Sant Gadge Baba Amravati University, Amravati

Student centric methods

(Experiential learning, participative learning and problem solving methodologies)

Department of Applied Electronics


Flexible-Solar panel


ECE(India)
Energies Pvt.Ltd.
Manufacturer of
Solar Power Equipment & Projects, Traffic Signal System,
Road Safety Items, LED Display Boards, Automation Systems

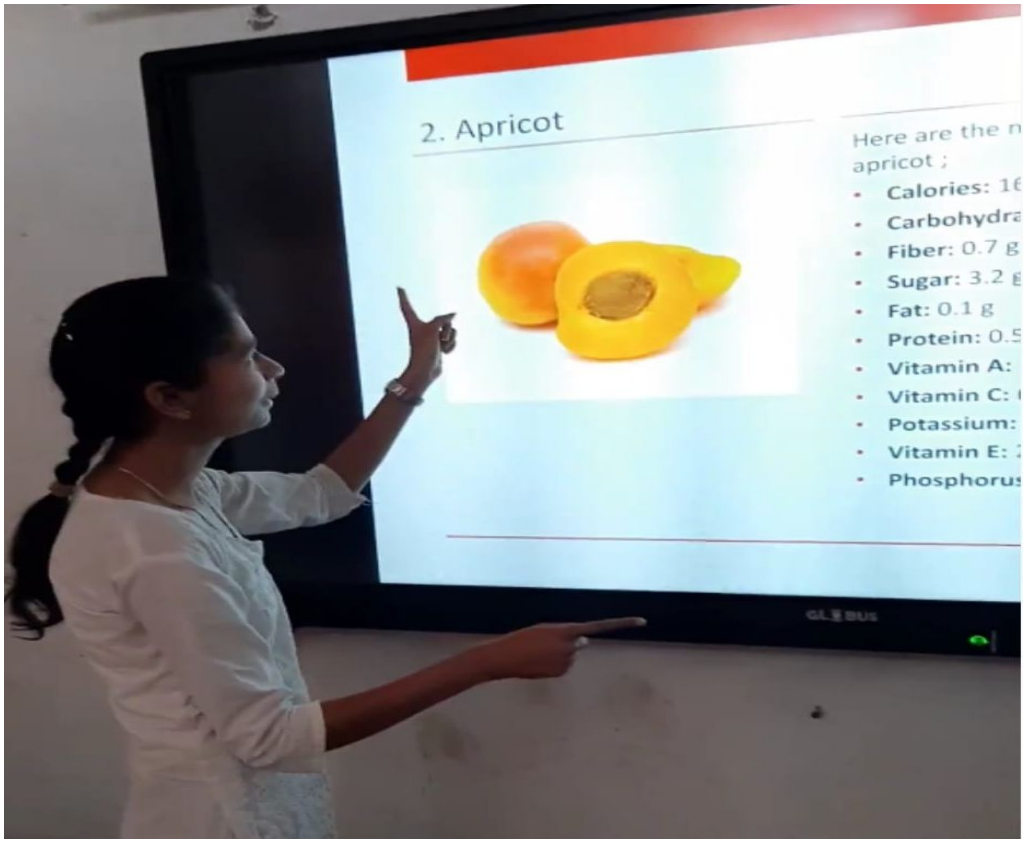

MIDC INDUSTRIAL
ASSOCIATION
AMRAVATI

Department of Biotechnology


CONTINGENCY


भारतगस

Department of Chemical Technology

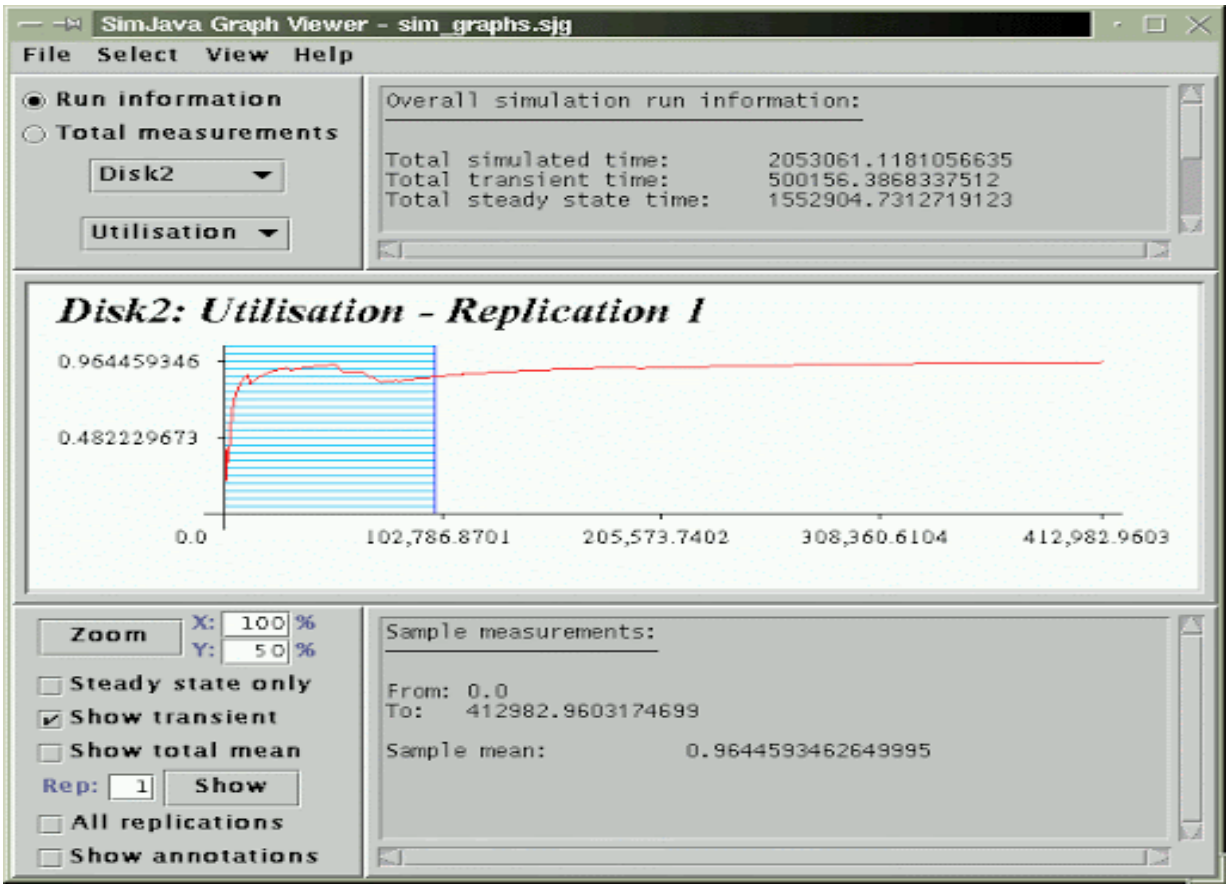


Department of Computer Science & Engg

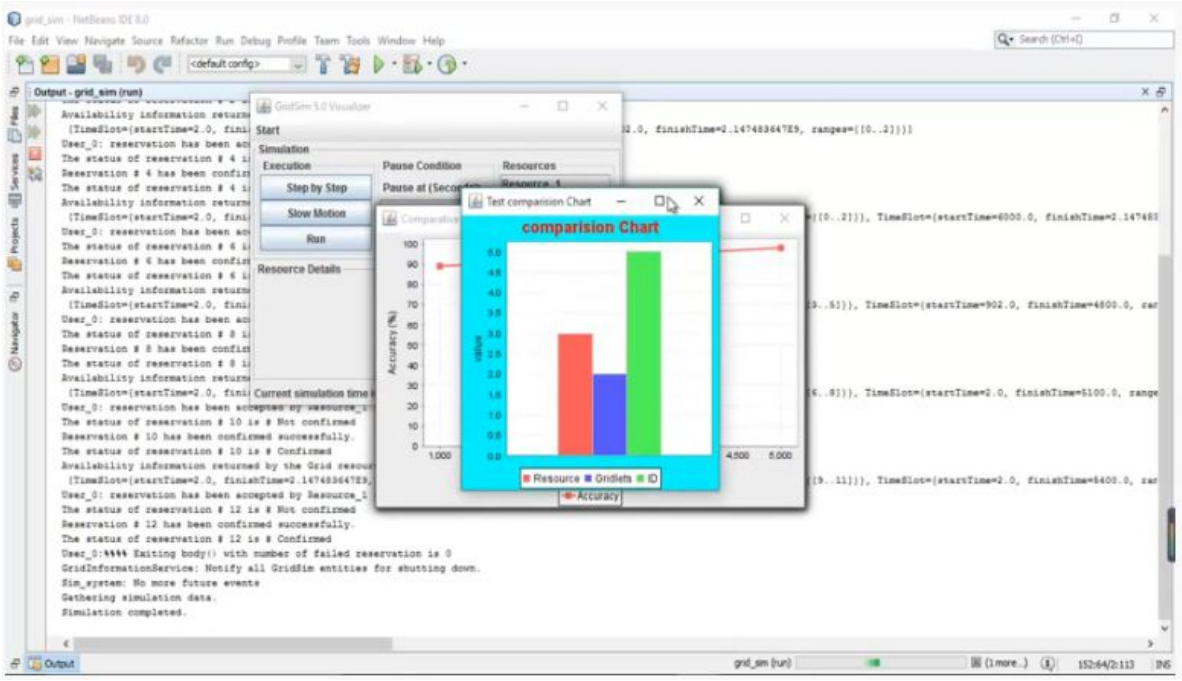
- **Screen Shots of Google Classroom,**
- **On-Line Test tool-Testmoz,**
- **On-line Demonstrations,**
- **Simulators used in Teaching/Learning,**
- **Screen shots of the Videos shared with Students,**
- **Face to Face meeting with students,**
- **Channel created for sharing e-contents,**
- **E-contents developed**
- **Power point Presentations**
- **Webinars**
- **Tutorials on Youtube, NPTEL Videos**
- **Projects**
- **Seminars**
- **Dissertations**
- **Software development Competitions**
- **Debugging Competitions**
- **Blind Programming competitions**
- **Project Competitions**
- **Paper presentation Competitions**
- **In Problem solving method: ME CSIT Students participate in Seminars, Conferences, symposium etc. and present their research work.**
- **In Experimental/ Participative Learning method: Industrial Training of MCA students, PGDCS & MSc Term End Project, ME CSIT Project & Dissertation.**

Simulators used :

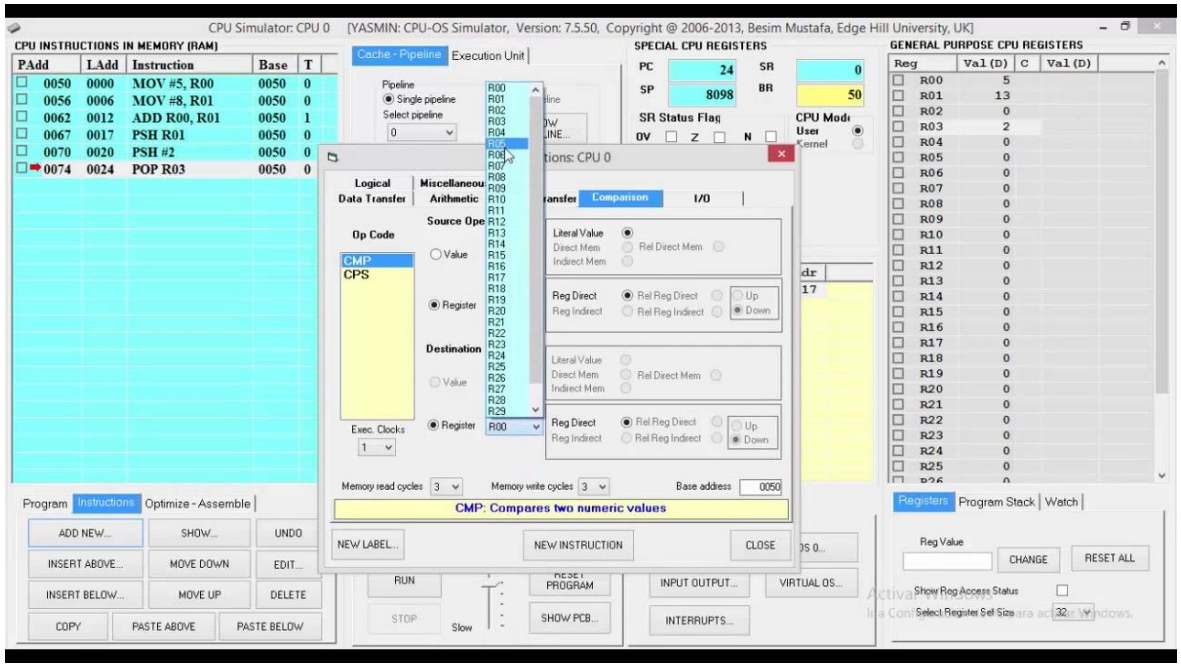
SimJava:



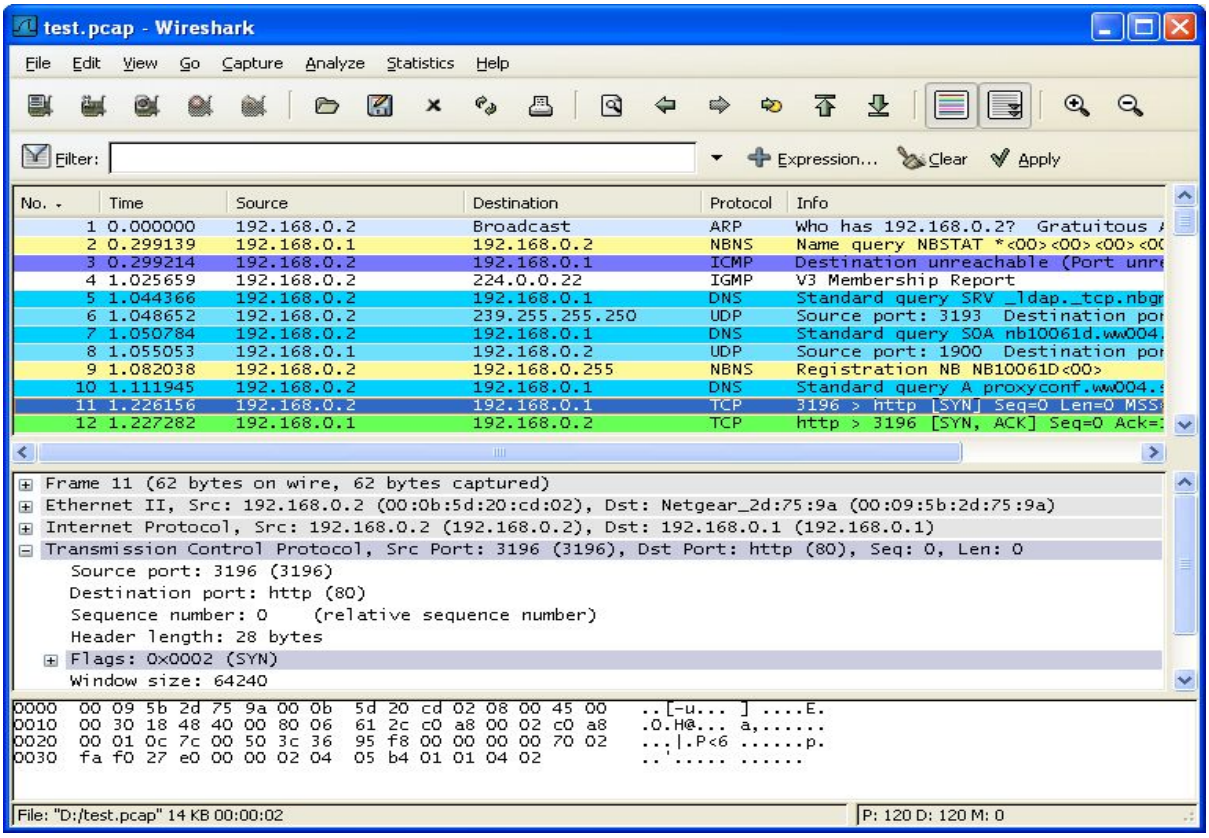
GridSim:



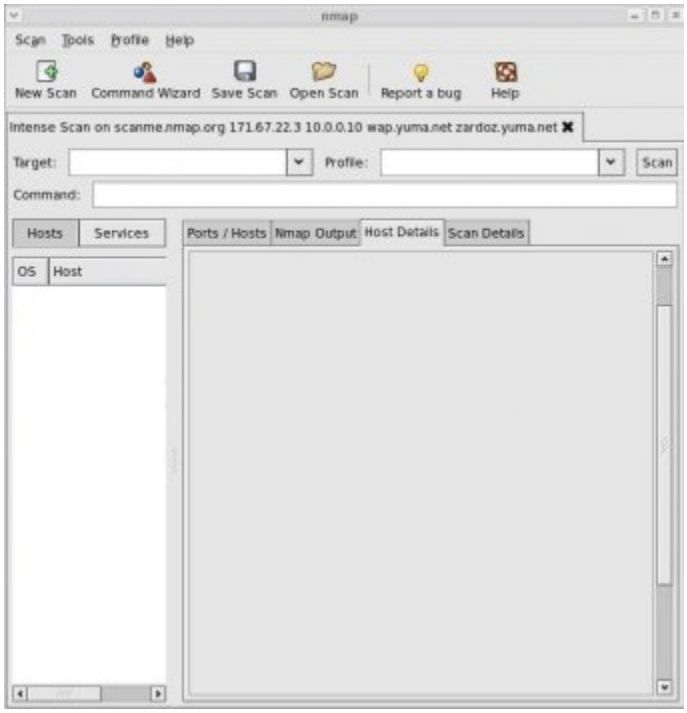
OS Simulator:



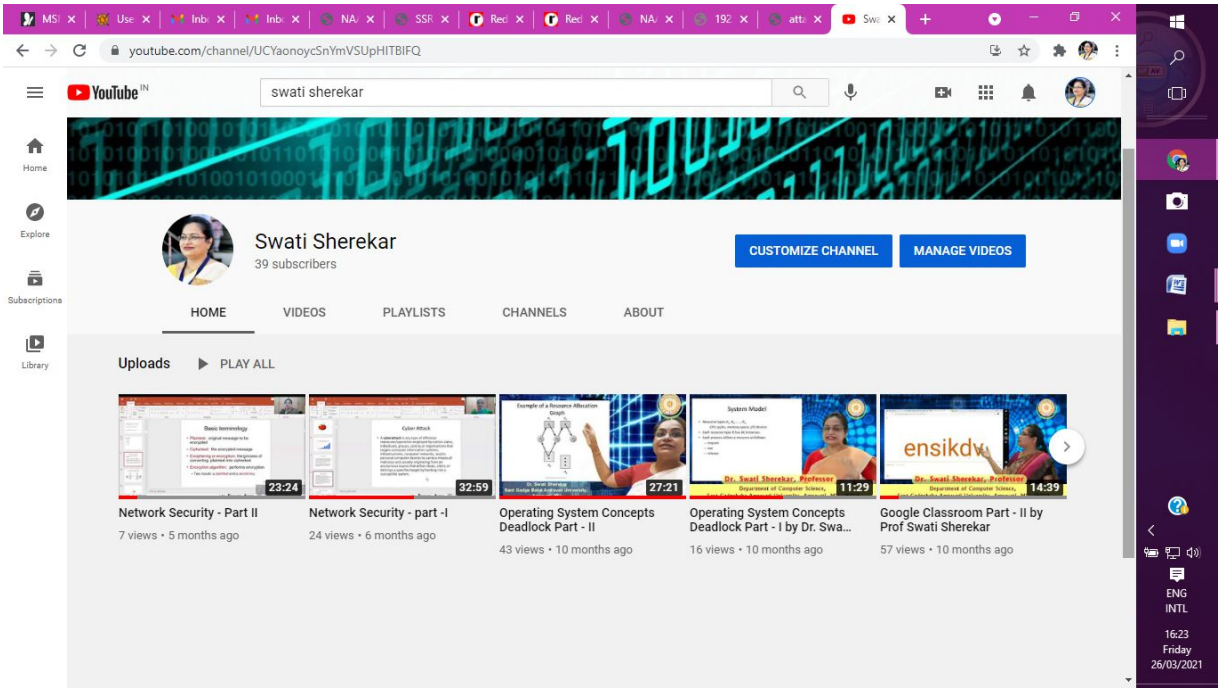
Wireshark:



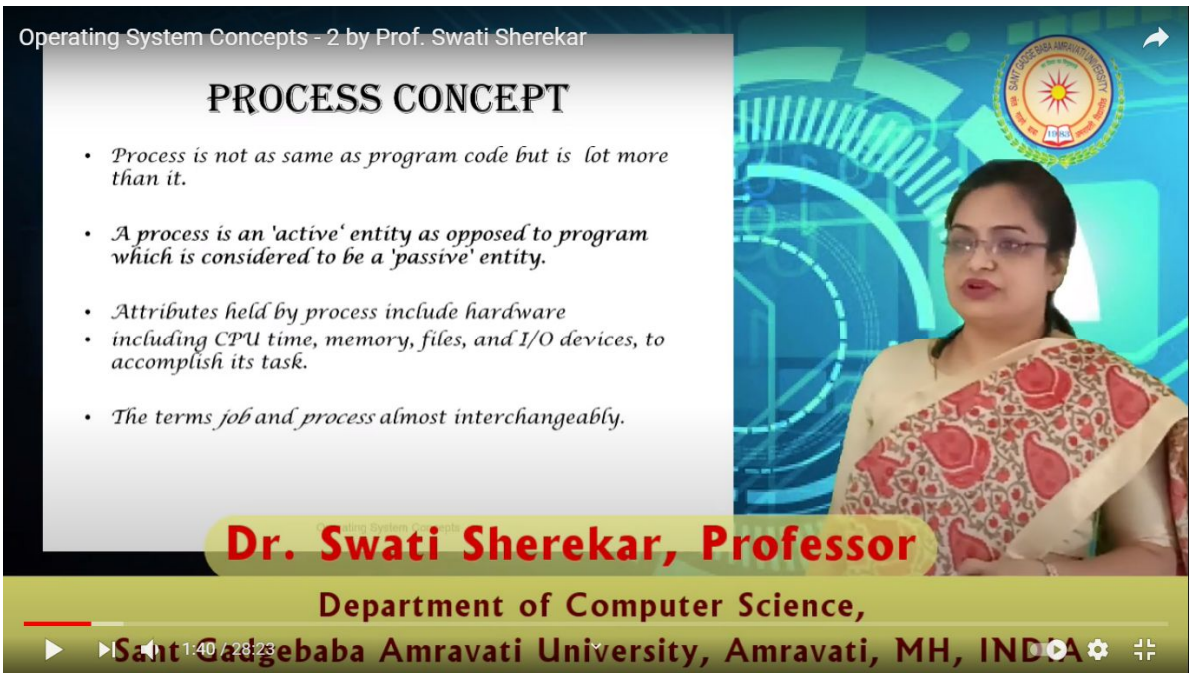
NMAP 7.07



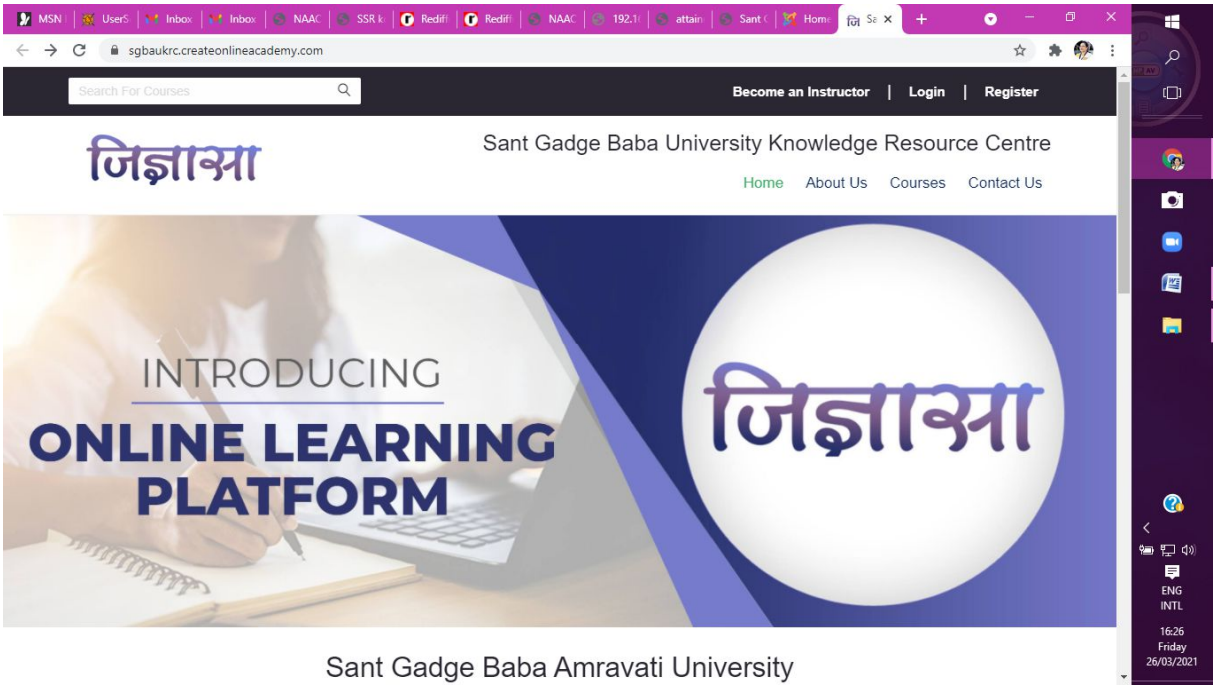
Channel Created

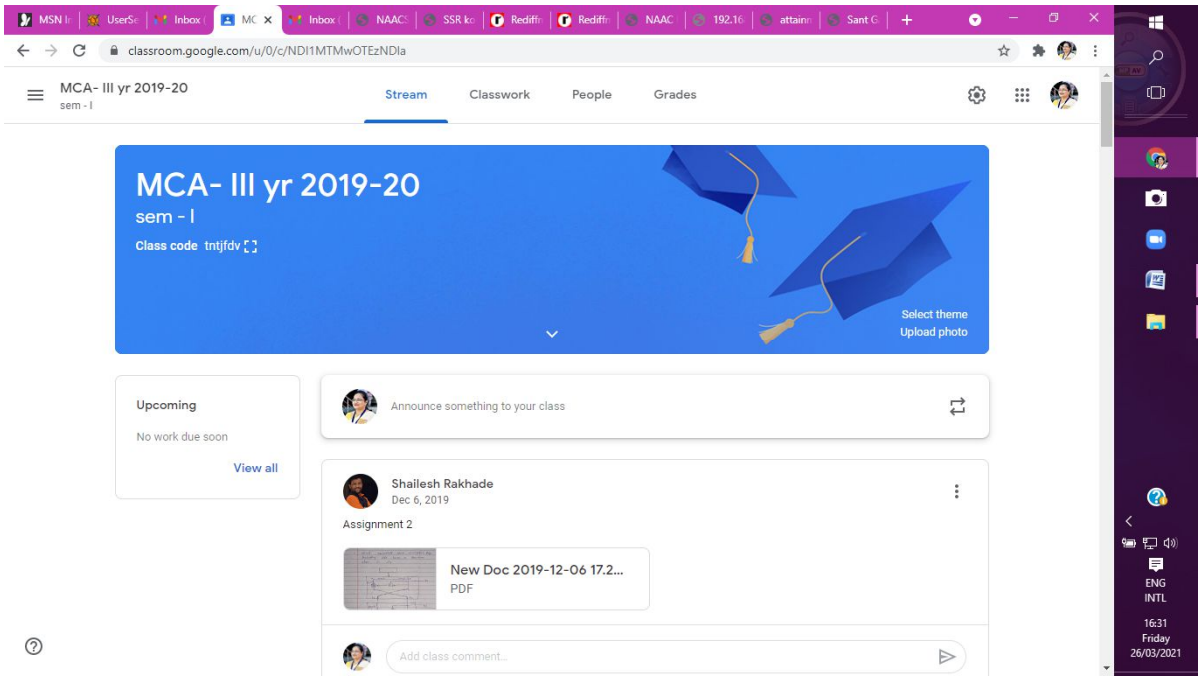


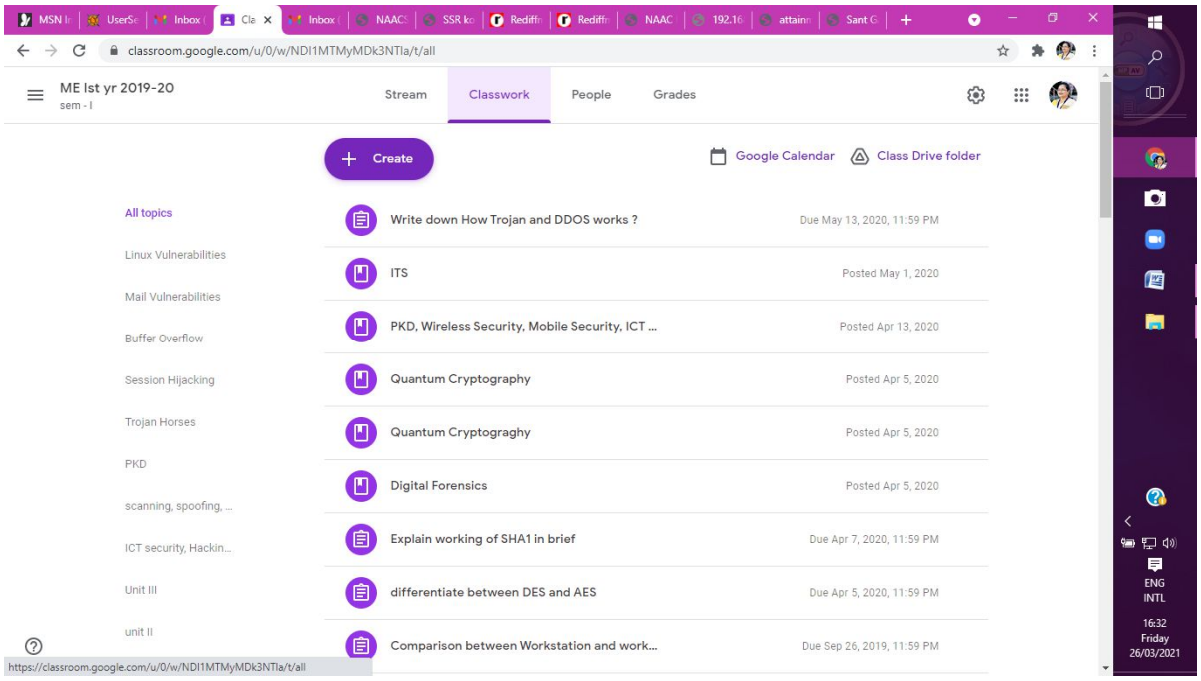
E- contents Developed:

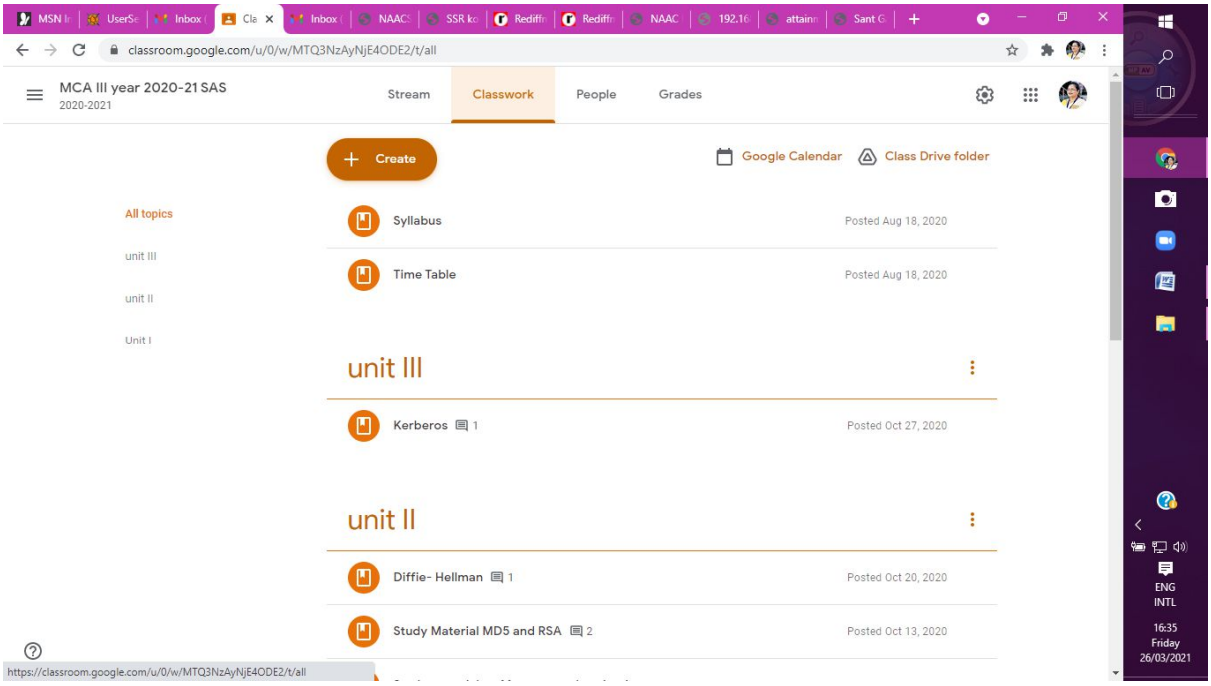


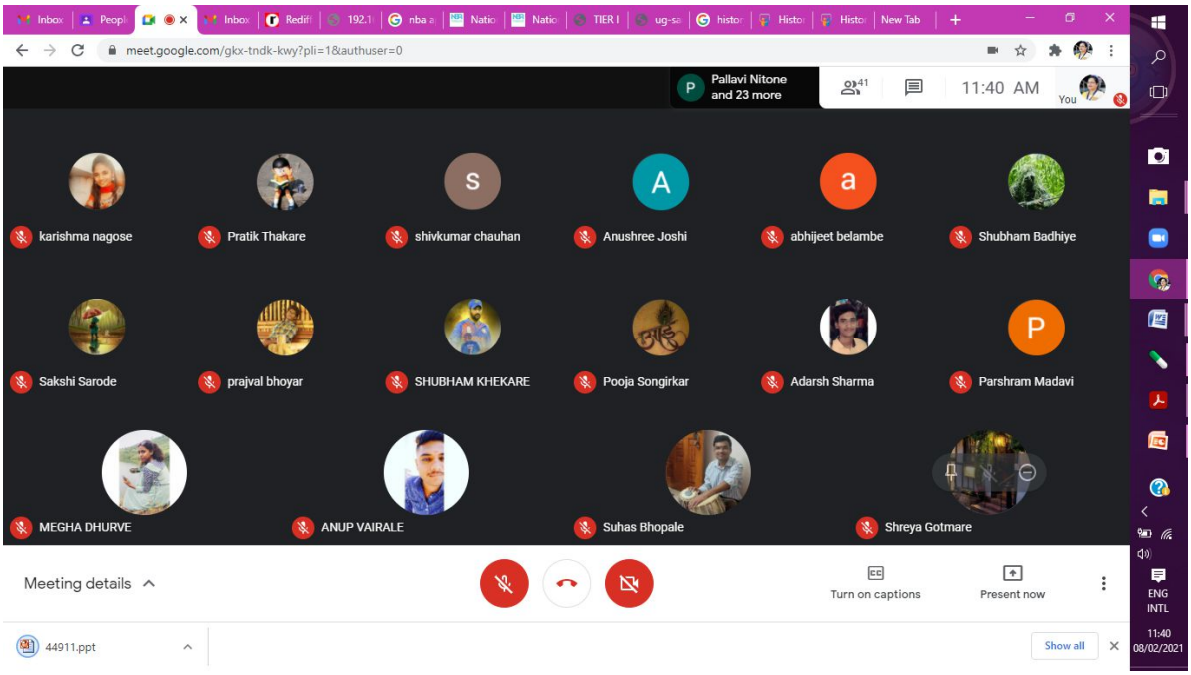
E-contents on On-line Learning Platform "Jigyasa" of SGB Amravati University



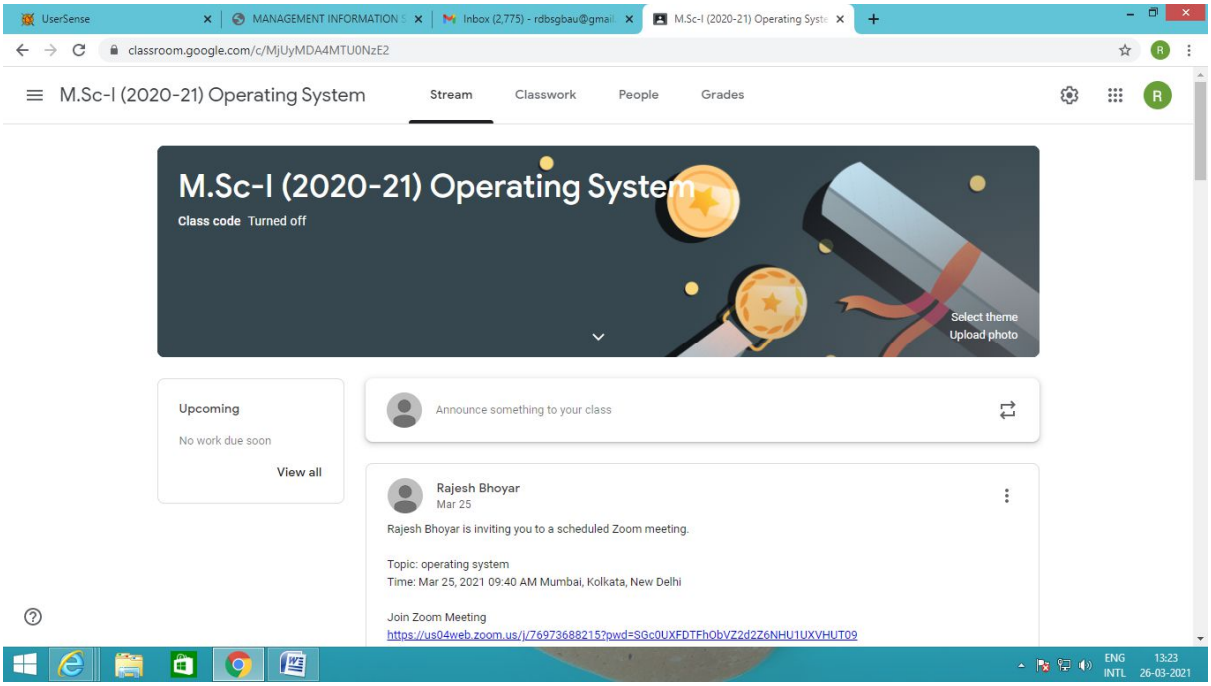

classroom.google.com/u/0/c/NDI1MTMwOTEzNDIa
MCA- III yr 2019-20
sem - I
Stream
Classwork
People
Grades
MCA- III yr 2019-20
sem - I
Class code tntjfdv
Select theme
Upload photo
Upcoming
No work due soon
View all
Announce something to your class
Shailesh Rakhade
Dec 6, 2019
Assignment 2
New Doc 2019-12-06 17.2...
PDF
Add class comment...
ENG
INTL
16:31
Friday
26/03/2021

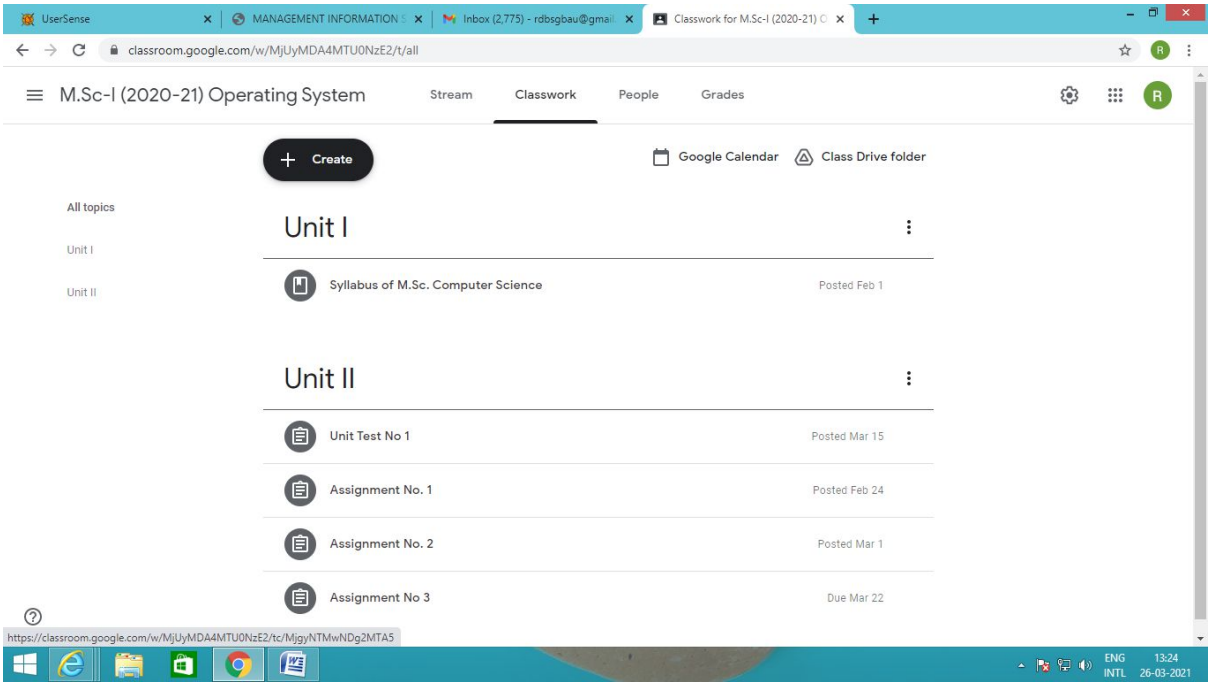

classroom.google.com/u/0/w/NDI1MTMyMDk3NTIa/t/all
ME Ist yr 2019-20
sem - I
Stream
Classwork
People
Grades
Create
Google Calendar
Class Drive folder
All topics
Linux Vulnerabilities
Mail Vulnerabilities
Buffer Overflow
Session Hijacking
Trojan Horses
PKD
scanning, spoofing, ...
ICT security, Hackin...
Unit III
unit II
Write down How Trojan and DDOS works ?
Due May 13, 2020, 11:59 PM
ITS
Posted May 1, 2020
PKD, Wireless Security, Mobile Security, ICT ...
Posted Apr 13, 2020
Quantum Cryptography
Posted Apr 5, 2020
Quantum Cryptograghy
Posted Apr 5, 2020
Digital Forensics
Posted Apr 5, 2020
Explain working of SHA1 in brief
Due Apr 7, 2020, 11:59 PM
differentiate between DES and AES
Due Apr 5, 2020, 11:59 PM
Comparison between Workstation and work...
Due Sep 26, 2019, 11:59 PM
https://classroom.google.com/u/0/w/NDI1MTMyMDk3NTIa/t/all
ENG
INTL
16:32
Friday
26/03/2021

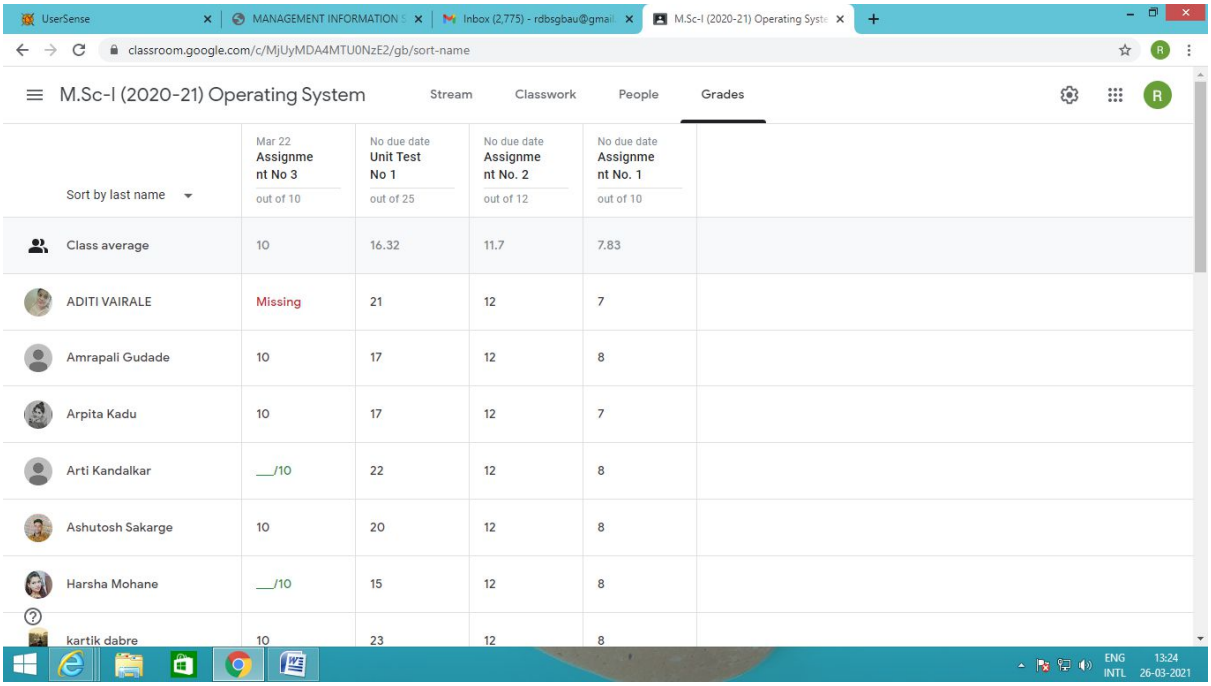

classroom.google.com/u/0/w/MTQ3NzAyNjE4ODE2/t/all
MCA III year 2020-21 SAS
2020-2021
Stream
Classwork
People
Grades
Create
Google Calendar
Class Drive folder
All topics
unit III
unit II
Unit I
Syllabus
Posted Aug 18, 2020
Time Table
Posted Aug 18, 2020
unit III
Kerberos 1
Posted Oct 27, 2020
unit II
Diffie- Hellman 1
Posted Oct 20, 2020
Study Material MD5 and RSA 2
Posted Oct 13, 2020
ENG
INTL
16:35
Friday
26/03/2021


meet.google.com/gkx-tndk-kwy?pli=1&authuser=0
Pallavi Nitone and 23 more
11:40 AM
You
karishma nagose
Pratik Thakare
shivkumar chauhan
Anushree Joshi
abhijeet belambe
Shubham Badhiye
Sakshi Sarode
prajval bhoyar
SHUBHAM KHEKARE
Pooja Songirkar
Adarsh Sharma
Parshram Madavi
MEGHA DHURVE
ANUP VAIRALE
Suhas Bhopale
Shreya Gotmare
Meeting details
Turn on captions
Present now
44911.ppt
Show all
ENG
INTL
11:40
08/02/2021

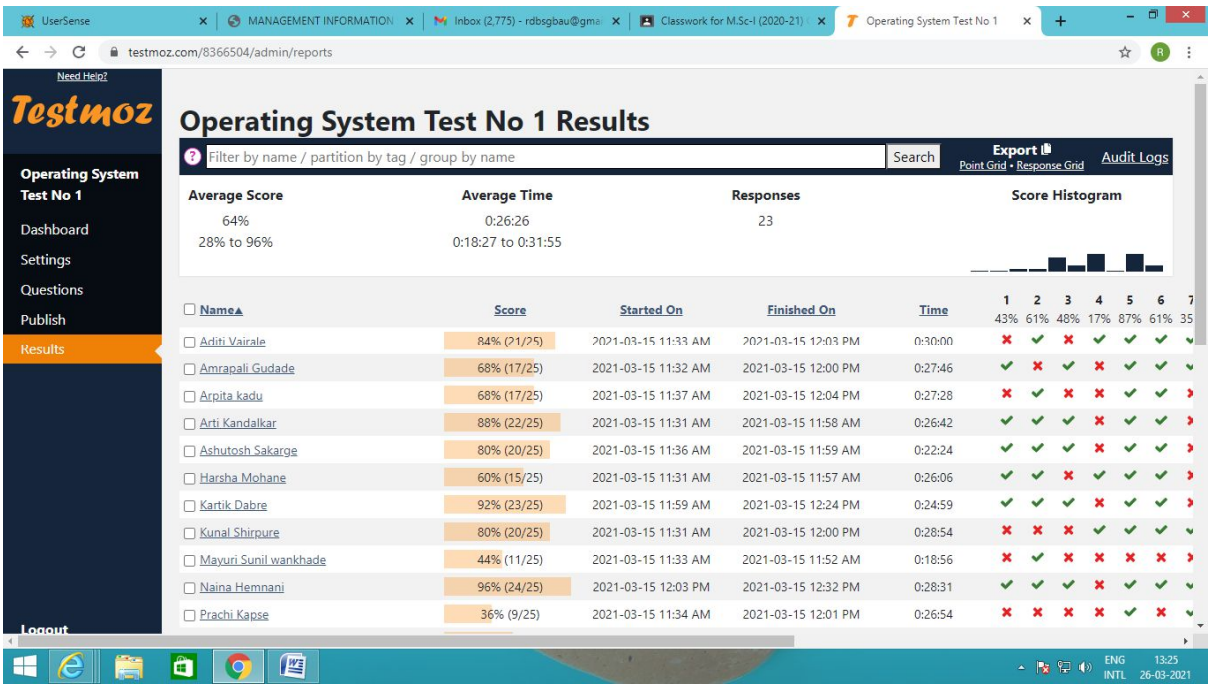
Google Classroom used for various subjects

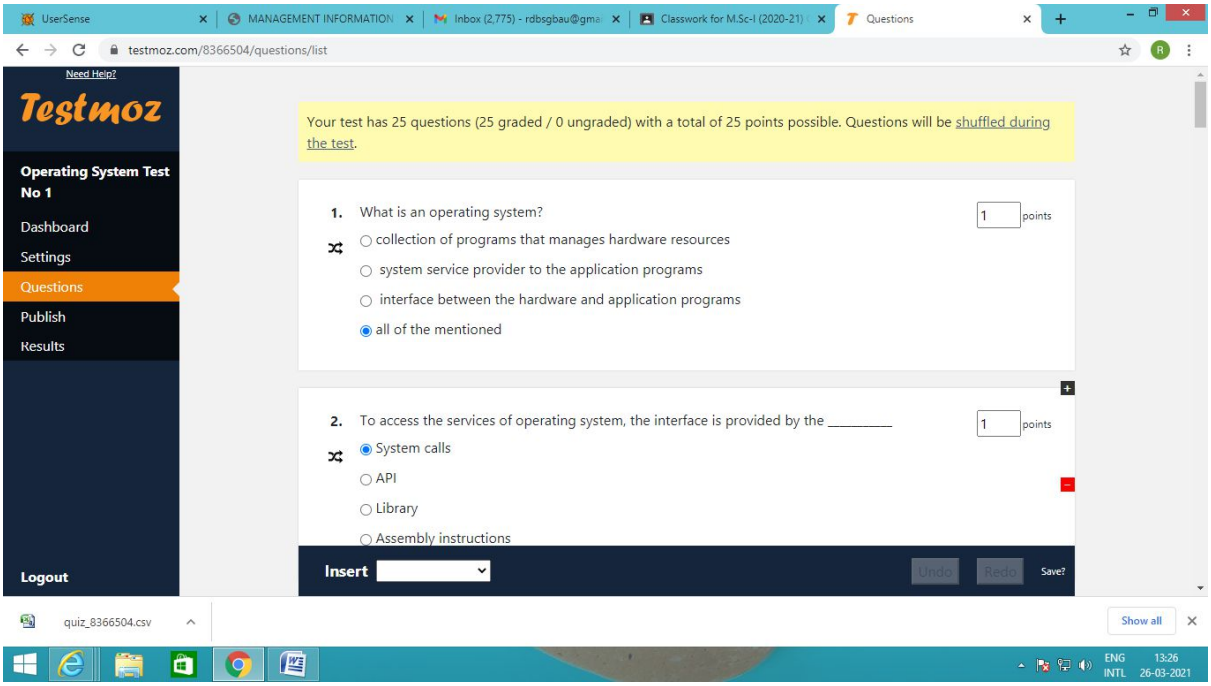




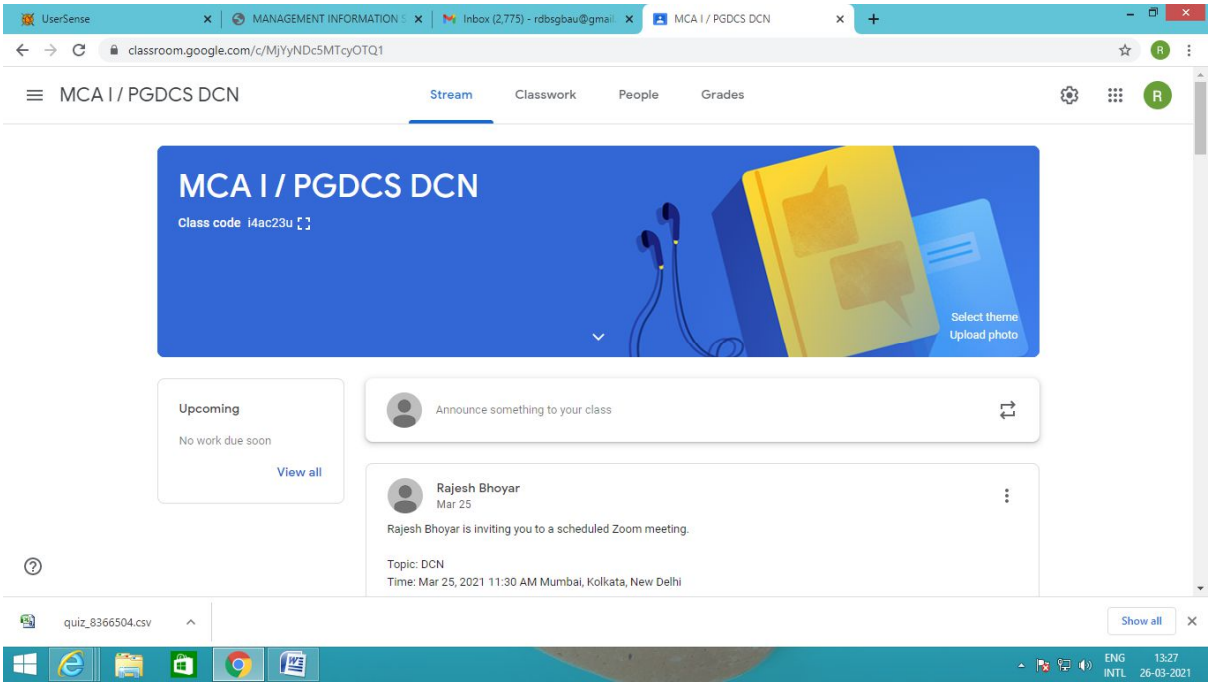


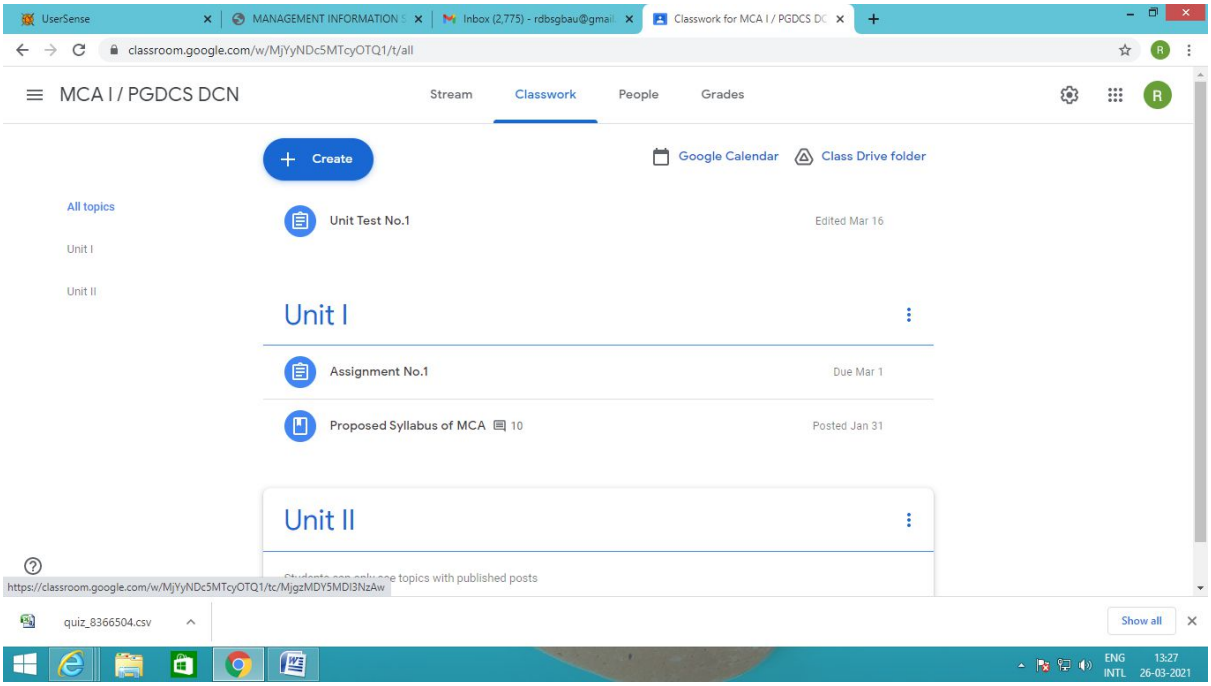
Test conducted using Testmoz testgenerator Tool





MCA/ PGDCS Google Classroom




UserSense
MANAGEMENT INFORMATION S
Inbox (2,775) - rdbsgbau@gmail
Classwork for MCA I / PGDCS DC
classroom.google.com/w/MjYyNDc5MTcyOTQ1/t/all
MCA I / PGDCS DCN
Stream
Classwork
People
Grades
Create
Google Calendar
Class Drive folder
All topics
Unit I
Unit II
Unit Test No.1
Edited Mar 16
Unit I
Assignment No.1
Due Mar 1
Proposed Syllabus of MCA
10
Posted Jan 31
Unit II
https://classroom.google.com/w/MjYyNDc5MTcyOTQ1/tc/MjgzMDY5MDI3NzAw
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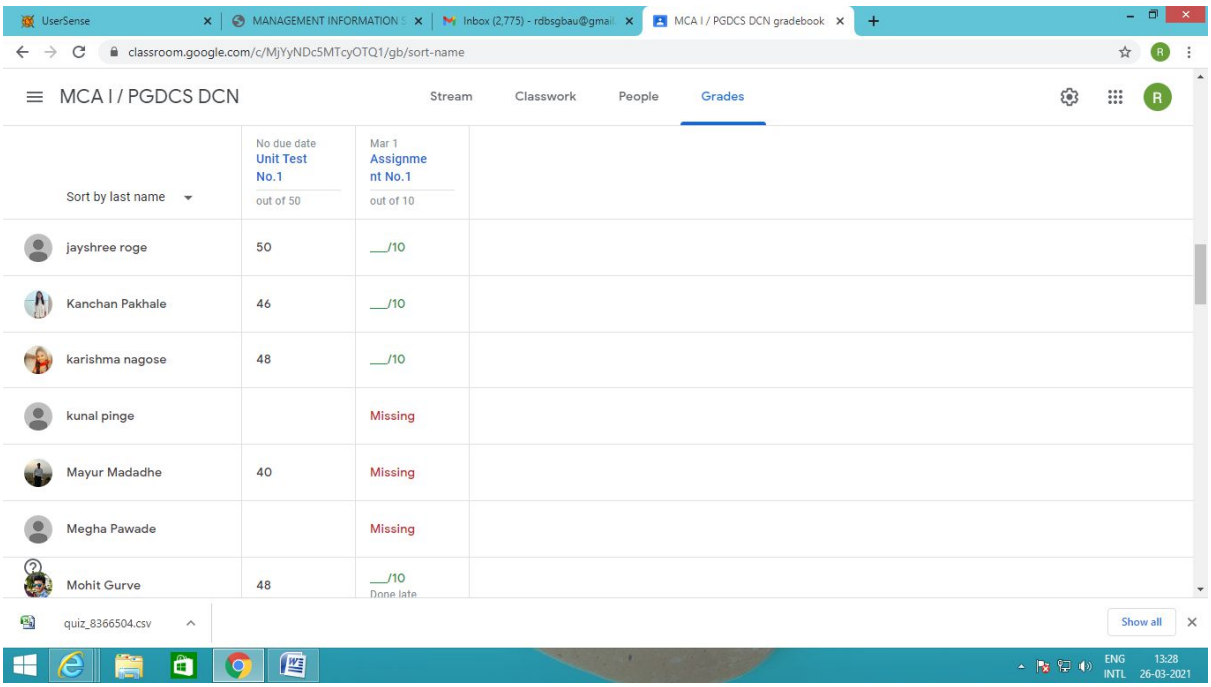
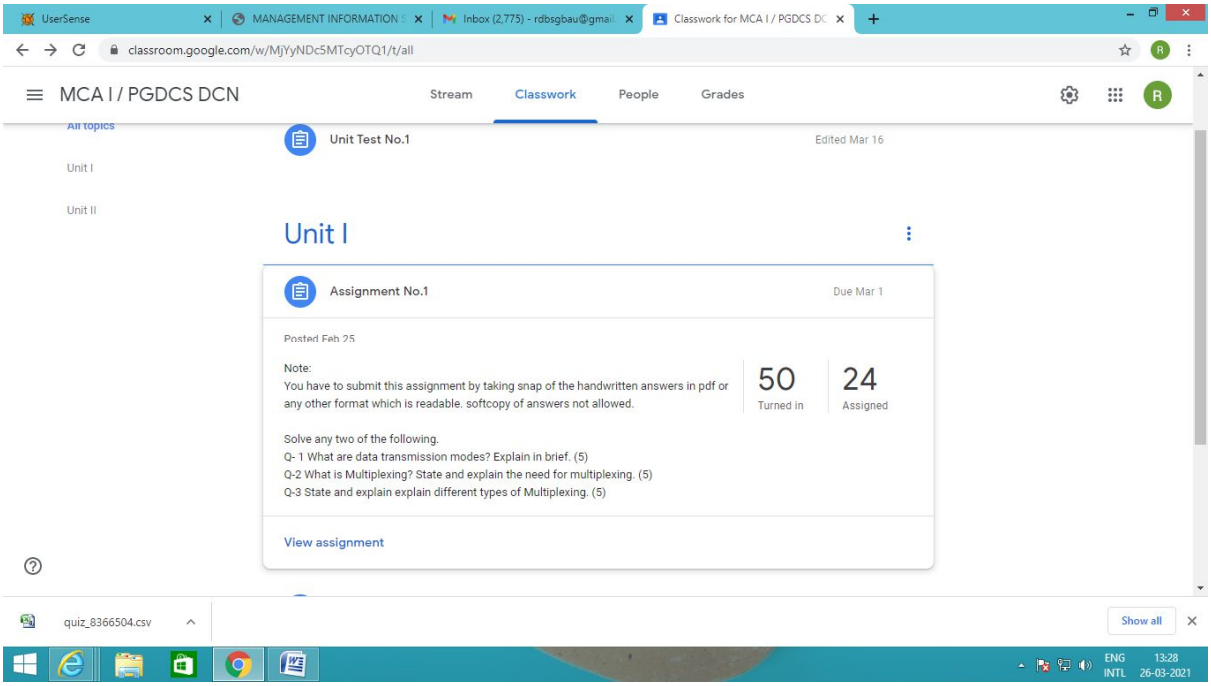
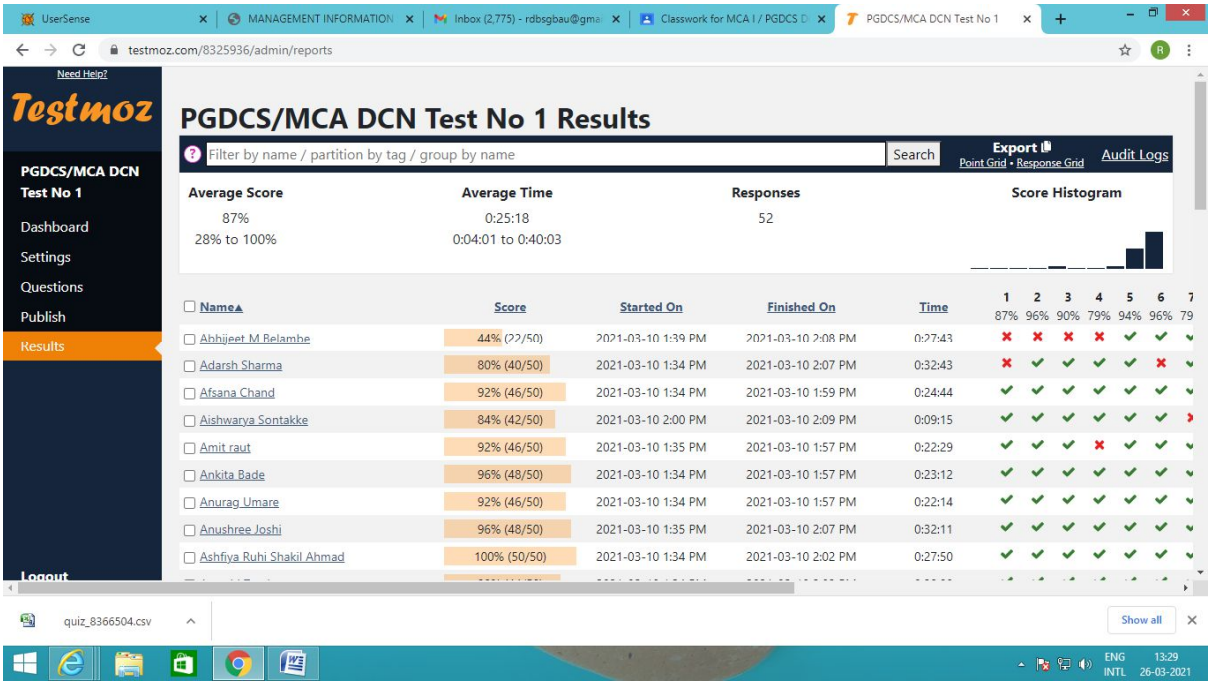
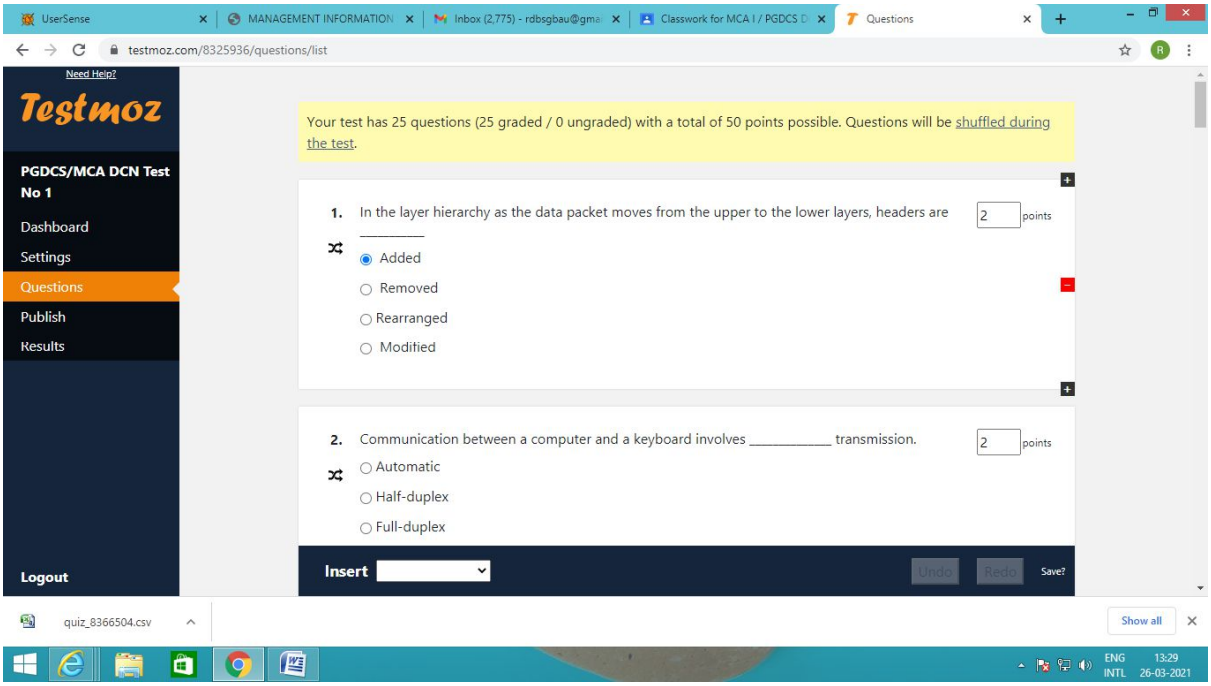
Show all
ENG
INTL
13:27
26-03-2021


UserSense
MANAGEMENT INFORMATION S
Inbox (2,775) - rdbsgbau@gmail
MCA I / PGDCS DCN gradebook
classroom.google.com/c/MjYyNDc5MTcyOTQ1/gb/sort-name
MCA I / PGDCS DCN
Stream
Classwork
People
Grades
Sort by last name
No due date
Unit Test No.1
out of 50
Mar 1
Assignment No.1
out of 10
jayshree roge
50
__/10
Kanchan Pakhale
46
__/10
karishma nagose
48
__/10
kunal pinge
Missing
Mayur Madadhe
40
Missing
Megha Pawade
Missing
Mohit Gurve
48
__/10
Done late
quiz_8366504.csv
Show all
ENG
INTL
13:28
26-03-2021

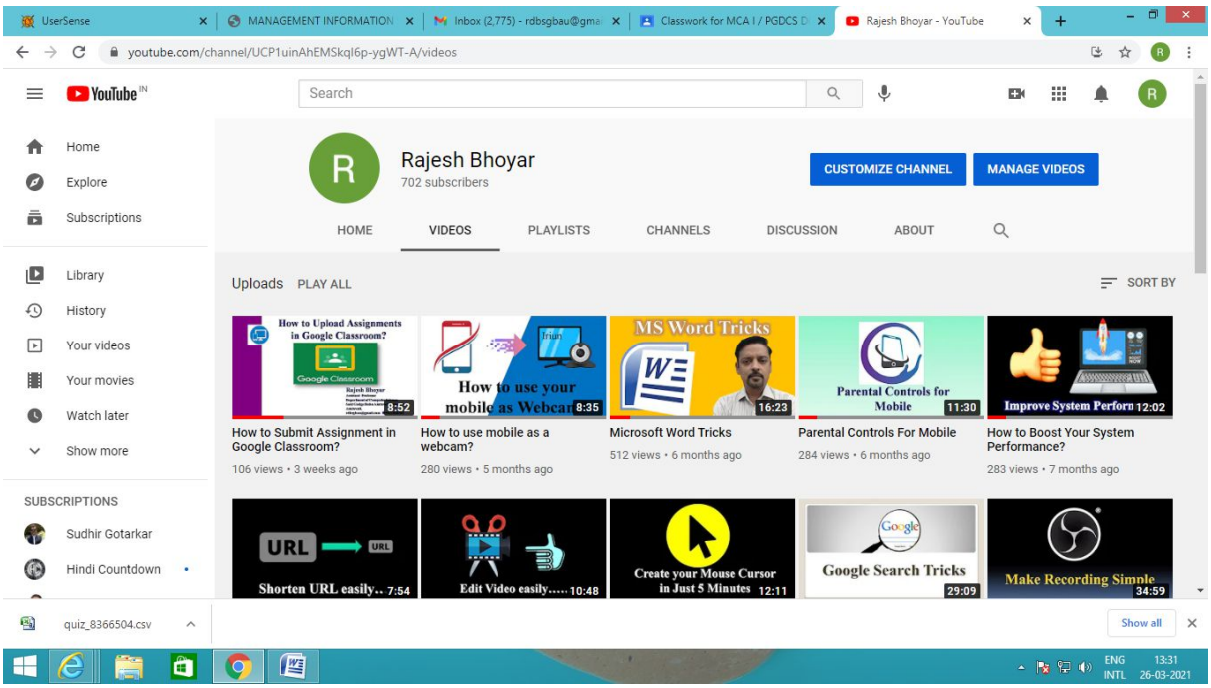


Test Conducted using Testmoz

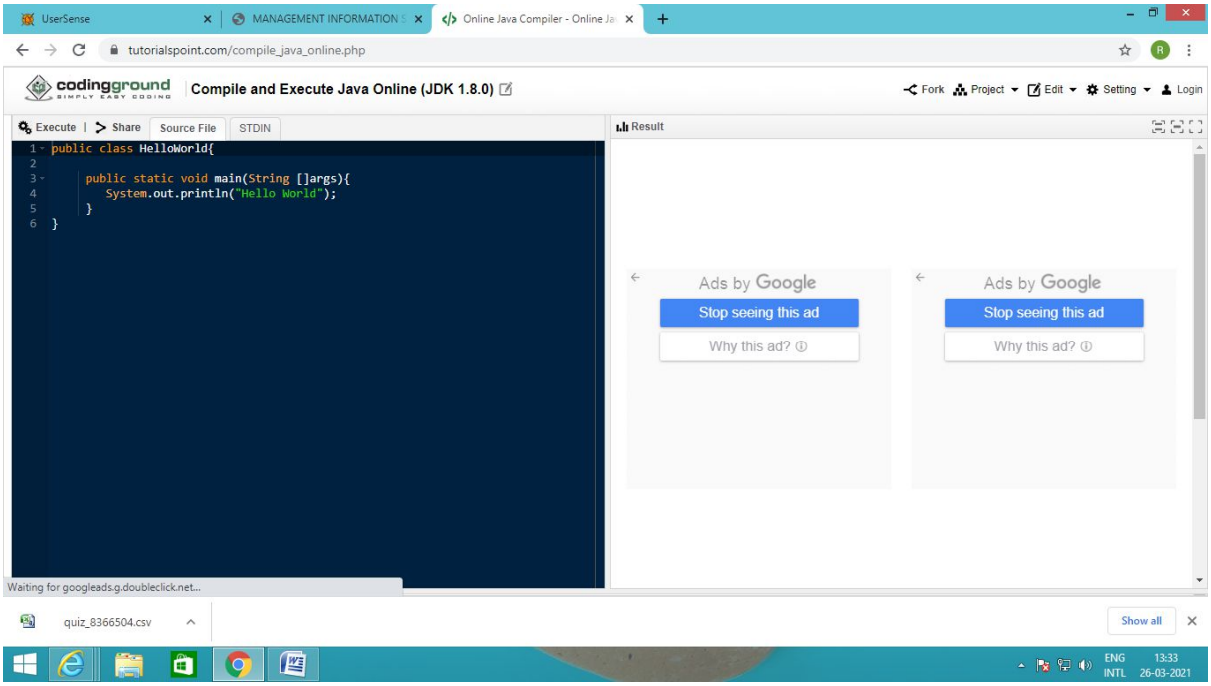




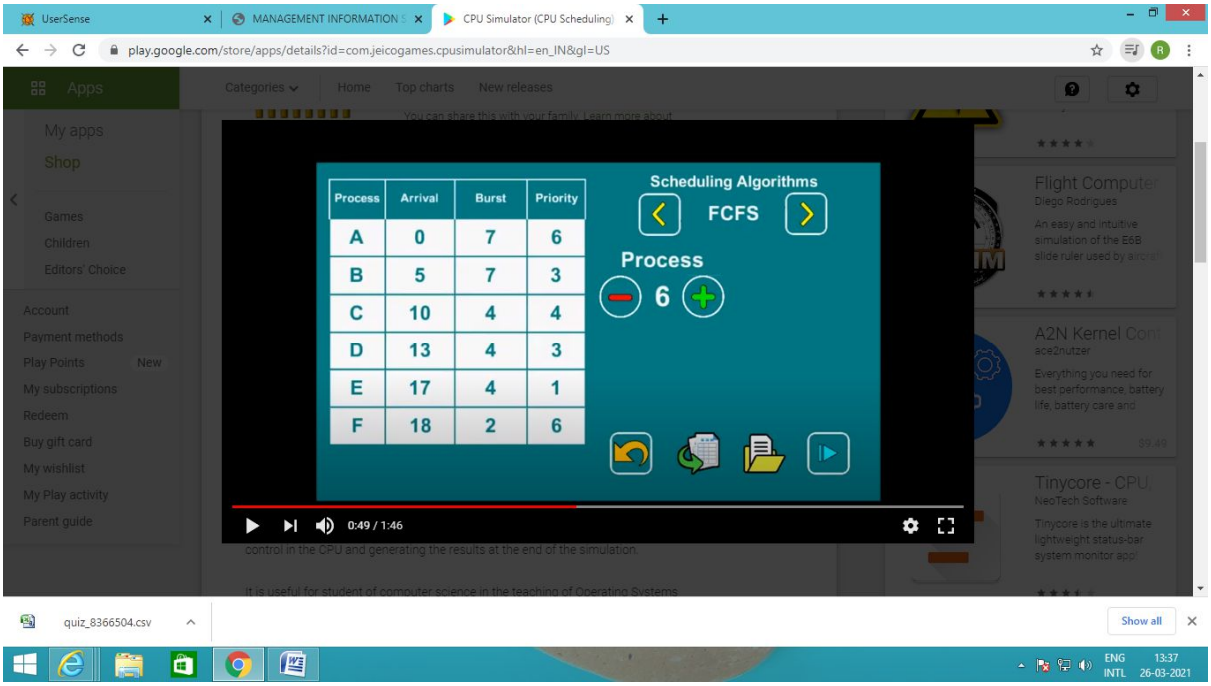
YouTube Chanel created for uploading video lectures:

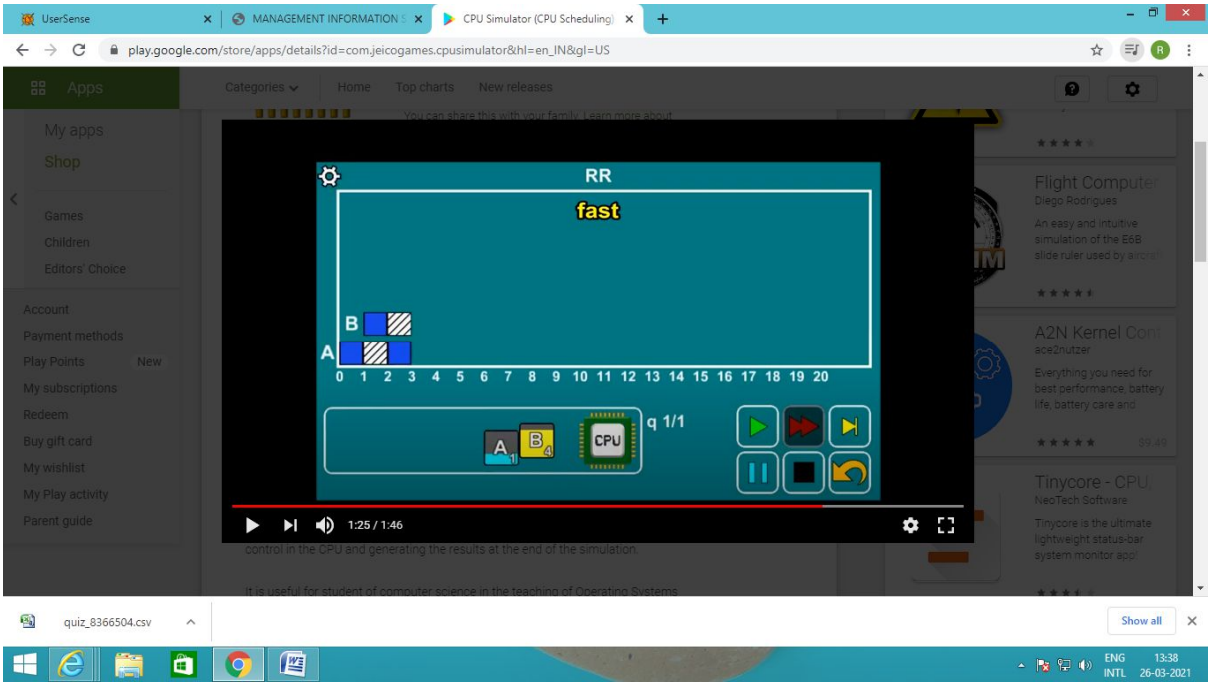


Online Java Compiler for student demonstration:



Online Simulator for Processor Scheduling Algorithms:



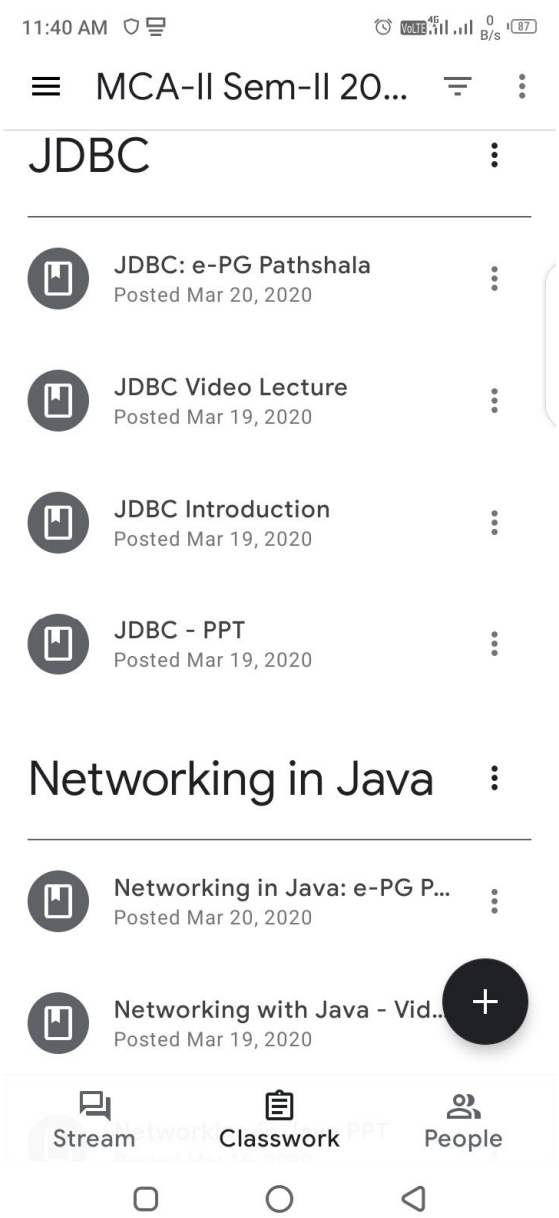


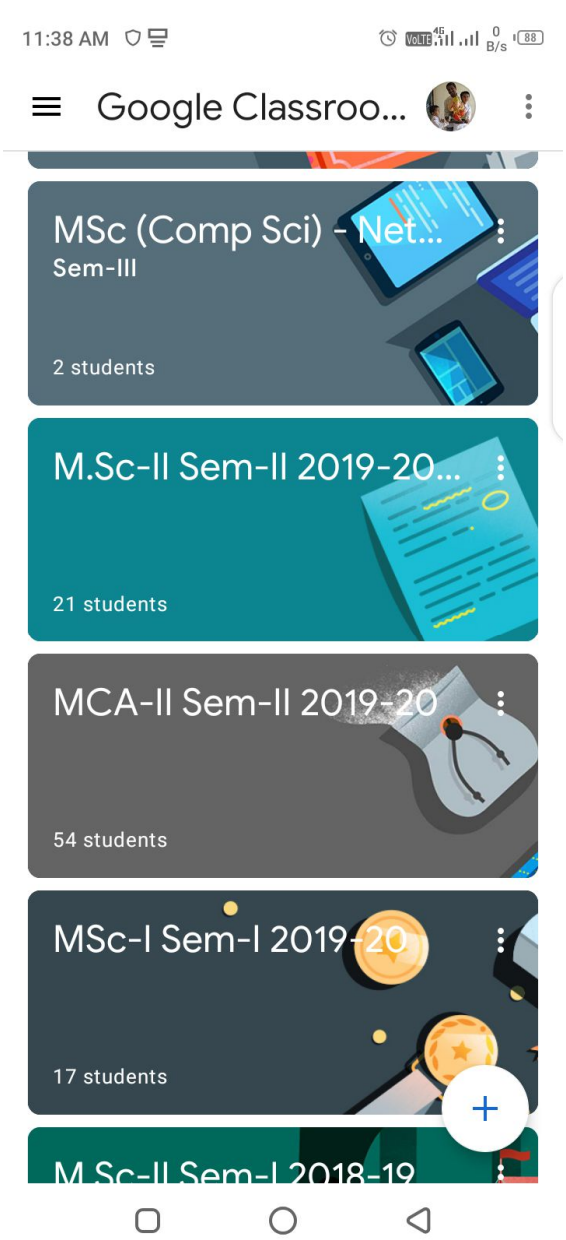
Video Lectures using OBS tool

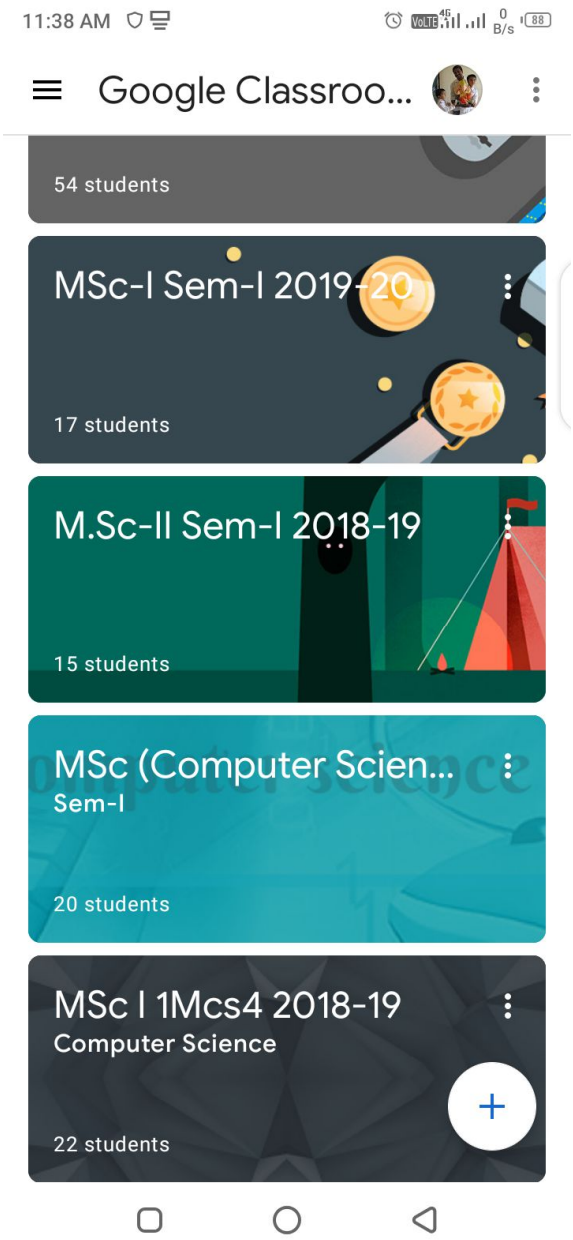
Youtube link for animated video

https://youtu.be/PBWhzz_Gn10

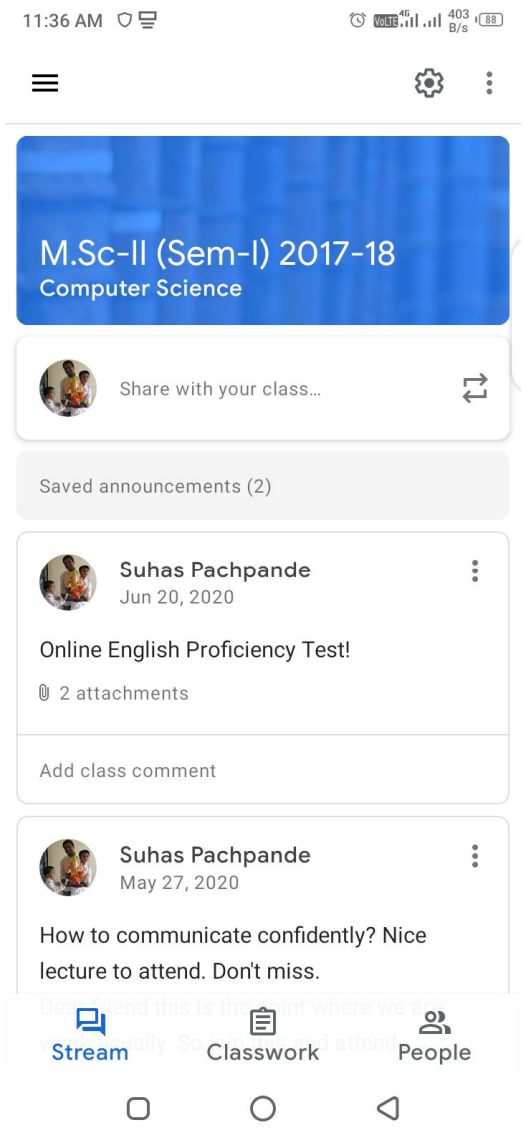
Screenshots of the Google Classrooms created for MSC (Computer Science), MCA

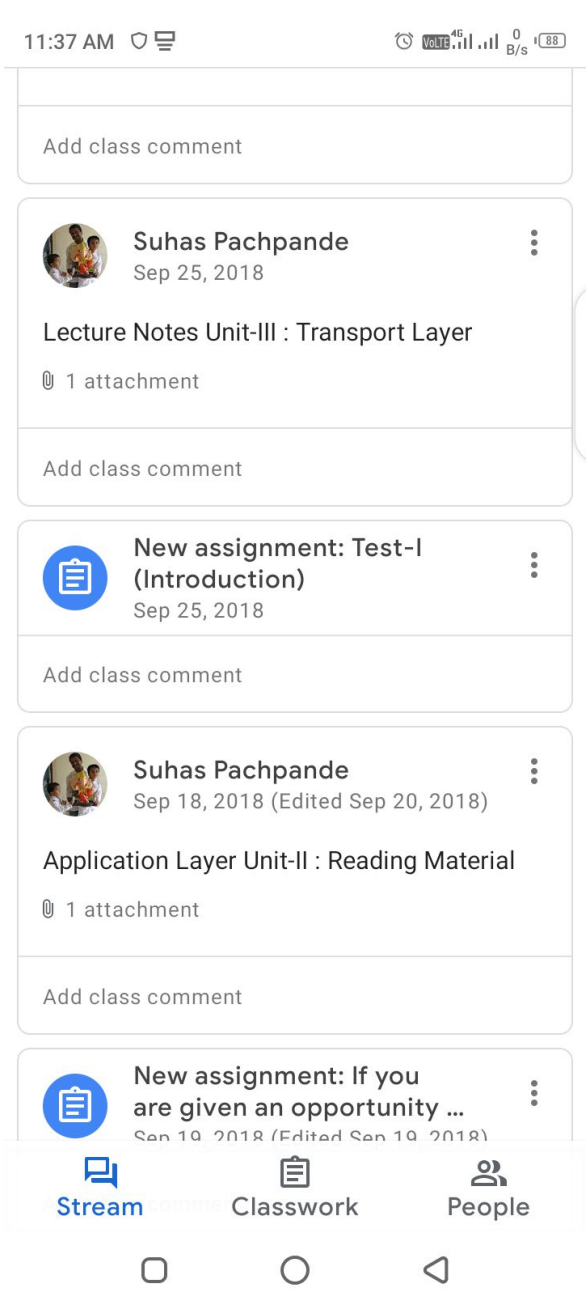


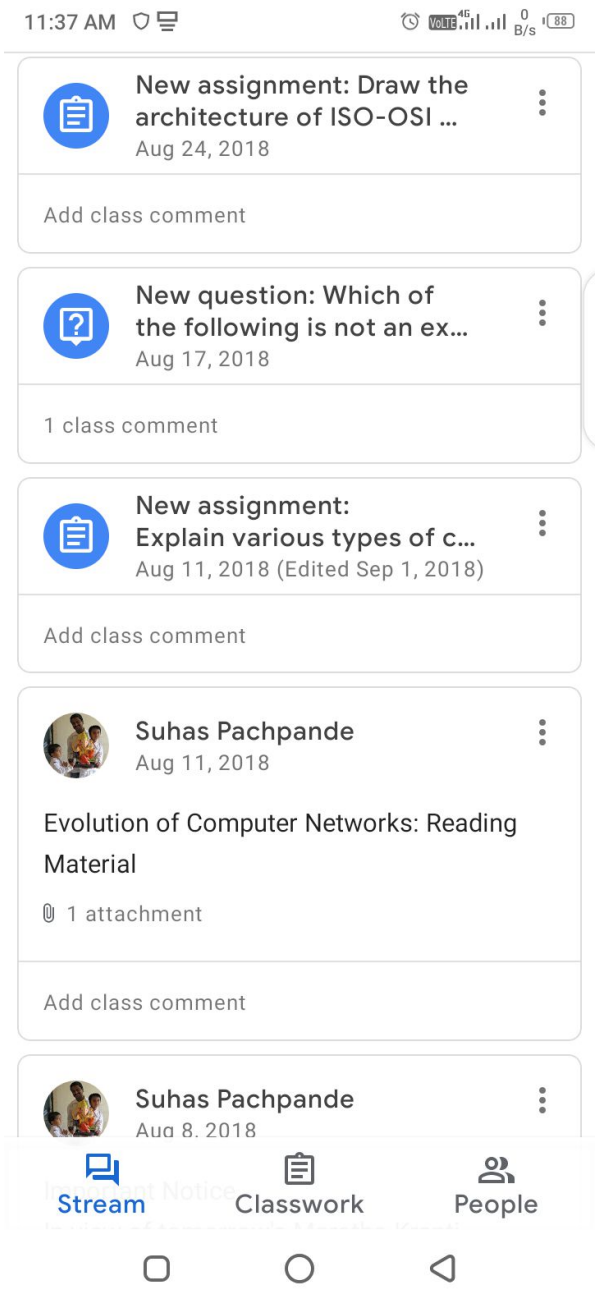

11:38 AM
Google Classroo...
MSc (Comp Sci) - Net...
Sem-III
2 students
M.Sc-II Sem-II 2019-20...
21 students
MCA-II Sem-II 2019-20
54 students
MSc-I Sem-I 2019-20
17 students
M.Sc-II Sem-I 2018-19

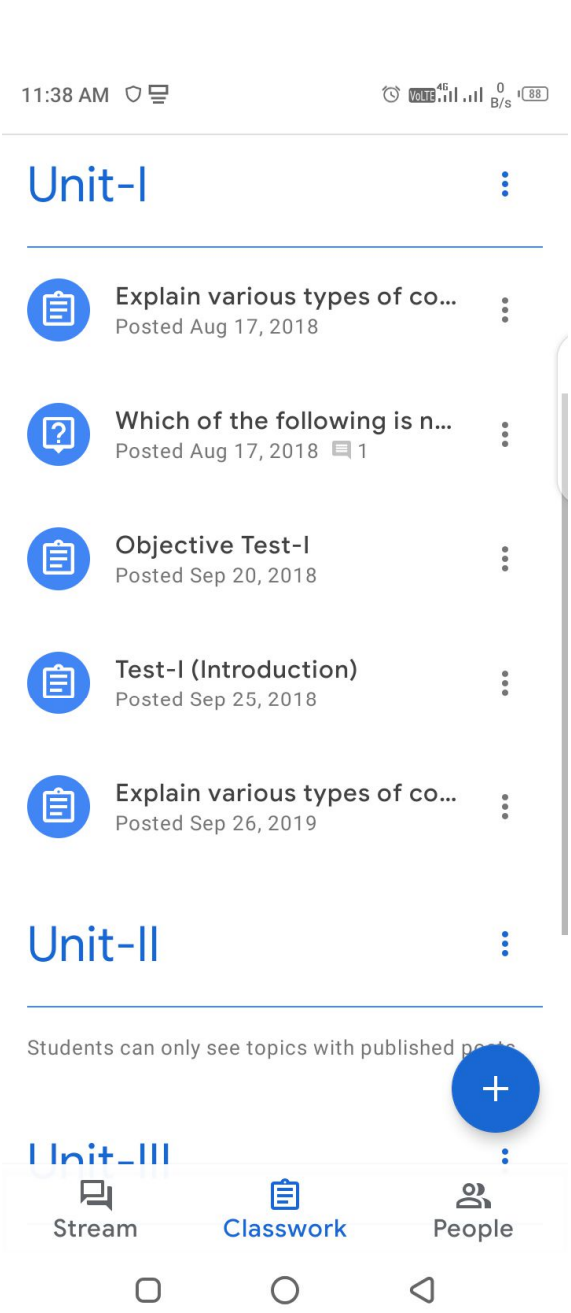

11:38 AM
Google Classroo...
54 students
MSc-I Sem-I 2019-20
17 students
M.Sc-II Sem-I 2018-19
15 students
MSc (Computer Scien...
Sem-I
20 students
MSc I 1Mcs4 2018-19
Computer Science
22 students

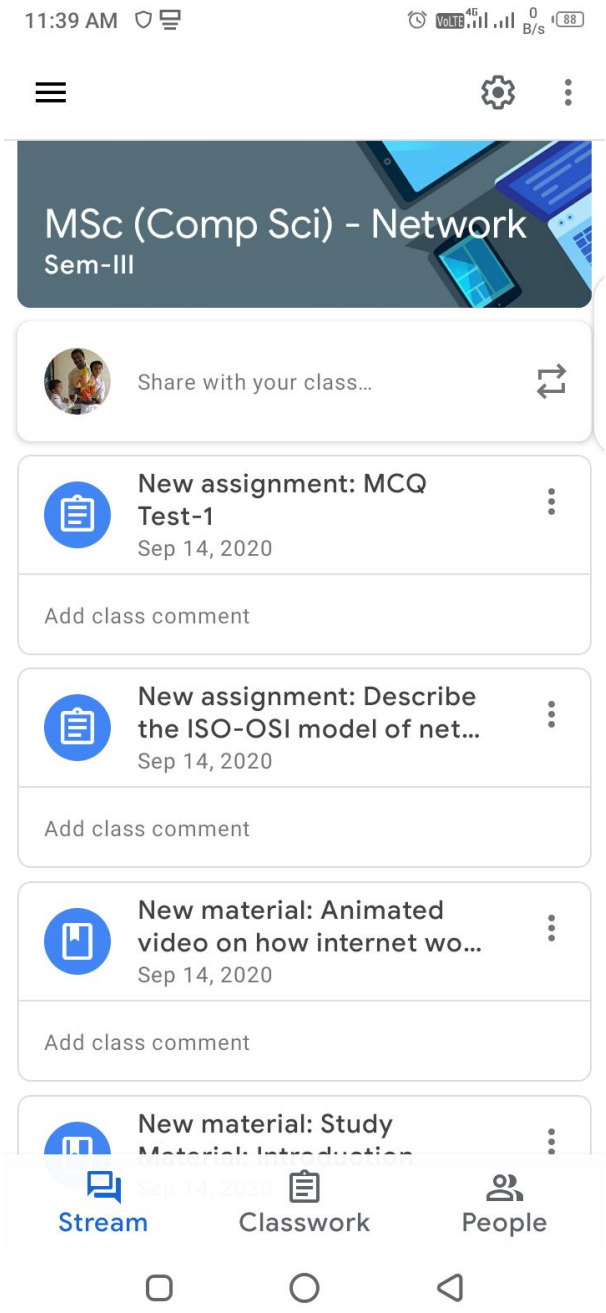

11:36 AM
Google Classroo...
22 students
MCA-II Sem-I (2018-19)
64 students
M.Sc.-I Sem-I 2018-19 (...
Sem-I
18 students
MCA-II Sem-II (2017-18)
Sem-II
37 students
M.Sc-II (Sem-I) 2017-18
Computer Science
12 students

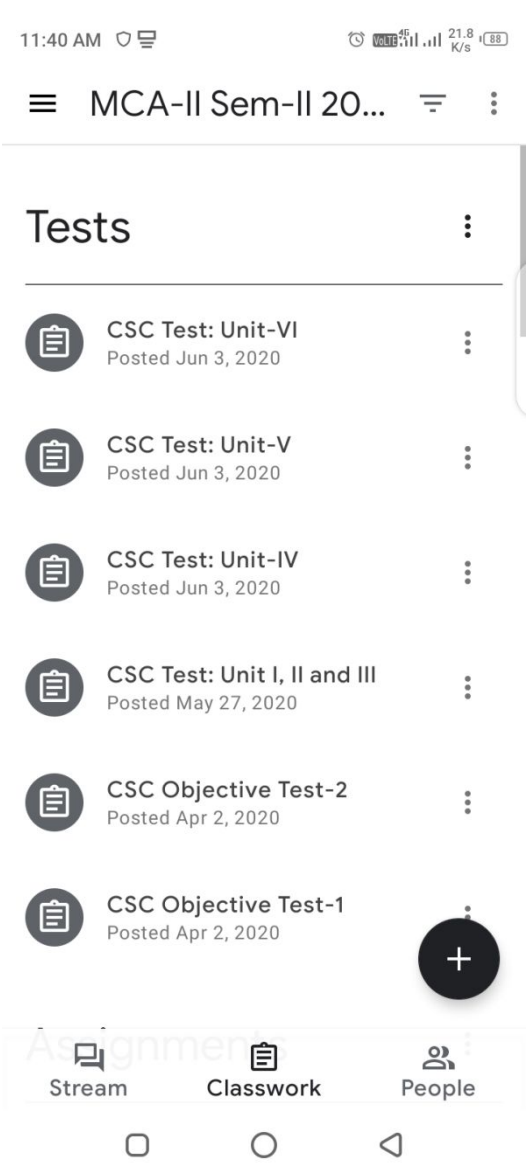

11:36 AM
M.Sc-II (Sem-I) 2017-18
Computer Science
Share with your class...
Saved announcements (2)
Suhas Pachpande
Jun 20, 2020
Online English Proficiency Test!
2 attachments
Add class comment
Suhas Pachpande
May 27, 2020
How to communicate confidently? Nice lecture to attend. Don't miss.
Stream
Classwork
People

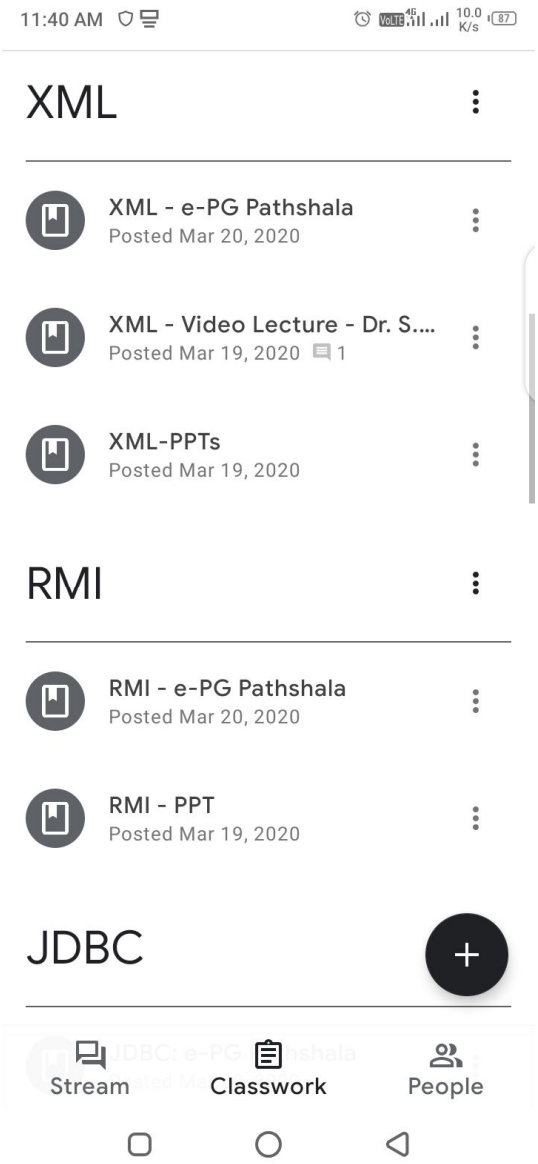

11:37 AM
Add class comment
Suhas Pachpande
Sep 25, 2018
Lecture Notes Unit-III : Transport Layer
1 attachment
Add class comment
New assignment: Test-I (Introduction)
Sep 25, 2018
Add class comment
Suhas Pachpande
Sep 18, 2018 (Edited Sep 20, 2018)
Application Layer Unit-II : Reading Material
1 attachment
Add class comment
New assignment: If you are given an opportunity ...
Stream
Classwork
People

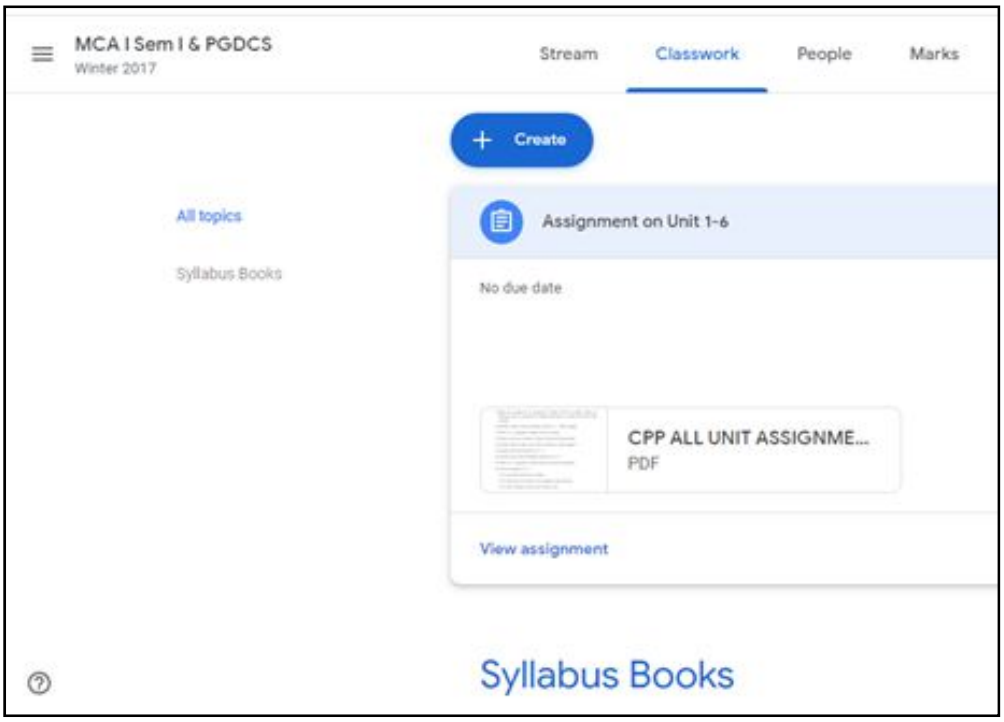

11:37 AM
New assignment: Draw the architecture of ISO-OSI ...
Aug 24, 2018
Add class comment
New question: Which of the following is not an ex...
Aug 17, 2018
1 class comment
New assignment: Explain various types of c...
Aug 11, 2018 (Edited Sep 1, 2018)
Add class comment
Suhas Pachpande
Aug 11, 2018
Evolution of Computer Networks: Reading Material
1 attachment
Add class comment
Suhas Pachpande
Aug 8, 2018
Stream
Classwork
People

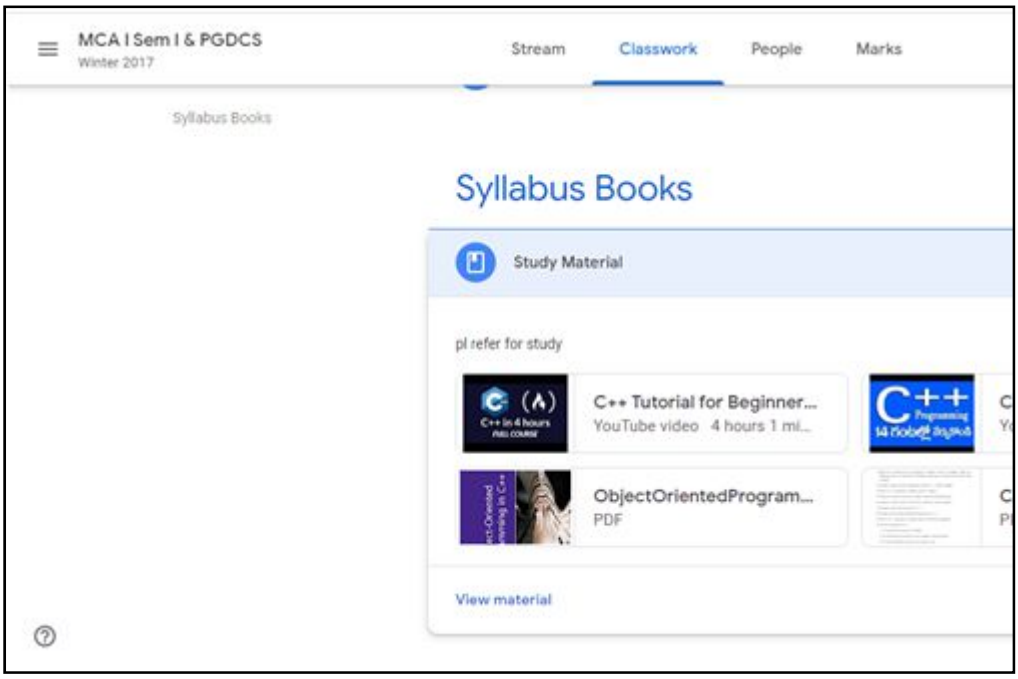

11:38 AM
Unit-I
Explain various types of co...
Posted Aug 17, 2018
Which of the following is n...
Posted Aug 17, 2018 1
Objective Test-I
Posted Sep 20, 2018
Test-I (Introduction)
Posted Sep 25, 2018
Explain various types of co...
Posted Sep 26, 2019
Unit-II
Students can only see topics with published posts
Stream
Classwork
People

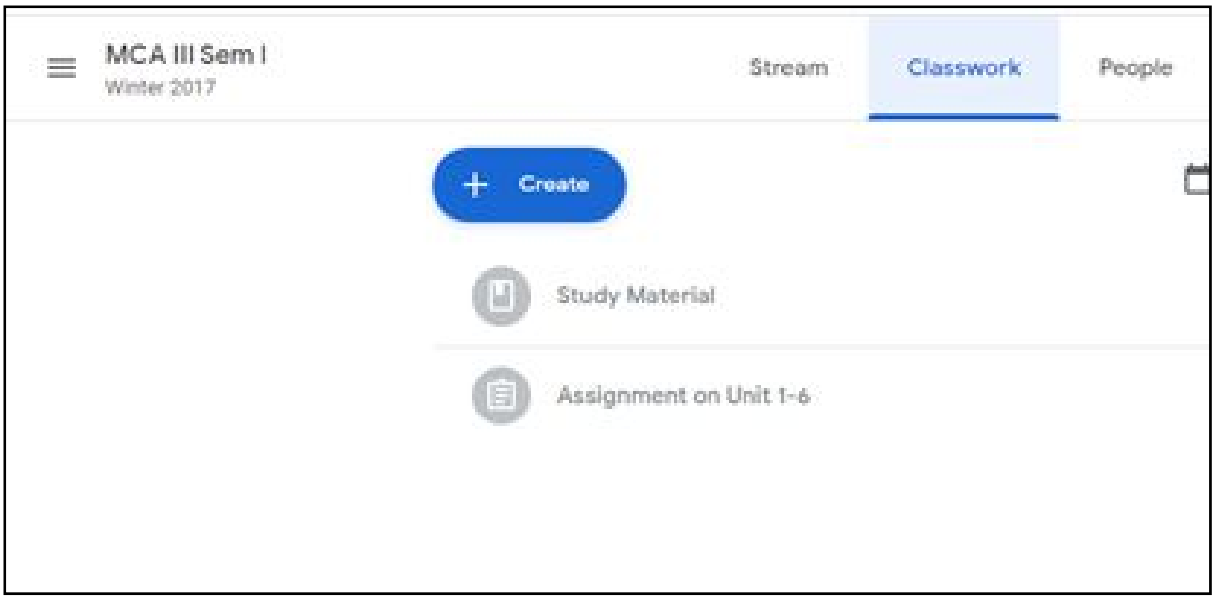

11:39 AM
MSc (Comp Sci) - Network
Sem-III
Share with your class...
New assignment: MCQ Test-1
Sep 14, 2020
Add class comment
New assignment: Describe the ISO-OSI model of net...
Sep 14, 2020
Add class comment
New material: Animated video on how internet wo...
Sep 14, 2020
Add class comment
New material: Study
Stream
Classwork
People

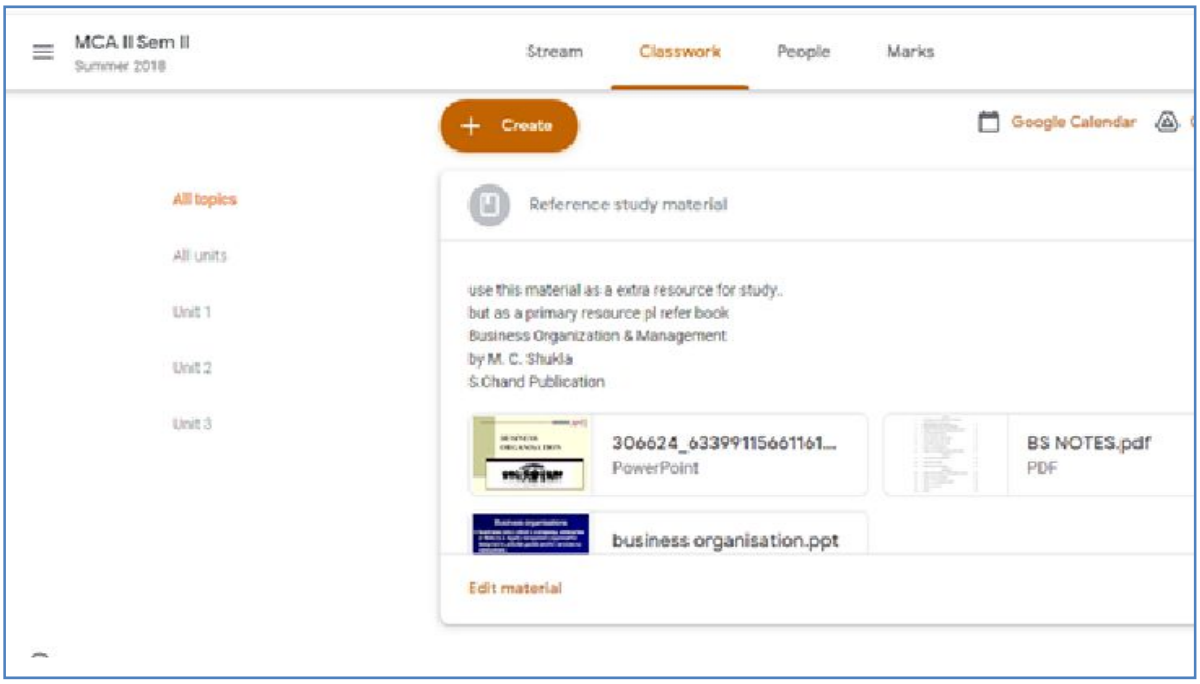

11:40 AM
MCA-II Sem-II 20...
Tests
CSC Test: Unit-VI
Posted Jun 3, 2020
CSC Test: Unit-V
Posted Jun 3, 2020
CSC Test: Unit-IV
Posted Jun 3, 2020
CSC Test: Unit I, II and III
Posted May 27, 2020
CSC Objective Test-2
Posted Apr 2, 2020
CSC Objective Test-1
Posted Apr 2, 2020
Stream
Classwork
People

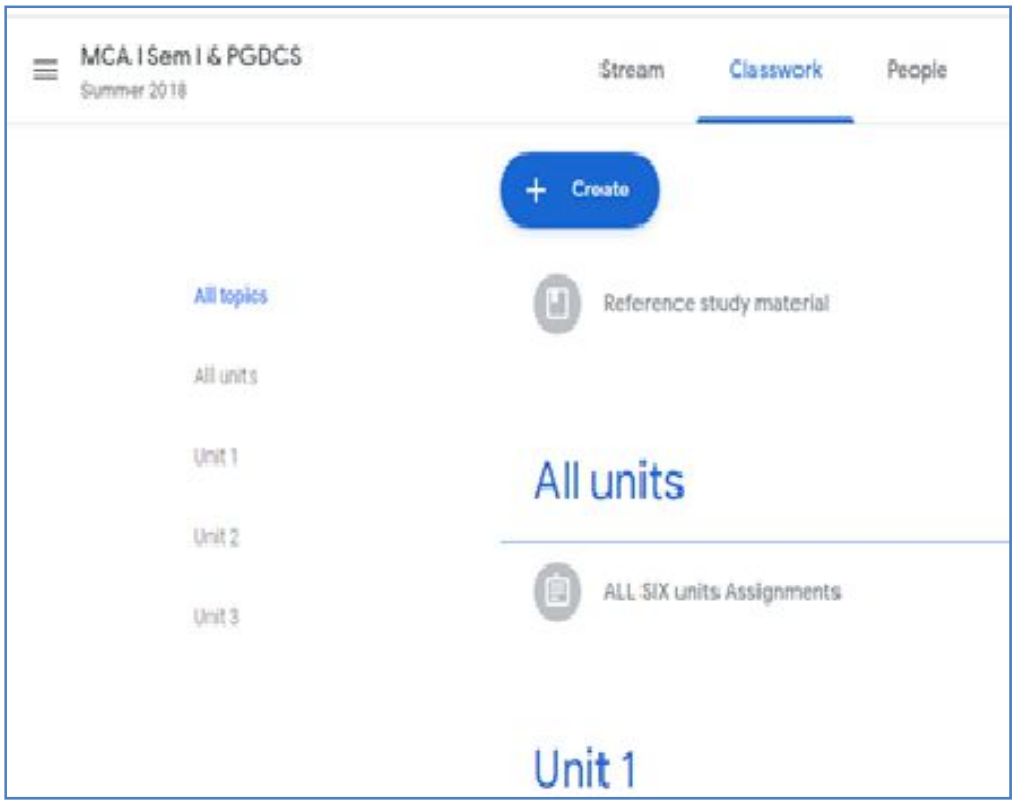

11:40 AM
XML
XML - e-PG Pathshala
Posted Mar 20, 2020
XML - Video Lecture - Dr. S....
Posted Mar 19, 2020 1
XML-PPTs
Posted Mar 19, 2020
RMI
RMI - e-PG Pathshala
Posted Mar 20, 2020
RMI - PPT
Posted Mar 19, 2020
JDBC
Stream
Classwork
People


MCA I Sem I & PGDCS
Winter 2017
Stream
Classwork
People
Marks
Create
All topics
Syllabus Books
Assignment on Unit 1-6
No due date
CPP ALL UNIT ASSIGNME...
PDF
View assignment
Syllabus Books

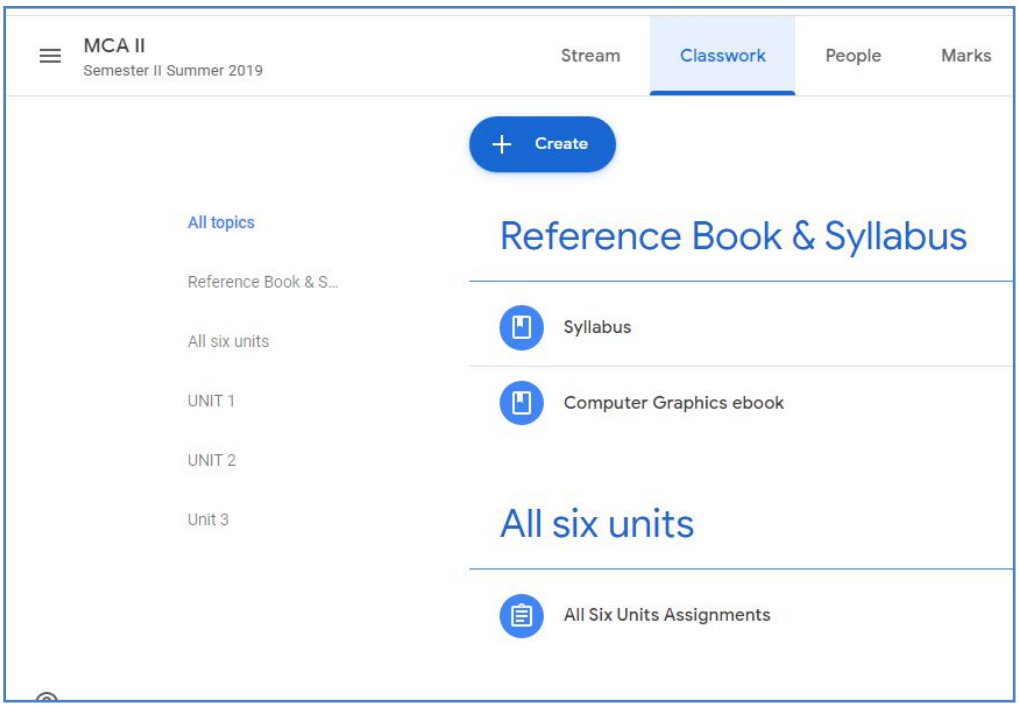

MCA I Sem I & PGDCS
Winter 2017
Stream
Classwork
People
Marks
Syllabus Books
Syllabus Books
Study Material
pl refer for study
C++ Tutorial for Beginner...
YouTube video 4 hours 1 mi...
ObjectOrientedProgram...
PDF
View material

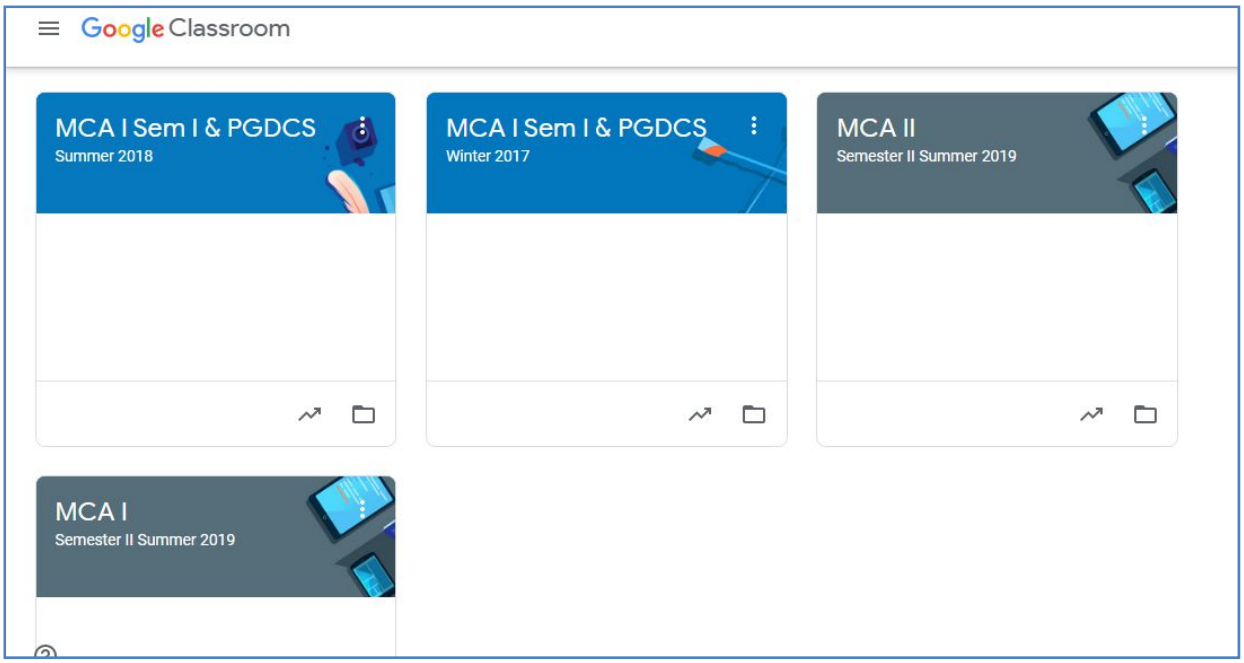

MCA III Sem I
Winter 2017
Stream
Classwork
People
Create
Study Material
Assignment on Unit 1-6


MCA II Sem II
Summer 2018
Stream
Classwork
People
Marks
Create
Google Calendar
All topics
All units
Unit 1
Unit 2
Unit 3
Reference study material
use this material as a extra resource for study.
but as a primary resource pl refer book
Business Organization & Management
by M. C. Shukla
S.Chand Publication
306624_633991156611161...
PowerPoint
BS NOTES.pdf
PDF
business organisation.ppt
Edit material

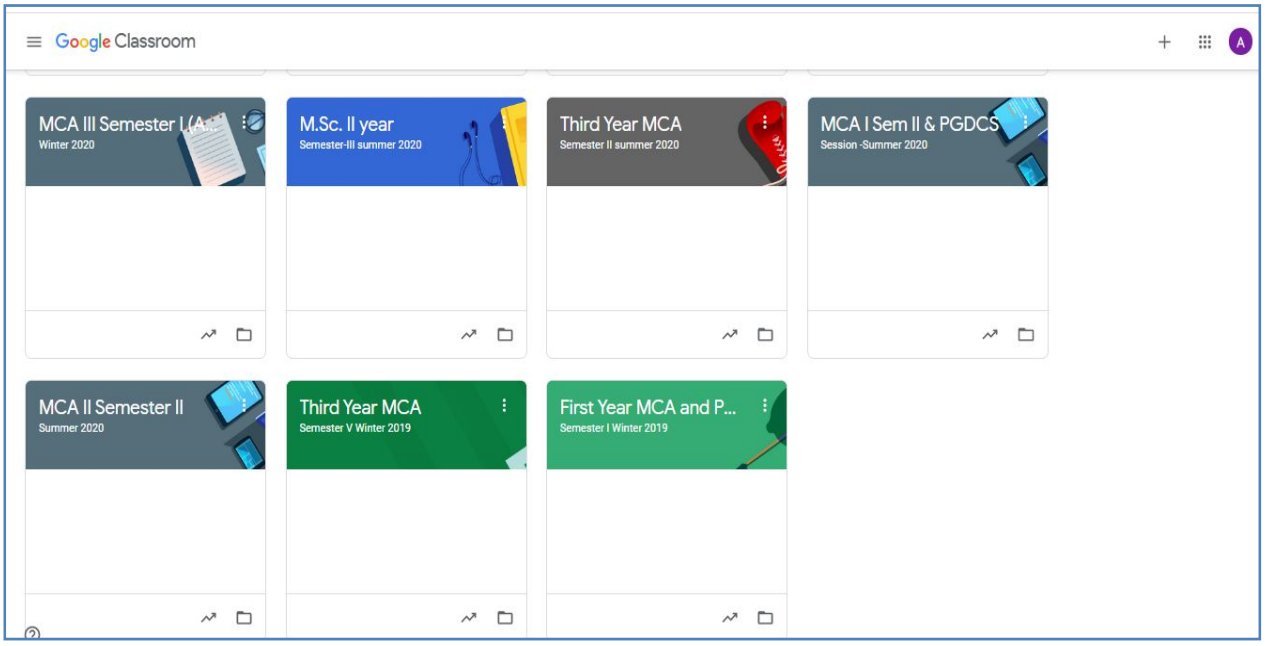


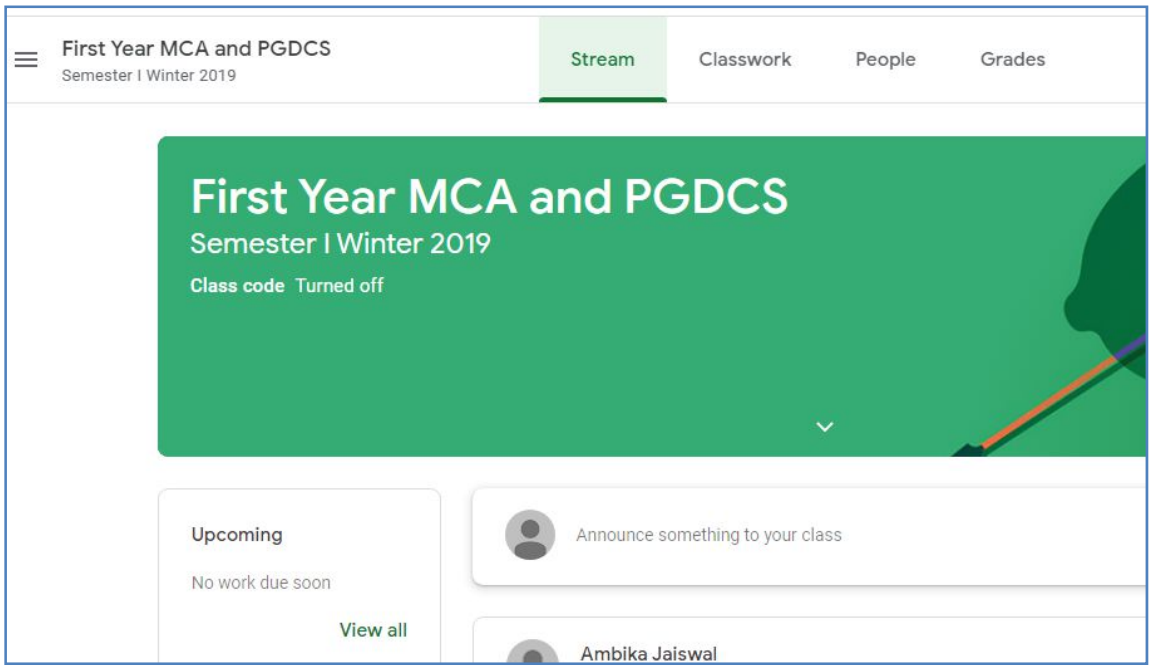
4)2018-19: Tutorials on Youtube, NPTEL Videos, Self made Powerpoint presentations, Google classroom.

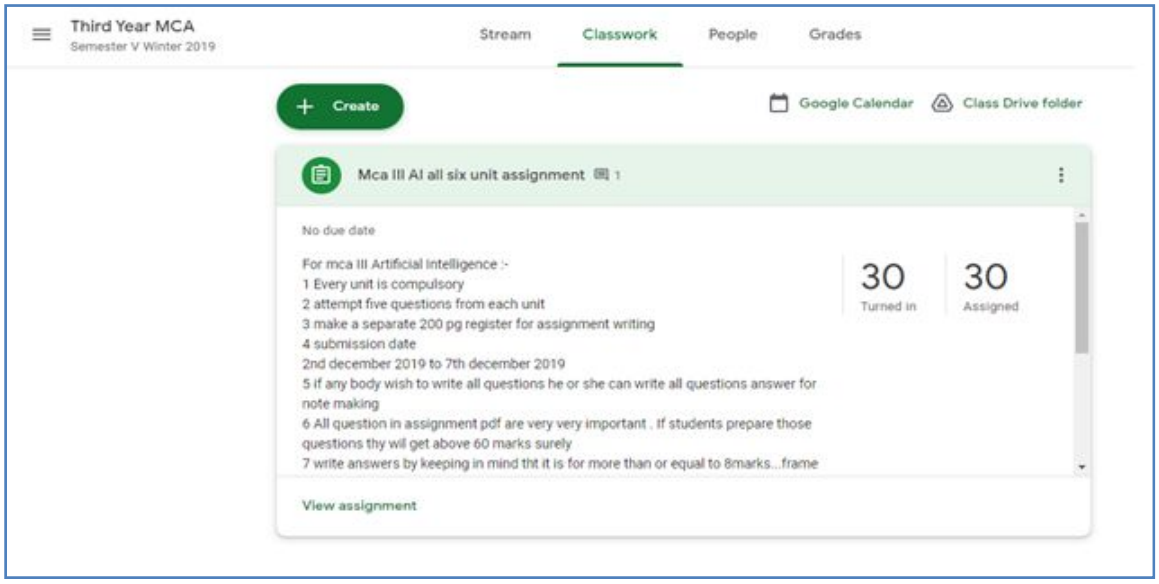


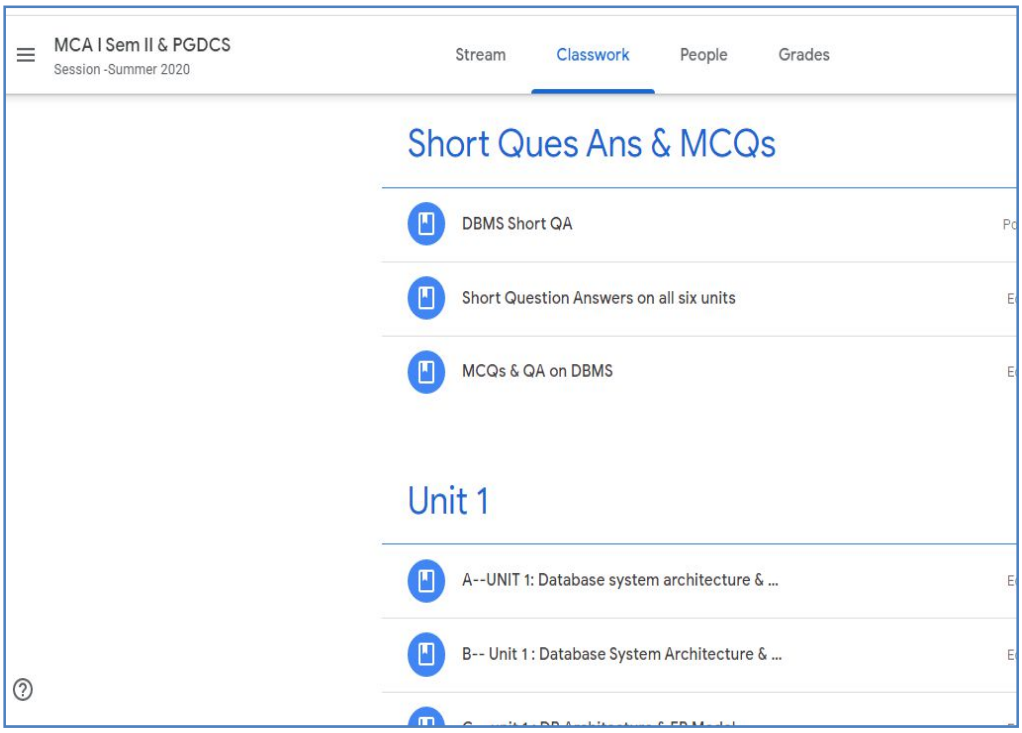


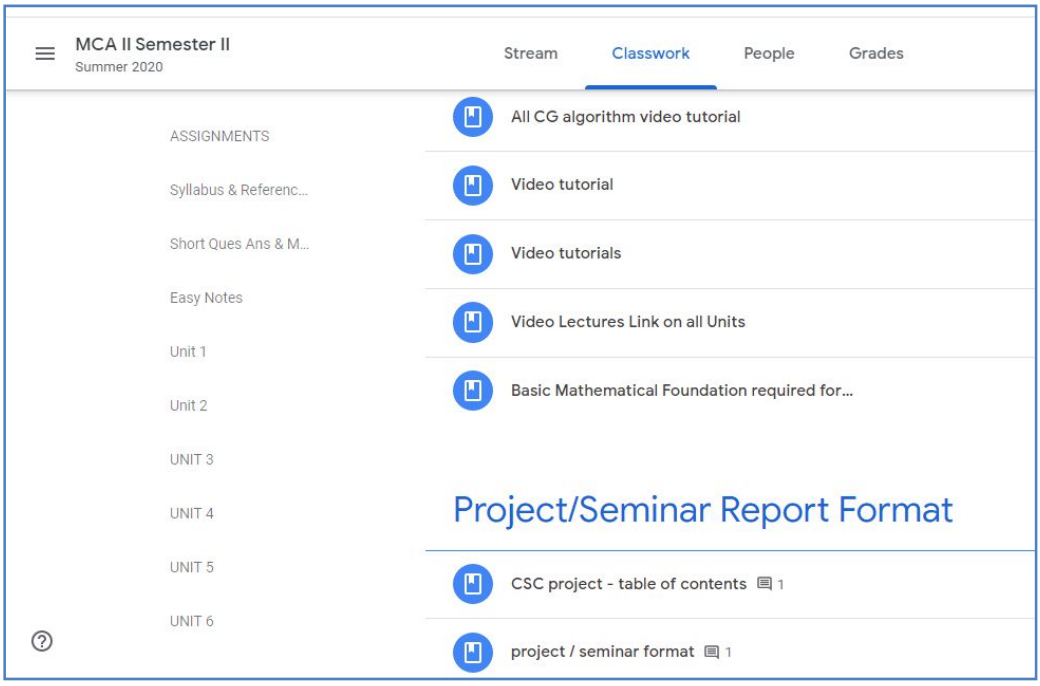
5) 2019-20: Tutorials on Youtube, NPTEL Videos, Self made Powerpoint presentations, Google classroom.

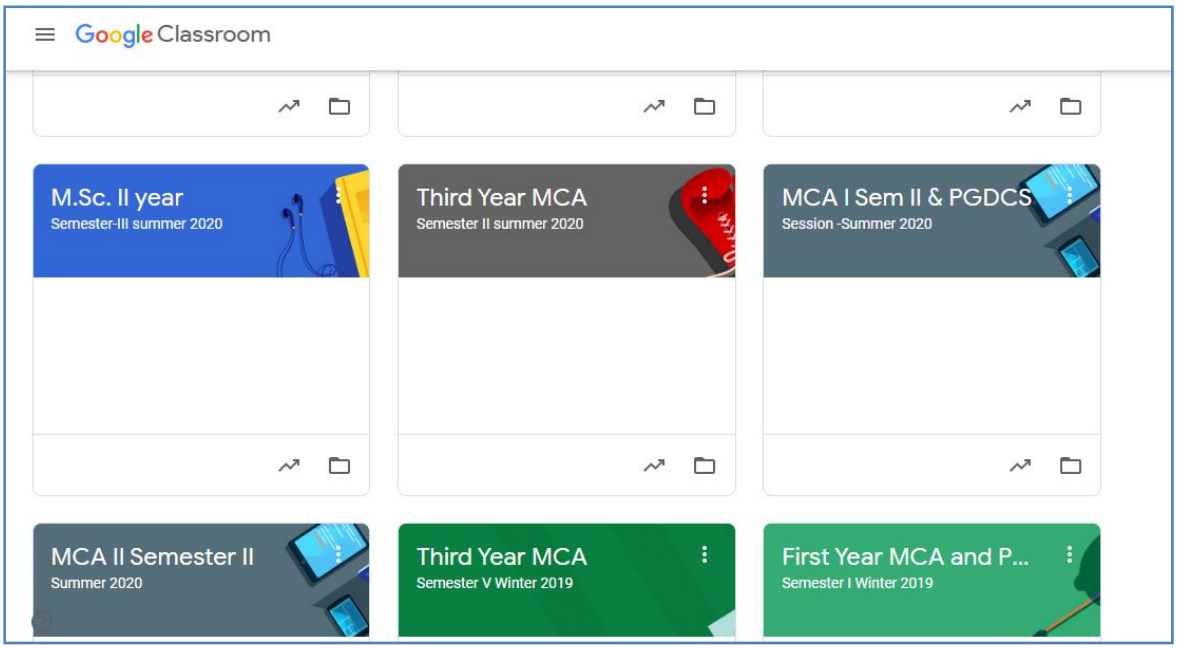



First Year MCA and PGDCS
Semester I Winter 2019
Stream
Classwork
People
Grades
First Year MCA and PGDCS
Semester I Winter 2019
Class code Turned off
Upcoming
No work due soon
View all
Announce something to your class
Ambika Jaiswal


Third Year MCA
Semester V Winter 2019
Stream
Classwork
People
Grades
Create
Google Calendar
Class Drive folder
Mca III AI all six unit assignment 1
No due date
For mca III Artificial intelligence :-
1 Every unit is compulsory
2 attempt five questions from each unit
3 make a separate 200 pg register for assignment writing
4 submission date
2nd december 2019 to 7th december 2019
5 if any body wish to write all questions he or she can write all questions answer for note making
6 All question in assignment pdf are very very important . If students prepare those questions thy wil get above 60 marks surely
7 write answers by keeping in mind tht it is for more than or equal to 8marks...frame
30
Turned in
30
Assigned
View assignment


MCA I Sem II & PGDCS
Session -Summer 2020
Stream
Classwork
People
Grades
Short Ques Ans & MCQs
DBMS Short QA
Short Question Answers on all six units
MCQs & QA on DBMS
Unit 1
A--UNIT 1: Database system architecture & ...
B-- Unit 1 : Database System Architecture & ...


MCA II Semester II
Summer 2020
Stream
Classwork
People
Grades
ASSIGNMENTS
Syllabus & Referenc...
Short Ques Ans & M...
Easy Notes
Unit 1
Unit 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
All CG algorithm video tutorial
Video tutorial
Video tutorials
Video Lectures Link on all Units
Basic Mathematical Foundation required for...
Project/Seminar Report Format
CSC project - table of contents 1
project / seminar format 1

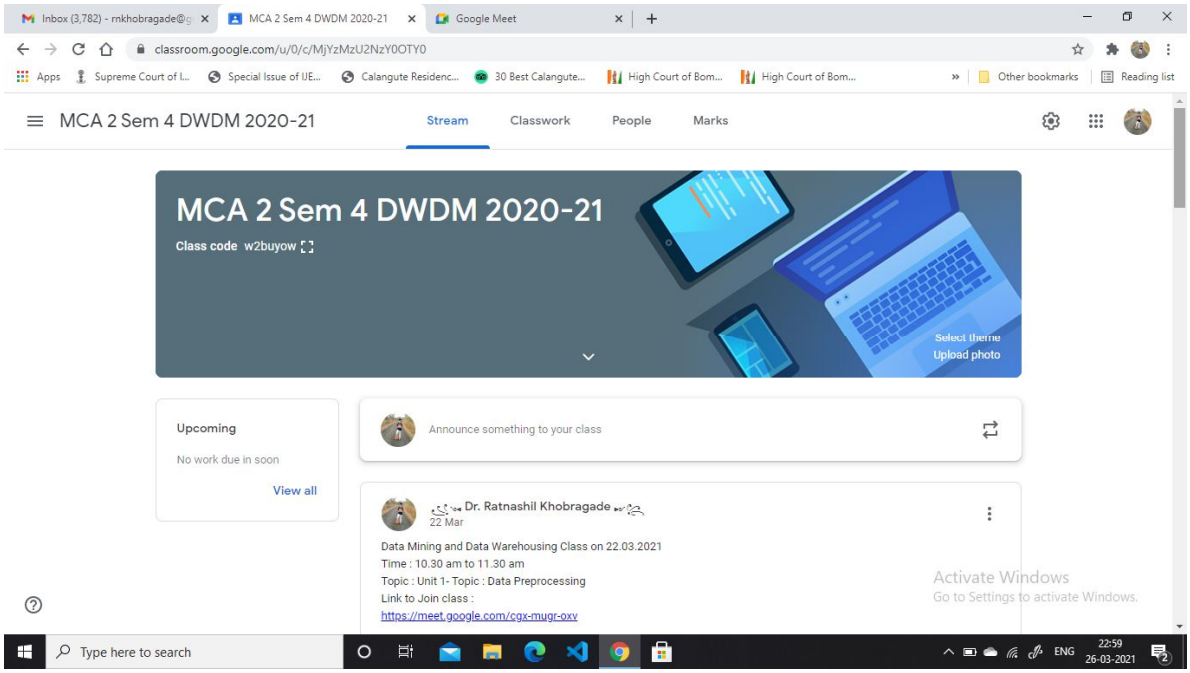


Data Mining ad Data Ware Housing

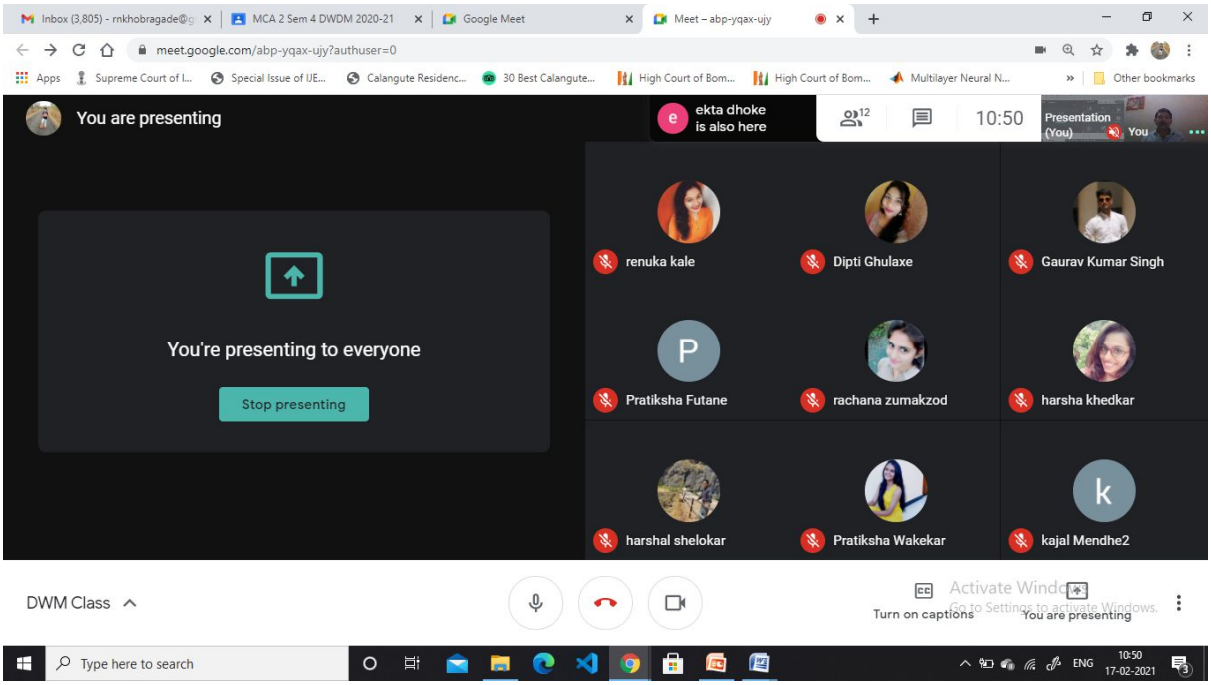
MCA 2nd Year Sem 4

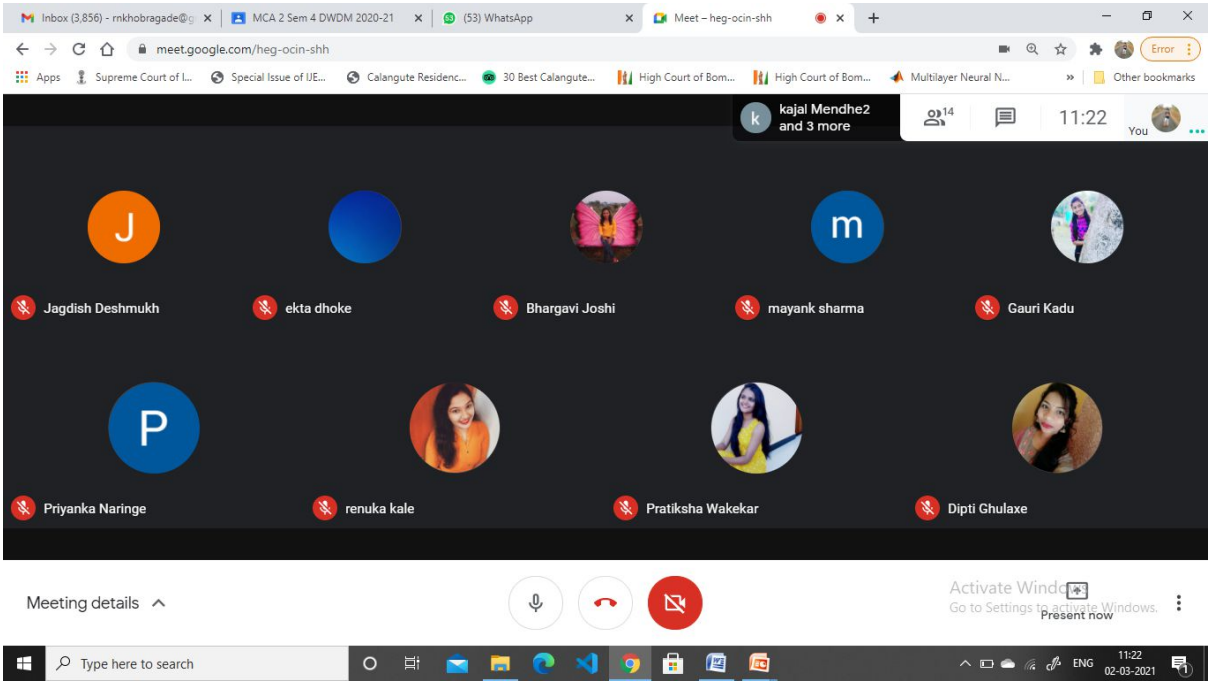
Session 2020-21

1. Google Classroom use for Teaching Assistance:



2. Google Meet use for Online Teaching:



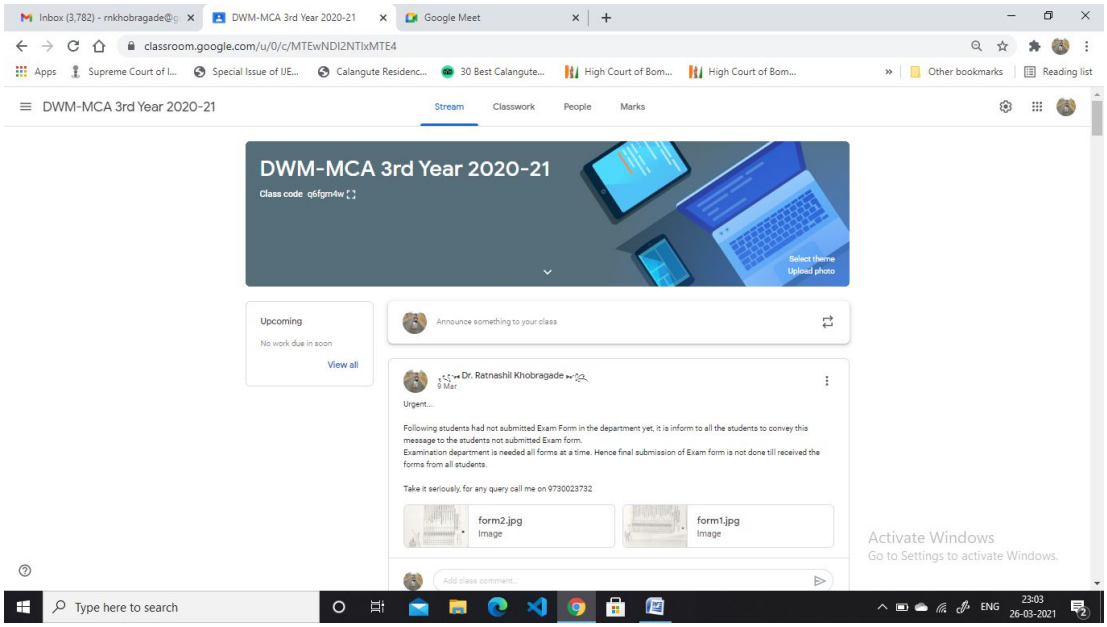


Data Mining ad Data Ware Housing

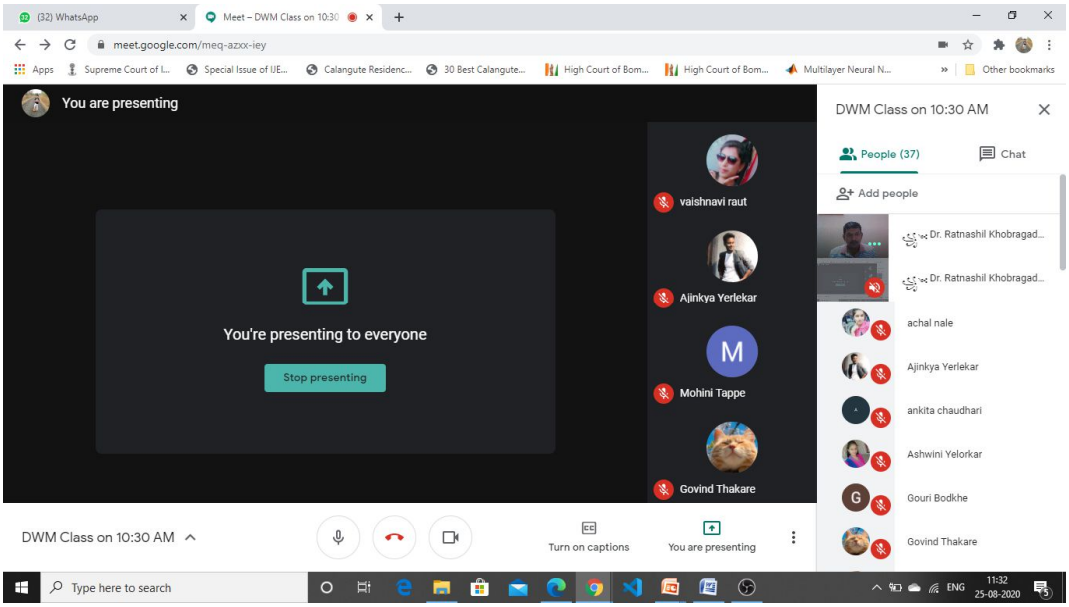
MCA 3rd Year Sem 5

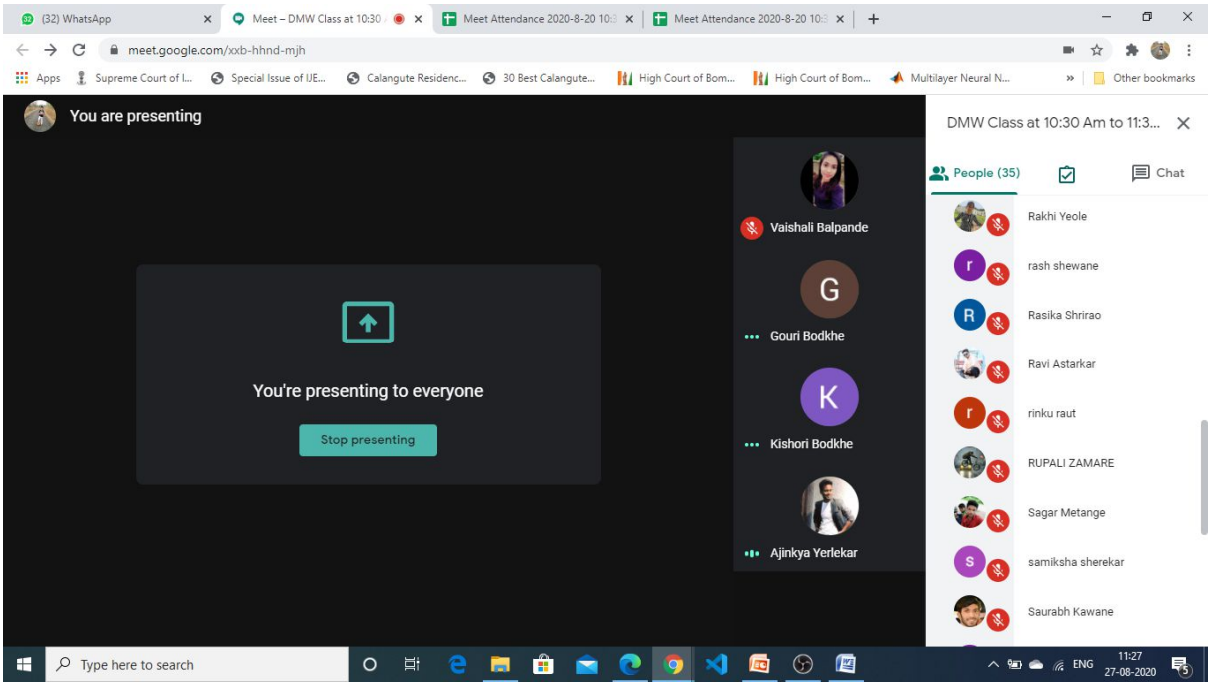
Session 2020-21

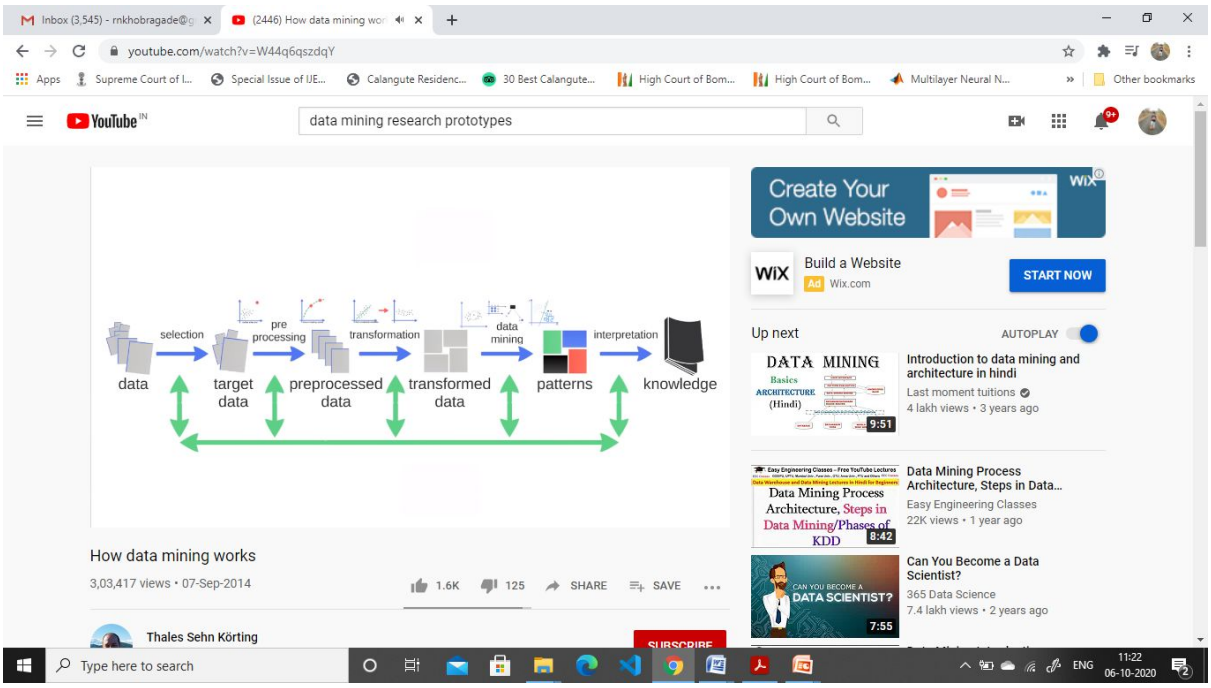
1. Google Classroom use for Teaching Assistance:

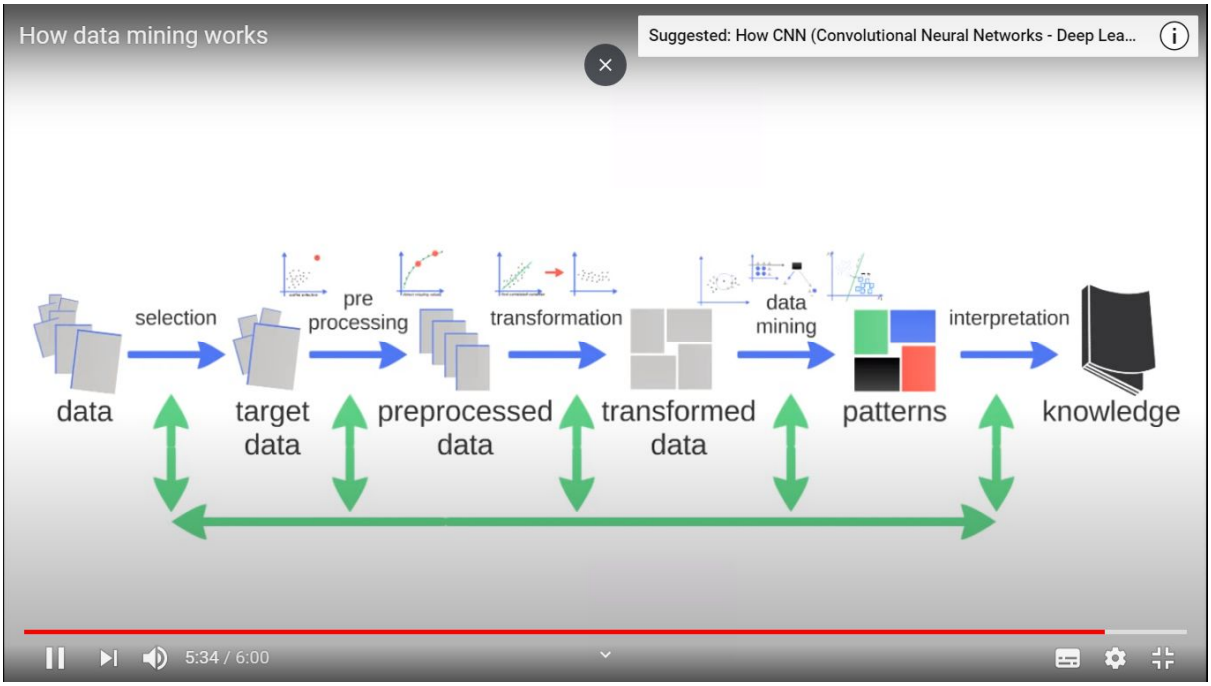


2. Google Meet use for Online Teaching:

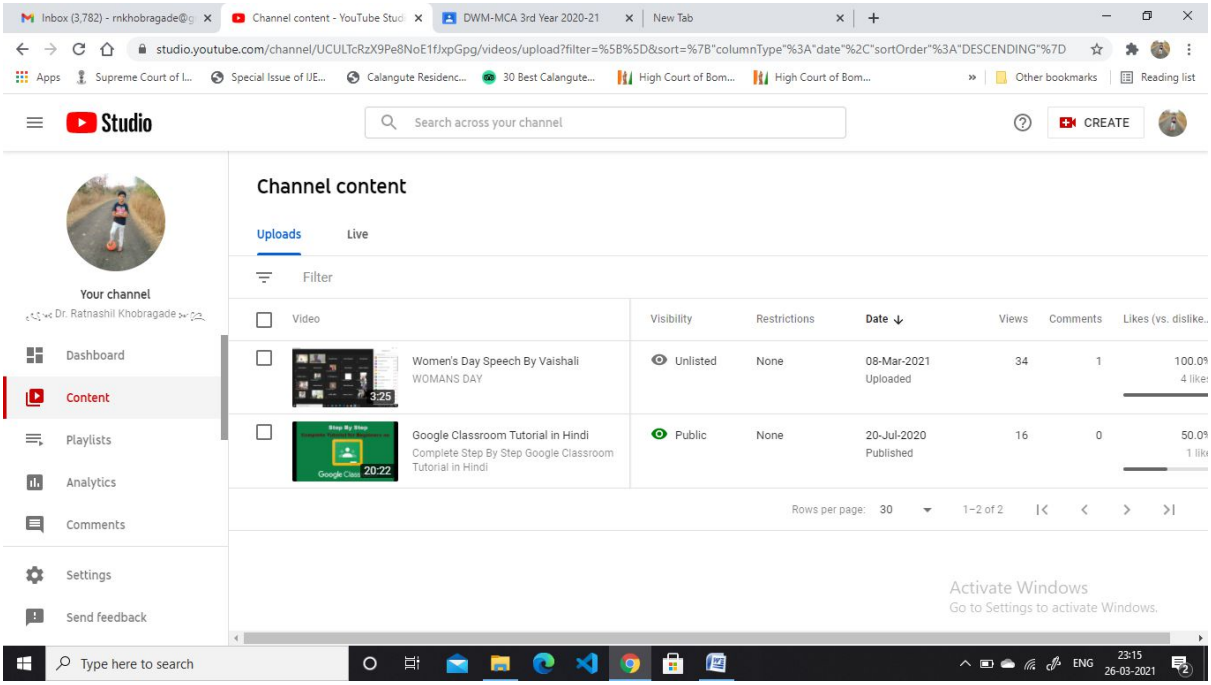


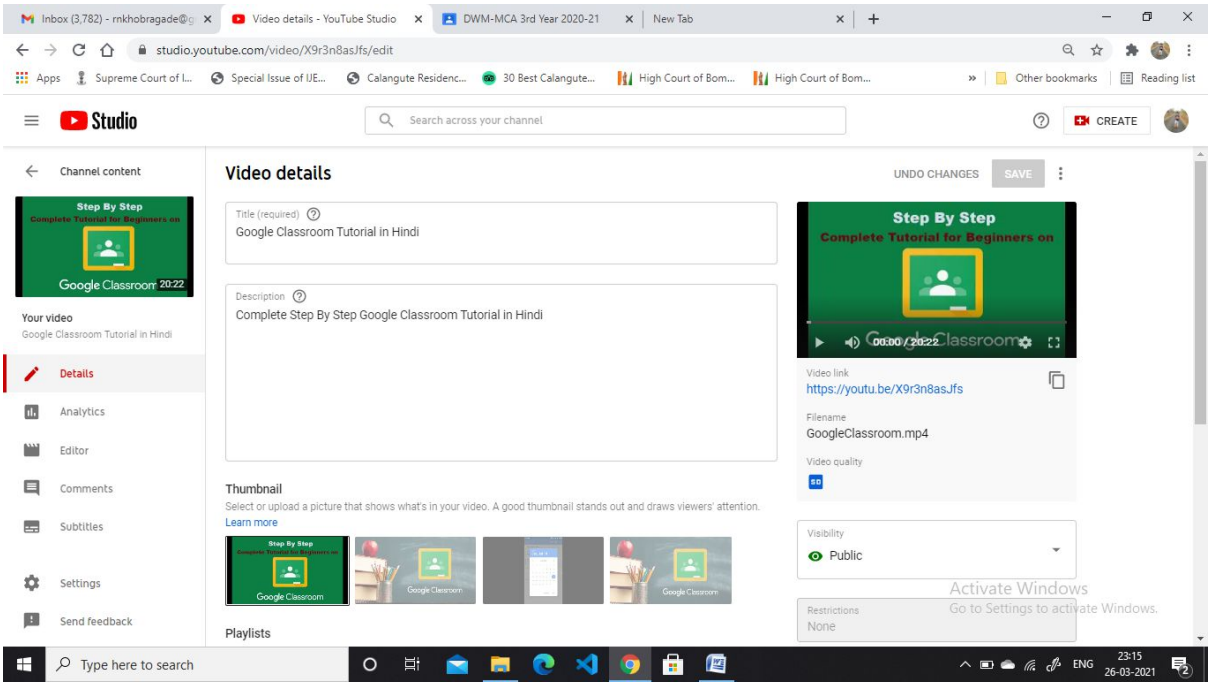

You are presenting
You're presenting to everyone
Stop presenting
Vaishali Balpande
Gouri Bodkhe
Kishori Bodkhe
Ajinkya Yerlekar
DMW Class at 10:30 Am to 11:3...
People (35)
Chat
Rakhi Yeole
rash shewane
Rasika Shrirao
Ravi Astarkar
rinku raut
RUPALI ZAMARE
Sagar Metange
samiksha sherekar
Saurabh Kawane
Type here to search
ENG
11:27
27-08-2020


youtube.com/watch?v=W44q6qszdqY
data mining research prototypes
selection
pre processing
transformation
data mining
interpretation
data
target data
preprocessed data
transformed data
patterns
knowledge
How data mining works
3,03,417 views • 07-Sep-2014
1.6K
125
SHARE
SAVE
Thales Sehn Körting
Create Your Own Website
Build a Website
Ad Wix.com
START NOW
Up next
AUTOPLAY
Introduction to data mining and architecture in hindi
Last moment tuitions
4 lakh views • 3 years ago
Data Mining Process Architecture, Steps in Data...
Easy Engineering Classes
22K views • 1 year ago
Can You Become a Data Scientist?
365 Data Science
7.4 lakh views • 2 years ago
Type here to search
ENG
11:22
06-10-2020



3. YouTube Content Development




Inbox (3,782) - rnkhobragade@g
Video details - YouTube Studio
DWM-MCA 3rd Year 2020-21
New Tab
studio.youtube.com/video/X9r3n8asJfs/edit
Apps
Supreme Court of I...
Special Issue of IJE...
Calangute Residenc...
30 Best Calangute...
High Court of Bom...
High Court of Bom...
Other bookmarks
Reading list
Studio
Search across your channel
CREATE
Channel content
Video details
UNDO CHANGES
SAVE
Step By Step
Complete Tutorial for Beginners on
Google Classroom
20:22
Your video
Google Classroom Tutorial in Hindi
Title (required)
Google Classroom Tutorial in Hindi
Description
Complete Step By Step Google Classroom Tutorial in Hindi
Details
Analytics
Editor
Comments
Subtitles
Settings
Send feedback
Thumbnail
Select or upload a picture that shows what's in your video. A good thumbnail stands out and draws viewers' attention.
Learn more
Playlists
Video link
https://youtu.be/X9r3n8asJfs
Filename
GoogleClassroom.mp4
Video quality
SD
Visibility
Public
Restrictions
None
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
23:15
26-03-2021

Department of Education

The Department of Education encourage all the students in participating learning activities in all the courses. We split the syllabus of each course according to the number of students and distribute topics among them. Then students will prepare and present as a seminar of each paper. We have dissertation as a part of syllabus, all the students are encourage identifying educational issues and collecting related data and presenting in the form of research report. Students are able to present their views and opinions in front of their peers. The can explain the concepts and collect the information required for this. This inculcates the habit of reading, referencing and cross referencing. Apart from this, students are motivated to undertake case studies during the internship programme.

Department of English

Department of Hindi


संत गाडगे बाबा अमरावती विश्वविद्यालय, अमरावती
नारीवादी हिन्दी कविताओं का पाठ्यांक
विशेष व्याख्यान
॥ विषय ॥
नारीवादी दृष्टिकोण से इस्मत चुगताई इनका साहित्य
डॉ. प्रभा गणोरकर
Accredited by NAAC with 'A' Grade

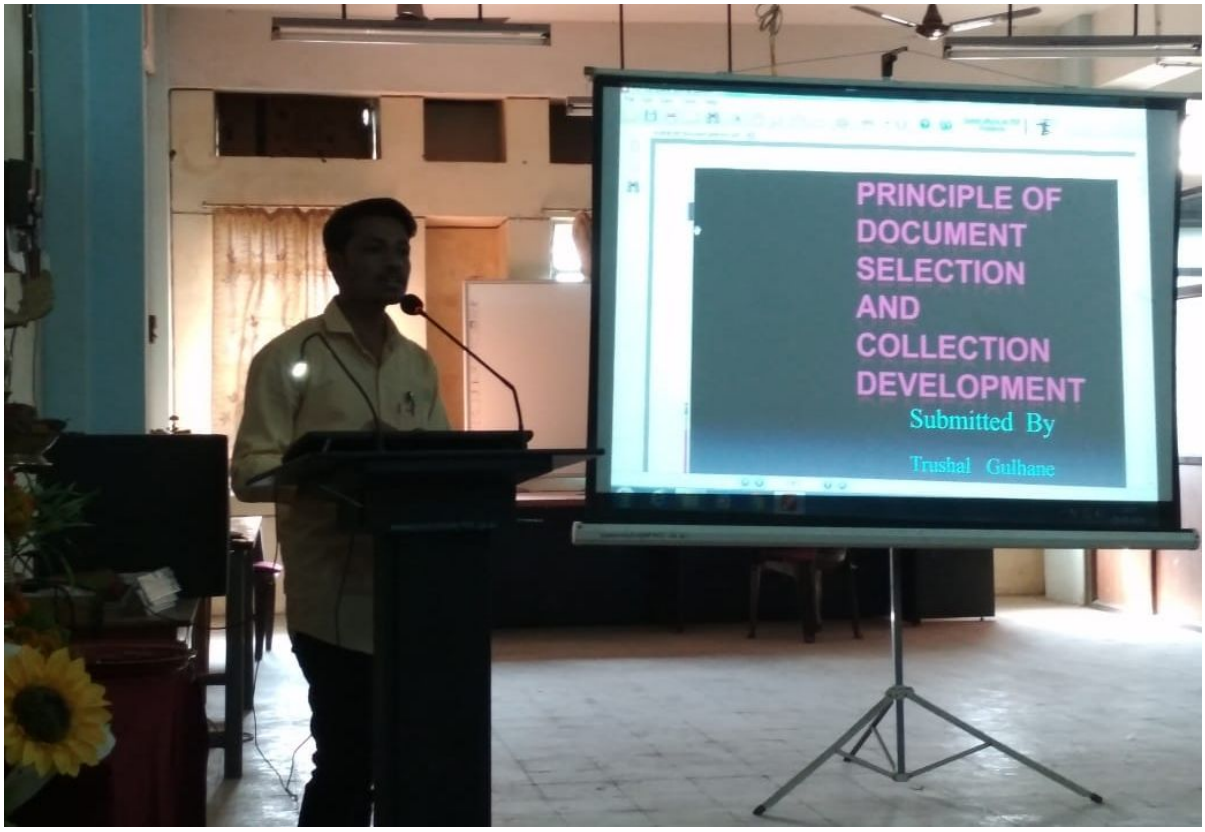

संत गाडगे बाबा अमरावती विश्वविद्यालय, अमरावती
नारीवादी हिन्दी कविताओं का पाठ्यांक
विशेष व्याख्यान
॥ विषय ॥
नारीवादी दृष्टिकोण से इस्मत चुगताई इनका साहित्य
डॉ. प्रभा गणोरकर
Accredited by NAAC with 'A' Grade

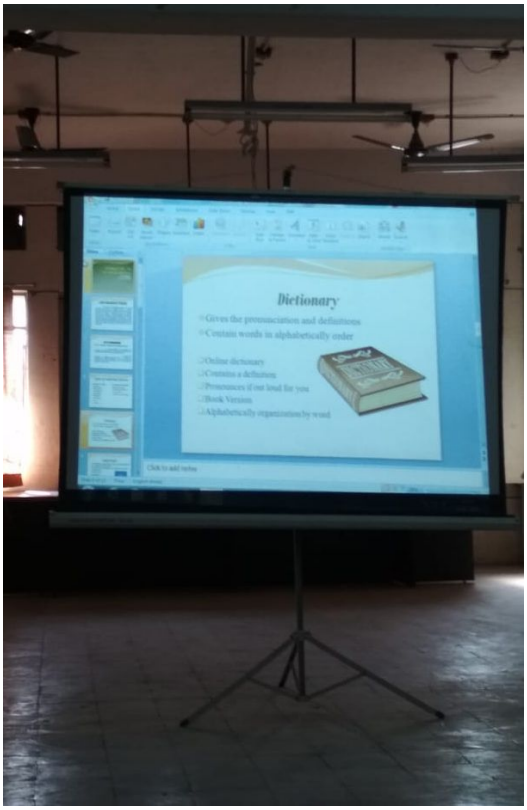
Department of Library & Information Science

Department of Library & Information Science uses various methods of teaching and learning. The events are celebrated like Birth Anniversary of Dr. S. R. Ranganathan, father of Library Science to make aware regarding his contribution in the field of Library Science and also the scientific laws developed by him. Invited guest lecturers to deliver talk on Competitive exams, communication skill, facing interviews etc, also celebrating national and International Library days. It is the good impact of Library & Information Science Study Tour on the Library & Information science students. The main objective of a study tour is to get familiar with the unfamiliar systems, organizations, notions, customs, culture, places and people. The students also visit to the other local and university libraries. They get an opportunity to interact with the students and teachers of other institution. The students also identified manuscripts from local libraries and learned to digitize the rare material. The department also conducts Inter collegiate Seminar completion, Poster presentation and LIS Quiz competition so that they must be familiar to present the seminar paper on current trends in Library & Information Science. Extra-curricular activities are also organized to present inner qualities. The students participate and learn from each activity conducted in the department.

Celebration of Dr. S. R. Ranganathan, Father of Library Science

Presentation of Seminar Papers by the Students


PRINCIPLE OF
DOCUMENT
SELECTION
AND
COLLECTION
DEVELOPMENT
Submitted By
Trushal Gulhane



Experimental teaching-Library Visit Tour


ENCYCLOPEDIA AND DICTIONARY
RARE BOOKS


राजस्व
राजस्व
भारतीय अर्थव्यवस्था


English Literature

Department of Marathi


लेखक आपल्या भेटीला
उद्या कादंबरीच्या निमित्ताने

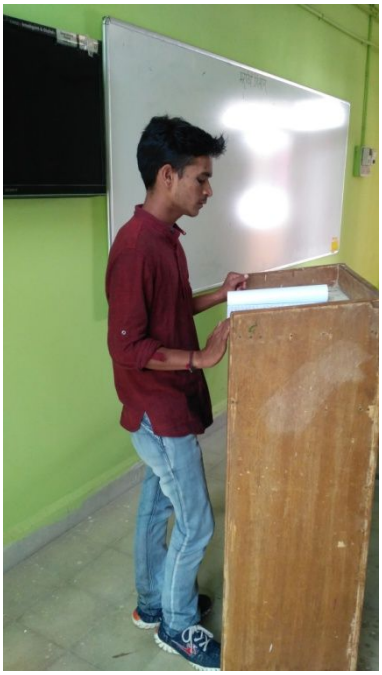

संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती
मराठी विभाग
कथालेखन कार्यशाळा
दि. १९ ते २१ डिसेंबर २०१६
19.12.2016 14:22


19.12.2016 14:52


मराठी विभाग, संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती
आणि
मराठी विभाग, श्री शिवाजी महाविद्यालय, अकोट
कवितालेखन कार्यशाळा
दि. १, २, ३ फेब्रुवारी २०१९
मार्गदर्शन सत्र
दि. १, २, ३ फेब्रुवारी २०१९


मार्गदर्शन सत्र
दि १, २३ फेब्रुवारी २०१९


श श्र
श्रावण श्रावण
श्रोता श्रोता
श्री श्री



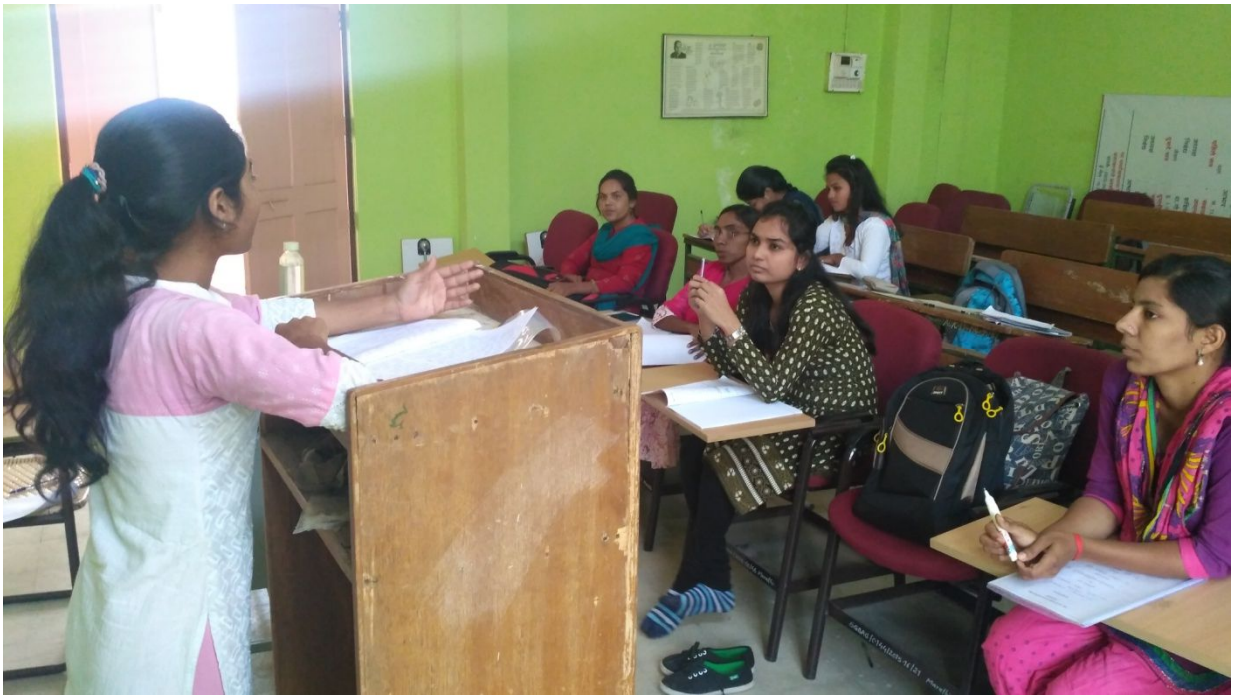




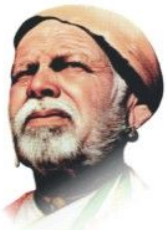








संत गाडगे बाबा अमरावती विद्यापीठ
अमरावती



मराठी विभाग
आयोजित
विश्वबंधुत्व दिनानिमित्त
महाविद्यालयीन व विद्यापीठीय विद्यार्थ्यांसाठी

कवी केशवसुत काव्यस्पर्धा

बुधवार
११ सप्टेंबर २०१९
सकाळी १०.०० वाजता

■ **स्थळ :**

दृक-श्राव्य सभागृह
संत गाडगे बाबा
अमरावती विद्यापीठ
अमरावती

प्रथम पुरस्कार - रु. २००० /-
द्वितीय पुरस्कार - रु. १५०० /-
तृतीय पुरस्कार - रु. १०००/-

■ **अटी**

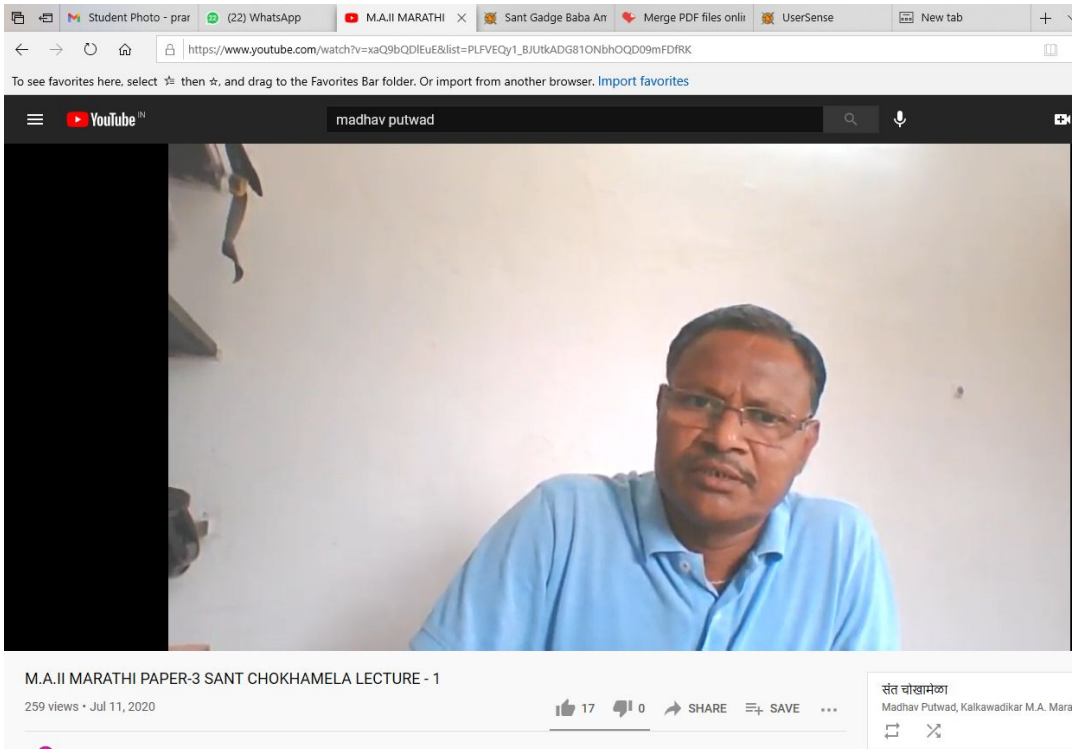
१) एक स्वरचित कविता परीक्षकांसमोर सादर करावी लागेल.
२) सादरीकरणासाठी जास्तीत जास्त ४ मिनिटे मिळतील.
३) प्राचार्य किंवा विभागप्रमुखांचे पत्र आणि ओळखपत्र आवश्यक राहील.

■ **संपर्क**

■ डॉ. मोना चिमोटे ९४२२१५५०८८
■ डॉ. माधव पुटवाड ९४२३७५०६०२
■ डॉ. हेमंत खडके ९८२२८४११९०

Recorded Lecture On You Tube

https://www.youtube.com/watch?v=xaQ9bQDlEuE&list=PLFVEQy1_BJUtkADG81ONbhOQD09mFDfRK&index=1



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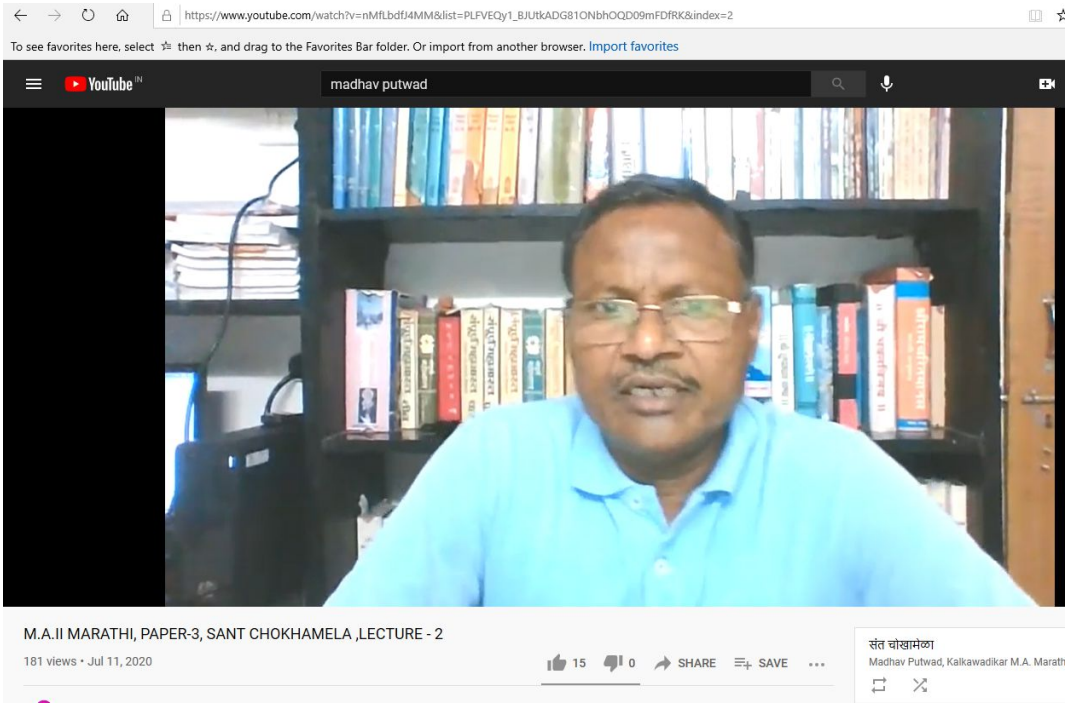

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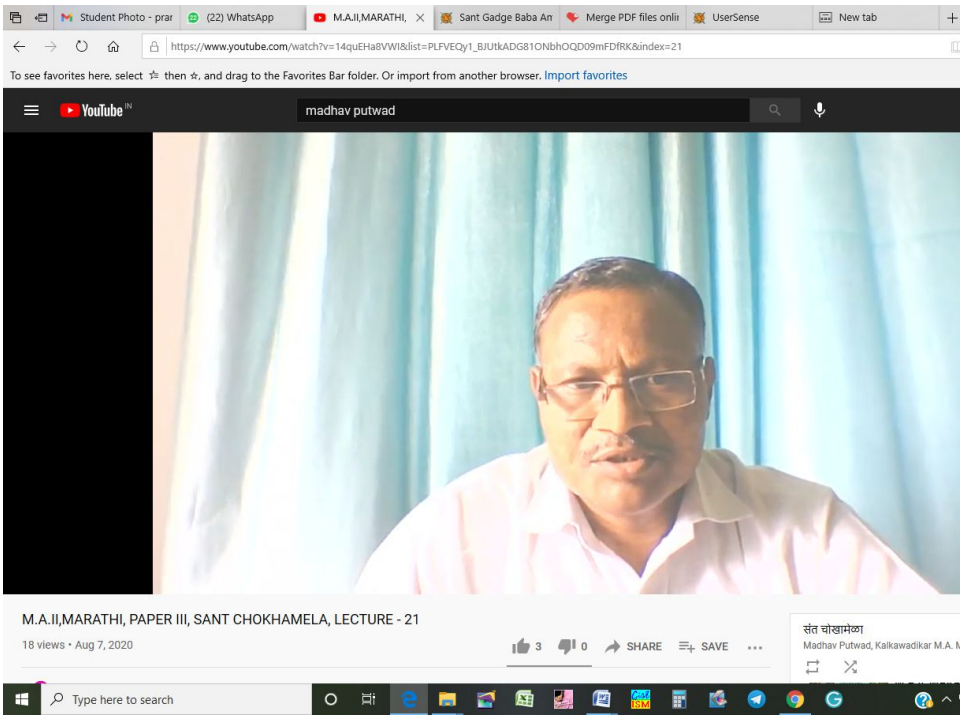
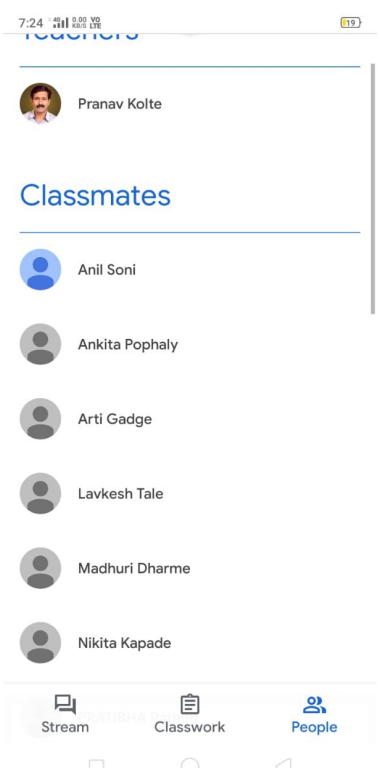
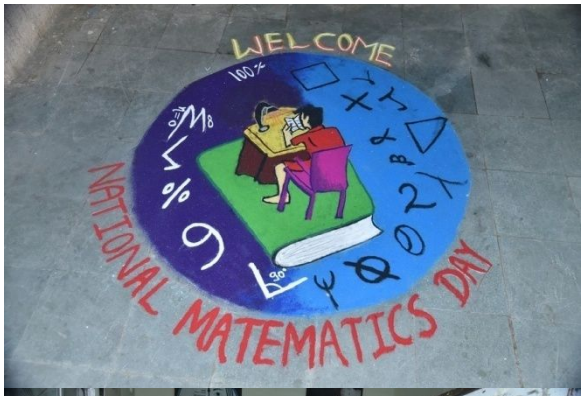


Screen shots Google Classroom



Department of Mathematics









Theory of Relativity in Real Life GPS Satellite

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India Academic Background
Surya Siddhant


Department of Physical Education


Cricket
P.G.T.D.
AMRAVATI


Cricket
P.G.T.D
AMRAVATI


DATE
25-01-2020


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AL EDUCATION
STUDENTS CENTRIC ACTIVITIES


P.G.T.D.
AMRAVATI


काशी हिन्दू विश्वविद्यालय

Department of Lifelong Learning and Extension Services

Women's Studies Centre

Women's Studies Centre a special focus was given on conducting student centric activities other than class room teaching. Students of the department visited some educational places / NGO's , Institutes and Social Activists & Intellectual who work on Gender & Women's issues.

1) Meet the Social Activists & Intellectual
(Meet With Dr. Nanda Taywade and Prabhakar Gambhir)

Date **:** 21/10/2015

Participated Students **:** Sachin Bhatkar, Deepak Surandase, Roshan Jawanjal, Nitin Bhatkar, Shubham Shende, Rajkumar Wankhade, Roshan Barabde

Outcomes:

- Importance of coming together to do social activity.
- What can we do to improve lives and solve the problems of Women.
- Got Opportunity to know how organizing and mobilizing people-power to take action and address social inequality.
- The visit helped in Understanding the complex nature of Caste, class & Gender issues in regional area.

2) Group Discussions on Violence against Women

Date **:**25/11/2016

Participated Students **:** MangeshBhutade, Amar Jawanjal, Nirmal Khirale and other students in university campus and affiliated colleges.

Outcomes:

- Got Conceptual Knowledge
- Helpful to know the information about various acts related with Violence against women's.
- Created sensitivity about these issue and encouraged to participate in like these types of campaign.

3) Seminar Competition on Women's Issues

Date **:**30/01/2018

Participated Students **:** Saurabh Yawalkar, Amar Jawnjal, Nirmal Kirale and other students in university campus and affiliated colleges.

Outcomes:

- Drew the attention of students on comtemporry women's issues

- Changed the traditional thinking process and developed gender perspective in Students.
- Helped to know the students about women's other problems and not only about sexual problems.
- Developed the skills of debating on women's issues.

4) Visit at Mahatma Gandhi International Hindi University, Wardha

Date **:** 26/09/2018

Participated Students **:** Rupali Bhowate, Priti More, Sangita Surpam, Sandip Bedare, Priya RuchikaLokhande , AsmitaMeshram , Dipti Nehar , Swapnil Ingale , Priya Sukhdeve , Hemant Bhande, AsmitaMeshram.

Outcomes:

- Established our network to another women's studies centre at other university.
- Made interaction with each other students of both women's studies centre.
- Understood the procedure of teaching, research and other programs.
- Got awareness in students about employment.


महापंडित राहुल सांकृत्यायन केन्द्रीय पुस्तकालय

5) Workshop on Constitution Promotion & Training Activity

Date **:** 31/12/2019

Participated Students **:** Priya Gajabe, Shraddha Chavhan, Pravin Raibole , Pooja Alone, Ruchika Lokhande ,AsmitaMeshram , Dipti Nehar , Swapnil Ingale , Priya Sukhdeve , Hemant Bhande, Asmita Meshram and other Affiliated Colleges Student in Amravati

Outcomes:

- Helpful to introduce the Indian Constitution and understand the importance of that.
- Helpful to know the importance of Indian Constitution by gender perspective.
- Developed the Communication skill to create the awareness of Indian Constitution by gender perspective.

.

6) Women's Night walk : RATRAGINI

Date **:** 22/ 12 /2019
Participated Students **:** Shraddha Chavhan, Pooja Alone, Dipti Nehar , Swapnil Ingale, jyotsnaMehakarand other Department students in University Campus.
Outcomes:

- Developed Self confidence to live without fear in public sphere.
- Got a own experience on related theory taught in books.
- Got idea of women's organization power.

7) Visit at Bahujan Hitay Society, Amravati

Date : 04/03/2020

Participated Students : Shraddha Chavhan, Pooja Alone, Swapnil Ingale , haghyshree Kamble, Priya Gajbe, Pallavi Sapkale, PritiChhapane, Dipti Nehar, AsmitaMeshram, Ruchika Lokhande.

Outcomes:

- Students knew the counselling process.
- Awareness about addiction.
- Meeting with there patient and counsellors was very helpful for students to know the reasons behind addiction and some ideas to overcome that.
- Developed stress management skills.
- The visit helped in Understanding Issues of addicted Women sand its reason.

8) Visit at 'Baba' De-addiction and Counselling Centre, Amravati

Date : 11/03/20220

Participated Students : Shraddha Chavhan, Pooja Alone , Swapnil Ingale , Veena Rathod,BhaghyshreeKamble, Priya Gajbe, Pallavi Sapkale, PritiChhapane.

Outcomes:

- Students knew the counselling process.
- Awareness about addiction.
- Meeting with there patient and counsellors was very helpful for students to know the reasons behind addiction and some ideas to overcome that.
- Developed stress management skills.
- The visit helped in understanding issues of addicted women and its reason.

Writing workshop on Indian and Western Feminist Thinkers Autobiographical Note

Date :06/03/2020

Participated Students : Shraddha Chavhan, Pooja Alone , Swapnil Ingale , BhaghyshreeKamble, Priya Gajbe,Sanjivani Chavan other students in university campus and affiliated colleges

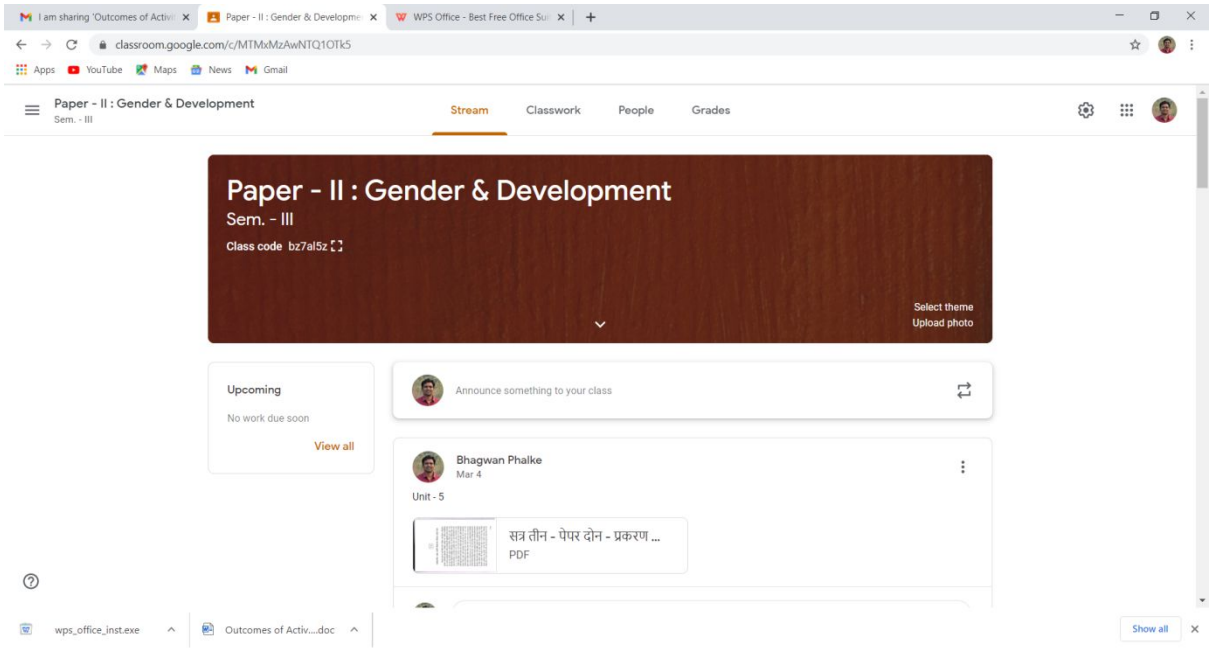
Outcomes:

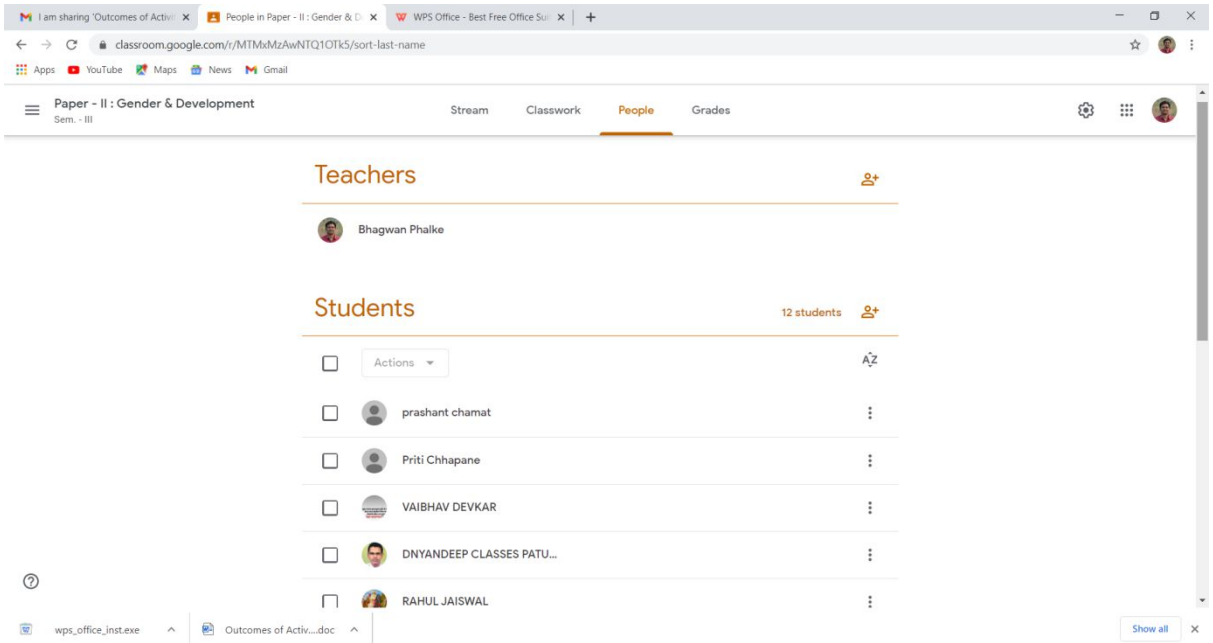
- Developed note-writing skills.
- Got a chance to introduced the work of unknown western and Indian feminist thinkers.
- Helped to get new resources for writing.
- Got inspiration for writing.

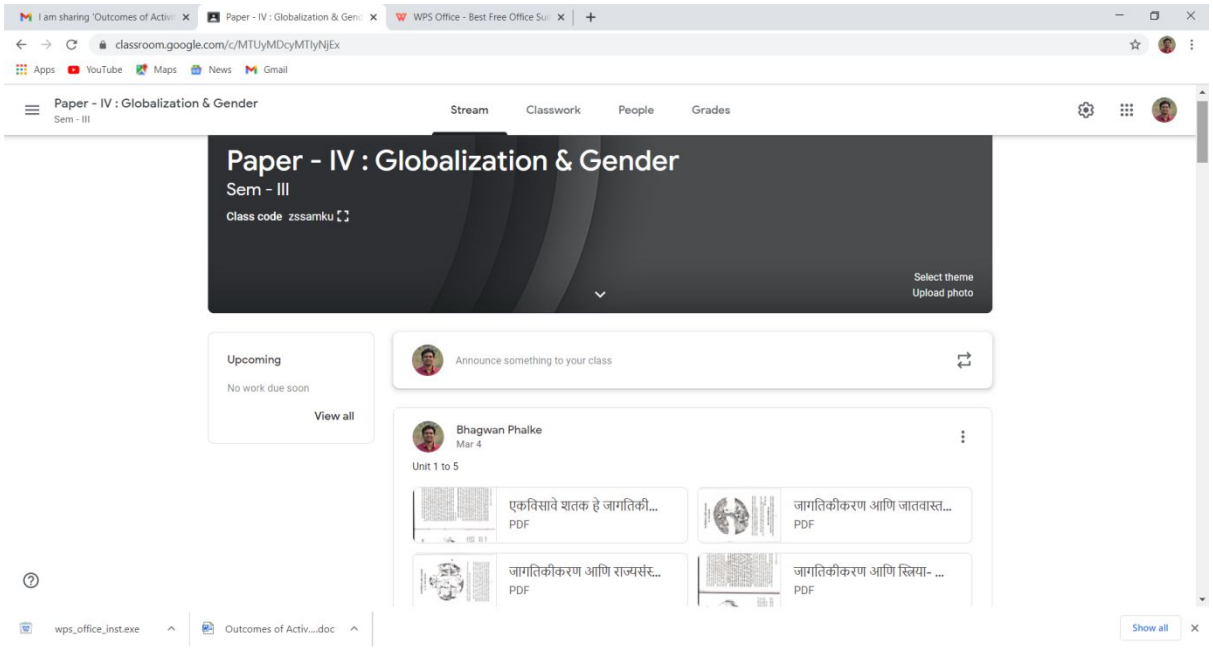
Online Teaching Methods

Google Class room

Teacher Name :Bhagwan Phalke



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Bhagwan Phalke
Mar 4
Unit 1 to 5
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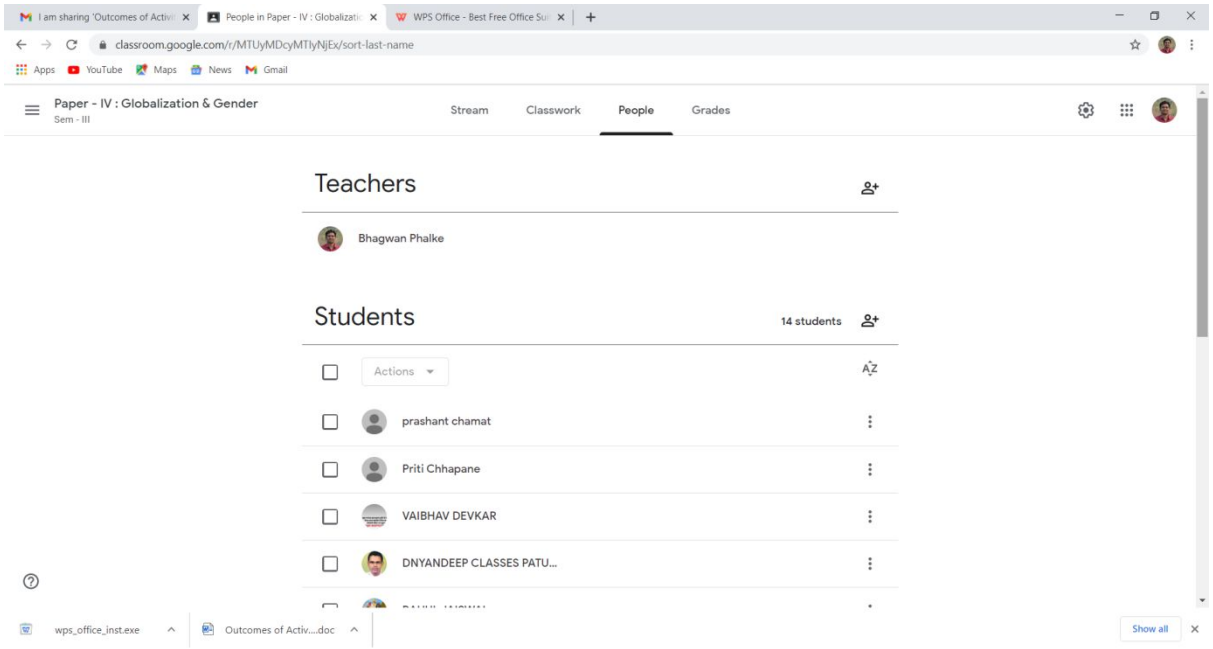
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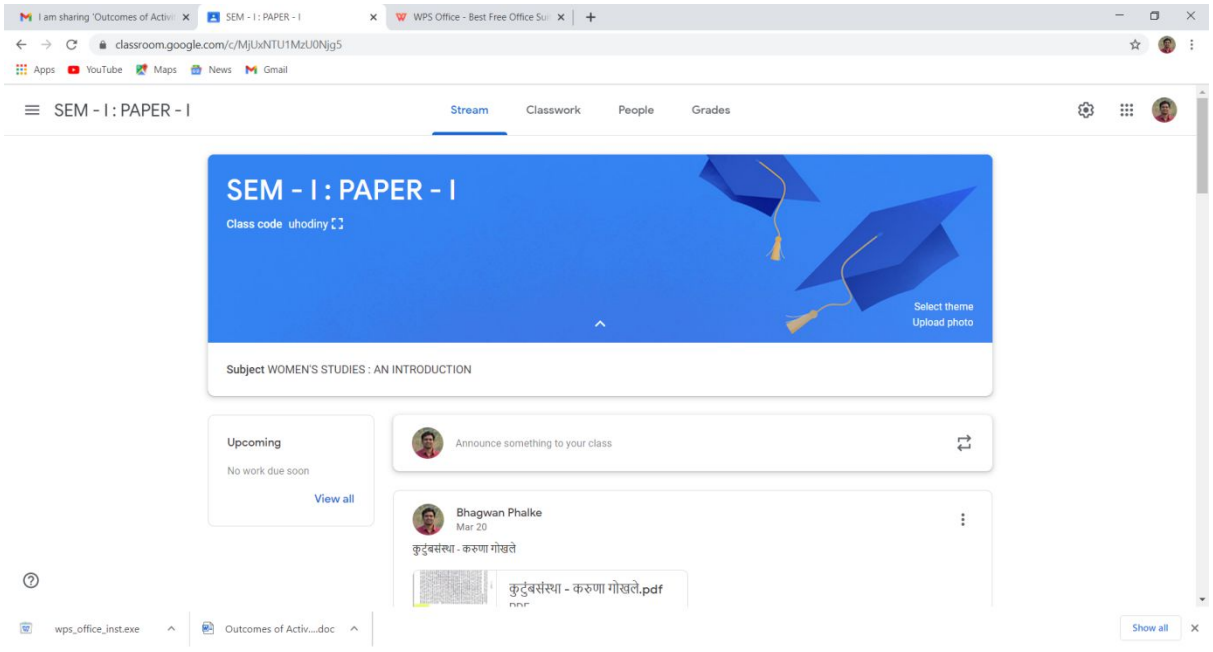
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Mar 20
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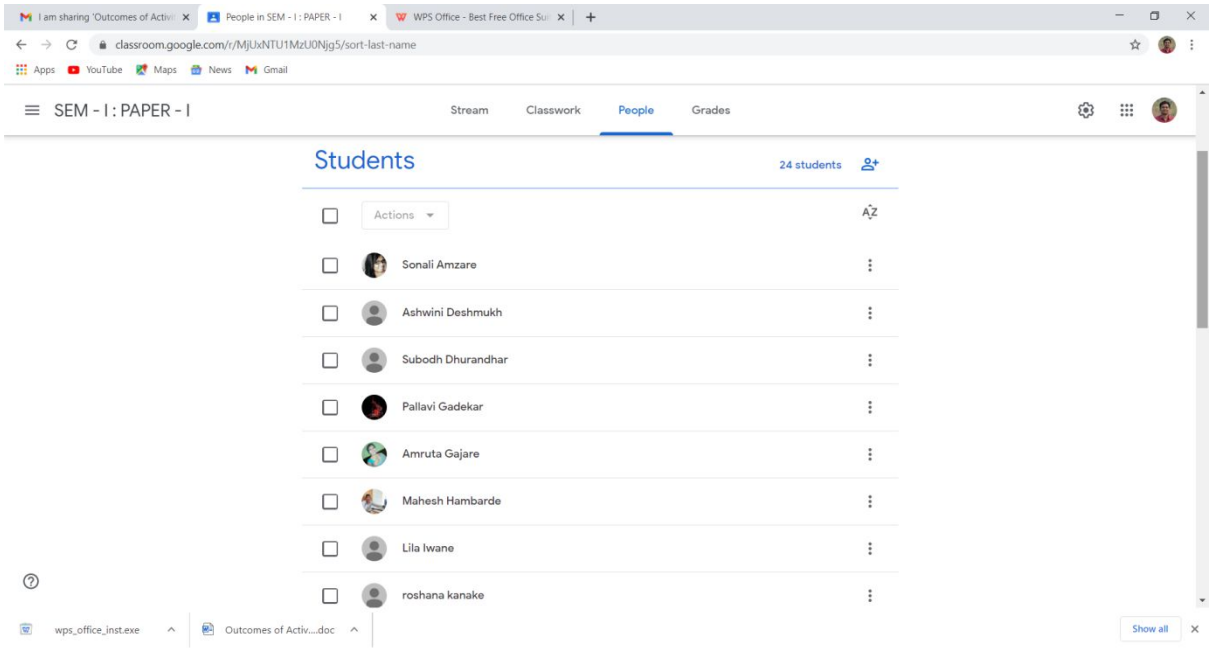
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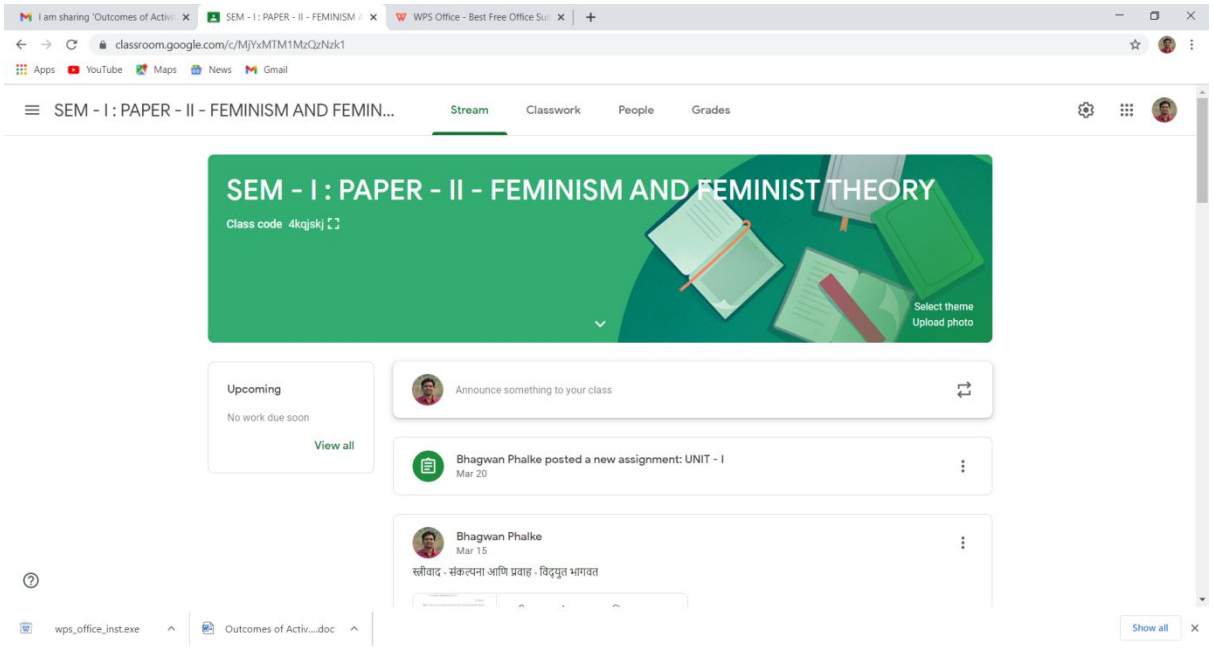
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Bhagwan Phalke
Mar 15
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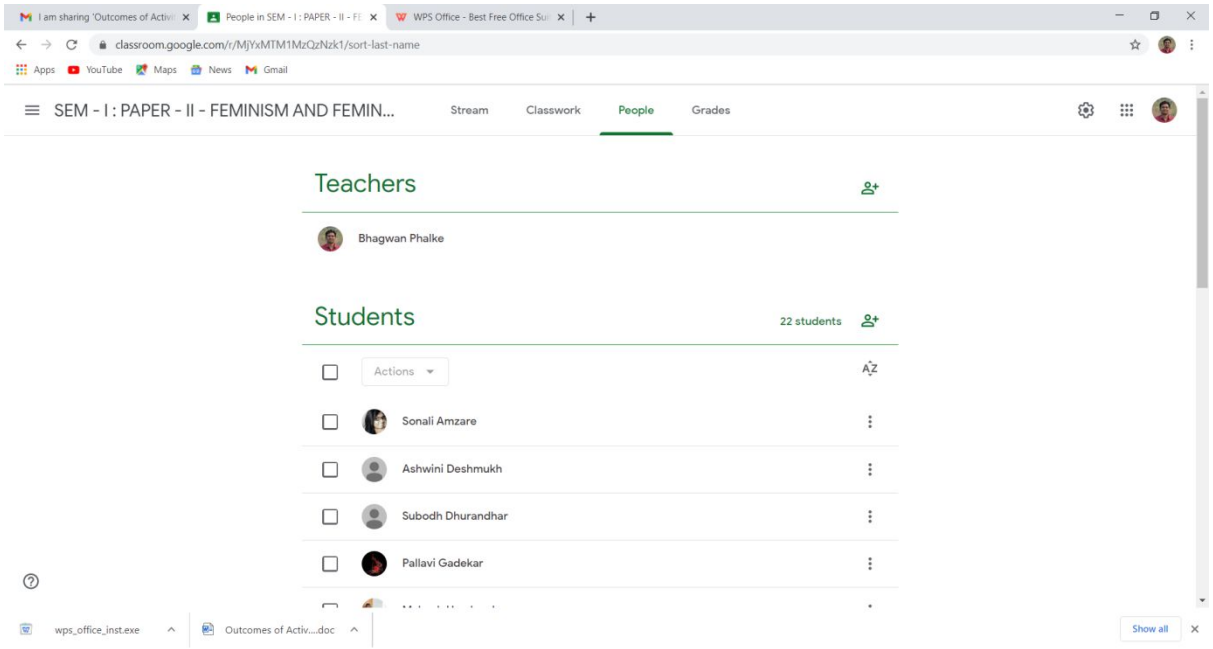
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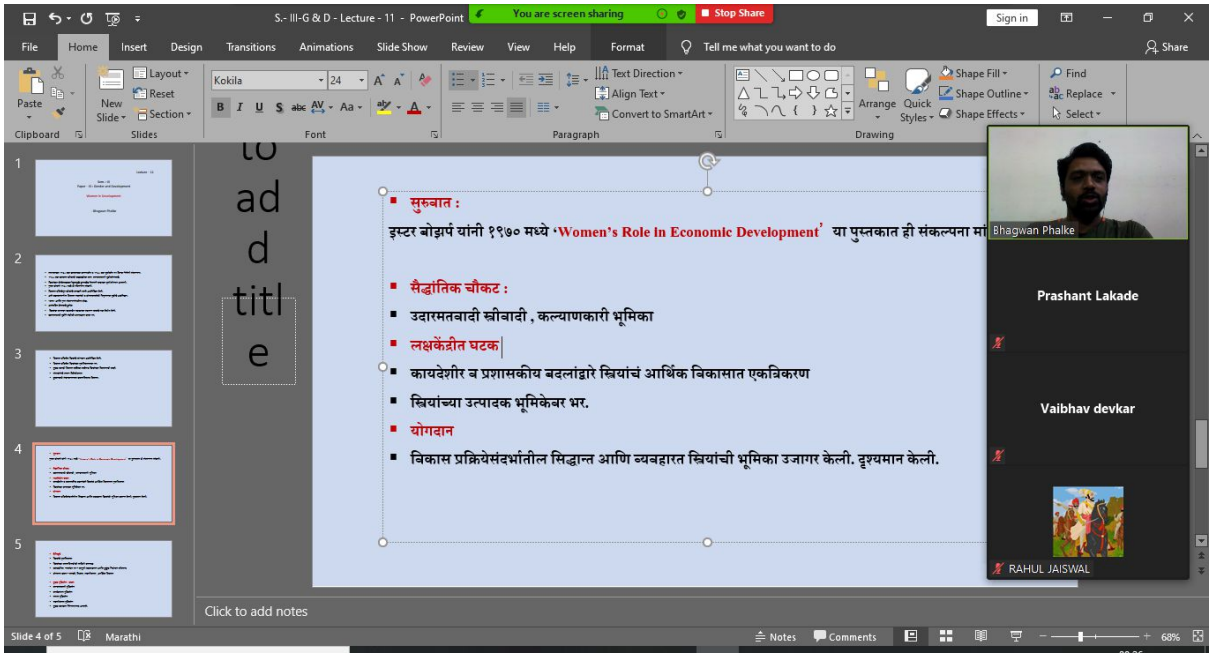
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इस्टर बोझर्प यांनी १९७० मध्ये 'Women's Role In Economic Development' या पुस्तकात ही संकल्पना मां
सैद्धांतिक चौकट :
उदारमतवादी स्त्रीवादी , कल्याणकारी भूमिका
लक्षकेंद्रीत घटक
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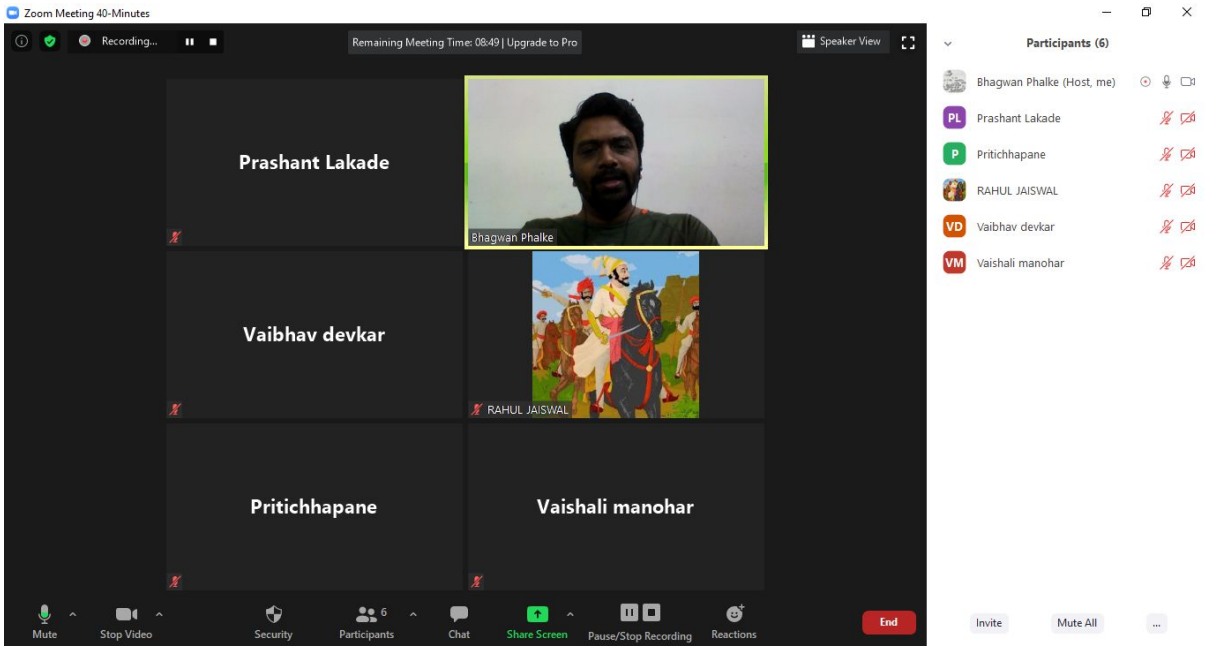
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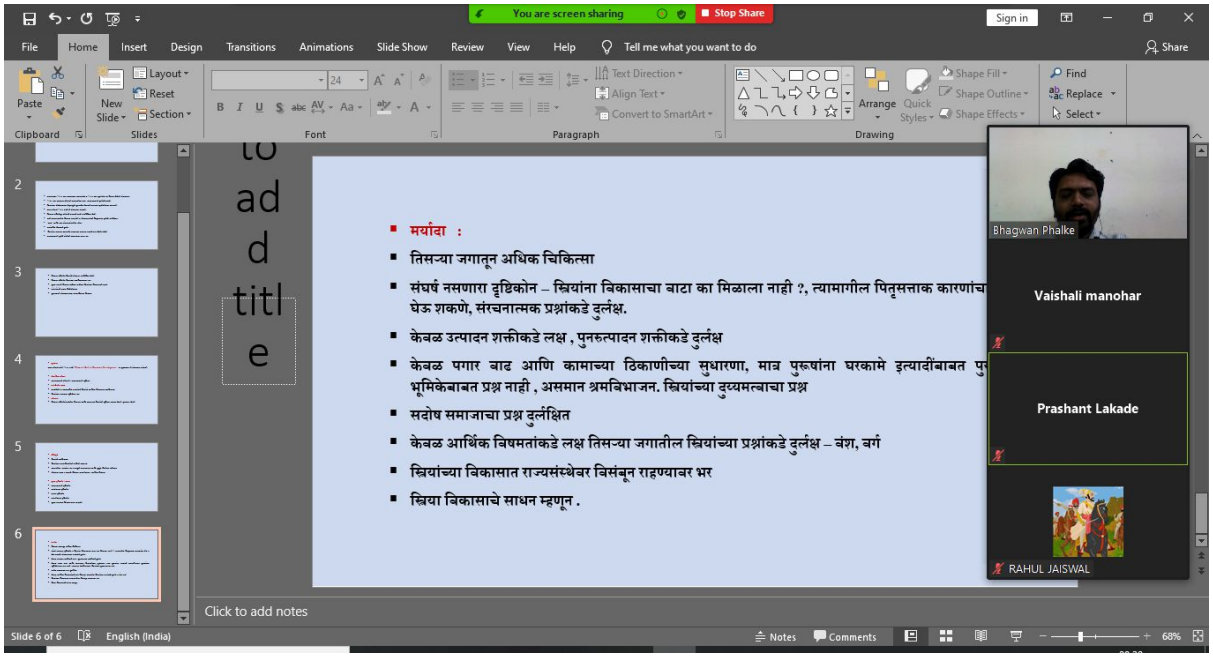
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मर्यादा :
तिसऱ्या जगातून अधिक चिकित्सा
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Bhagwan Phalke
Vaishali manohar
Prashant Lakade
RAHUL JAISWAL
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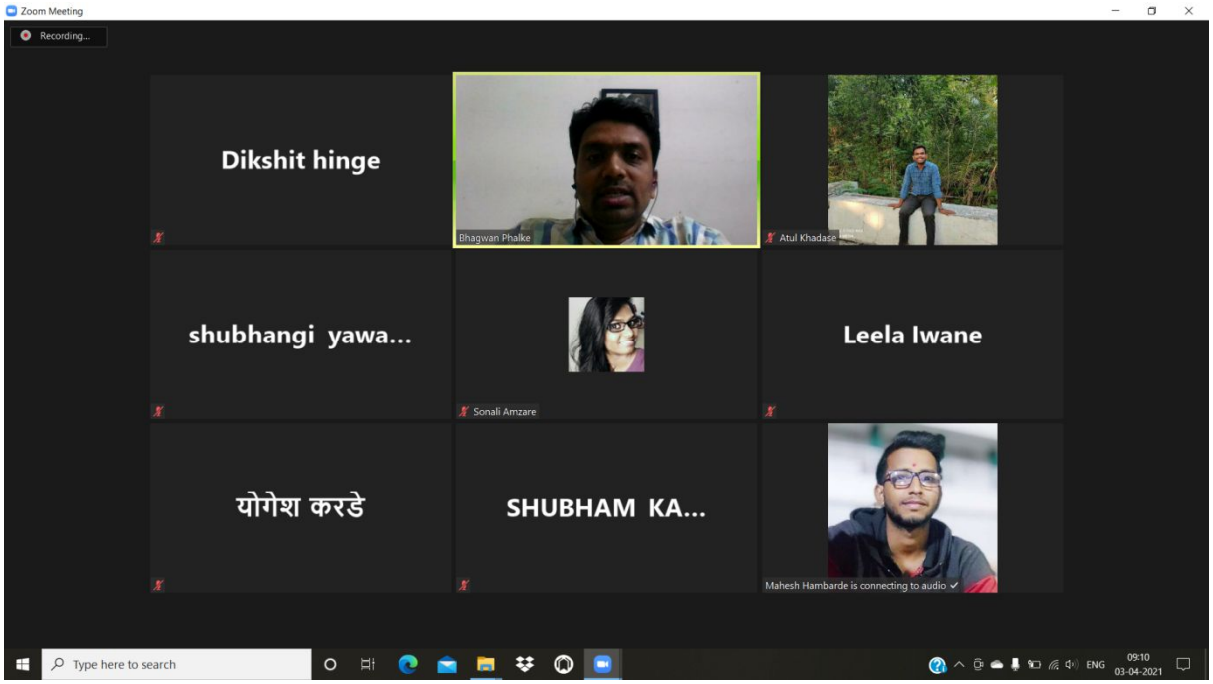
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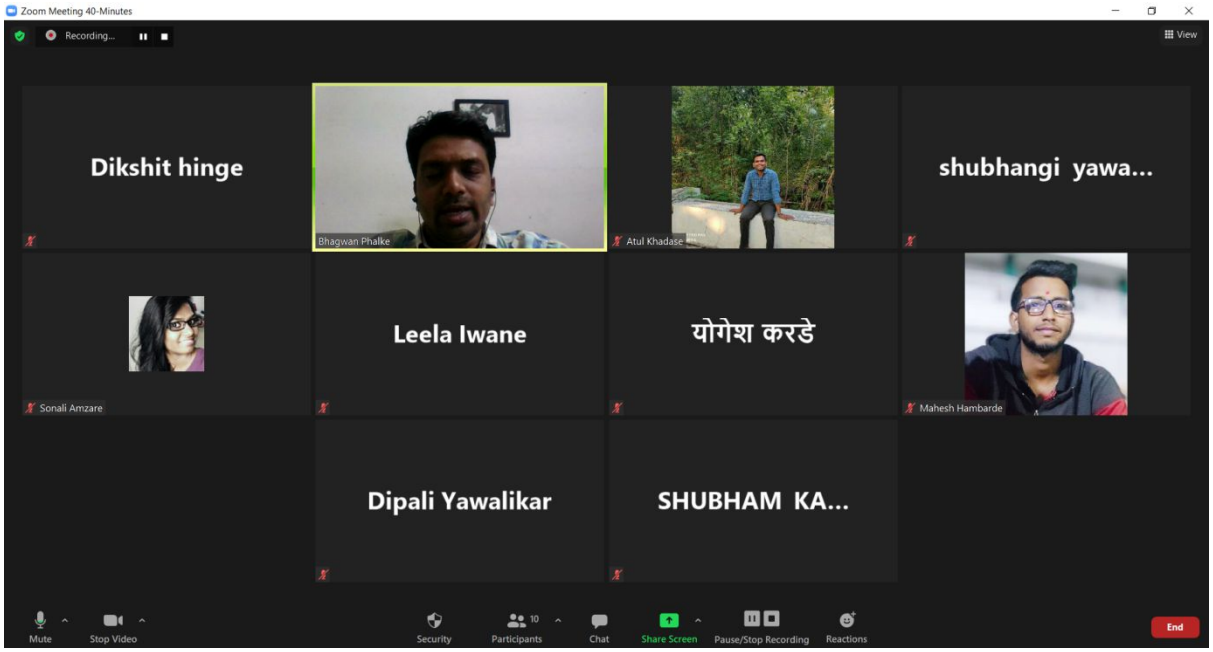
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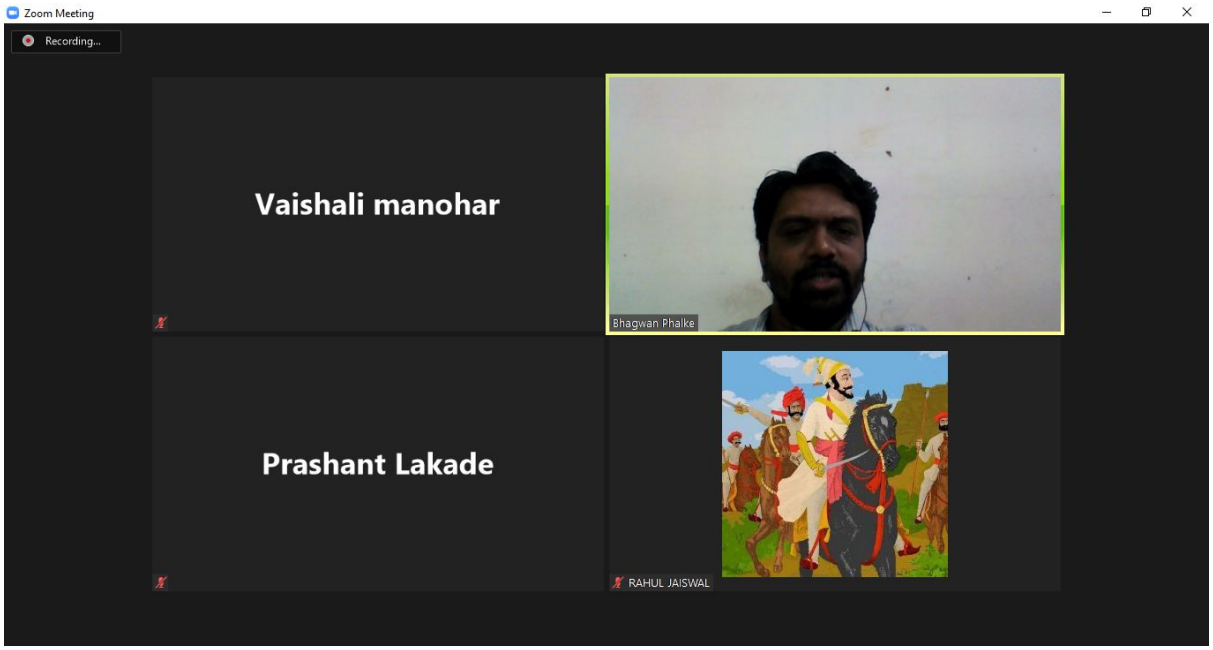
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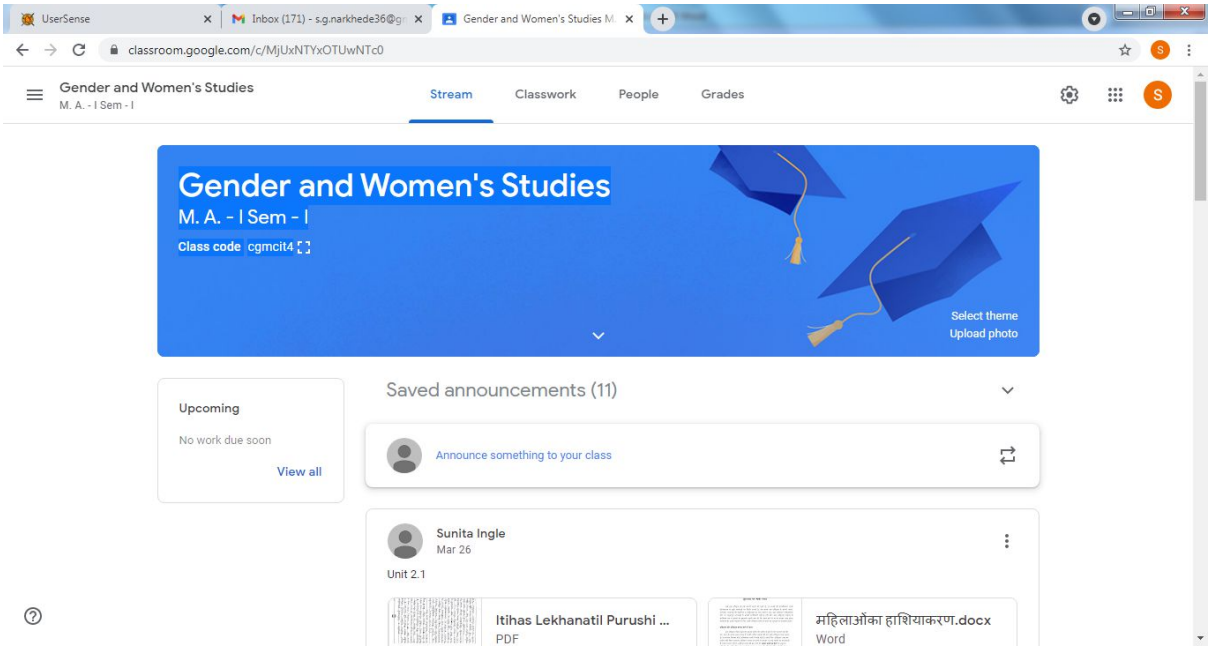

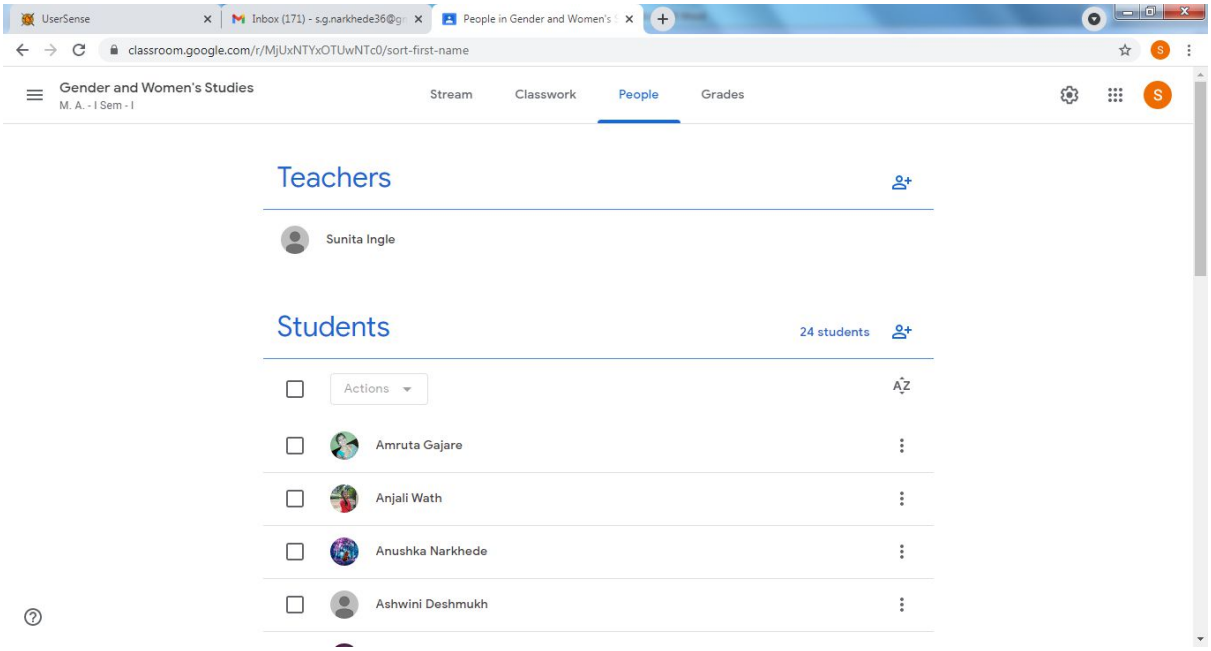

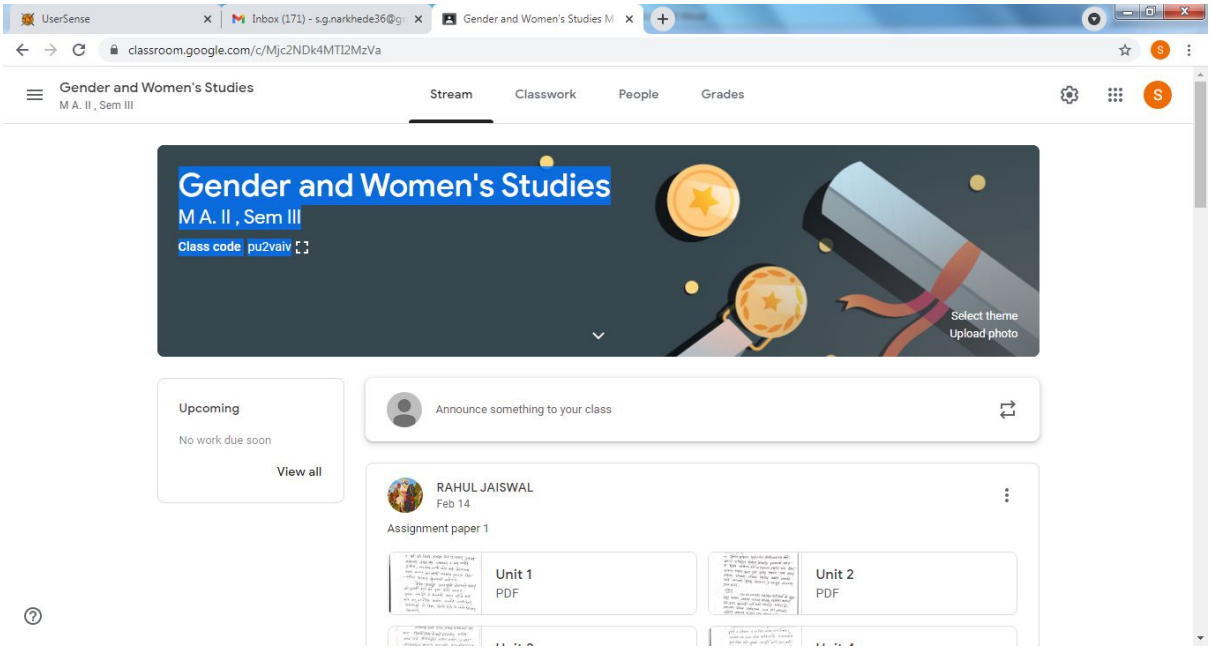
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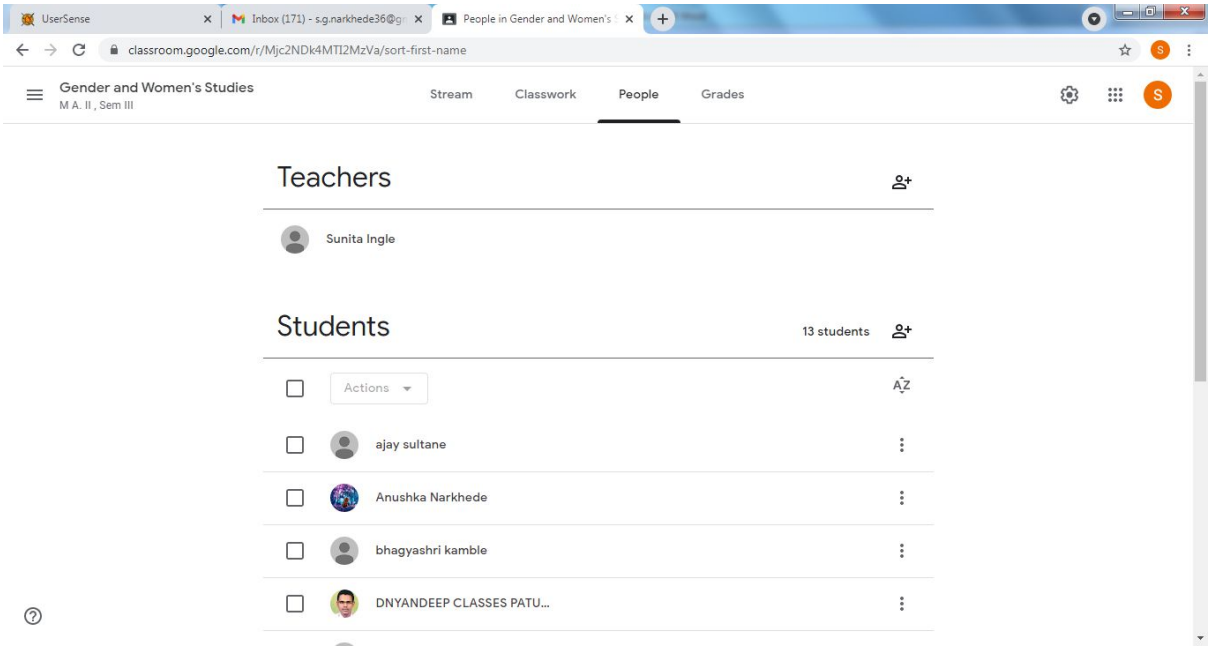
Announce something to your class
RAHUL JAISWAL
Feb 14
Assignment paper 1
Unit 1
PDF
Unit 2
PDF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Stream
Classwork
People
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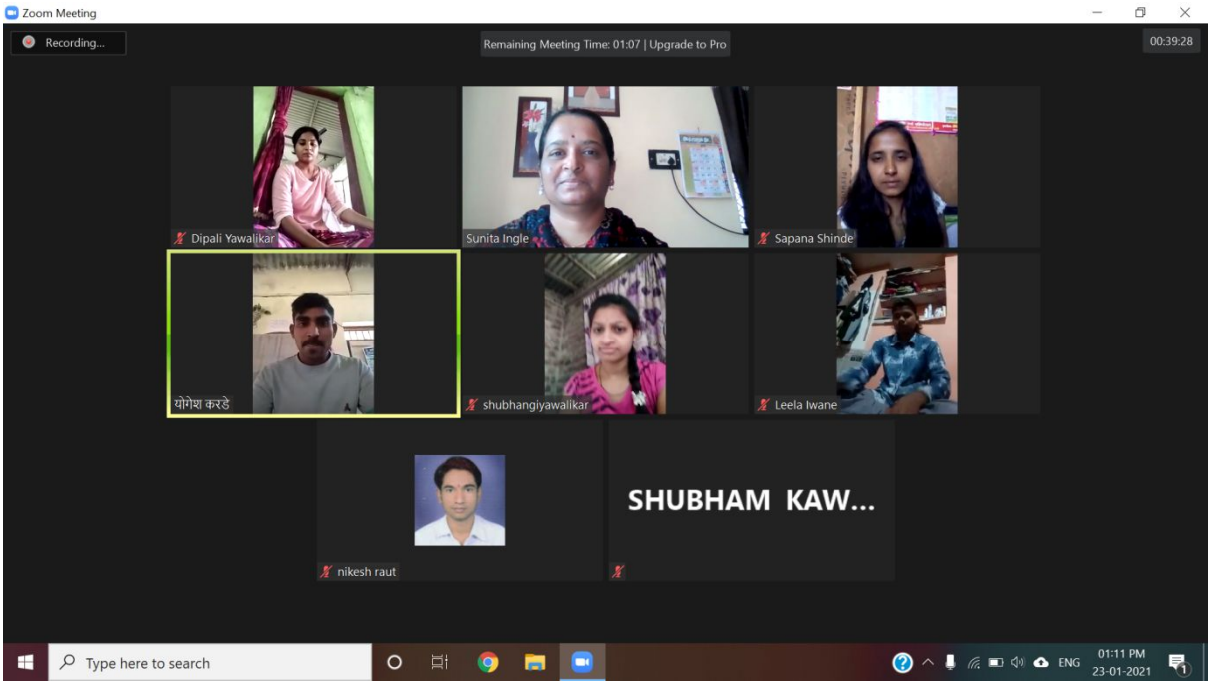
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Sapana Shinde
योगेश करडे
shubhangiyawalikar
Leela Iwane
nikesh raut
SHUBHAM KAW...
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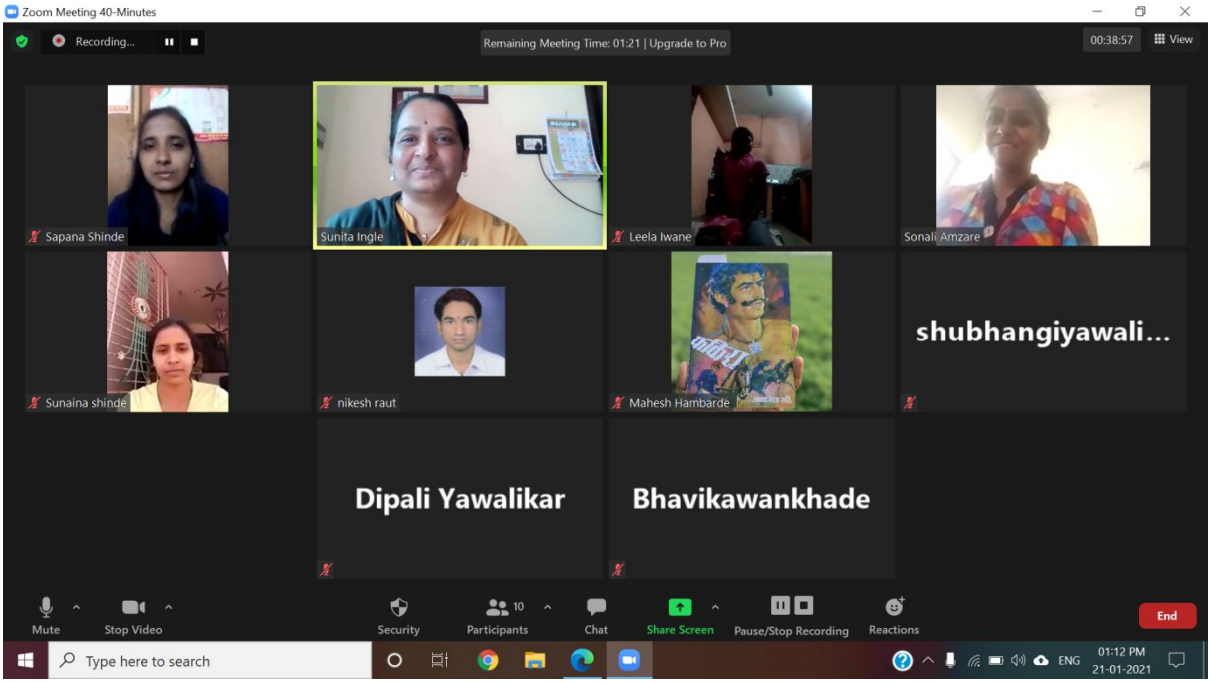
ENG
01:11 PM
23-01-2021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Mahesh Hambarde
shubhangiyawali...
Dipali Yawalikar
Bhavikawankhade
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Chat
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Pause/Stop Recording
Reactions
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ENG
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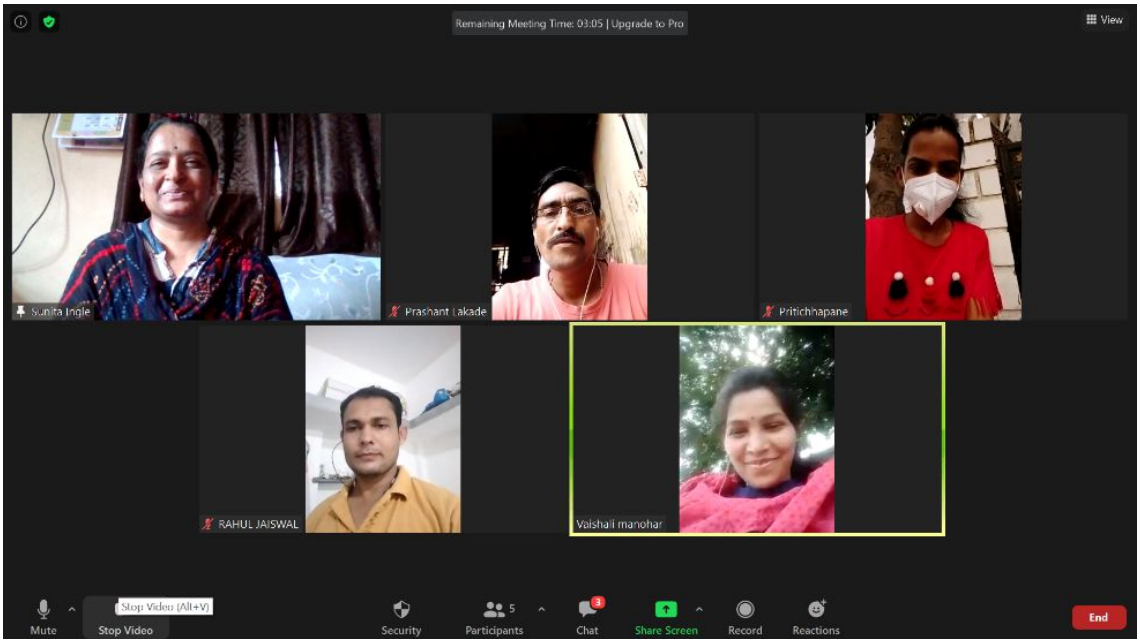
21-01-2021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Pritichhapane
RAHUL JAISWAL
Vaishali manohar
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5
Chat
3
Share Screen
Record
Reactions
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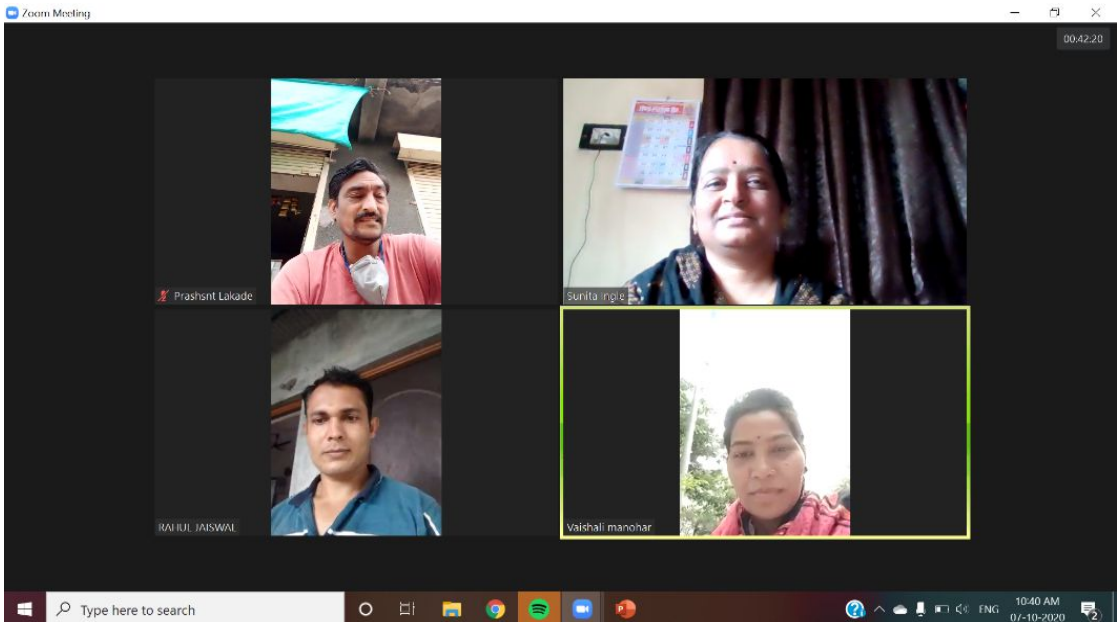
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Sunita ingle
RAHUL JAISWAL
Vaishali manohar
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ENG
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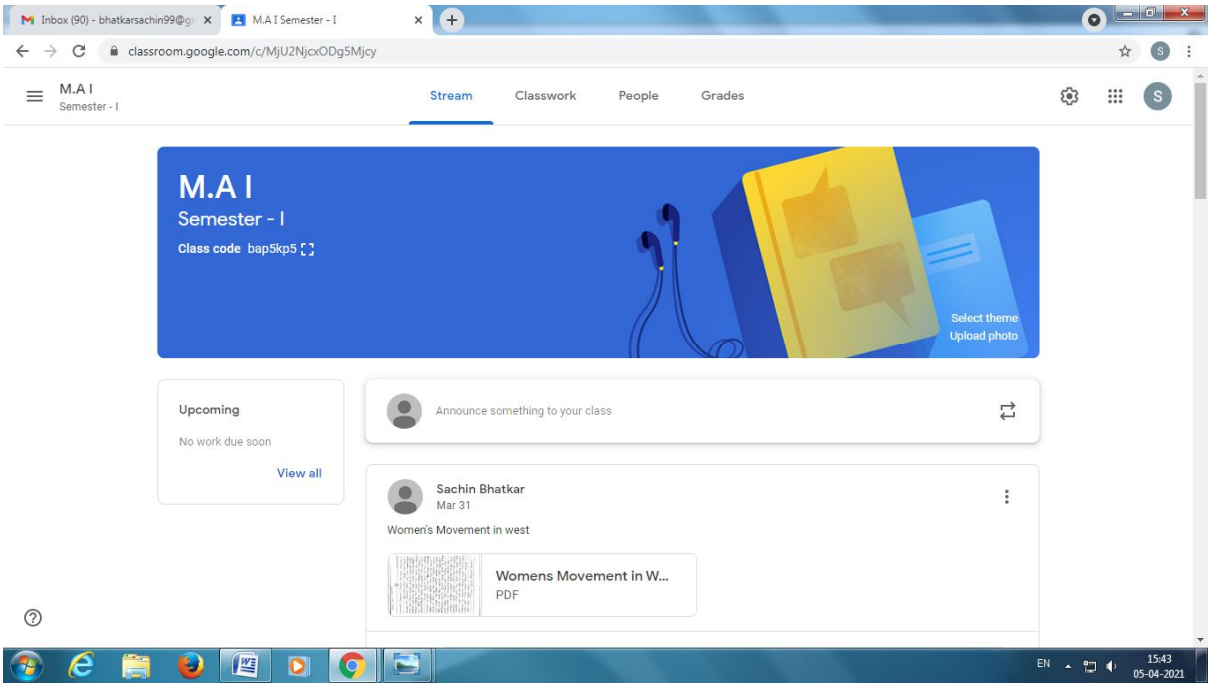
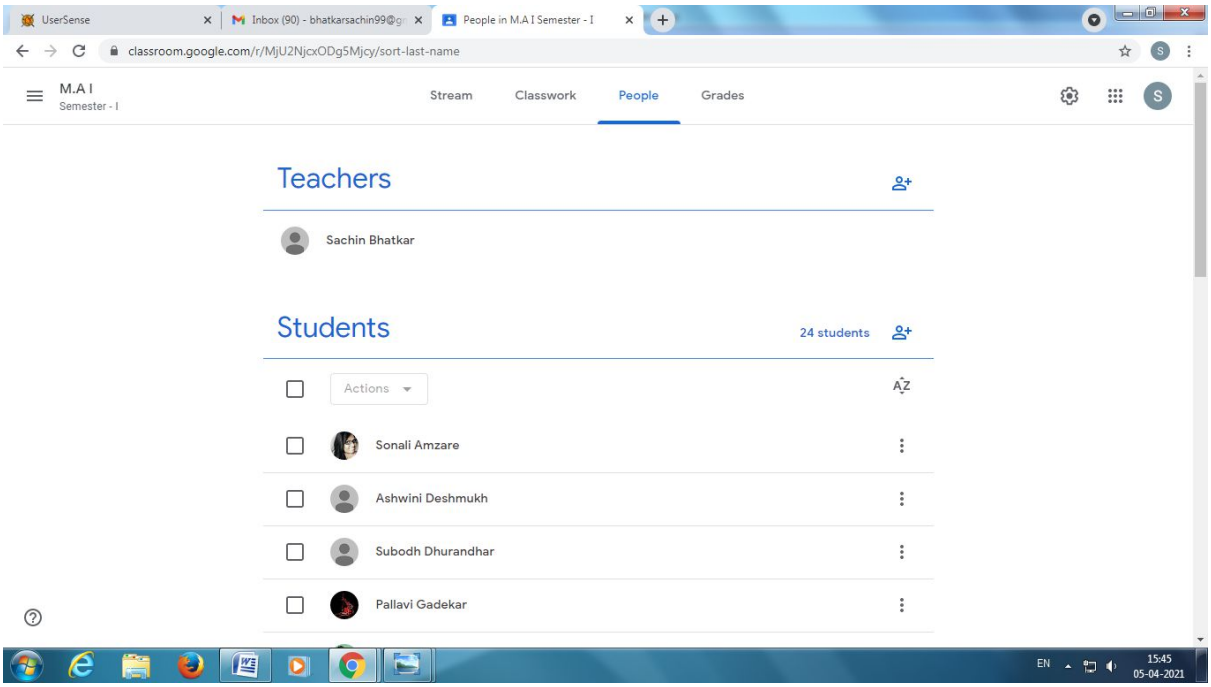
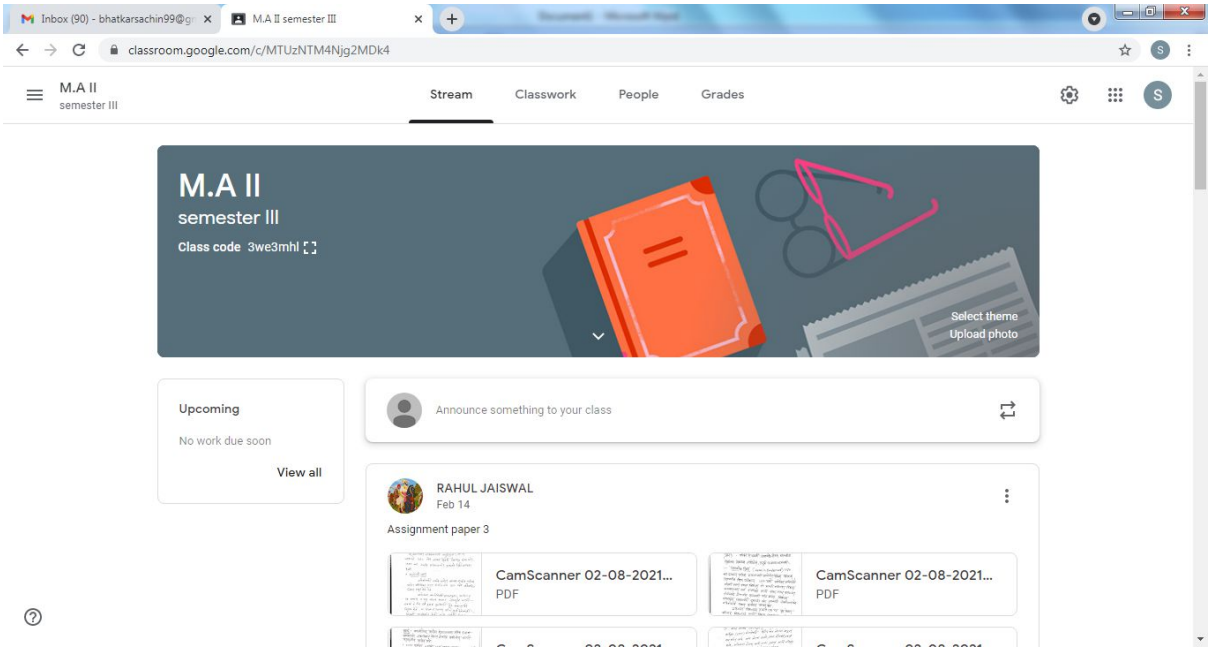
07-10-2020

Teacher Name :SachinBhatkar



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M.A II
semester III
Stream
Classwork
People
Grades
M.A II
semester III
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Select theme
Upload photo
Upcoming
No work due soon
View all
Announce something to your class
RAHUL JAISWAL
Feb 14
Assignment paper 3
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CamScanner 02-08-2021...
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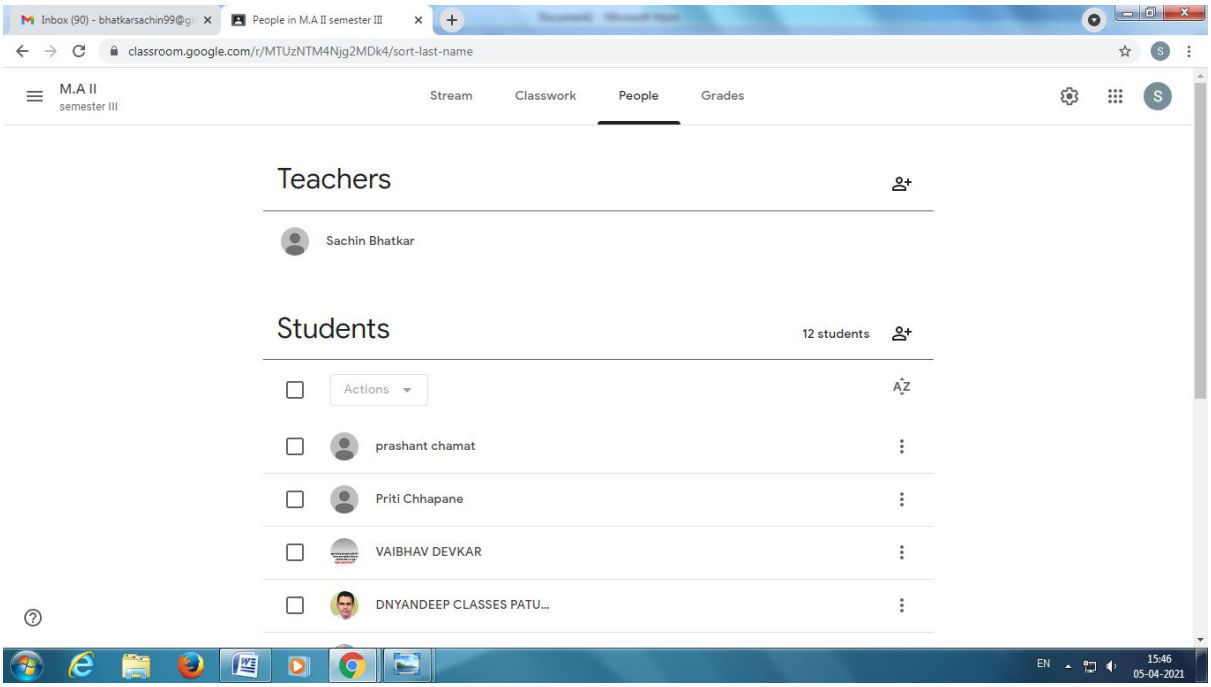
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People in M.A II semester III
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Sachin Bhatkar
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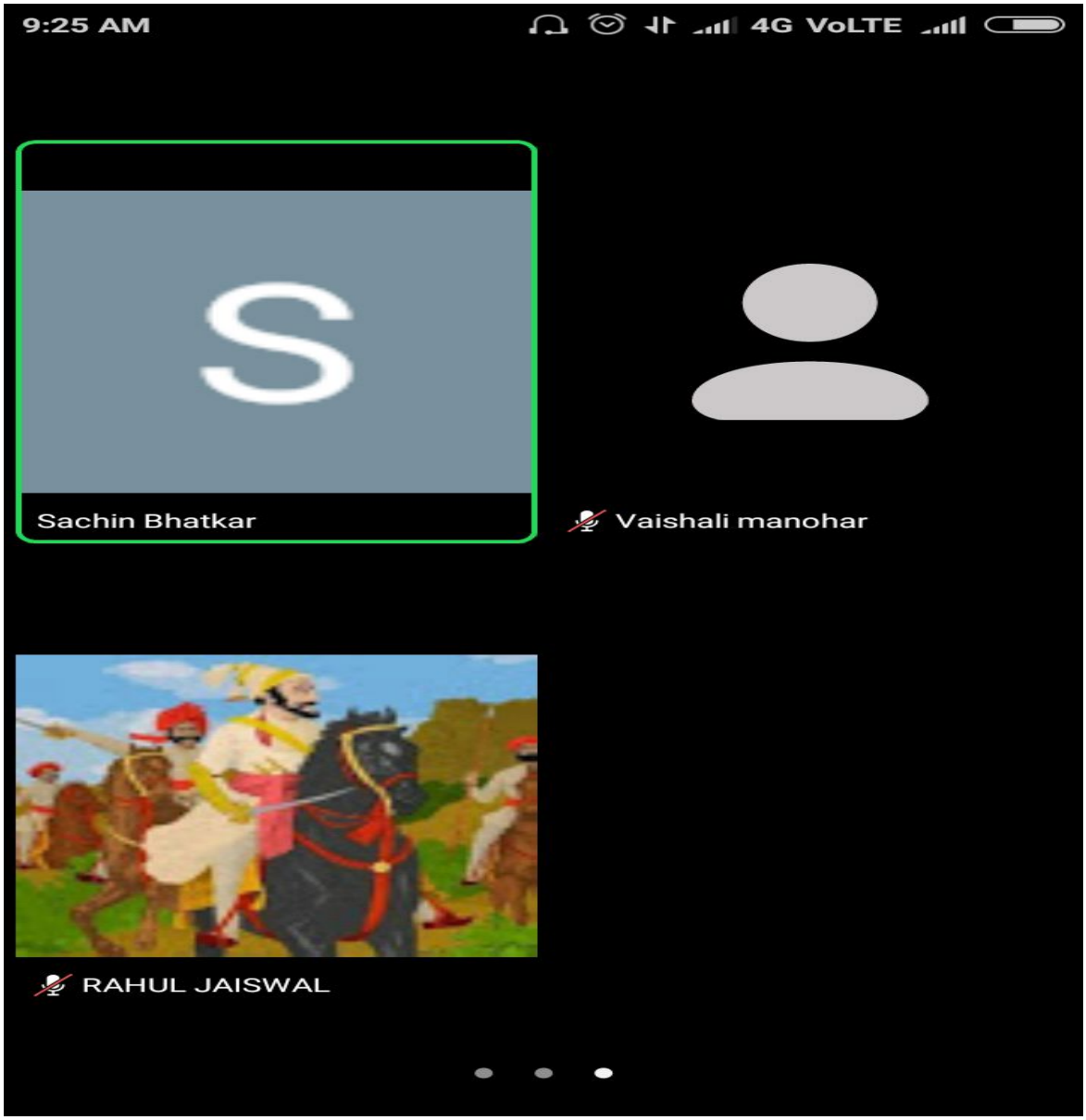
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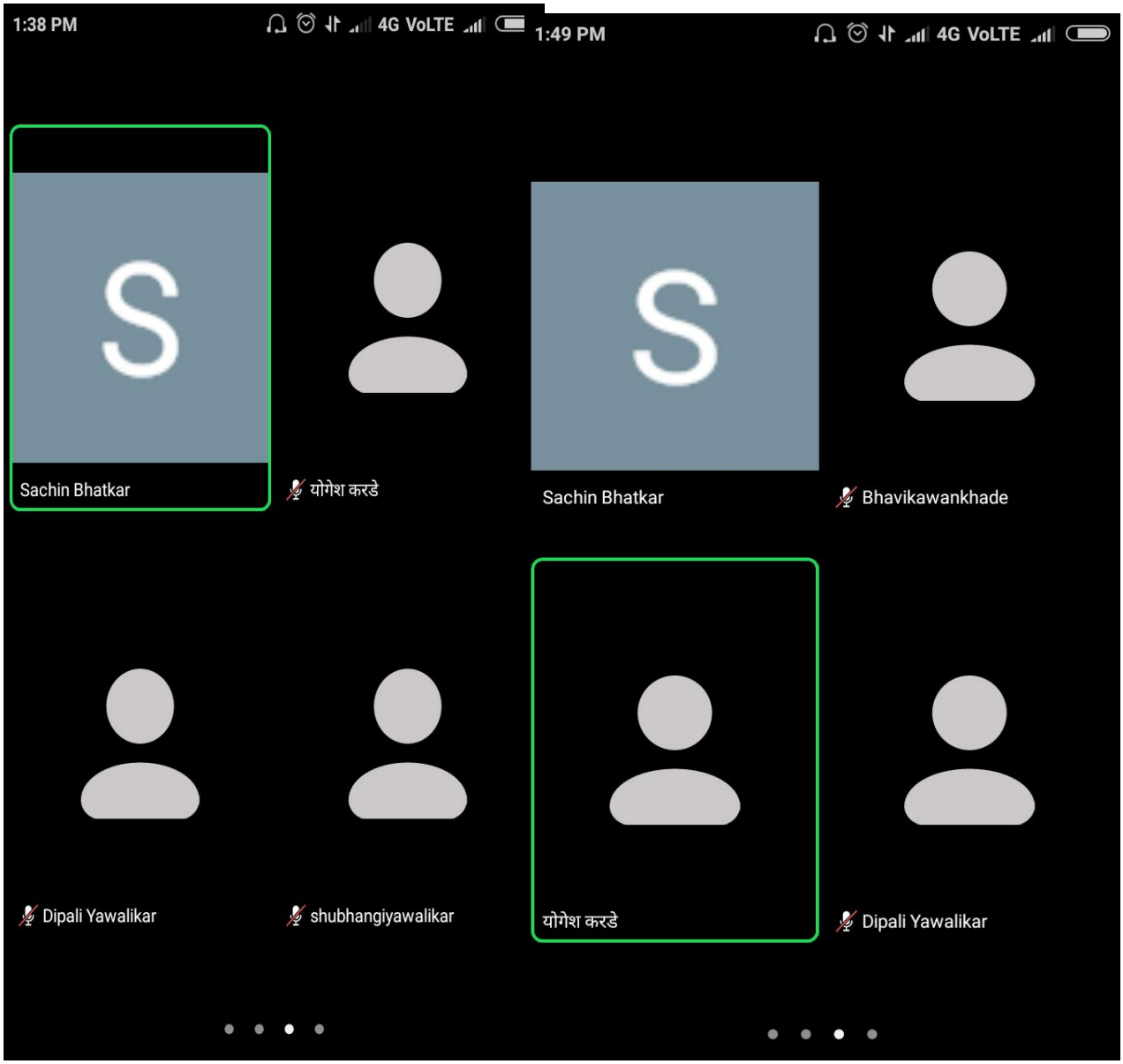
Sachin Bhatkar
Vaishali manohar
RAHUL JAISWAL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Sachin Bhatkar
Bhavikawankhade
योगेश करडे
Dipali Yawalikar

Applied Skill Development Centre

संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती

उपयोजित कौशल्य विकास केंद्र

सत्र : २०१९-२०२०

(विद्यापीठ आणि महाविद्यालयीन विद्यार्थ्यांसाठी)

१) विद्यार्थ्याचे नाव (मराठी) : .....

(इंग्रजी) : .....

२) विद्यापीठ पदव्युत्तर विभाग : .....

/ महाविद्यालयाचे नाव : .....

३) वर्ग : .....

४) भ्रमणध्वनी क्र. : .....

५) E-mail : .....

या सत्रामध्ये विद्यार्थ्यांसाठी उपयोजित कौशल्य विकासाचे प्रशिक्षण वर्ग आयोजित करण्यात येत आहेत. इच्छुक विद्यार्थ्याला रु.२००/-(दोनशे रुपये केवळ) भरून खालीलपैकी कोणत्याही एका विषयातील प्रशिक्षण वर्गाला प्रवेश घेता येईल. प्रशिक्षण वर्गाला शंभर टक्के उपस्थित राहणाऱ्या विद्यार्थ्याला प्रमाणपत्र दिले जाईल.

कोणताही एक विषय निवडून त्यापुढे ☑ अशी खूण करा.

अ.क्र.	विषय	
१.	भाषण कौशल्य	☐
२.	सूत्रसंचालन	☐
३.	स्पोकन इंग्लिश	☐
४.	मुलाखत तंत्र	☐
५.	पीपीटी कौशल्य	☐
६.	उपकरण हाताळणी	☐

* दिनांक १४/०९/२०१९ (शनिवार) आणि १५/०९/२०१९ (रविवार)
* वेळ : सकाळी १०.०० ते संध्याकाळी ५.३०
* स्थळ : विद्यापीठाचे विविध विभाग

दिनांक

विद्यार्थ्याची स्वाक्षरी

सदर विद्यार्थ्याला प्रशिक्षण वर्गासाठी परवानगी देण्यात येत आहे.

विद्यापीठ विभागप्रमुख/प्राचार्य

उपयोजित कौशल्य विकास वर्ग

मुलाखत तंत्र

१४ व १५ सप्टेंबर, २०१९

अ. क्र.	विद्यार्थ्याचे नाव	१४.०९.२०१९	१५.०९.२०१९
०१	कु. शरयू बाभळे	Sbd.	Sbd.
०२	कु. मिनल ठाकरे	A.Thakre.	A.Thakre.
०३	कु. पूर्वा तांबेकर	P.R.Tambekar	P.R.Tambekar
०४	धनराज राठोड	Rathod	Rathod
०५	कु. स्वाती अनपट	Anpat.	Anpat.
०६	आदित्य कुलकर्णी	Kulkarni	Kulkarni
०७	कु. पैगणी भक्ते भालके	P.P.Bhalke.	P.P.Bhalke
०८	कु. सलोनी बघेल	Baghel	Baghel
०९	कु. पूजा चोंदडे	Pchondde	Pchondde
१०	कु. प्रिया आढोळे	Adhol	Adhol
११	कु. अनुश्री डीके	Anu Dke	Anu Dke
१२	वैभव डांगे		
१३	कु. पैगणी जावरकर	Sjawarkar	Sjawarkar
१४	कु. मयूरी गोडसे	Mgodse	Mgodse
१५	कु. सायली अवताडे	Savatade	Savatade
१६	रोशन बनसोड	R.V.Bansod.	R.V.Bansod.
१७	कु. उत्कर्षा निंबाळकर	Unimbalkar	Unimbalkar
१८	बंधीभाज अ. सलीम पांडे	Bshaikh.	Bshaikh
१९	कु. रुपाली नारायण पिंदूरकर	Rpindurkar	Rpindurkar
२०	कु. धैर्या धर्मेंद्र शर्मा	Dsharma	Dsharma
२१	कु. श्रेया प्र. पैराळे	Spainale.	Spainale.
२२	प्रणित धर्मेंद्र रामटेके	ABSENT	
२३	कु. गायत्री हेमंत पुंड PPT	ABSENT	
२४	कु. राधना बाळाभाऊ जावरकर	Rjawarkar	Rjawarkar
२५	शिवदास गरिबदास भंडारी	ABSENT	
२६	गौतम सं. रंगे (गौरव स. रंगे)	Grange	
२७	कु. श्रुती गणेश नाफडे	Snaphade	Snaphade
२८	कु. प्राचिता विलासराव दुपे	Pdupe	Pdupe
२९	कु. शारदा श्रीकृष्ण काकडे	Skakade	Skakade
३०	कु. स्वाती रवींद्र [illegible]डे	Shande	Shande
३१	कु. प्रतिक्षा रतीकराव मोहोड	ABSENT	
३२	कु. मोनिका राजुसिंग आडे	Monika	
३३	कु. मोनाली महादेव वाडगे	Mwadge	Mwadge
३४	कु. आंचल संजय गुप्ता	Anchal	Anchal
३५	कु. सुमैया जाकीर हुसैन	Shussain	Shussain
३६	कु. शिवानी गणेश ढोके	Ddhoke	Ddhoke
३७	कु. वैशाली पुरुषोत्तम फुलझेले	Vphulzele	Vphulzele
३८	कु. रेवती रवींद्र झाडे	Rjhade.	Rjhade.
३९	मिरोज सलीम मिरजापुरे (शमीम)	Mirajapure	Mirajapure


संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती
उपयोजित कौशल्य विकास कक्ष
कौशल्य विकास वर्ग
भाषण कौशल्य
सूत्रसंचालन
पीपीटी कौशल्य
मुलाखत तंत्र
संत गाडगे बाबा अमरावती विद्यापीठ

Sant Gadge Baba Amravati University, Amravati

Department of Political Science

Discussion Forum

Department of Political Science conducted this student centric activity for the entire year of 2019-2020 before the corona pandemic. Objective of this activity was to encourage students to participate of the self-monitored group discussions on the various important topics of current affairs. Students of the department actively participated in this activity. Coordinator and teachers of the department supervised this activity without much interference. It also encouraged students to monitor and organize discussions. This activity was conducted on each Saturday of the week after the teaching hours.

A brief report is given here:
The Forum started from Friday, 27th September 2019, the next day was holiday that's why it was conducted a day prior to the schedule. The very first lecture was conducted by the coordinator of the department to introduce students to this important student centric activity.

Various topics were covered in the discussion, some of which are mentioned here:

1.	The Muslim Women's (Protection of Rights on Marriage Bill 2019).
2.	Article 370 and Kashmir Issue
3.	Citizenship Amendment Act and NRC
4.	Student's Issues, reasons and students movements
5.	Indian Republic
6.	Method of qualifying and dis- qualifying civil servants
7.	Public Safety Act (PSA)

Weekly discussions on such important current affairs topics were conducted. It increased students participation in departmental academic activities and provided a platform to the students to interact with each other on current affairs.

Coordinator
Department of Political Science
Sant Gadge Baba Amravati University, Amravati

Sant Gadge Baba Amravati University, Amravati

Department of Political Science

Activity on Awareness about Constitution

This activity was conducted in the first semester of 2019-2020.
On every Friday of the week this activity was conducted at the department in which teachers provided information on the various articles, amendments and overall guidance about the Indian Constitution.
An objective of this activity was to create awareness about the Constitution among Post graduate students of the department.
Students actively participated in this student centric activity of the department. Many important topics were handled in this activity, to name few are given in the following chart:

1.	Introduction to the Fundamental Rights and Constituent Assembly
2.	Fundamental Duties
3.	Directive Principles of State Policy
4.	First Census
5.	Election Commission
6.	Rajya Sabha, Vidhan Parishad
7.	Rafel Deal

This activity helped students to increase their awareness about the Indian Constitution. It also helped in inculcating constitutional values among students through the class participation in this activity.

Coordinator
Department of Political Science
Sant Gadge Baba Amravati University, Amravati

Department of Botany
Sant Gadge Baba Amravati University, Amravati
Botanical Excursion: 2015-2020

The Department of Botany is regularly organises field trips, study tours, botanical excursions to study the natural vegetation and biodiversity in different geographical locations as well as the CSIR laboratories also visited for inculcating the scientific approach that helps for achieving holistic development of students.

Summarised information of Botanical Excursion: 2015-2020

Sr.No.	Excursion Places	Long/Short	Year
1	Hemalkasa and Anandvan	short	2015-16
2.	Chikhaldara	Short	2016-17
	University campus collection	short	
	Goa	Long	2017-18
3.	Simla-Kullu-Manali	Long	2018-19
	University campus visit	Short	
4.	Campus Tour	Short	2018-19
	Botha Forest Buldana	Short	
	Goa	Long	

Photographs


WELL DONE
IS BETTER THAN
WELL SAI

Short excursion Campus

Long Excursion

Professor and Head
Department of Botany
Sant Gadge Baba Amravati University,
Amravati

Sant Gadge Baba Amravati University, Amravati

Department of Political Science

Report of Study Tour (2017-2020)

Study Tour: 2017-2018

Post Graduate Teaching Department of Political Science, established in the year 2017 in SGBAU Amravati. From the very first year of its formation a special focus was given on conducting student centric activities other than class room teaching. The then curriculum (before its revision in the consecutive year) also involves internal assessment of students through their participation in the community political process. Students of the department visited four educational places in the city of Amravati.

Visit to Punjabrao Deshmukh Smruti Bhavan

Punjabrao Deshmukh, one of the pioneer of Agricultural reforms in India in the post Independent India belongs to the very city of Amravati. Political Thought of this progressive political leader and social activist is included in the syllabus of political science. A short tour was organized to Punjabrao Deshmukh Smruti Bhavan (Memorial) to introduce students to his political thought and great life work. Students observed the archive and life history of him.

Visit to District Session Court

With a motto to give students a first hand experience of court proceedings and to make them familiar with the district level judicial structure as a session court; a visit was organized to the District session court. This field visit provided an opportunity to the students to interact with the working positions in the court. With all due discipline and protocols students were allowed to sit in the audience section to hear the case proceedings. It was a very live experience for students to be part of the political process in the form of judiciary. Though it was at a district level but students were overwhelmed to interact with the officials and to be present in the proceedings as observers.

Visit to District Information Office

Most of the students enrolled for the PG course in Political Science also prepare for civil services exams. While choosing civil services as a career options students need guidance from the people already cleared it and also information about the modus operandi of the administrative structures and positions where they can work in future. Accordingly, Students and teachers visited District Information Office of Amravati. The DIO guided students about choosing Indian Information Services as a career and also provided details about the modus operandi of the office.

Visit to Punjabrao Deshmukh Prabodhini

It's an administrative structure situated in Amravati where the training to various local bodies and administrative trainees is provided. It's a beautifully organized and maintained training academy. Office in charge there provided a conference session to the students about detailed work methodology they follow. Also he gave another lecture on personality development and work inside the political system.

Visit to Armory

Students and teachers visited armory at the Police Training Center of Amravati. The office in charge introduced students to various arms used. The purpose of this visit was to highlight international relations and use of weapons in International Politics as its part of our syllabus.

Study Tour: 2018-2019

Department of Political Science organized outstation educational tour to Mahatma Gandhi's Sevagram Ashram, Wardha, Vinoba Bhave's Pavnar Asharam, And Rashtrasant Tukadoji Maharaj's Gurukunj Ashram Mozari. Gandhian Political Thought and Tukadoji Maharaj's Political thought are part of our syllabus and since these eminent thinkers have their ashrams in Vidarbha, Students and Teachers of the Political Science department visited these three places. University allotted University's bus and driver to the department for this educational tour.

Sevagram Ashram:

The political venue where Gandhiji spent many of his years. Students and teachers were assisted by a lady from the ashram to guide and provide information about various parts of the asharam and activities in the ashram. Students visited Bapu kuti, Akhiri Nivas, Parchure Kuti, Rustom Bhavan, Ba- Kuti and book stalls in the Ashram. There is also a primary school designed on Gndhiji's concept of Rangeet Talim, Students interacted with students and accompanied them in their mid-day meal. The meal was cooked for the students from the vegetables grown by students in the ashram garden.

Pavnar Ashram

This Ashram is very near to Sevagram, Vinoba Bhave spent many of his years in this ashram. Students interacted with the lady who assisted them to see the ashram. Students bought some books from there too.

Gurukunj Ashram, Mozari

The place where Rashtrasant Tukadoji Maharaj resided and worked. Students participated in the samudayik prarthna giving the message of unity, brotherhood, selflessness and secularism. Students ate their dinner at the asharam. Students got opportunity to serve to the people in the asharam. This activity was only important as learning political thought through field visit but also important to create a possibility of inculcating values of secularism, brotherhood and unity through direct observation of the field activities.

Study Tour : 2019-2020

Educational Tour to Delhi and Amritsar

Teachers and students of the department visited Delhi and Amritsar.

Delhi Visit

Delhi being the National Capital of India was on the priority list of students while deciding the places to visit. Students were keenly interested in this tour and were enthusiastic to visit parliament of India and other political structures in Delhi. Students walked on the Rajpath just to feel the tempo of republic day. The journey through train itself was very memorable for students, many of the students from remote areas were travelling for the first time to the National Capital. Students visited Parliament, War memorial, Red fort. Teachers assisted students in the visits. Students travelled through the Delhi metro and buses. Delhi corporation does not charge girls in public buses. Girl students found this facility as a privilege to encourage girls in education and outdoor activities. Students ate their lunch in an Old Delhi Dhaba, where most of the people were settled after the partition. It was an emotional experience for students to feel the culture and taste of India. Overall, it was a memorable tour.

Amritsar Visit

After Delhi, students visited Delhi. Students saw Golden temple and Waghah Border in Amritsar. Both were the overwhelming experiences for the students. Students halted in the Gurudwara rest houses, and they could collect many books on Sikhism and Guru Nanak from the book exhibition in the rest house.

Students witnessed the gate closing ceremony at the Wagah border. That was a proud and memorable experience for students. Students cheered for India and enjoyed each moment at the ceremony.

This educational tour provided an opportunity to the students to see important political structures of India and to experience diverse culture of India.


उरे
NR 04252
Sant Gadgebaba Amravati University
Amravati
Department of Political Science
Study Tour
23-2-2020 to 29-2-2020


Sant Gadgebaba Amravati University Amravati
Department of Political Science
Study Tour
23-2-2020 to 29-2-2020
अभ्यासदौरा
(Study Tour)

Coordinator
Department of Political Science
Sant Gadge Baba Amravati University, Amravati

Sant Gadge Baba Amravati University, Amravati

Department of History

1) Educational Tour : 2018 -19

Chikhaldara / Achalpur:

This educational trip is organized so that the students of the postgraduate history department can experience the physical tools of history first hand. The students were informed about the city of Elichpur, the capital of Imadshahi, the fort of Achalpur, the entrance, the Shah Wali Dargah, the medieval sewage system.

The students experienced their rich heritage. Gavilgad at Chikhaldara bears witness to its then glory. The students experienced the cannons placed in the strategic place of the fort, various lakes, and on that occasion the water management strategies of that period, the remnants of various buildings that bear witness to the splendor of Gavilgad. Seeing the tomb of Sardar Bail Shinga fighting against the British, he understood the story of heroism.

Aurangabad / Lonar / Sinkhedraja / Ajanta Tour:

The students understood the importance of rich historical places in Maharashtra by visiting them. Lonar is a meteorite lake as well as an important place from a religious point of view. The glorious history of the Marathas came to the fore when they saw Maher Sinkhedraja, the mother of Shivaji Maharaj, who was inaugurating the Swarajya.

Aurangabad, a wonderfully beautiful city, came to prominence in the medieval period. Aurangzeb's wife Aurangzeb's wife Rabia Durrani made a small replica of her tomb, the Taj Mahal. Its grandeur and architecture could be studied. He also came to study the architecture of the fort of Daulatabad. It was also possible to see why Mohammad Tughlaq had not brought the Indian capital to the fort for some time. The architecture, buildings, labyrinths, Bharat Mata Mandir, minarets etc. were seen there. Wakataka. The culmination of Rashtrakuta period architectural painting is the rich heritage of the time by seeing the architectural paintings at Ajanta Caves.

2) Educational trip: 2019 -20

Kaudanyapur / Jahagirpur:

In order to make the students interested in the local history, they visited the ancient heritage sites of Vidarbha at both Jahagirpur and Kondanyapur. The importance of Kaundanyapur can be seen from the mythological period. There is also a self-contained Hanuman Temple at Jahagirpur. The importance of both places can be studied as a temple sculpture as well as a religious tourist destination.

Ujjain / Mandu / Maheshwar / Mhow / Omkareshwar:

Chandragupta Vikramaditya's Navratna Darbar in Ujjain is an important tool of the Gupta period in terms of introducing students to the history of other states as well as local history, culture, historical architecture and sculptural skills. Also Jantar Mantar i.e. Jivaji Observatory is important for getting information about the science and technology of that time. Mahakaleshwar, one of the twelve Jyotirlingas, is important.

The kingdom of Baj Bahadur can be seen at Mandu. Various historical buildings can be seen here. Along with various structures like Jahaj Mahal, Ashrafi Mahal, Hindola Mahal, Baj Bahadur's Mahal, Roopmati's Mahal, Jama Masjid can also be seen here. The students were able to experience this feature of excellent construction style.

Ahilyabai Holkar built a ghat on the banks of Narmada and got information from Maheshwar from an architectural point of view. At the same time, Holkar's entire life could be experienced in Holkar Gallery. We could also see how Maheshwari sarees are produced.

The sculptor of the incident at Mhow saw the birth place of Dr. Babasaheb Ambedkar. At the same time, the person who had the skill to build India competently got energy from the place of his birth.

The students also learned that Omkareshwar, one of the twelve Jyotirlingas, is important from an architectural point of view as well as from a religious point of view.

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Coordinator
Dept. of History
Sant Gadge Baba Amravati
University, Amravati

“Field Tour Report”

Submitted by

Miss.Vaishnavi Rajendra Chaudhari
M. Sc. Geology (Sem. - IVth)

Tour Incharge

Dr. Y. K. Mawale

P.G. Department of Geology
Sant Gadge Baba Amravati University
Amravati- 444602

2019-20

P.G. Department of Geology
Sant Gadge Baba Amravati University

Date : 19 / 09 /2020

Place : Amravati

CERTIFICATE

This is to certify that Geological Tour/ Field Report entitled "North India" has been duly completed by **Miss. Vaishnavi Rajendra Chaudhari** in satisfactory manner as partial fulfillment of the requirement for the degree of Master Science in Geology, Sant Gadge Baba Amravati University, Amravati.

The report embodies the original work of the candidate of the best of our knowledge.

– Tour Incharge –

Dr. Y. K. Mawale

P. G. Department of Geology
Sant Gadge Baba Amravati
University Amravati

–Head of Department–

Dr. S. F. R. Khadri

P. G. Department of Geology
Sant Gadge Baba Amravati
University Amravati

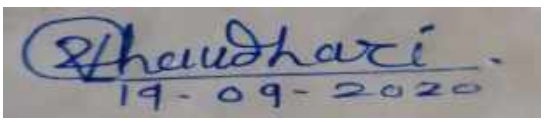
DECLARATION FOR TOUR REPORT

I, Vaishnavi Rajendra Chaudhari, hereby declare that the presented report of excursion is uniquely prepared by me after the completion of 17 days of field work in the North Indian Region.

I further declare that this excursion report or any part thereof has not been submitted in any other university and does not form the basis for the award of any other degree or diploma.

The data used for this excursion report is purely for the purpose of the field work. The data collected for this field work pertains purely to Sant Gadge Baba Amravati University, Amravati.

I also confirm that the report is only prepared for my academic requirement and not for any other purposes.



Vaishnavi Rajendra Chaudhari

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Sant Gadge Baba Amravati University,

Amravati - 444602

ACKNOWLEDGMENT

While submitting this “Geological Tour/ Field Report around the North Indian Region” I assure myself to be very fortunate with pleasure. It gives me a lot of lucrative knowledge in field work of geology.

This geological tour was very well conducted in systematic manner due to endeavor of my Geology Department.

I want hardly express gratitude for my respected Head of Department Dr. S.F.R. Khadri for their major contribution in conduction of the tour. They also visit to our camp giving us inspirit and ideas while working in the field.

It is greatest pleasure to place on record my sincere esteemed towards Dr. Y. K. Mawale, field tour incharge for their invaluable guidance, continuous encouragement and personal enthusiasm in inspiring me to take up this work and complete the same. In the field they gives me valuable tips when and where required, which will helpful throughout life.

Further I wish to give heartily thanks to my colleague who gave me a great support in the field work and completing the same.

1) Mayur S. Shende
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3) Ashish P. Bhawane
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6) Dhanashri D. Jadhao
7) Namrata R. Bagane
8) Pooja C. Durbule
9) Pawan Sadashiv Gedam
10) Jayashri M. Kalaskar
11) Kalyani S. Gharde
12) Komal P. Dahake
13) Priyanka M. Chendkapure

Index

Day 1-2 : Amritsar

Amritsar city a holy city of District Amritsar is situated in Northern Punjab state of north-western India lies about 15 miles (25 km) east of the border with Pakistan with an area of 139 Sq. Km. Amritsar is an important city in Punjab and is a major commercial, cultural, and transportation centre.

Geology of the area:

The whole of the Amritsar District is composed of the recent deposits known collectively as the Indo-Gangetic alluvium, which consists of the alluvial sand, clay and loam. Apart from the clay used for brick-making, the concretionary form of calcium carbonate, known as kankar, is found in beds generally at a slight depth below the surface at the upper margin of the impermeable subsoil, from where it is excavated to form material for road-making.

The method of its formation is as follows: A portion of rather porous soil, consisting of a mixture of lime, sand and clay, is infiltrated with water retained in it by an impermeable bottom. The carbonate of lime is deposited throughout this porous mass, and cements its particles till it becomes of stony hardness. Its deposition no doubt takes place along the outer surface, as each former minute crystal deposited acts as a nucleus for further depositions. The formation is often seen in an incomplete state, nodules of soil having become only partially hardened.

The process of essentially one of segregation from the soil itself, the essential condition of its existence is the presence of carbonate of lime or its ready production by ordinary decomposition in the soil. In soils and subsoils which supply little lime, there may be efflorescence without the formation of kankar, as in those consisting of clay and siliceous sand. On the other hand, in marly soils, in which there may be little or no production of alkaline salts, kankar may form without any efflorescence. In a district where stone road metal is not procurable, unless imported, the presence of this kankar beds are found in Ajnala on the left bank of the Sakki

from Karyal downwards, and between Kaler and Vadala Bhittewad. Good kankar is also found to the right and left of the Grand Trunk Road near Jandiala Guru and at Varpal. In Tarn Taran, it occurs at Bala Chak and Godhlwar.

Topography of the area:

Lying between the River Beas to the east and the River Ravi to the west, the Amritsar District, which forms the lower part of the Upper Bari Doab, is one of the inter fluvial tracts of the Punjab Plain. The River Beas, which separates the Amritsar District from the Kapurthala District, joins the Satluj River near the point where the four districts of Lahore (Pakistan), Firozpur, Amritsar and Kapurthala meet. The Punjab Plain is largely flat and featureless and it is formed of the Pleistocene and the sub-recent alluvium deposited by the rivers of the Indo Gangetic system. As such, the physiography of the Amritsar District is product of alluviation by the Beas and the Ravi rivers. The existing soil is a light reddish-yellow loam, known to the people as maira, but it stiffens into rohi or clay, in which the surface drainage collects on its way down the doab from the hills, and occasionally degenerates into strips of sandy, slightly uneven soil, locally known as tibba, bare of trees and apt to be blown into hummocks by the wind. There are no hills within the limits of this district, and nothing of the nature of rock or stone is to be met.

The formation is distinctly alluvial. Though apparently of a uniform level, the country falls away to the west from the high right bank of the Beas to the left bank of the Ravi and there is also a gentle slope, of perhaps one feet and a quarter in a kilometer, down the doab, which slightly broadens out as the two rivers diverge after issuing from the hills above Gurdaspur.

The district is devoid of impressive natural features, except the dhaya, as the cliffs forming the high bank of the Beas are called, the sandy ridge running down the doab, the scarcely perceptible drainage lines which carry off the surface water, and the perennial stream known in Ajnala as the Sakki. The Amritsar District is a continuous level plain, unbroken by hills or valleys. It ranges in its elevation from about 200 metres in the north-east to about 175 metres in the south-west, with a very gentle gradient of one metre in four kilometers. It points out that the district has

a flat topography, in general. However, an interfluvial tract like that of the Amritsar District cannot be homogeneous throughout, as the terrain of the floodplains must differ from that of the upland plains situated away from the rivers. Indeed one can distinguish the following terrain units in the district on close observation :

(i) The Upland Plain

(ii) The Bluff along the Beas

(iii) The Floodplain of the Satluj

Climate:

The climate of the area is sub Tropical Monsoon climate. The climate of the area is characterized by general dryness except during the brief south-west monsoon season, a hot summer is a bracing winter. The year may be divided into four seasons. It comprises of the winter season (November to March) when temperatures ranges from 4°C to about 16°C, the hot season (April to June) when temperatures can reach 45°C, monsoon season (July to September) and post-monsoon (September to November). The climate is generally characterized by dry weather except the brief southwest monsoon season, hot summer and bracing winter. Amritsar receives on an average 601.5 mm of rainfall with around 33 rainy days. The wind direction of Amritsar is from North-West to South-East.

Availability of mineral:

The whole of the Amritsar District is composed of the recent deposits known collectively as the Indo-Genetic alluvium, which consists of the alluvial sand, clay and loam.

Alkaline Earth:

Sand is the basic raw material for its utilization in any development activity throughout the world. Sand is primarily produced from mining operations on the surface of the earth, near the river beds and the sand quarrying below the surface of earth. Some brick earth and foundry sands are reported from the district.

Groundwater condition:

The entire area in the district is underlain by quaternary alluvium comprising fine to coarse sand, silt and clay, with intercalations of pebbles and kankar. Bore holes drilled down to a depth of about 100 meters have encountered 70-90 per cent of sand.. Groundwater occurs both under confined and unconfined conditions. The depth of reach water in the area ranges from about 1 to 20 meters below the land surf aces. The water-table is generally deep towards the high banks of the Beas and the Sutlej. However, in the vicinity of the canal-irrigated area and also in the floodplains of the Beas and the Satluj, the water-table is very shallow. In many parts of the canal-irrigated areas, waterlogged conditions prevail. Land Stalinization is also observed in areas 3 affected with water logging. The groundwater available in the greater part of the district is generally fresh but hard, except in the southern part of t he district where it is of inferior quality, being saline to bitter. The groundwater in general is suitable for irrigation and domestic purposes.

Also Visit Places at Amritsar

1) Golden temple:

The Golden Temple is a Gurdwara located in the city of Amritsar, Punjab, India. It is the preeminent spiritual site of Sikhism. The Gurdwara is built around a man-made pool (*sarovar*) that was completed by the fourth Sikh Guru, Guru Ram Das in 1577. Guru Arjan, the fifth Guru of Sikhism, requested Sai Mir Mian Mohammed, a Muslim Pir of Lahore, to lay its foundation stone in 1589. In 1604, Guru Arjan placed a copy of the AdiGranth in Harmandir Sahib, calling the site *Ath Sath Tirath*. The Gurdwara was repeatedly rebuilt by the Sikhs after it became a target of persecution and was destroyed several times by the Mughal and invading Afghan armies. Maharaja Ranjit Singh after founding the Sikh Empire, rebuilt it in marble and copper in 1809, overlaid the sanctum with gold foil in 1830. This has led to the name the Golden Temple.

Image: The Golden Temple

2) Jallianwala Bagh massacre:

As per tradition, the Sikhs gathered in the Golden Temple to celebrate the festival of Baisakhi in 1919. After their visit, many walked over to the Jallianwala Bagh next to it to listen to speakers protesting Rowlatt Act and other policies of the colonial British government. A large crowd had gathered, when the British general Reginald Dyer ordered his soldiers to surround the Jallianwala Bagh, then open fire into the civilian crowd. Hundreds died and thousands were wounded. The massacre strengthened the opposition to the colonial rule throughout India, particularly that from Sikhs. It triggered massive non-violent protests. The protests pressured the British government to transfer the control over the management and treasury of the Golden Temple to an elected organisation called Shiromani Gurudwara Prabandhak Committee (SGPC). The SGPC continues to manage the Golden Temple.

Image: Jallianwala Bagh massacre

3) Wagah border:

Wagah is a village and union council (UC 181) located in the **Wagah Zone** of Lahore, Punjab, Pakistan. The town is famous for the Wagah border ceremony and also serves as a goods transit terminal and a railway station between Pakistan and India. Wagah is situated 600 meters (2,000 ft) west of the border and lies on the historic Grand Trunk Road between Lahore and Amritsar in India. The border is located 24 kilometers from Lahore and 32 kilometers from Amritsar. It is also 3 kilometers from the bordering village of Attari.

Image: Wagah Border

Day 3-4 : Jammu

The state of Jammu & Kashmir is strategically located in the north-west corner of India. It shares its borders with China in the east, Pakistan in the West, Afghanistan and Russia in the North and plains of Punjab and Himachal in the south and south-east. The state of Jammu & Kashmir stretches between 32° - 17' N to 37° - 05' North latitude and 72° - 31' E to 80° - 20'East longitude. From North to South, it extends 640 kms in length and from East to Westover 480 kms in breadth. The total area of state is 2,22,236 sq. kms. But the area under actual control is 1,01,387 sq. kms only, as the great chunk of the territory is under illegal occupation of Pakistan and China.

Geology:

The Kashmir valley comprises of sedimentary, metamorphic and igneous rocks ranging in age from Salkhala (Precombrian) to Recent. Outer Hill Division covering Jammu, comprises of Siwaliks, Murrees and Dogra Slates types of Geological Formations. Indus valley (Ladakh) Comprises Crystalline complex of rocks ranging in composition from sedimentary, Igneous and Metamorphic in characteristics.

Physiography:

The state of Jammu and Kashmir is bestowed with lofty snow mountains, fascinating valleys, sparkling streams, rushing rivers and emerald forests. The state

is blessed with diverse ecosystem. In the south lies the Jammu region the lower portion of which is essentially hot in summer and cold in winters, bearing broad leaved forests at lower altitudes in plains and Siwaliks. The middle part of Jammu region support mostly Chirpine forests where as higher reaches are temperate and support luxuriant coniferous forests, the northwest region between Pir Panjal and Zojila is the Kashmir Valley considered the "paradise on earth". This fascinating valley enticing the visitors is a museum of nature and scenic beauty. To the northeast lies the great landscape of Ladakh bound by snow peaks and friendly people. It is a place of innumerable attractions. The state of Jammu & Kashmir is having the unending varieties of its landscape, the magic of natural scenery, the vivid cultural life, the unmatched glaciers, rushing torrent, sparkling springs, the cool shade of Chinars, wealth of its famous health resorts and the last but not least its traditional hospitality which attracts any tourist. The state of Jammu & Kashmir is drained by the mighty Indus and its tributaries like Kishan-Ganga, Jhelum, Chenab and Ravi and their tributaries. Out of these, the Indus and the river Chenab have their origins to the north of the greater Himalayas and they pierce through the main ranges of Himalayas.

Climate:

The regions of state Jammu, Kashmir and Ladakh have distinct agro climatic characteristics and cultural identity. Jammu region has two different climatic zones depending primarily on altitude. Lower hills& plains bear subtropical climate with hot dry summer lasting from April to July. The summer monsoons coming around middle of July and fading away in early September, this is followed by dry spell from September to November. Winter is mild and temperature seldom touches freezing point. In the high reaches of Chenab valley, the climate is moist temperate, winter are severe and varied quantity of snow is received. The Kashmir valley with Pir Panjal Mountains on its south and Karakoram on its north receives precipitation in the form of snow due to western disturbances. The winter is severely cold and temperature often goes below 0°C. Spring is pleasantly cold.

Summers are warm and dry and autumn is again cool and sometimes wet. Ladakh is situated in eastern mountain range of Kashmir. This is one of the highest

ranges in the world. It is cold desert receiving very little precipitation. The temperature remains below the freezing point during winter due to its high altitude when people often remain indoors. Drass in Ladakh is the coldest place of the state. It has recorded the temperature of -50°Cduring winter. During the short period of summer season, the scorching heat of sun often causes sunburns

Soil:

The soil of Kashmir is generally classed as clayey, loamy rich and light, peaty and low lying swamps and is of alluvial origin but quite fertile. In the semi-mountainous tracts the soil is indeed coarse. The underlying rocks in this area are loose boulders. The Kandi tracts have a stony soil and give a dry look even during the rainy season. The soil of Ladakh is bare and rocky with bare gravel slopes.

Biodiversity:

The state of Jammu & Kashmir has been regarded as heaven on earth, and is also called the biomass of state of India. The biodiversity of the rich area of Jammu & Kashmir happens to be one of the 26 hotspots in India with high endemicity. The whole Himalayan belt is one hotspot mega centre having 8 critical areas which includes two regions from the state viz Ladakh and Kashmir. The state of Jammu & Kashmir has fairly rich diversity of plant life and on this people depend for their daily needs of food, medicine, fuel, fiber etc.

The flora of Himalayan Kashmir comprises about 3054 species. About 880 species are found in Ladakh and 506 species found in Jammu. The faunal diversity of Jammu & Kashmir is diverse due to its unique location and climatic condition. 16% of Indian mammals are present in state including birds, reptiles, amphibians and butterflies.

Visit places at Jammu City

1) Geology Department at Jammu University:

The University of Jammu accredited as A+ grade by National Assessment and Accreditation Council (NAAC) was established in 1969. The main campus of Jammu University is situated at Baba Saheb Ambedkar Road in Jammu at an altitude of 1030ft above sea level. The University of Jammu has 11 faculties and 36 academic departments.

Image: Department of Geology at Jammu & Kashmir University

2) Seismological Observatory at Geology Department of Jammu University:

The observation of seismic waves and their propagation through the earth gives seismologist important insight into the mechanisms responsible for earthquakes. This knowledge can be used to assess the seismic risk in earthquake regions. The seismic waves also provide information on the structure of the Earth's interior as they pass through the deeper strata and undergo characteristic changes there.

Image: Seismological Observatory at Geology Department of Jammu University:

3) Wadia Museum of Natural History:

Wadia museum of natural history has been established in the University of Jammu. It is named after the Doyen of Indian Geology Prof. D. N. Wadia. The museum has a large collection of rocks and minerals with its unique symbiotic relationship of Jammu Kashmir and Ladakh and showcases the Ruth Cultural heritage.

Image: Wadia Museum of Natural History

4) Government Gandhi Memorial Science College Jammu:

Geology as subject was introduced as early as 1907, at prince of Wales College, Rechristened as Government Gandhi Memorial Sceince College, Identifying it as Second oldest Geology Department in India, next only to presidency college Culcutta.

Geology as a subject was introduced at Jammu by none other than Dr. D. N. Wadia, FRS who authored the well known text book “Geology of India” Published in

1919.

Fig: Government Gandhi Memorial Science College Jammu

Day 5-6 : Katra

Katra or katra vaishno devi as it popularly known is a small town in Reasi district in the union territory of Jammu and Kashmir, India, situated in the foothills of

the Trikuta Mountains, where the holy shrine of vaishno devi is located.

Katra is located at 32.98^{o} N 74.95^{o} E. it has an average elevation of 875meters. The Banganga River passes through the village.

The town has been connected by roads and state highways for a long time but recently it has also been connected by Indian Railways.

Of the three principle outcrops of limestone, the “Ranjoti-Devigarh” inliers studied by wadia (1937) forms the cores of two broad, not very irregular, anticline dome, pitching abruptly at the extremities. The “Reasi inliers” largest of the three, lies along the same general trend, extending for a distance of about 40km form North of Triyath to the East katra.

Image: Katra Vaishno devi

Day 7-9 :Shimla

Shimla lies in the south-western ranges of the Himalayas at 31.61°N 77.10°E. It has an average altitude of 2,206 metres (7,238 ft) above mean sea level The highest point in Shimla is the Jakhoo hill, which is at a height of 2,454 meters (8,051 ft). The city is a Zone IV (High Damage Risk Zone) per the Earthquake hazard zoning of India. Weak construction techniques and an increasing population pose a serious threat to the already earthquake prone region. There are no bodies of water near the main city and the closest river, the Sutlej, is about 21 km (13 mi) away. Other rivers that flow through the Shimla district, although further from the city, are the Giri, and Pabbar (both tributaries of Yamuna).

The green belt in the Shimla planning area is spread over 414 hectares (1,020 acres). The main forests in and around the city are of pine, deodar, oak and rhododendron. Environmental degradation due to the increasing number of tourists every year without the infrastructure to support them has resulted in Shimla losing its popular appeal as an ecotourism spot another rising concern in the region are the frequent number of landslides that often take place after heavy rains

Physiography of shimla:

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The elevation above mean sea level varies from 320m in Una District, to 6975 m at Leo Pargil Peak of Kinnaur District. Physiographically, the State can be divided into five distinct parallel zones. From south to north these are:

1. Alluvial Plain: A limited zone of nearly flat plain developed at the foot hills of Siwalik Range in the vicinity of Indo-Gangetic Alluvium in the southwestern and southeastern fringes of the state with an average altitude of 375m.

2. Siwalik Foothills: It is also known as SubHimalaya and is the outermost mountainous zone of Himachal Himalaya, separating the state from the plains of Punjab and Haryana. It is 8 km - 50 km wide zone, with altitude ranging from 345m to 1500m. This zone contains many prominent longitudinal valleys viz. Una, Sirsa and Poanta duns.

3. Lesser Himalayan Zone: It is a 65km to 80km wide zone between Sub-Himalaya and Central Himalaya. The altitude of this zone rarely exceeds 3000m.

4. Central Himalayan/Great Himalayan Zone: It comprises a zone of snow-capped peaks ranging in height from 4000m to 5000m. It separates the Lesser Himalayan zone from the Trans-Himalayan zone.

5. Trans Himalayan/Higher Himalayan Zone: It is mainly a rain shadow area, having an average width of 40km and height varying from 3000m to 6000m. The mountain ranges in general trend in NW-SE direction.

There is a network of perennial rivers in Himachal Pradesh, which have glaciers as their sources. Majority of the drainage of the State belongs to Indus River System. The Satluj, Beas, Ravi, Chenab, Spiti, Parbati, Pabbar, Tons and Giri are the main rivers of Himachal Pradesh. Of these, the Satluj, which rises in the highlands of Tibet, is an antecedent river. Most of the rivers flow following the trend of the main structural grain of the region. Nearly 17% of the total area of Himachal Pradesh is covered by glaciers.

A recent study in 2004 has Iodocumented 2,554 glaciers in the state, which are the source of fresh water to the rivers of North India. Bara Shigri is the largest glacier in the State, which is located in the Chandra valley of Lahaul and feeds the Chenab River. The glacier is more than 25km long and about 3km wide. Chandra

Nahan, Bhadal, Bhaga, the Lady of Keylong, Mukkila and Hamata are other major glaciers in the state.

There are many fresh water lakes in Himachal Pradesh.The Chandra Tal, Suraj Tal, Yonam Tso and Nako Lake are the lakes formed due to damming of glaciers, while the Riwalsar and Renuka lakes are due to damming of river/stream courses. Besides, Gobindsagar, Pong and Pandoh are the artificial lakes in of dams across Satluj and Beas river.

Climate of the Area

The region has four distinct seasons. The area experiences severe winter from December to March followed by server's summer season lasting from April to June. The area receives rainfall under the influence of south west monsoon from July to mid-September followed by post-monsoon season lasting up to November. The terrain in general has profound influence on the temperatures of a region.

The temperature generally rises from the beginning of March till June which is the hottest month of the year with mean minimum and maximum temperature of 10 ^{o} C to 40 ^{o} C respectively. With the onset of monsoons by the end of the June temperature begins to fall. The drop in day temperature is much more than the drop in night temperature. The night temperature falls rapidly after the withdrawal of monsoons by mid-September. The month of January is cooler month with the mean maximum and minimum temperature being 8.9^{o} C and 1.7^{o} C respectively. Under the influence of western disturbance, the temperature falls appreciably during winters and it may go even below 0C.

Humidity is generally low throughout the year. During summer season, humidity is lowest 36%. During monsoon month, it goes as high as 80-90%. The average humidity during synoptic hours is 53% and 62% respectively. The highest levels of humidity are observed in the month of August.

Visit Historical places at Shimla

1) Indian institute of advance study (IIAS)

From 1823 onwards, for some six decades the Governors-General and later Viceroys of India had shuttled from one unsuitable residence to another during their summer sojourns in Shimla. It was Lord Lytton (1876-80), who chose Observatory Hill for constructing the building that was to be the final Viceregal address in town. The hill derives its name from Observatory House which was built in 1840 by Captain J. T. Boileau. In time, Observatory House became the residence of the Viceroy's Private Secretary. Observatory Hill is a watershed which stands figuratively astride India. The waters from one side of the hill flow down to the Bay of Bengal, and from the other heads towards the Arabian Sea.

The first designs for the new Viceregal residence were prepared by Captain H. H. Cole of the Royal Engineers. These were presented before the workaholic Viceroy, Lord Lytton at the Simla Fine Arts Exhibition of 1878. It was Lord Dufferin (1884-88), however, who took great personal interest in the matter. He persuaded the Secretary of State for India, Lord Randolph Churchill, to sanction the project that was finally to cost thirty eight lakh rupees. The annual upkeep of the estate was estimated to be one and a half lakh rupees.

Image. Visit at the Indian institute of Advance study center, Shimla

2) Himachal state Museum, Shimla

Dating its history back to the colonial times, the Himachal State Museum was once the residence of Lord William Beresford, who was the Military Secretary of Lord William Bentick. When he left the country, the complex was occupied by Sir Edwin Colon and then it was inherited by the finance member of the council, Sir Edward Law. Later, after many years of independence, the mansion became the house of several Indian government officials.

On January 26th, 1974, the house was finally converted into a museum with the sole aim of preserving the historical and archaeological artifacts. Since then, the museum collects a wide variety of heritage paintings, coins, photographs and sculptures which otherwise would have been extinct.

Image: gallery of Himachal state museum

Day 10-11: Dehradun

Dehradun is made up of two words dehra + doon “dehra” is derived from the word dera, meaning home, and “doon” is a term for the valley that lies between the Himalayas and the Shivalika. The city is also regarded as Devbhoomi ("Land of the Gods"). Often referred as gateway to Mussorie, the city was ruled in turns by Sikhs, Mughals and Gurkhas before coming under the reign of British. Uttarakhand police is the main law enforcement agency in the city.

Dehradun is located in the Doon Valley on the foothills of the Himalayas nestled between the river Ganges on the east and the river Yamuna on the west. The city is noted for its picturesque landscape and slightly milder climate and provides a gateway to the surrounding region. It is well connected and in proximity to Himalayan tourist destinations such as Mussoorie, and Auli and the Hindu holy cities of Haridwar and Rishikesh along with the Himalayan pilgrimage circuit of Chota Char Dham. Dehradun is also known for its Basmati rice and bakery products.

Geologically Dehradun valley is a synclinal trough within the Shiwaliks formation. The young formations in the region are the river terraces formed by Dun gravels. The limits of syncline consist of middle and upper Shiwaliks rocks followed by the northerly dipping pre-tertiary formations of lesser Himalaya in north. On all these older formations are deposited the Pleistocene and recent sediments, the Dun gravels (Misra et al., 1988). Outer fringe of lesser Himalaya of Garhwal is rich in its mineral deposits especially for rock phosphate and lime. Mussoorie hills and Dehradun valley have huge deposits of phosphorite. This mineralization is confined to the Krol and Tal formation and found in association with chert and black shales.

Soil:

Soil texture of Maldeota varies from sandy loam to clayey loam. Soil pH is slightly higher in the restored sites in comparison to the natural area, which favors the increased availability of nutrient elements. The soil color varies according to profile but generally color was observed dark brown to olive brown (Kumar, 1997).

Climate:

Climate of Maldeota has well demarcated summer, rainy and winter seasons. Because of elevation of this site and its location in Doon Valley, summer is not very hot. Summer is followed by pre-monsoon and local showers. Monsoon breaks towards the end of June and continues up to September. The average rainfall during the study year i.e. 2010-11 was 116.5 mm and the average maximum temperature was 28.5o C and minimum was 14.2oC whereas relative humidity was 50.4 % during the study period.

Visit Places at Dehradun:

1) Wadia Institute of Himalayan Geology:

Wadia Institute of Himalayan Geology, Dehradun is an autonomous research institute for the study of Geology of the Himalaya under the Department of Science and Technology, Ministry of Science and Technology, Govt. of India. It was established in June, 1968 in the Botany Department, Delhi University, the Institute was shifted to Dehradun, Uttrakhand during April, 1976.

The institute has its origins in department of Geology at University of Delhi, after being shifted to Dehradun it was initially named as the Institute of Himalayan Geology, renamed in 1976 as the Wadia Institute of Himalayan Geology in memory of its founder, late Prof. Darashaw Nosherwan Wadia (F.R.S. and National Professor), in honor to his contributions to the geology of the Himalayas. During the last quarter century the Institute has grown as a centre of excellence in the field Himalayan Geology and is recognized as a National Laboratory of international repute with advanced laboratories and other infrastructural facilities for undertaking higher level of research in the country.

Image: Wadia Institute of Himalayan Geology

2) S. P. Nautiyal Museum:

The museum offers a glimpse of the mighty Himalaya; its origin, evolution in time and space, natural resources, life in the geological past, earthquakes and environmental aspects. Basic objective in organizing the museum is to educate students and general public as well as to highlight the Institute activities. Museum, the educative wing of the Institute had a large number of student visitors from different universities, local schools and general public and as usual remained the main centre of attraction for the national and international visitors. Students in large groups from different schools, universities, colleges and from other institutions visited the Museum and guided tours were provided to them. A relief model of the

Himalaya and paintings depicting the impact of human activities on the environment displayed in the Museum remained a point of attraction for the visitors.

Image: S. P. Nautiyal Museum

3) Forest Research Institute:

The Forest Research Institute (FRI) वन अनुसन्धान संस्थान is an institute of the Indian Council of Forestry Research and Education and is a premier institution in the field of forestry research in India. It is located at Dehradun in Uttarakhand, and is among the oldest institutions of its kind. In 1991, it was declared a deemed university by the University Grants Commission.

The Forest Research Institute campus hosts the Indira Gandhi National Forest Academy (IGNFA), the staff college that trains officers selected for the Indian Forest

Service (IFS). It was founded in 1878 as the British Imperial Forest School by Dietrich Brandis in 1906 It was reestablished as the Imperial Forest Research Institute, under the British Imperial Forestry Service.

The museum is open from 9:30am to 5:00pm daily. There is an entry fee of ₹40 per person and a nominal entry fee for vehicles. There are six sections in the museum:

1. Pathology Museum
2. Social Forestry Museum
3. Silviculture Museum
4. Timber Museum
5. Non-Wood Forest Products Museum
6. Entomology Museum

Image: Forest Research Institute

Day 12: Rishikesh

Uttarakhand is a hilly state situated in the Indian Himalayas. Formerly a part of Uttar Pradesh, Uttarakhand (formerly called Uttaranchal) was created as the 27th state of the Indian Union on November 9th, 2000 by carving out the 13 hill-districts of Uttar Pradesh. It lies in the Northern part of India between the latitudes 28°43'- 31°27'N and longitudes 77°34'- 81°02'E. It has a maximum dimension along the East - West axis of 310 km and of 255 km along North – South axis, covering an area of 53,484 km2. The elevation ranges from 210 to 7817 m AMSL The state shares border with China (Tibet) in the North and Nepal in the East and inter-state boundaries with Himachal Pradesh in the West, Northwest and Uttar Pradesh in the South. Broadly the region constitutes of 13 districts falling in two major administrative Units, Garhwal (northwest portion) and Kumaon (southeast portion). Garhwal Division consists of 7 districts, i.e. Dehradun, Haridwar, Uttarkashi, Tehri, Pauri, Rudra Prayag and Chamoli while remaining 6 districts viz., Pithoragarh, Bageshwar, Almora, Nainital, Champawat and Udham Singh Nagar fall in Kumaon division.

Climate:

The state has two distinct climatic regions: the predominant hilly terrain and the small plain region.The climatic condition of Uttarakhand varies greatly due to variation in altitude and proximity towards Himalayan ranges. The climatic condition of the plains is very similar to its counterpart in the Gangetic plain, i.e. tropical. Summers are relatively hot and winters are chilly with temperaturesgoing below 0°C

Average Rain in the state varies from the 92 cm in Srinagar to 250 cm in Nainital. However, spatial distribution of the rainfall varies depending upon the geographical location; and slope and aspect of the place. The amount of rainfall is generally high in low mountainous regions like Nainital and Dehradun and it gradually decrease with increasing height. About ¾ of the total rainfall is confined to the monsoon season and remaining ¼ occurs in the other seasons due to the western

disturbances and local orographic effects. The monsoonal activities generally start in the later part of June and seizes in the month of September.

Image: Field work at Rishikesh area

Day 13-15 : Jaipur

Jaipur city is the capital and largest city of the Indian state of Rajasthan. Its municipal boundary of the city extends from 26º46' N latitude to 27º01'N latitude and 75º39'E longitude to 75º57'E longitude. The city is surrounded by the Nahargarh hills in the North and Jhalana in the East, which is a part of Aravalli hills ranges. To its south and west the city is surrounded by isolated and discontinuous hillocks. The Southern end of the city is an open plain stretching far and wide towards Sanganer and beyond. The city was initially located within the walls with the rocky streets providing an easy drainage system on either side of the city but the later extension of the city took place towards the south and west on the alluvial plains formed in the confluence zone of the Amani Shah Nala in the west and Jawahar Nagar Nala in the east and beyond.

Topography

The general slope of Jaipur city and its surroundings is from north to south and then to south-east. Nearly all ephemeral streams flow in this direction. Higher elevations in the north exist in the form of low, flat-topped hills of Nahargarh (587 meters). Jaigarh, Amber and Amargarh hills are deeply dissected and eroded. An isolated hillock called 'Moti Dungri' upon which an old royal castle exists is near the Rajasthan University. Further in the south, topographical levels of the plain areas vary between 280 meters along Bandi and Dhund rivers to some 530 meters in the north-east of Chomu near Samod hills. The overall trend is a decline of slope from the areas bordering the hills in the north to low lying gentle plains in the south.

Geology and soil

Jaipur city situated in middle part of Jaipur District in Rajasthan. The area is a pediplain covered with thick alluvium and aeolian deposits of Quaternary age. A few isolated, linear ridges and hillocks trending ENE-WSW to NE-SW form prominent landmarks in the North-Western part of the area. The maximum height near Kalwar is 515m above mean sea level. Meta-sedimentary rocks, metapellites, migmatites and

gneisses of Precambrian age occur in some rocky outcrops and also concealed under thick cover of alluvium and aeolian sand.

Jaipur city is covered with several soil units and also some other physical features such as sand dunes, rocky outcrops, water bodies etc. Sandy soil with severe erosion and high salinity and shallow skeletal soils are major limiting factors affecting crop choice in the region. Soils of the Aravalli landscape are mainly derived from the argillaceous deposits composed of slates, phyllites and mica schist along with granite and quartzite.

Climate

Jaipur city falls under the semi-arid of climate and experiences a continental type of climate owing to its proximity to the desert and inland location. It is characterized by hot summers and cold winters. The mean temperature of Jaipur is 36ºC varying from 18ºC in winter (January) to 45ºC in summer (June). The normal rainfall of Jaipur is 600 mm nearly 90 percent of which takes place in the summer monsoon period from (June to September) and the rest comes from the winter cyclones.

Drainage system

The natural drainage of the Jaipur city is largely guided by erosion. Figure 2.5 (b) shows the drainage network of JMC area. Intense gully erosion characterizes the city particularly the northern hilly region. Dhund River and Amanishah nala form a fork like drainage pattern in the confluence zone in which the major part of Jaipur city is situated. The Amanishah nala originates from the western slopes of Jaigarh hills and flows northwards in the upper reaches, turns south and south-west in its middle course and flows towards east with a broad semi-circular course. Further downstream it joins the Dhund River. There is another small drainage system in the northern foothills which presently discharges the city's waste effluents into an artificially impounded lake called the Jal Mahal (Man Sagar). Jal Mahal Lake is now a large cesspool of effluent waste water changing its profile from muddy water mixed with effluents and sludge during rainy season to a dried large puddle surrounded by parched earthen floor during summer season. The Jaipur municipal area has an adequate planned storm water drainage system.

Surface Water

For Jaipur city, most of the surface water sources originate from nearby hills which act as drainage channels for rainwater. The city is drained by a number of seasonal rivers, of which Banganga, Dhundh and Bandi are prominent. There is no perennial surface water source in the city. Amanishah Nallah is a seasonal stream that flow from north to south near the city. Dhund river to the east of the city. Ramgarh Lake was the main source of supply more than 30 years back but has now dried up.

Ground Water

In Jaipur city ground water quality is variable with some areas largely within permissible limits as per Indian Standard (IS) 10500, and concentrations of nitrates and fluorides exceeding limits in other locations. The widespread use of septic tanks throughout the city is possibly one factor contributing to the high concentration of nitrates in the groundwater. The wastewater from soak pits leaches into the ground and contaminates the groundwater strata (LEA & CEPT 2005). The drinking water standards provide for monitoring or regulating only chemicals and metals in water, but not the bacteriological counts (IS 10500). Thus, the extent of faecal contamination of tube-well drinking water in the city is not known but the high presence of nitrates could be considered a proxy indicator.

Visit Places at Jaipur

Geological Survey of India, Jaipur

Geological Survey of India, Western Region, has its Regional Geological Museum at its premises in 15-16 Jhalana Institutional area, Jaipur, which is regularly maintained and constantly upgraded.

The museum at Jaipur exhibits rare and typical samples of fossil wood, dinosaurian remains and marine fossils of geological significance. The museum is frequently visited by the various institutes and different professional organizations. In addition, a Rock Garden is also maintained in the GSI office premises at Jaipur.

Image: GSI Jaipur

2) Atomic Minerals Directorate for Exploration and Research, Jaipur

Atomic Minerals Directorate for Exploration and Research (AMD), with headquarters at Hyderabad and seven regional centres, is the oldest unit of the Department of Atomic Energy (India) (DAE), Government of India. The principal mandate of the organisation is to carry out geological exploration and discover mineral deposits required for nuclear power programme of India.

AMD started functioning from New Delhi on 10 August 1948 as 'Rare Minerals Survey Unit'. Renamed first as 'Raw Materials Division' and then as 'Atomic Minerals Division' in 1958, it was shifted to Hyderabad in 1974. On 29 July 1998 it underwent the latest name change as 'Atomic Minerals Directorate for Exploration and Research' to assert its status as a premier geological exploration and research

organisation. Professor D.N. Wadia, FRS, a doyen among Indian geologists guided the organisation from its inception to 1970 as Geological Adviser to Government of India.

The prime mandate of Atomic Minerals Directorate for Exploration and Research is to identify and evaluate uranium resources required for the successful implementation of Atomic Energy programme of the country. AMD over the past five decades has been instrumental in locating Uranium resources in Singhbhum Shear Zone, Jharkhand; KPM (Domiasiat), Wahkut, Wahkyn, Meghalaya; Lambapur - Chitrial, Peddagattu, Telangana; Tummalapalle, Andhra Pradesh; Gogi, Karnataka and Rohil, Rajasthan. AMD also has established vast resources of thorium in the coastal tracts of Kerala, Tamil Nadu, Andhra Pradesh and Odisha. AMD has also extended its contribution towards recovery of Rare Metals and Rare Earths elements.

Image: Atomic Minerals Directorate, Jaipur

3) Birla Mandir

Birla Mandir of Jaipur is a Hindu Temple and is one the many Birla Temples. It was built by the B. M. Birla Foundation in 1988 and is construction solely of white Marble. It is dedicated to the Hindu Goddess Lakshmi and Lord Vishnu, whose images appear inside, along with other Hindu Gods.

Tradition states that a Maharaja sold the Birla family the land for the temple for one rupee. Construction began in 1977 under the direction of Ramanauj Das and Ghanshyam Birla. It opened on February 22nd, 1988.

Image: Birla Mandir

4) Jantar mantar

Jantar Mantar of Jaipur is one of the five observatories constructed by Jai Singh II. Ujjain, Delhi and Varanasi are the other cities that house the remaining Jantar Mantars but there remain no traces of the one at Mathura. Among the many instruments that are part of this observatory is the world's biggest sundial. Jantar Mantar is located just a stone's throw from City Palace and Hawa Mahal and features instruments made of stone and brass that were built using instrument design principles from ancient texts. In all there are 19 instruments that help observe astronomical positions with the naked eye.

Jantar Mantar is a fine example of Ptolemaic positional astronomy and has instruments that operate in each of the three main classical celestial coordinate systems: the ecliptic system, the horizon-zenith local system and the equatorial

system. When it suffered some damage in the 19th century, Major Arthur Garrett, an amateur astronomer who was posted as the Assistant State Engineer in Jaipur, undertook the first major restoration work on Jantar Mantar. As of 2010, Jantar Mantar has been included in the list of UNESCO World Heritage sites and remains a gem of Jaipur that cannot be missed.

Image: Jantar Mantar

5) Amber fort

Amber Fort stands on the outskirts of Jaipur, some 13 km from the city center. As with almost all other structures in the area of its era, Amber Fort brings together elements of Hindu and Mughal architecture. Before Jai Singh II founded Jaipur in the plains and moved his capital there, Amber served as the seat of the Kachhawa Rajput clan to which Jai Sing belonged. Construction on Amber Fort began in 1592 when Raja Man Singh I built over the remnants of an earlier fortification. Built with red sandstone, Amber saw considerable modifications over time as successive rulers added their own elements to it over a span of a century and a half. Amber's

moment of glory was under the reign of Man Singh I. The commander-in-chief of the Mughal army and one of Akbar's Navratnas (or nine jewels of Akbar's court) Man Singh I commissioned the construction of Amber.

In several ways, Amber is less of a military fortress (like Jaigarh or Nahargarh) and more of a pleasure palace. Precious stones were once embedded in the walls and ceilings of Amber. The stones have long gone but the intricate carvings and mirror work remain and offer a glimpse of just how grand Amber Fort must have been at the peak of its power. The fort complex houses several palaces constructed in the Mughal style of architecture and a fortified tunnel that connects it to Jaigarh. The tunnel was built as an escape route for members of the royal family so they could take refuge in Jaigarh, a far safer place than Amber.

Amber gets its name from Amba, the goddess of the Meena clan that ruled the fort and its surrounding areas in 967 AD. Amber fell into the hands of the Kucchwaha Rajputs in 1035 AD. Amber flourished under the reign of the Kucchwaha Rajputs, especially so under the reign of Raja Man Singh I and became capital in 1036 AD. Amber remained the seat of power of the Kucchwaha Rajputs for close to seven hundred years, right up until 1727 AD. Jai Singh II built a new city for his fast-growing population.

Image: Amber Fort

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Tour report on

"Jain Irrigation Tour"

Submitted by

Mr. TEJAS PRABHAKAR GAYAKI

PGDWTM Sem IInd (2019-20)

PG Department of Geology, Amravati University

Maharashtra - 444602

Organized by- Department of Geology, SGBAU, Amravati.

Succeeded by- Respected Dr.S.F.R. Khadri sir, the head dept of Geology, SGBAU, Amravati.

Time duration: 10-02-2020 Monday to 14-02-2020 Friday.

Day 1

10 February 2020

Very soon we will arrive to the most interesting place i.e. nothing but the **Jalgaon Khandesh** via **Amravati-Surat** express. It's long tour arranged by the department of Geology for us diploma students. So let's fun, enjoy and it's also the knowledge grade uping (increasing)tour.

We has kept small Bluetooth amplifier, so we have enjoyed the so many our favorite and evergreen songs during the journey. We are arrived to the Jalgaon station at accurate **01:48pm**. There was unforgettable memories during our first group photo on the station by one drinker citizen. Very soon the we got the van sent by the Jain irrigation trust and approximately at 03:00pm we touched to the spot.. **the Jain irrigation trust**. The place was not even much less interesting than as the sir was told us. We were total of 7 candidates, Akshay, Sachin, Jivan, Karma, Santosh, Tejas and 7th one was respected Dr. Khadri sir, the head Dept of Geology, SGBAU.

We six got the very fantastic large hall with advance facilities with room no.608 and the 609 was the room no. which was taken by Dr. Khadri sir. Without any delay we have our lunch and after getting the relief for half an hour, immediately fell out to walk and experience the nearby natural beauties.. Sir was urging for group photos at each place that's why our special/single photos are to low but lots of group photos are accumulated. Sir was very interested to share the knowledge about each place wherever we was going to. At the front of **Gandhi Aashram** we made conversation with guard and then we got much of co-operation from him too•. Today was Monday's holiday hence this place **i.e. Gandhi Research Center** was so hush..

After going a little further and just behind the National flag (Tiranga) there were lying some large Besalt Rocks, sir was urge to us to take a photos of that and then told us the history of **Indian Subcontinent and moving plate tectonic plate of 60-65 million years ago (mya).**

1.1 Introduction about Jain Ltd.

Jain Irrigation Systems, often known as Jain Irrigation, JISL, or simply Jains, is a multinational organization based in Jalgaon, India. JISL employs over 11, 500 employees, and has 33 manufacturing plants. It develops, manufactures, supports and sells diversified products, including drip and sprinkler irrigation systems and its components integrated irrigation automation systems, PVC and PE piping systems, plastic sheets, greenhouses, bio-fertilizers, solar power, solar water-heating systems, solar water pumps, turnkey biogas plants, and photovoltaic systems. JISL also processes dehydrated vegetables, concentrated and frozen fruits or pulp.

Jain Irrigation Systems Limited (JISL) with its motto 'Small Ideas, Big Revolutions' with more than 10,500+ associates worldwide and revenue of ~USD 1 Billion, is an Indian multinational company with manufacturing plants in 30 locations across the globe. JISL, its subsidiaries and associates are engaged in providing solutions in agriculture, piping, and infrastructure through manufacturing of Micro Irrigation Systems, PVC Pipes, HDPE Pipes, Plastic Sheets, Agro Processed Products, Renewable Energy Solutions, Tissue Culture Plants, Financial Services and other agricultural inputs since more than 34 years. It has pioneered a silent Productivity Revolution with modern irrigation systems and innovative technologies in order to save precious water and has helped to get significant increase in crop yields, especially for more than 6 million small farmers. It has also ushered in new concept of large scale Integrated Irrigation Projects (IIP). 'More Crop Per Drop™' is the company's approach to water security and food security.

1.2 Founder of Jain Irrigation Systems Limited (JISL)

Bhavarlal Hiralal Jain (12 December 1937 – 25 February 2016) was an Indian entrepreneur, and the founder chairman of Jain Irrigation Systems Ltd. (JISL), now the second largest micro-irrigation company in the world. He was a staunch Gandhian and philanthropist. He was the founder of Gandhi Research Foundation. In 2008, he was awarded the Padma Shri, India's fourth highest civilian award by the Government of India. He strove hard to earn a place of pride for Indian agriculture by augmenting yields and adding value using technology.

Photo – 1 Showing Premises of Parish ram Building

Location - Near Gandhi Teerth (Evening)

1.3 Giant Phenocrysts Basalts in the Deccan Trap

The giant Phenocrysts(plagioclase) basalts (GPBs) occur both in continental and oceanic basalts. Their chemical and mineralogical compositions give insights into the processes that occur in crustal magma chambers (e.g., magma mixing and fractionation). Petrologic ally GPBs are an important component of the DVP.In hydrothermally altered portions of some flows the phenocrysts are altered and in some patches seem to have been completely destroyed. As a rule, the plagioclase weathers more quickly than the ground mass producing a very characteristic pitted appearance. Some flows seem to have contained large crystals of olivine which have been altered to iddingsite. Highly vesicular and amygdaloidal giant phenocrysts basalts are also met with.

Photo 2 - Showing Giant Phenocrysts Basalts

Day 2

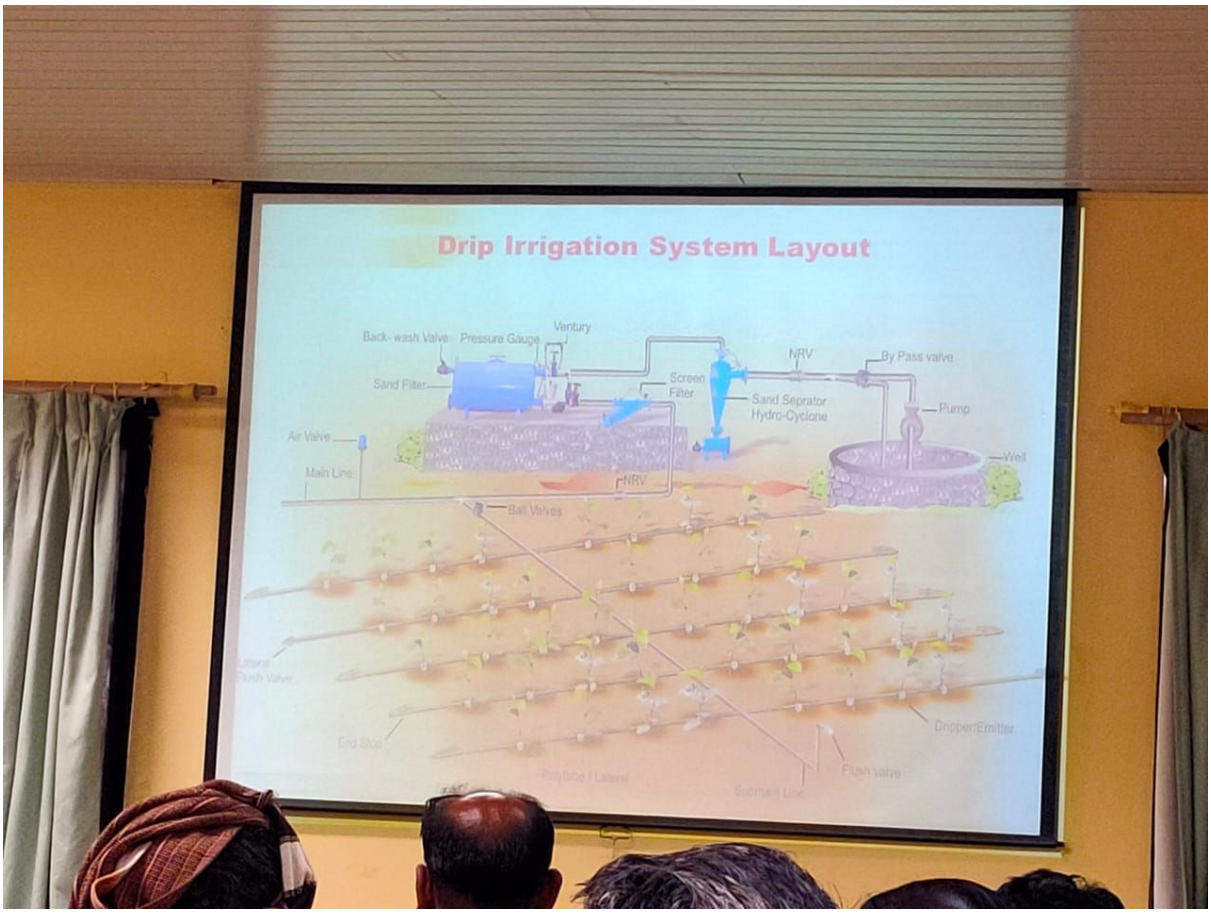
11 February (Morning)

2.1 Subir Bose Hall

Subir Bose hall is seminar hall of Jain irrigation system. Here are so many guest comes and guided to so many farmer or agriculture related peoples. That day chinmay Joshi sir guided us, they give information about the Jain Irrigation system, agriculture, Watershed and irrigation.

After the lecture of chinmay sir we guided by Dr. B. D. Jade sir he is the senior scientist and head of agronomy. Their lecture on Advanced Irrigation and Nutrigation Technologies

- No. 1 in mango processing
- No. 1 in tissue culture banana
- No. 2 in onion dehydration
- No. 1 in micro irrigation



"Sr.scientist Dr.B.D.Jade sir's lecture"

At the morning after full stomach breakfast we had attend the lecture on **Crop yield** given by the **senior scientist Hon. Dr. B.D.Jade sir.** Lecture was started with the prayer **i.e. "Itani shakti hame de n data.."** (as I strongly wish inside my heart). After this lecture we were going towards the green house by the traveler with no. 0077.

Location- 2.2 Tissue Culture Plant (Morning)

Plant tissue culture is a collection of techniques used to maintain or grow plant cells, tissues or organs under sterile conditions on a nutrient culture medium of known composition. Plant tissue culture is widely used to produce clones of a plant in a method known as micro propagation. Different techniques in plant tissue culture may offer certain advantages over traditional methods of propagation, including: The production of exact copies of plants that produce particularly good flowers, fruits, or have other desirable traits.

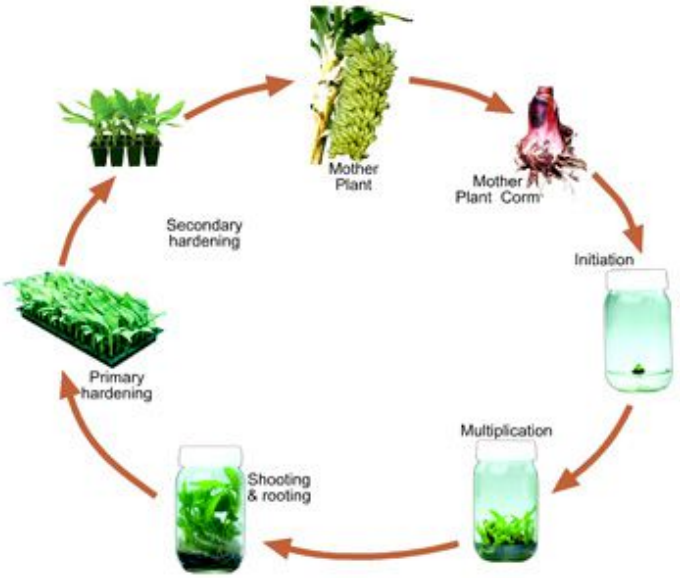


Figure 13 - Cycle of Tissue Culture Plant

After that lecture we had going to tissue culture park of Jain Irrigation System. There are Mr. Dhiraj P. Khadke Guided us about the tissue culture. This park having a total 900 acre area. There are two types of hardening found, one is the primary hardening and secondary hardening, primary hardening is a green house and secondary is a poly house.

After looking the process of primary hardening of Banana and sweet Orange• seedlings, we have take our lunch at the 1:30pm approximately.

"Visit to plastic plant"

After lunch we visited to the plastic plant, wherein multiple types of plastic equipment like PVC pipes (poly vinyl chloride), agricultural equipments and much more plywood replacing goods were gone to be manufacturing there.

Out of total 2000 hector land where the Jain irrigation system was spread, the plastic plant was occupied total of 400 hectors. **Raw plastic material they were importing directly from the Thailand via Sea way or via Airplane too.** Whole information and visit to this plastic plant was made properly only because of the **Mr.Bhushan Jadhao (agri Engineer).**

Place Jain Irrigation System Limited (Afternoon)

Location –2.3 Drip Line Plant

After detailed study of inter-relationship among soil, water, crop, land terrain and related agro climatic conditions, Jains designed a suitable and economically viable system to deliver a measured quantity of water at the root zone of each plant at regular intervals. This is to ensure that the plants do not suffer from stress or strain of less and over watering. The system installed at the farmer's field is commissioned and training imparted to the farmer, followed by regular after sales services.

Photo 9 - Plastic Plant of Jain Irrigation System Limited

2.3.1 Emitting Pipe

Emitting Pipe play a key role in drip irrigation systems. Jain Emitting pipes are manufactured from virgin special grade polyethylene.Resistant to Ultra Violet (UV) radiation and other environmental effects. Jain Emitting Pipe passes through stringent quality tests confirming to Indian and International Standards .The nominal diameter ranges from 12 mm to 25 mm.

Figure 7 - Emitting Pipe

2.3.2 Drippers

Drippers are used for online drip irrigation system. Each of our Dripper is designed to suit difficult soil conditions, water needs of various crops, difficult water quality and numerous requirements of agriculture. Innovative design, precision molding, use of quality raw material and stringent quality tests are the key factors behind the sustainable and efficient performance of our online dripper for Drip Irrigation. Narrow cross shaped inlet acts as a filter and colored cap represents flow rate and facilitates easy identification. Manufactured from virgin plastic for stable performance. These devices are UV stabilized and are able to withstand environmental effect. Recommended for orchards,fruit crops, vegetables, nurseries&flowers.

2.3.3 Filters

Water is not found in its purest form in nature. It is always contaminated with physical, chemical & biological impurities. Proper filtration is of much importance to prevent low pressure diffuser like emitters from clogging. Our wide range of water filters are standing like watchdogs to protect your system from clogging hazards. Sand Separators to remove silt, sand from your water, media filters to remove organic impurities like algae, trash, leaves etc. from water and complete range of screen filters to remove any physical impurities from water are available in our filtration range. Stable performance maximum filtration efficiency and minimum maintenance are some of the common features of our filters.

2.3.4 Plastic Control & Safety Valve

Jain provide complete solution for Control and Safety Valves. Our high performance valves are with manual and or automatic control. Our Plastic valves are cost effective, easy to install & maintain, value driven and customized for specific requirement. We also provides turnkey services for survey, designing & installation

Figure 10-Plastic Control & Safety Valve

2.4 SWR pipe plant

PVC SWR Pipes System is manufactured strictly conforming to the relevant environment friendly standard.PVC SWR Pipes System comes with a full product range, excellent service support & wide distribution network.PVC SWR Pipes System has immunity to corrosion and resistance to all types of chemicals used in detergents and disinfectants.

Figure 11- SWR pipe plant

2.5 Installations of Drip Irrigation System

Drip irrigation is a type of micro-irrigation system that has the potential to save water and nutrients by allowing water to drip slowly to the roots of plants, either from above the soil surface or buried below the surface. The goal is to place water directly into the root zone and minimize evaporation. Drip irrigation systems distribute water through a network of valves, pipes, tubing, and emitters. Depending on how well designed, installed, maintained, and operated it is, a drip irrigation system can be more efficient than other types of irrigation systems, such as surface irrigation or sprinkler irrigation.

Components used in drip irrigation:

1) Pump or pressurized water source:-Water filter(s) or filtration systems: sand separator, Festination systems (Venturi injector) and chemigation equipment (optional).

2) Pressure Control Valve (pressure regulator).

3) Distribution lines (main larger diameter pipe, may be secondary smaller, pipe fittings).

4) Hand-operated, electronic, or hydraulic control valves and safety valves.

5) Poly fittings and accessories (to make connections).

6) Emitting devices at plants (emitter or dripper, micro spray head, inline dripper or inline drip tube).

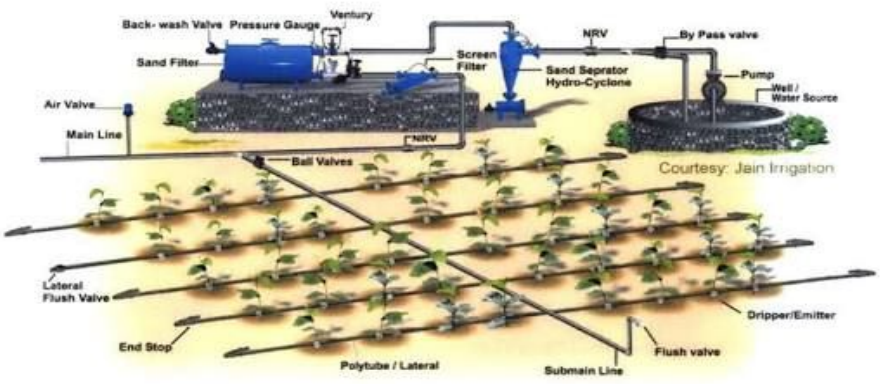


Figure 12 - Installations of Drip Irrigation Syste

Day 3

12 February (Morning)

"Visit to Farm."

After breakfast at morning we gone to the farm of Dr.Ranjit Chavan along with the farmers from Uttarakhand which were came to attend this all agricultural sessions in a way to apply the new ideas into the farm. Again second banana farm visit in village Ramdevadi and onion farm visit the farm of Uttamrao Daglu there are so many information got from guide. Till afternoon we have complete this visit in which we seen some new ideas regarding to the traditional agricultural systems, in which we were attended the drench• systems, Banana • farming systems, Onion farming systems and much more. All that things we were seen here till now was already known to us.


"Again towards the bird's eye view Lake"

At afternoon by meal and by relaxing for a while, we came towards the same bird's eye view Lake. At there in a garden designed at the Lake corner, sir gave us a lecture on the questions regarding watershed technology diploma, which are gone to be asked frequently in a interview. We captured n number of highlights of the memories in our Mobiles during walk round to the lake. This was the most likely point of our whole tour. Honestly this was the very best combination of the nature and development. This was the very best example for Watershed technology and management.


Day 4

13-02-2020-Thursday.

Visit to "Bhavarlalji Jain Parishram Museum"

Parishram

Parishram hall is the collection of all photos related to Jain irrigation system Ltd, which includes information of

1) PVC Foam Sheets

2) Bio-Gas Power Plant

3) Jain SolarPhotovoltaic Appliances

4) Fruit Processing and Products

5) Different Irrigation i.e., Sprinkler, drip etc.

6) Greenhouses, Poly and Shade houses

Photo - 3showing photo gallery of Jain irrigation

we came to the **"Bhavarlalji Jain Parishram lab/Museum"** along coincidentally with the college tour organised for B.Sc agri. first year students of the **"Vasundharatai Deshmukh Agricultural college, Amravati**. Here the gentleman Mr.Chinmay Joshi(M.Com) were gave us the information regarding the work done by the respected **"Bhavarlalji Jain"** for the field of agriculture. After that the whole museum was opened for us in which the thousands of awards achieved through the "Jain irrigation", like **"all-India Khandesh Kohinoor award"** etc. At that place photo session was not allowed at all.

Location - Near Parishram Hall

2.2 Sprinkler Irrigation System

Sprinklers provide efficient coverage for small to large areas and are suitable for use on all types of properties. It is also adaptable to nearly all irrigable soils since sprinklers are available in a wide range of discharge capacity.

Jain Sprinkler system is a unique irrigation system. It is designed to ensure maximum water saving, combining high quality, affordability and ease of installation. All the products are made out of high strength & chemical resistance engineering plastics to achieve functional satisfaction and to maintain cost economics.

All sprinklers undergo extensive quality testing in our well-equipped state of the art lab. Moreover, performance of the products are also tested in the field to ensure uniform water distribution and higher efficiency

2.2.1 Spray Heads, Jets & Foggers

Spray Heads, Jets & Foggers are used to maintain humidity or temperature control in greenhouse, shade house. Spray Heads, Jets & Foggers are manufactured from good quality virgin raw material, easy to install, reliable performance are some of the common features of our fogger and misters. It can be supplied with Leakage Prevention Device (LPD) for pulsed operation and to prevent low head drainage. Ideal for plant propagation, recommended for climate control in Greenhouse and Shade house. Suitable for crops which require maintaining micro climate in the canopy area.

Figure – 1 Spray Heads

2.2.2 Rainport Sprinkler System

Rain port Sprinkler Systems is a mini irrigation system i.e., laterals and sprinklers can be easily shifted from one place to other. Reinstallation of the system is also easy and consumes less time and labor. It overcomes all the limitations of conventional sprinkler irrigation system and yet meets the high standards of effective irrigation principles such as:

1) High distribution uniformity.

2) Controlled application rate.

3) Gentle precipitation, low droplet impact on soil structure and no foliage damage.

Figure - 2 Rain port Sprinkler Systems

2.2.3 Over Head Sprinkler

Overhead Sprinklers are designed for a wide range of general field uses portable, semi-portable and solid set systems, to meet the demanding needs of modern, economic irrigation systems. Featuring a sophisticated field tested construction and the use of highly corrosion resistant materials; they ensure fall safe operation and long life requiring a minimum maintenance. We have a wide range of overhead sprinkler starting from small nozzle size with low flow rates to large nozzle size with high flow rates.

1) Plastic Impact Sprinkler

2) Metal Impact Sprinkler

1) Plastic Impact Sprinkler

Plastic Impact Sprinklers are designed for a wide range of general field uses portable, semi-portable and solid set systems, to meet the demanding needs of modern, economic irrigation systems. Featuring a sophisticated field tested construction and the use of highly corrosion resistant materials; they ensure fall safe operation and long life requiring a minimum maintenance. We have wide range of Plastic Impact Sprinkler starting from small nozzle size with low flow rates to large nozzle size with high flow rates.

Figure 3 - Plastic Impact Sprinklers

2) Metal Impact Sprinkler

Sprinkler irrigation is a method of applying water similar to rainfall. Water is distributed through pressurized network system. It is then sprinkled through sprinkler nozzles to achieve uniformly distributed rain fall. Sprinkler irrigation is adaptable to any farmable slope, whether uniform or undulating. The lateral pipes supplying water to the sprinklers should always be laid out along the land contour whenever possible. This will minimize the pressure changes at the sprinklers and provide a uniform precipitation. If practically it is difficult to install along the contours pressure compensating sprinklers can also be used.

Figure 4 - Metal Impact Sprinklers

2.2.4 Raingun

Plastic Impact Sprinklers are designed for a wide range of general field uses portable, semi-portable and solid set systems, to meet the demanding needs of modern, economic irrigation systems. Featuring a sophisticated field tested construction and the use of highly corrosion resistant materials; they ensure fall safe operation and long life requiring a minimum maintenance. We have a wide range of Plastic Impact Sprinkler starting from small nozzle size with low flow rates to large nozzle size with high flow rates.

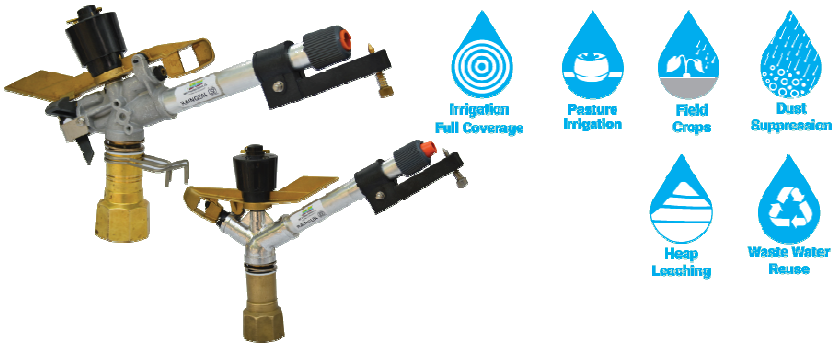


Figure 5 - Raingun

2.4 Jain Solar Roof-Top

Jain Irrigation Systems Ltd. is one of the ancient companies working in Solar Grid Connected Plants in India. Jains had installed its first solar grid connected plants in 2010-2011. Jains is one of the top and largest companies for solar roof top under net metering for domestic, commercial and industrial sectors and all type of roofs. Jains have also done several projects for solar roof top captive power plants. Jains had dedicated team of experts for concept to commissioning of solar roof top plants along with visioning of solar roof top plants.

Photo 4 - Jain Solar Roof-Top

Location -BhaunchiSrushti

2.5 Bhavarlal Jain Making of Bhauchi Shrusti

Bhaunchi watika is perfect example of development of watershed on barren hill. Terracing in the landscape creates gardens and is an excellent option for farms with steep slopes where planting is otherwise impossible. Terrace gardens help prevent erosion by dividing hilly areas into smaller level sections where water is more easily distributed and soaked into the ground.

From the cosmos is where all souls, celestial bodies and spirits like saint, Rishi-Munis and Teerthankars, Nakshatras and Navgrahas reside. Souls come to this Earth with a purpose tor a limited period of time. Thereafter they return to their original habitat. One such Soul was Bhavarlal Jain caring soul who not just loved nature, but worshipped it. The Air, water, greenery, amidst all nature was where he spent his life. Having his humble roots in the rural hinterland, uplifting the lives of farmers with modern technology was his constant endeavor. They have dedicate to this soul, a re-creation of this cosmic garden of mythological sources like the seven Saptarshis and fifty three. These trees are divinity personified. They emanate

positive vibrations, have therapeutic value and provide all means to sustain human life on this earth. A total of two hundred and sixty seven different trees blessed by holy spirits will make this A Watika (a home) for Bhau's spirit.

Photo 5- Bhauchi Srushti

Visit to "Food processing factory"

From there we came to the Food factory where we seen the "plant tissue culture lab", processing of Bananas•, processing of Mango, Processing of Jackfruit and likewise verious type of fruit processing was going on there. Mr. Chinmay Joshi were explained each and every thing to be important. The style of explanation was too good and yes.. we don't forget to give nice comments to him• • •. I also express lots of thanks• without forgetting• to the Mam,Sir and all students of the "Vasundharatai college of Amravati" who adjust us in their traveler.

"Visit to Gandhi Museum/Gandhi Tirth"

By having lunch we attend the show of Gandhi Museum/Gandhi Tirth with student discount of 50% i.e. 50 rupees out of 100 per student. We got this discount only just because of the "madam" from Vasundharatai agri college Amravati. The show was lasted for 2 to 2:30 hours, it was totally based upon the biography of **"Mahatma Gandhi".**

Location –2.10 Gandhi Teerth

This place is also called as Gandhi Teerth. It's a part of Jain Irrigation group. The way they have covered the life of Gandhi is extremely amazing. The best part is the technologies they have used to demonstrate this all. It is situated near to jalgaon city, only 7 to 8 km from city. It is surrounded by the lush green 2000 acares greener and it is at the top of the hill. It is

very much different museum,head phone and receiver is given to each person, and guide is provided to the each group. Mahatma Gandhiji's story is illustrated by audio and video clips. Murals and the replicas of the things related to gandhiji were awesome. Many of the stories of gandhiji which were untold can be seen here. We loved the experience to know more about Gandhi, his work and life, but even when the tour takes about 2h 30 min, you hav to go in a rush and cannot complete and digest all the information. Also is sad no be unable to have your cell phone and something to eat with you, as you have to let all your belongs at a locker outside the building.

Day 5

14-02-2020-Friday.

"Last day of the Jain Irrigation Tour"

At 10:15 we arrive at station and because of our tickets issue, sir and we all had to catch different trains. Sir arrive at Amravati at some 2:30 pm and we all at 4pm. This journey of coming back, Ha..(expiration) and thus (like this) the tour is done with lots of memories..