



# Automated google calendar User Guide

## Prerequisite:

1. **credentials.json file:** Create a "credentials.json" file, a unique file associated with each Gmail account. Ensure that you save this file with the exact name "credentials.json" in all lowercase letters. You only need to generate this file once when running the code for the first time. For subsequent uses after the initial setup, you can reuse the existing "credentials.json" file. Watch the YouTube tutorial linked here (from 00:00 to 05:20) for guidance on how to generate this file([link](#)).

2. **Token File:** The script uses a "token.json" file to store user access and refresh tokens. This file is automatically created during the authorization flow for first-time use.

## 3. Academic calendar file in CSV:

### Guidelines for Adjusted Dates

To ensure the proper functioning of the code, it is crucial that all adjusted dates fall within the specified range, indicated by the following texts:

- "TT: Adjusted Days"
- "H: This includes Saturdays/Sundays and GH"

Please take note that these two texts must be identical; any variation may impact the code's functionality. Kindly adhere to this structure to maintain the integrity of the system. If you have any questions or require further clarification, do not hesitate to seek assistance.

### Formatted Adjusted Dates Requirement

It is imperative to adhere to the specified format for adjusted dates, which should be consistently presented as follows:

- "20th Nov - FRI TT"

Note: The month can be referred to by either its full name or its acronym; for example, it can be either "November" or "Nov."

### Holiday Date Format Specification

For consistency and accurate interpretation, the format for holiday dates must strictly adhere to the following standard:

- "DD-Month"

"DD-Month" represents the date on which a holiday occurs, where DD is the day, and Month can be either the full name or its acronym. For instance, "29-Jul" or "29-July". signifies the 29th of July. Days can also either have a full name or its acronym. For example either "Monday" or "Mon"

.

An example is shown below:

TT: Adjusted Days		GH: Gazetted Holidays							
20th Nov - FRI TT		29-Jul	Muharram, Saturday		30-Aug	Raksha Bandhan, Wenesday		28-Sep	Id-e-Milad, Thursday
		15-Aug	Independence Day, Tuesday		7-Sep	Janmashtami, Thursday		2-Oct	Mahatma Gandhi Birthday, Monday
		24-Oct	Dussehra, Tuesday		12-Nov	Diwali, Sunday		27-Nov	Guru Nanak's Birthday, Monday
		25-Dec	Christmas Day, Monday						
H: This includes Saturdays/Sundays and GH		*Mid Recess & Summer Vacation - For UG Students only							

#### 4. Slot Data(Details about each slot) in CSV:

##### Slot Data Table Structure Guidelines

When supplying information for slotdata, it is imperative to adhere strictly to the specified table structure outlined below. Furthermore, ensure that the time format conforms to the 24-hour clock in HH:MM:SS format, and all days are written in full form only. For example: "Monday" not "Mon".[No constraints whether it upper cas, lower case or mixture of both]

For example:

	A	B	C	D	E	F	G
1	Slot No.	Starting_Time_1	Ending_Time_1	Day-1	Starting_Time_2	Ending_Time_2	Day-2
2	1	9:30:00	11:00:00	TUESDAY	9:30:00	11:00:00	THURSDAY
3	2	11:00:00	12:30:00	MONDAY	11:00:00	12:30:00	THURSDAY
4	3	15:00:00	16:30:00	TUESDAY	15:00:00	16:30:00	THURSDAY
5	4	9:30:00	11:00:00	MONDAY	9:30:00	11:00:00	WEDNESDAY
6	5	11:00:00	12:30:00	TUESDAY	11:00:00	12:30:00	FRIDAY
7	6	15:00:00	16:30:00	MONDAY	15:00:00	16:30:00	WEDNESDAY
8	7	16:30:00	18:00:00	MONDAY	16:30:00	18:00:00	WEDNESDAY
9	8	16:30:00	18:00:00	TUESDAY	16:30:00	18:00:00	THURSDAY
10	9	11:00:00	12:30:00	WEDNESDAY	9:30:00	11:00:00	FRIDAY
11	10	18:00:00	19:30:00	MONDAY	18:00:00	19:30:00	WEDNESDAY

#### 5. Slot data(list of all courses except 1st Year) in CSV:

##### Slot Data Format Guidelines

When inputting data for slot information, it is crucial to adhere to the specified table format outlined below. Ensure that the information meets the following guidelines for accurate representation:

- In the "Year" column, use "Rest", "II Year" and "I year".[No constraints whether it upper cas, lower case or mixture of both]
- The "Final Slot" column should not remain empty. If a course doesn't fall under any regular slot, write "Nil".[No constraints whether it is upper case, lower case or mixture of both].
- If a course doesn't fall under any regular slot, ensure columns "Starting Timings," "Ending Timings," and "Day" are filled. If the course falls under a regular slot, these columns should remain empty.
- The time should be in 24-hour HH:MM:SS format.
- The day should be written in full form like "Monday".[No constraints whether it upper cas, lower case or mixture of both]

Adhering strictly to these guidelines ensures a consistent and accurate representation of the slot data. If you have any questions or need further clarification, feel free to seek assistance.

4	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Depart	Course Code	Year	Faculty Name	Acronym	Registration	Room No	Instructor	Final Sl	Slot	Previous slot no	Starting Timings	Ending Timings	Day	Gmail ID
2	SSH	SOC312/501	Rest	Advanced Ethnographic and Qualitative Research Methods	AERM	32	C215	Dr. Soibam Haripriya	1	1					rohit21279@iitd.ac.in
3	CSE	CSE643	Rest	Artificial Intelligence	AI	215	C102	Saket Anand	1	8					rohit21279@iitd.ac.in
4	CB	BIO549	Rest	Computational Metagenomics	CoMeG	40	C03	Tarini Ghosh	1	1					rohit21279@iitd.ac.in
5	HCD	DES314	Rest	Digital Audio & Video Production Workflow	DAVP	49	102 (R&G)	Aman Samuel (V)	1	1					rohit21279@iitd.ac.in
6	ECE	ECES70	Rest	Linear Systems Theory	LST	13	C13	Sanat Biswas	1	1	4				rohit21279@iitd.ac.in
7	ECE	ECES25	Rest	Quantum Mechanics	QM	23	C22	Sayak Bhattacharya	1	1					rohit21279@iitd.ac.in
8	MATHS	MTH506	Rest	Topics in Mathematical Logic	TML	2	C208	Sankha Basu	1	1					rohit21279@iitd.ac.in
9	CSE	CSE538/ECES38	Rest	Wireless Network	WN	73	C21	Mukulika Maity	1	1					rohit21279@iitd.ac.in
10	ECE	EC607/CE6077	Rest	Advances in Deep Learning	ADL	16	C03	A.V.Subramanyam	2	2					rohit21279@iitd.ac.in
11	CB	BIO361	Rest	Biophysics	BioP	77	C11	Arjun Ray	2	2					rohit21279@iitd.ac.in
12	CB	BIO211	II Year	Cell Biology and Biochemistry	CBB	21	C12	Jaspreet Kaur	2	2					rohit21279@iitd.ac.in
13	CSE	CSE506	Rest	Data Mining	DMG	40	C215	Vikram Goyal	2	2					rohit21279@iitd.ac.in
14	HCD	DES301	II Year	Design Processes and Perspectives	DPP	60	A106	Anmol Srivastava	2	2					rohit21279@iitd.ac.in
15	ECE	EC2270	II Year	Embedded Logic Design	ELD	119	B105	Sumit Darak	2	2					rohit21279@iitd.ac.in
16	SSH	SOC513	Rest	Enhancement Technologies and the Body	ETB	28	C22	Paro Mishra	2	2					rohit21279@iitd.ac.in
17	MATHS	MTH561	Rest	Introduction to Algebraic Geometry with Applications	IAGA	3	C208	Nabanita Ray	2	2					rohit21279@iitd.ac.in
18	SSH	ECO301	Rest	Microeconomics	ME	90	A007	Souvik Dutta	2	2					rohit21279@iitd.ac.in
19	MATHS	MTH211	II Year	Number Theory	NT	38	C02	Anuradha Sharma	2	2					rohit21279@iitd.ac.in
20	ECE	ECES24	Rest	Quantum Materials and Devices	QMD	21	C216	Ram Krishna Ghosh	2	2	2				rohit21279@iitd.ac.in
21	HCD	DES330	Rest	The Business of Artificial Intelligence	BAI	111	A106	Vinish Kathuria	3	3					rohit21279@iitd.ac.in
22	CB	BIO294	Rest	Biomedical Image Processing	BIP	15	B001	Vibhor Kumar	3	3					rohit21279@iitd.ac.in
23	CSE	CSE333/CESE33	Rest	Computer Graphics	CG	43	B105	Ujjwala Sharma	3	3	8				rohit21279@iitd.ac.in
24	SSH	SSH255A	II Year	Comprehensive Gender Sensitization	CGS	48	C21	Smriti Singh	Nil	Nil		13:30	15:00	Tuesday	rohit21279@iitd.ac.in
25	CB	BIO546/CESE85	Rest	Computing for Medicine	CM	137	C01	Taypreet Sethi	3	3					rohit21279@iitd.ac.in
26	SSH	PSY308/PSY508	Rest	Cognition of Motor Movement	CMM	134	C11	Sonia Baloni Ray	3	3					rohit21279@iitd.ac.in
27	CSE	CSE665A	Rest	Distributed and Federated Machine Learning	DFML	20	C211	Prasad	3	3					rohit21279@iitd.ac.in
28	MATHS	MTH376	Rest	Mechanics of Bodies	MB	0		Sarthak Sircar	3	3					rohit21279@iitd.ac.in
29	ECE	ECES01	Rest	Probability and Random Processes	PRP	26	C213	Chanekar Prasad Vilas	3	3					rohit21279@iitd.ac.in
30	ECE	ECES18/ECES18	Rest	Solid State Devices	SSD	79	A006	Sneh Saurabh	3	3					rohit21279@iitd.ac.in
31	CSE	CSE516/ECES09	Rest	Theories of Deep Learning	TDL	7	C03	Vinayak Abrol	3	3					rohit21279@iitd.ac.in
32	SSH	SOC314/SOC512	Rest	Technology and the Future of Work	TFW	57	C21	Gayatri Nair	3	3					rohit21279@iitd.ac.in
33	ECE	ECES01/CESE15	Rest	Bayesian Machine Learning	BML	34	C03	Ranjitha P	4	4					rohit21279@iitd.ac.in
34	SSH	SSH30x/SSHx	Rest	Concepts and Methods in Social Movement	CMSMR	11	C209	Aasim Khan	4	4					rohit21279@iitd.ac.in
35	CSE	CSE232	Rest	Computer Networks (Sec A)	CN (Sec A)	150	A006	Rinku Shah	4	4					rohit21279@iitd.ac.in
36	CSE	CSE232	Rest	Computer Networks (Sec B)	CN (Sec B)	157	C21	Poojyendra Singh	4	4					rohit21279@iitd.ac.in
37	ECE	EC2215	II Year	Circuit Theory and Devices	CTD	119	B105	Shobha Sunder Ram	4	4					rohit21279@iitd.ac.in
38	CSE	CSE321	II Year	Discrete Mathematics	DM	222	C102	Bapi Chatterjee	4	4					rohit21279@iitd.ac.in
39	MATHS	MTH210	II Year	Discrete Structures	DS	167	C11	Rajiv Raman	4	4					rohit21279@iitd.ac.in
40	CB	BIO214	II Year	Genetics and Molecular Biology	GMB	56	C12	Gaurav Ahuja	4	4					rohit21279@iitd.ac.in
41	HCD	DES522	Rest	Accessibility	IDUDA	19	C208	Richa Gupta	4	4	1				rohit21279@iitd.ac.in

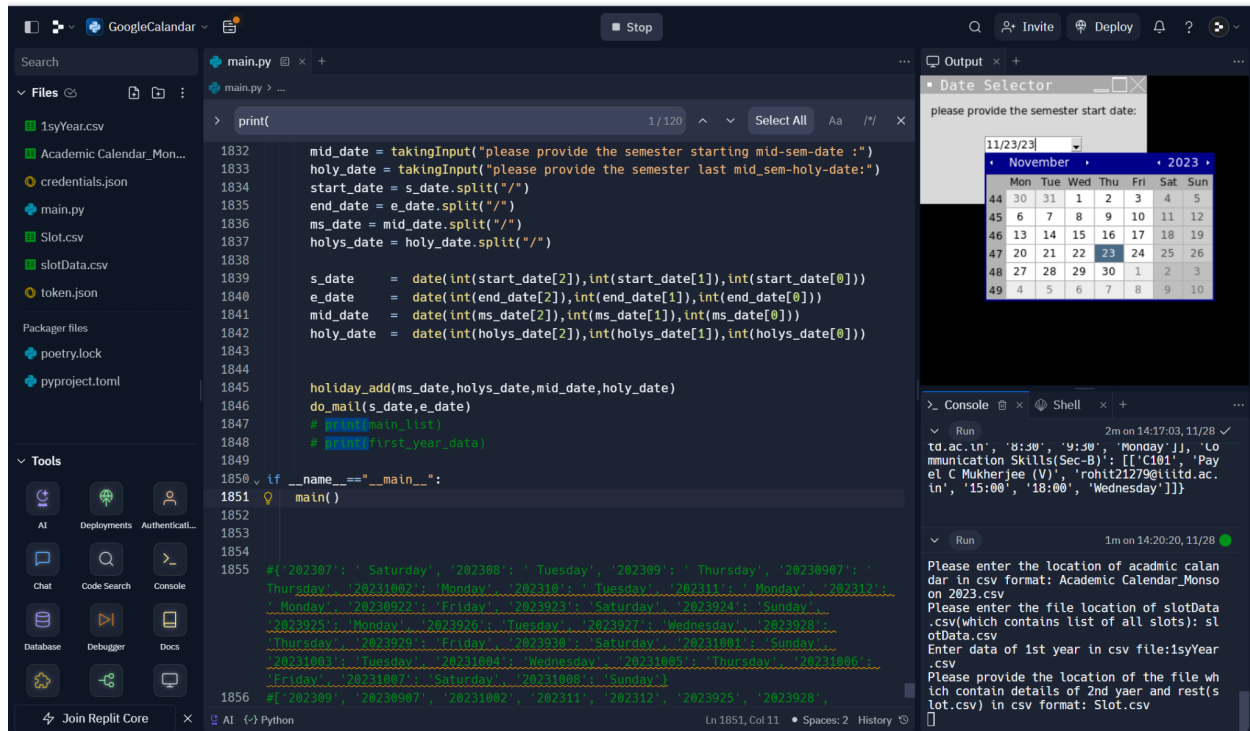
## How our algorithm/code works:

**Step 1:** Begin by converting the academic calendar, Slot Data(list of all slots), 1st Year Data(list of first year courses) and the list of all courses (slots) from Excel format to CSV format.  
(Here is link of online excel to csv converter: [Link](#))

**Step 2:** Proceed to upload these CSV files along with credentials.json or token.json file to Replit by clicking on 3 dots on the left side then clicking on "upload file".

**Step 3:** Open Replit, click on the "Run" button, and provide input for the following:

- (i) Provide the location of the academic calendar for the monsoon semester (in CSV file).
- (ii) Provide the location of the slot data (list of all slots) in CSV format.
- (iii) Provide the location of the 1st year (list of all courses of 1st year) in CSV format.
- (iv) Provide the location of the slots (list of all courses) in CSV format.
- (v) Input the starting date of the semester. (Demo is shown in fig-(a))
- (vi) Input the ending date of the semester.
- (vii) Specify the starting date of mid-semester exams.
- (viii) Specify the ending date of the mid-semester break.



(Fig-a)

## How we perform testing:

For testing purposes, we randomly select seven courses(each from different slots), then send emails to ten different students, and record their screenshots after our algorithm/code has been executed.

Here are screenshots of 10 users. In the first screenshot(fig-1(a)), it is evident that they have received an invitation email. In the second screenshot, if a user selects "yes," we can observe that these courses get added to their respective Google Calendar(Fig-1(b)).

Testing Users: Sandeep rathore, {'email':'sandeep21283@iiitd.ac.in'},  
Satyam Rao, {'email':'satyam21284@iiitd.ac.in'},  
Pourav Surya, {'email':'pourav21271@iiitd.ac.in'},  
Tarun kumar Arya, {'email':'tarun21295@iiitd.ac.in'},  
Shantanu Prakash, {'email':'shantanu21285@iiitd.ac.in'},  
Harshit Pal, {'email':'harshit21255@iiitd.ac.in'},  
Shubham Pal, {'email':'shubham21564@iiitd.ac.in'},  
Shubham Yadav, {'email':'shubham21290@iiitd.ac.in'},  
Aryan Dhawan, {'email':'aryan21023@iiitd.ac.in'},  
Suyash Kumar, {'email':'suyash21293@iiitd.ac.in'},  
Rohit Raj, {'email':'rohit21279@iiitd.ac.in'}

### Sample Screenshots:

Invitation: Artificial Intelligence @ Weekly from 9:30am to 11am on Tuesday, Thursday from Tue Aug 8 to Wed Nov 29 (IST) (Shubham Pal) [Inbox x](#)



Rohit Raj <rohit21279@iiitd.ac.in>

to me, Tarun, Pourav, Aryan, Shantanu, Sandeep, Satyam, Shubham, Harshit, Suyash

12:15 PM (5 minutes ago) ☆ ↶ ⋮

Nov  
23  
Thu

### Artificial Intelligence

[View on Google Calendar](#)

When Weekly from 9:30am to 11am on Tuesday, Thursday from Tue Aug 8 to Wed Nov 29 (IST)

Where Somewhere

Who Tarun Kumar Arya, Pourav Surya, Aryan Dhawan, Shantanu Prakash, Sandeep IIITD, Satyam IIITD...

Yes

Maybe

No

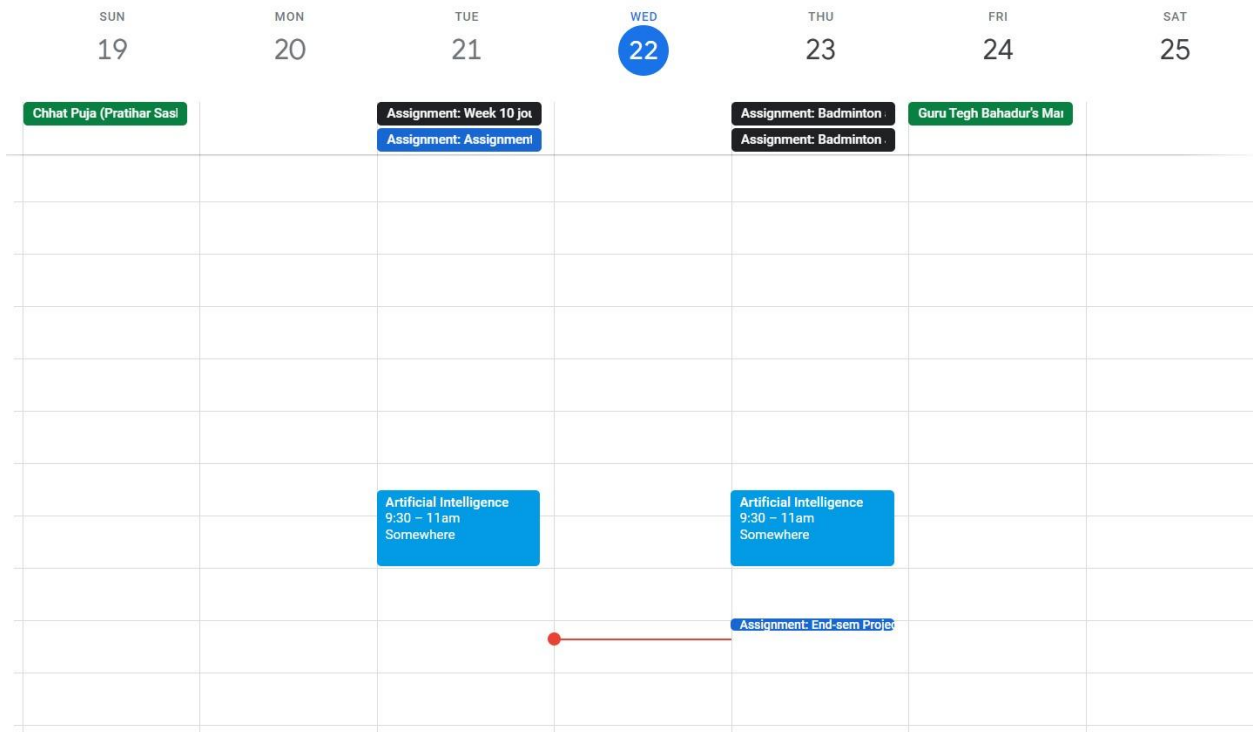
somewhere online

**When**  
Weekly from 9:30am to 11am on Tuesday, Thursday from Tuesday Aug 8 to Wednesday Nov 29 (India Standard Time - Kolkata)

**Location**  
Somewhere  
[View map](#)

(Fig-1(a))

After accepting the invitation:



User 2:

Invitation: Topics in Mathematical Logic @ Weekly from 9:30am to 11am on Tuesday, Thursday from Tue Aug 8 to Wed Nov 29 (IST) (Suyash Kumar)

Inbox x



Rohit Raj <rohit21279@iiitd.ac.in>  
to me, Satyam

12:35 PM (0 minutes ago)



## Topics in Mathematical Logic

[View on Google Calendar](#)

**When** Weekly from 9:30am to 11am on Tuesday, Thursday from Tue Aug 8 to Wed Nov 29 (IST)

**Where** Somewhere

**Who** Satyam IIITD, Rohit Raj\*

Yes



Maybe

No

## Agenda

Thu Nov 23, 2023

No earlier events

9:30am Topics in Mathematical Logic

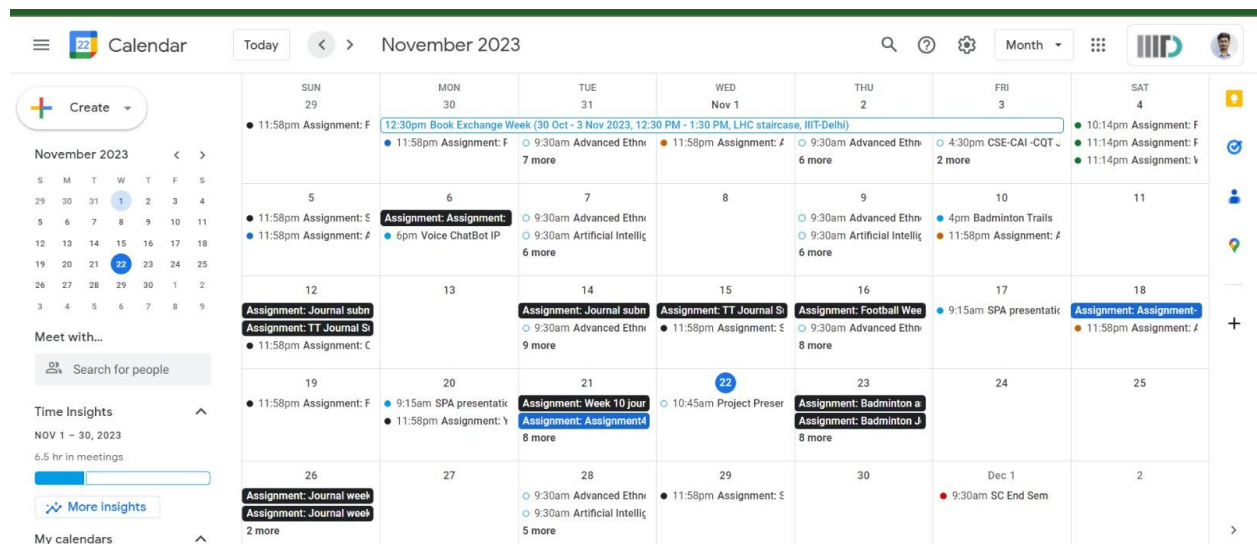
9:30am [Linear Systems Theory](#)

9:30am [Artificial Intelligence](#)

9:30am [Quantum Mechanics](#)

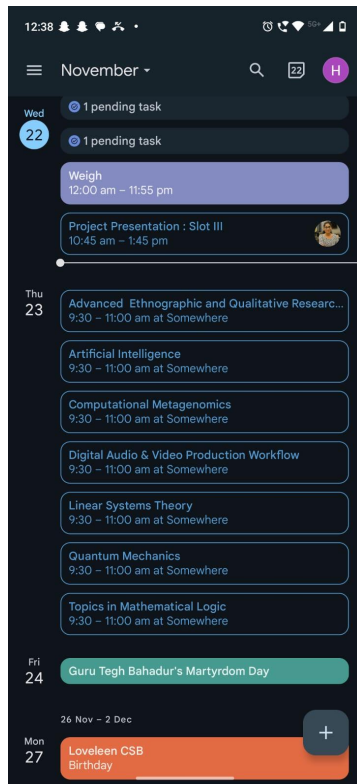
(Fig-2(a))

After accepting the invitation:

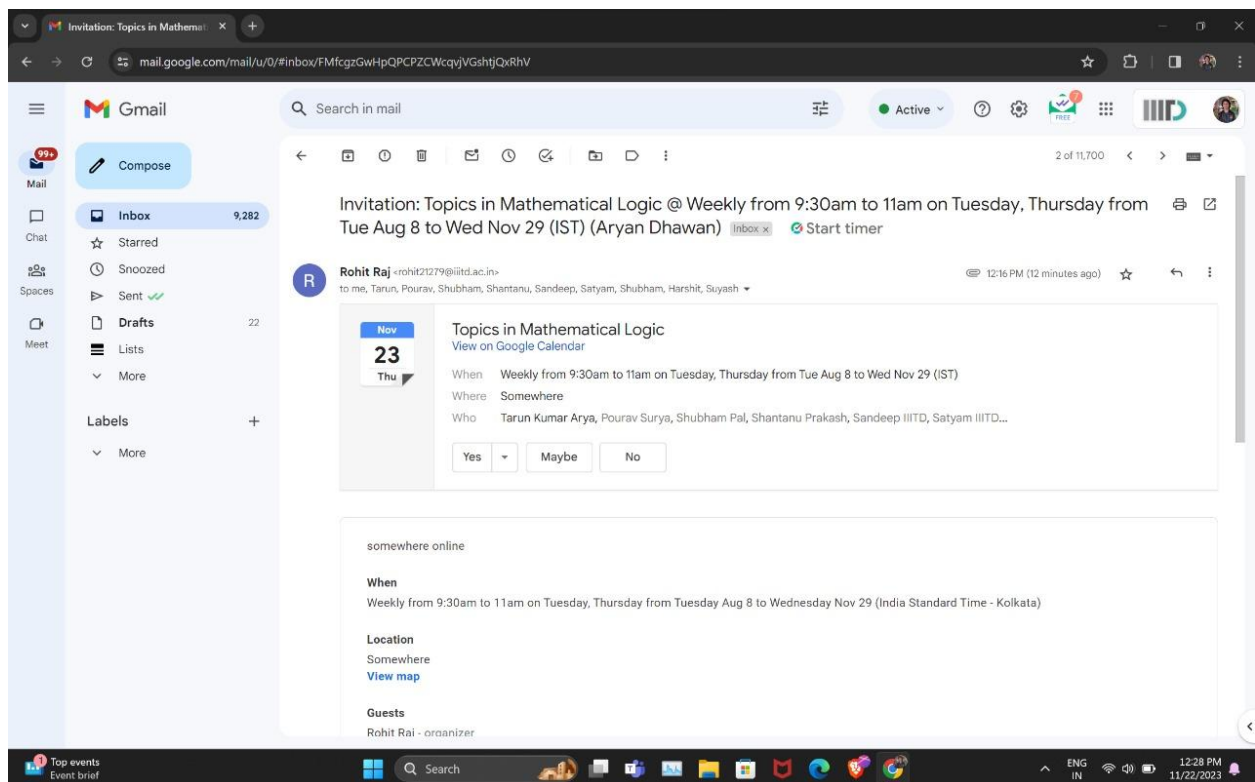


(Fig-2(b))

User 3:

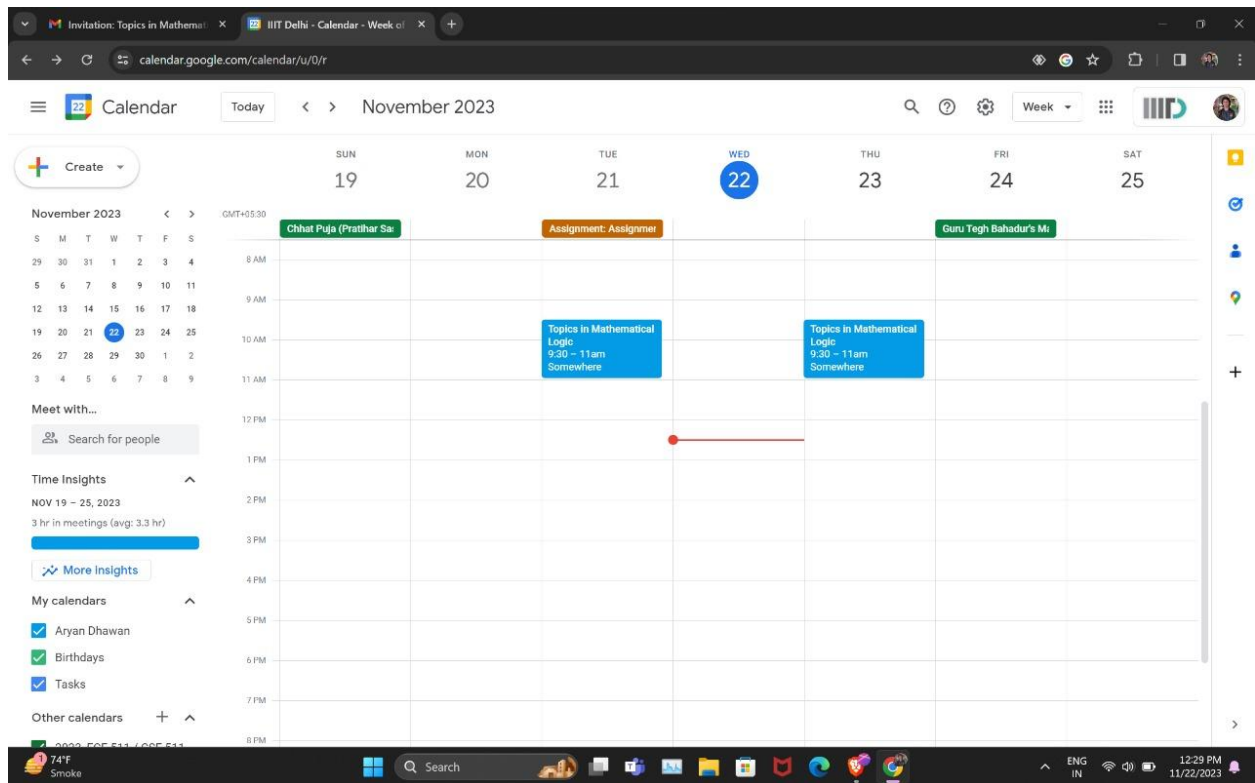


User 4:

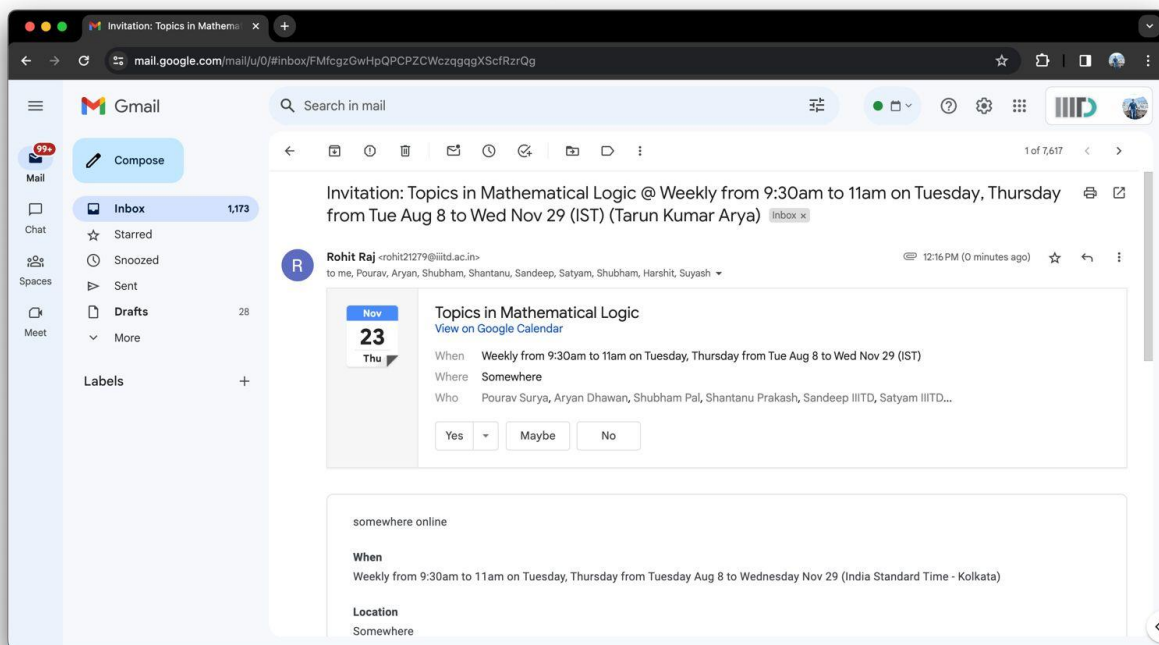




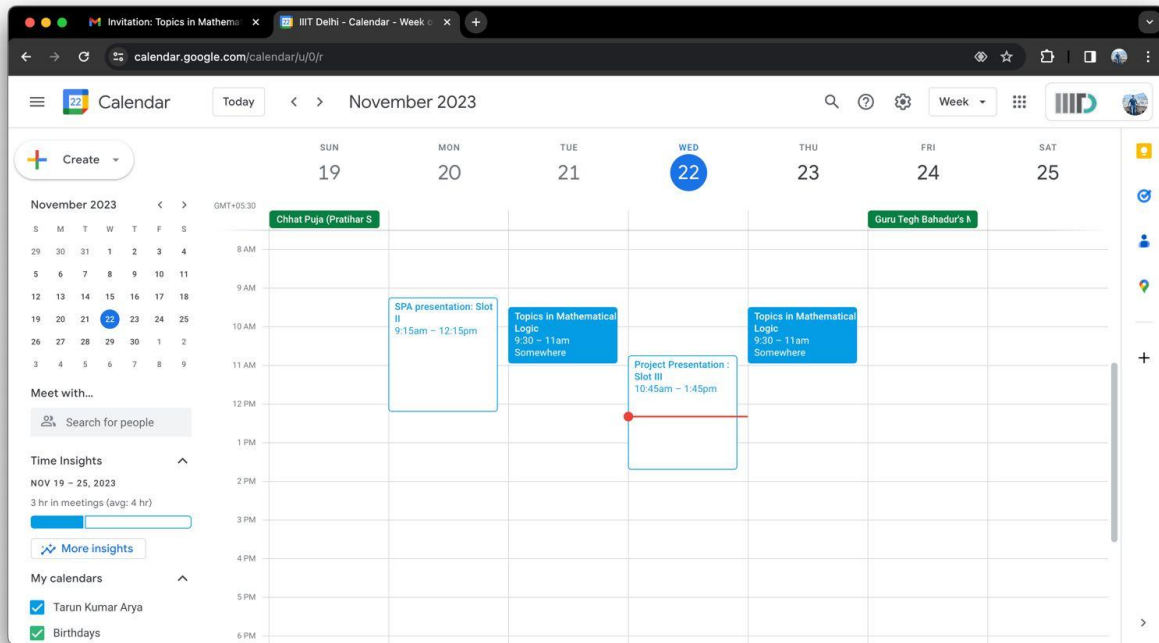
After accepting the invitation:



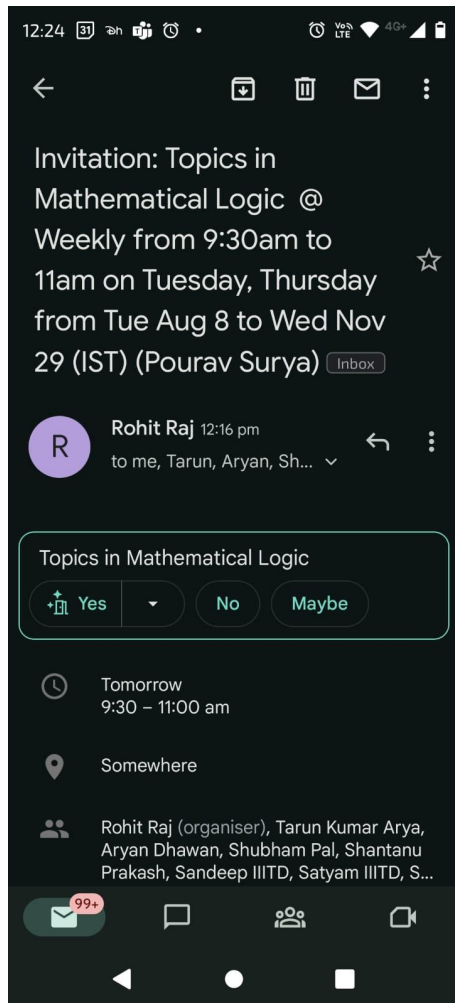
User 5:



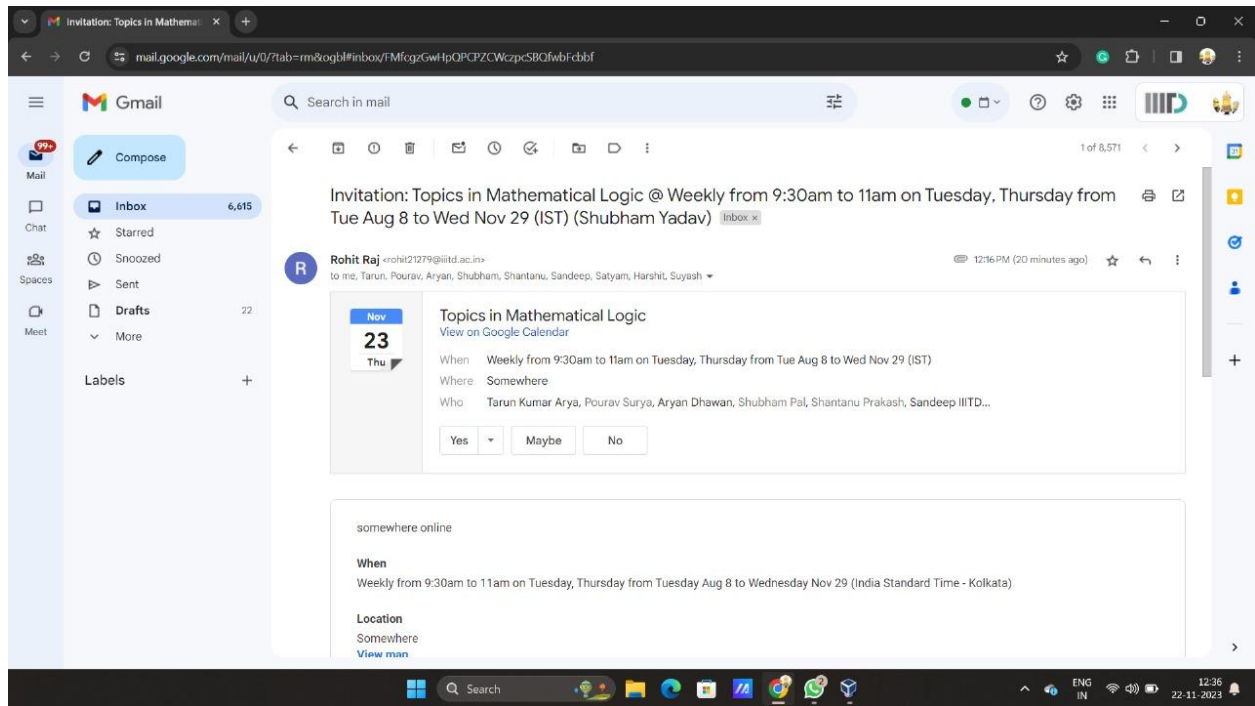
After accepting the invitation:



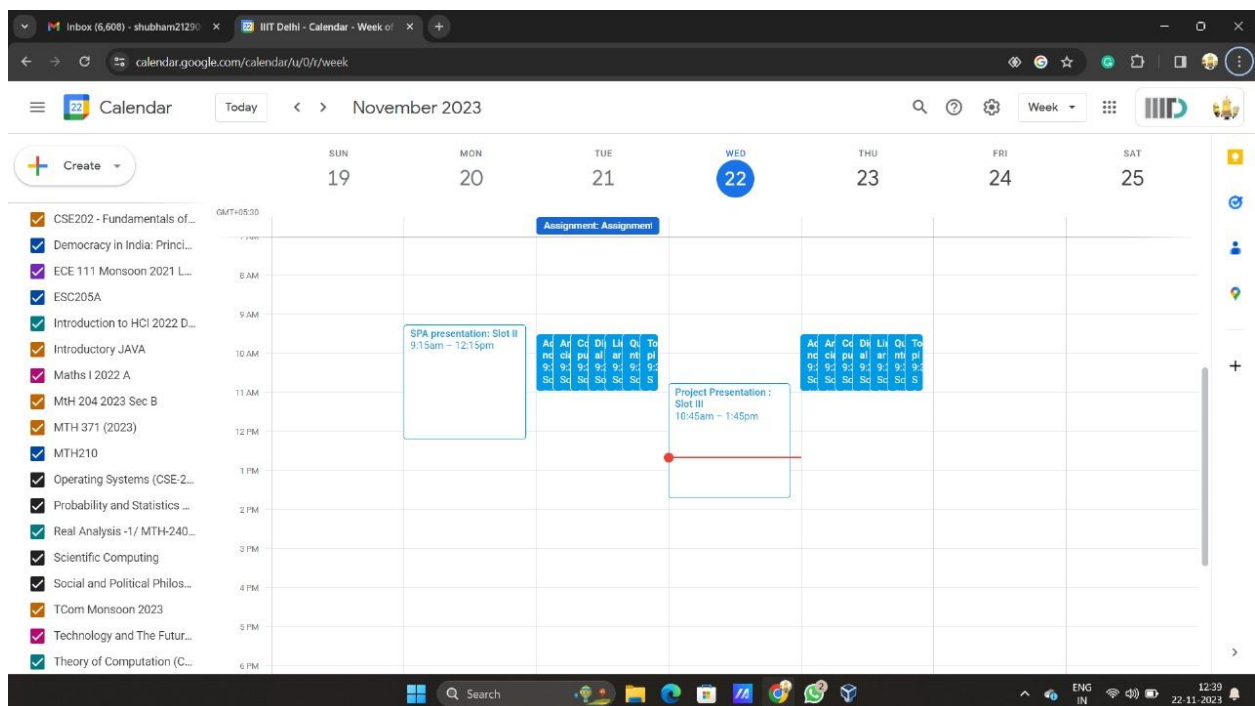
User 6:



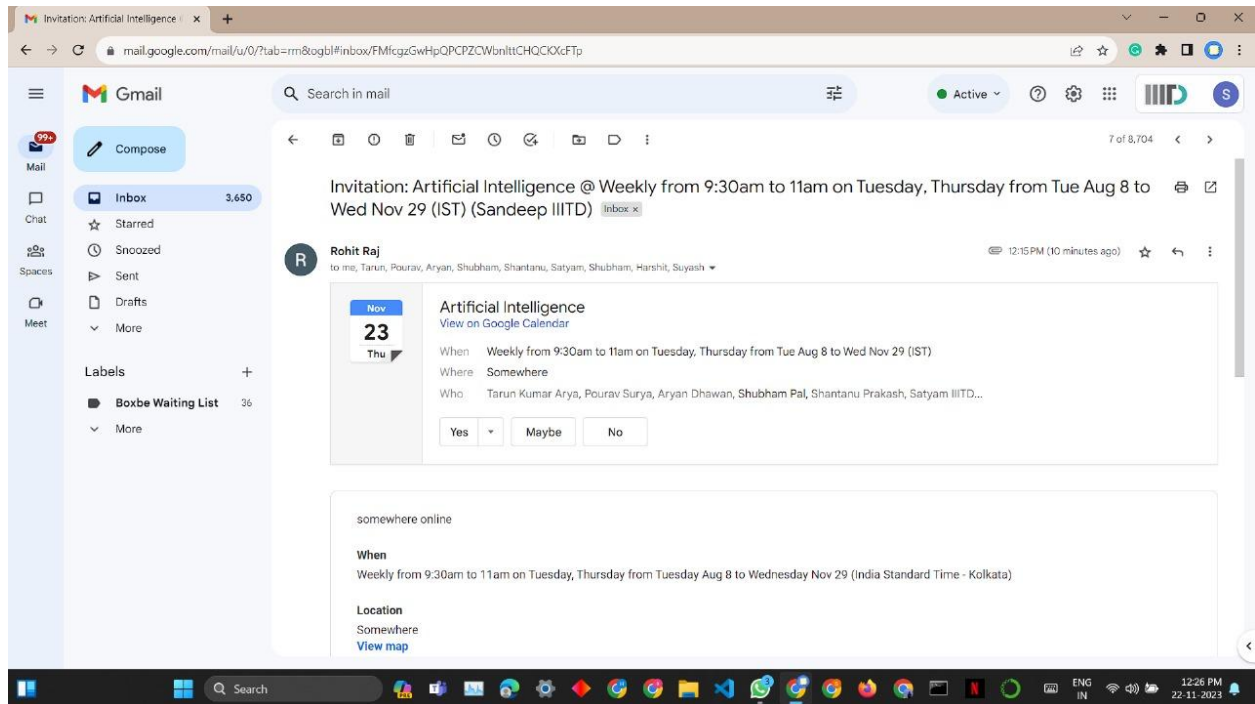
User 7:



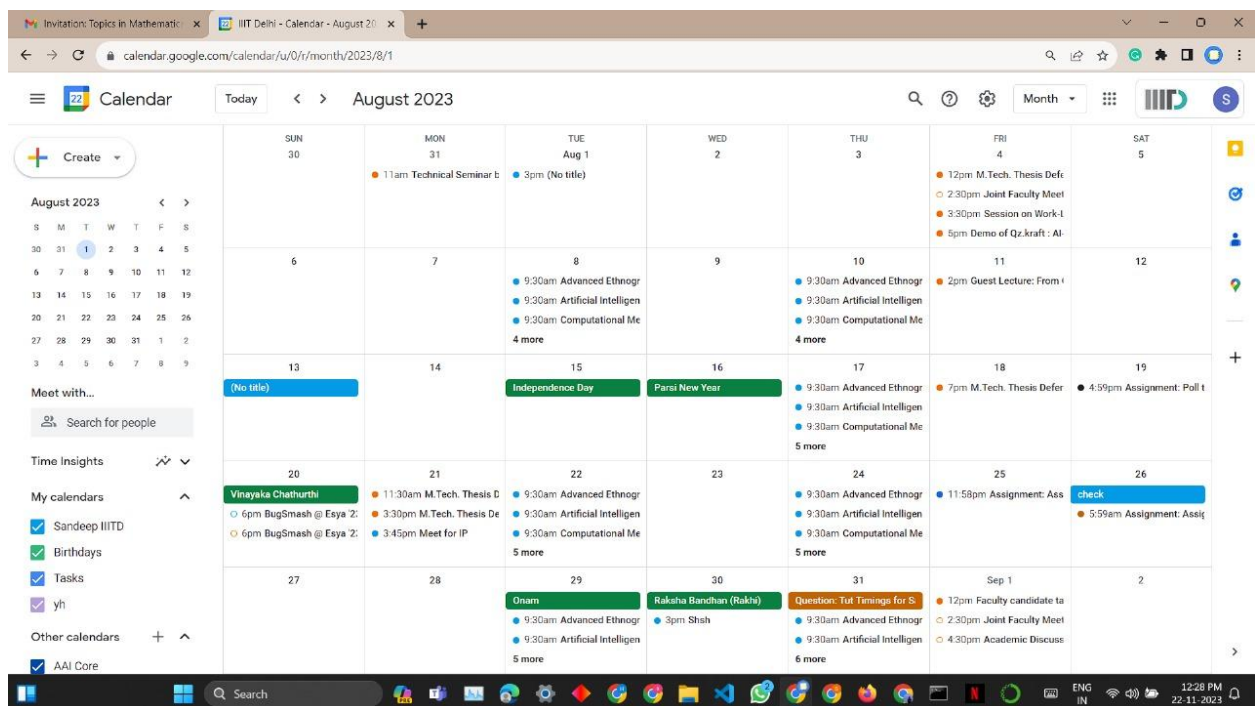
After accepting the invitation:



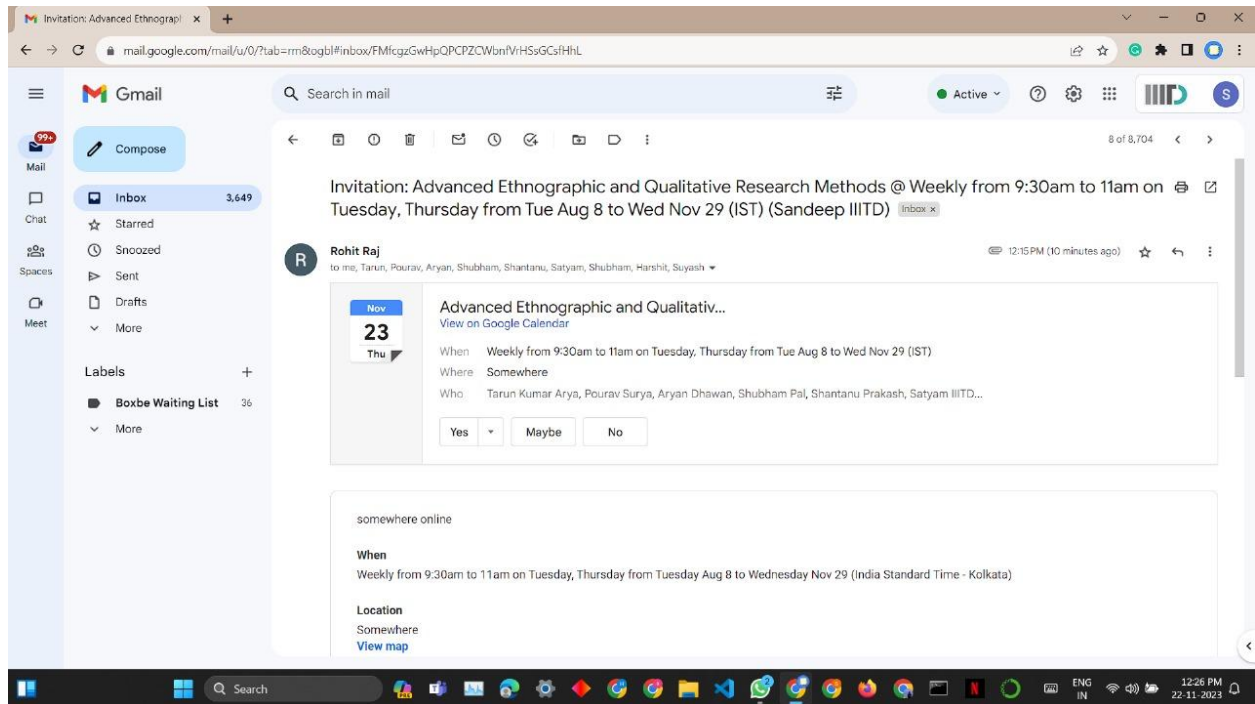
User 8:



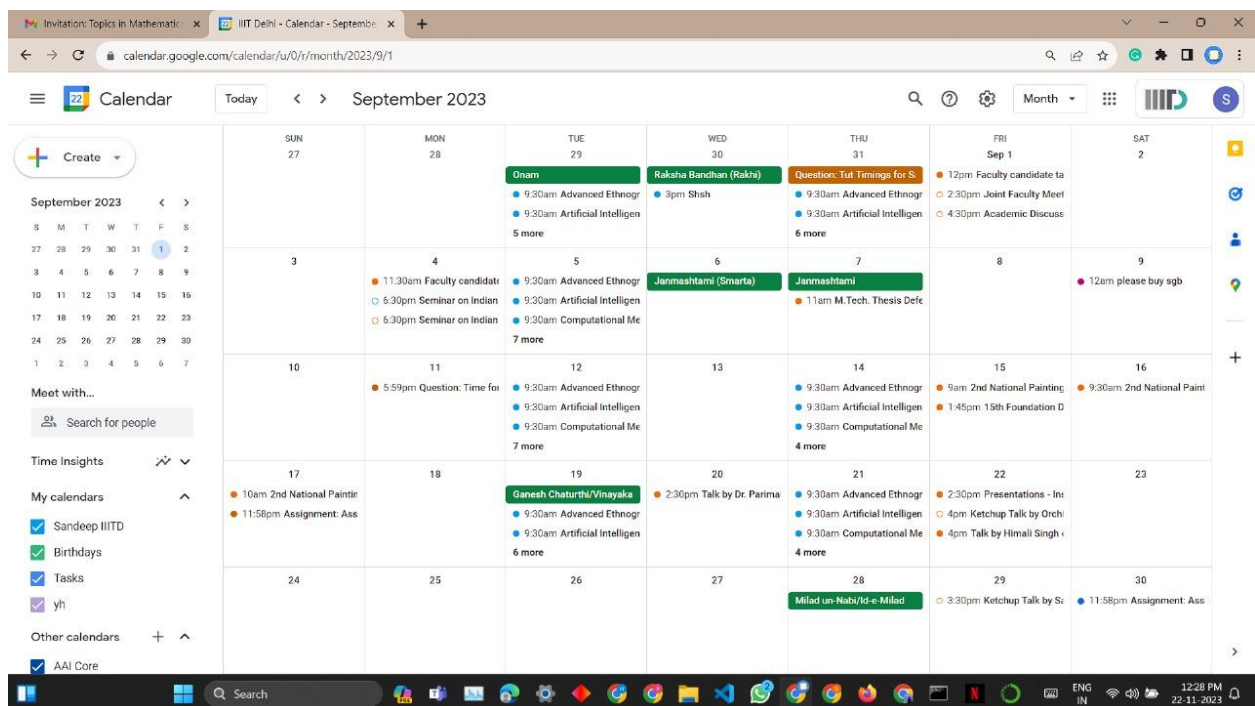
After accepting the invitation:



User 9:

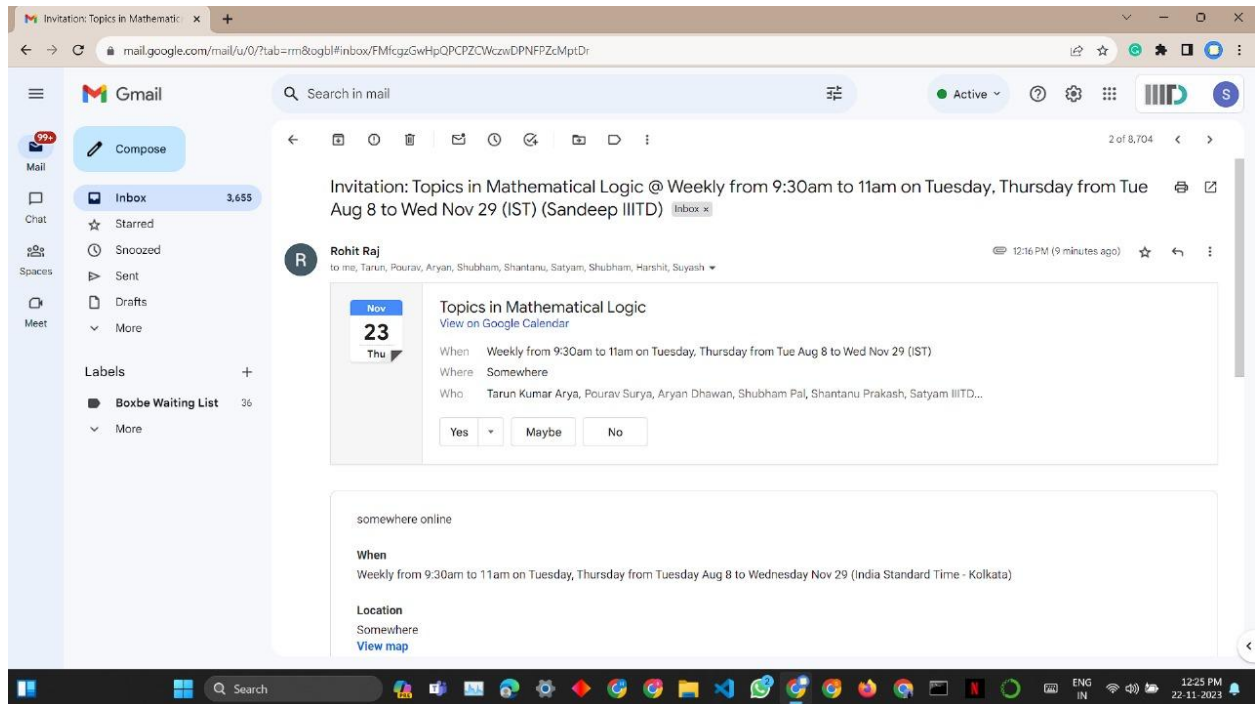


After accepting the invitation:



User 10:





After accepting the invitation:

