PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 07-09-2024

CIRCULAR

It is hereby informed to all the Students of III B.Tech. that "CLOUD COMPUTING" club of IT Department in association with Career Guidance cell organizing a seminar on "**API Management In Cloud**" on 10-09-2024. The students who are interested should register through the following link:

Registration link for the session:
https://forms.gle/KWQ2prrskuvu4g6E9
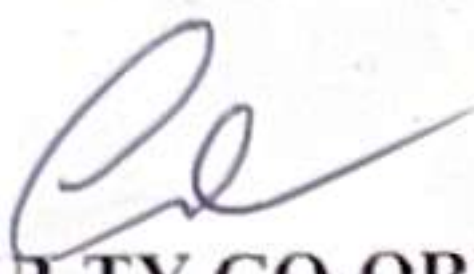
Mode: Offline
Venue:F-24
Time: 10:00 AM to 11:00 AM

FACULTY CO-ORDINATOR

HOD-IT

PRAGATI ENGINEERING COLLEGE

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DEPARTMENT OF INFORMATION TECHNOLOGY

Date: 10-09-2024
Day: Tuesday

"CLOUD COMPUTING CLUB" of IT Department in association with Career Guidance cell organized a seminar on "API Management In Cloud"

Registration link for the session:-
https://forms.gle/KWQ2prrskuvu4g6E9

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List of students from III year have been registered for the Seminar.
Branch wise report is as follows:-

S.No.	NAME	ROLL	BRANCH	YEAR
1	p.l.reethuka	22A31A1220	IT	III
2	Samireddi Adilakshmi	22A31A1223	IT	III
3	Ummanboyina Triveni	22a31a1226	IT	III
4	N. Vasavi	22A31A1219	IT	III
5	BODDU SRI VISHNU	22A31A1237	IT	III
6	M.Ramasuresh	23A35A1203	IT	III
7	Gadamsetti Manikanta	22A31A1242	IT	III
8	M PAVITHRA	23A35A1202	IT	III
9	G.R.L.Deepika	22A31A1209	IT	III
10	Deepak	22A31A1247	IT	III
11	Dakshayani salapu	22A31A1222	IT	III
12	Sukumar	22A31A1249	IT	III
13	Channa rama sathwik	22A31A1239	IT	III
14	Vallabhaneni V V N Sri Vaishnavi	22A31A1229	IT	III
15	K.Radha	22A31A1214	IT	III
16	JADA MOUNIKA SRI	22A31A1212	IT	III
17	Jahnavi	22A31A1207	IT	III
18	Ram Kiran Tadi	22A31A1261	IT	III
19	Asritha Dasari	22A31A0506	CSE	III
20	Abhishek	22A31A4299	CSE	III
21	P Kanya Gowri	22A31A1221	IT	III
22	G Manasa sree vyshnavi	22A31A4406	CSE- DS	III
23	Jonnada Durga Anjali	22A31A1213	IT	III
24	Utukuri Naveen Satya Sai	22A31A1263	IT	III
25	UMA SAI KIRAN.PONNADA	22A31A1255	IT	III
26	Ch Jahnavi	22a31a1204	IT	III
27	GUTTULA.VENKATA PRIYA	22A31A1211	IT	III
28	Charan Teja Palleti	22A31A42B9	CSE(AI&ML)	III
29	RYALI KARTHIK	22A31A1257	IT	III
30	G S V L B Sathwika	22A31A1210	IT	III
31	PENKE SREERAMKASULU	22A31A42C0	CSE(AI&ML)	III
32	K.M V N Sai Manikanta	22A31A1250	IT	III
33	Renuka Chowdary	22A31A1218	IT	III
34	Yeadida bhavya	22A31A1234	IT	III
35	Gedda Lalitha Raja Sri	22A31A1208	IT	III
36	Vallabhaneni V V N Sri Vaishnavi	22A31A1229	IT	III
37	U.Rama sahithi	22A31A1227	IT	III

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38	P.Hamsini	23A31A1221	IT	III
39	G. Navya Deepthi	23A31A1211	IT	III
40	M.Ramasuresh	23A35A1203	IT	III
41	Gedda Lalitha Raja Sri	22A31A1208	IT	III
42	GIRADA Urmila	23A31A1208	IT	III
43	Channa rama sathwik	22A31A1239	IT	III
44	UMA SAI KIRAN.PONNADA	22A31A1255	IT	III
45	Navya	23A31A1201	IT	III
46	Dakshayani salapu	22A31A222	IT	III
47	Renuka Chowdary	22A31A1218	IT	III
48	SAYED MAHABUB YOUNIS	22A31A1258	IT	III
49	Jonnada lakshmi anu hasini	23A31A1214	IT	III
50	Monica Battula	23A31A1218	IT	III
51	Yeadida bhavya	22A31A1234	IT	III
52	Deepak	22A31A1247	IT	III
53	Jada mounika sri	22A31A1212	IT	III
54	Jahnavi G	22A31A1207	IT	III
55	Rajitha karella	23A31A1215	IT	III
56	Gadamsetti Manikanta	22A31A1242	IT	III
57	Radha lahari k	22A31A1214	IT	III
58	Revathi Gundarapu	23A31A1209	IT	III
59	B.Sri Vishnu	22A31A1237	IT	III
60	V.krishna mounika	23A31A1227	IT	III
61	KANAKALA LAKSHMINI PARVATHI SREEDEVI	23A35A1201	IT	III
62	U Naveen satya sai	22A31A1264	IT	III
63	PENKE SREERAMKASULU	22A31A42C0	CSE(AIML)	III

The session **"API Management In Cloud"** was taught by K .Sai Varshitha (CSE) and P.B.S. Alekhya(CSE)

Pictures:
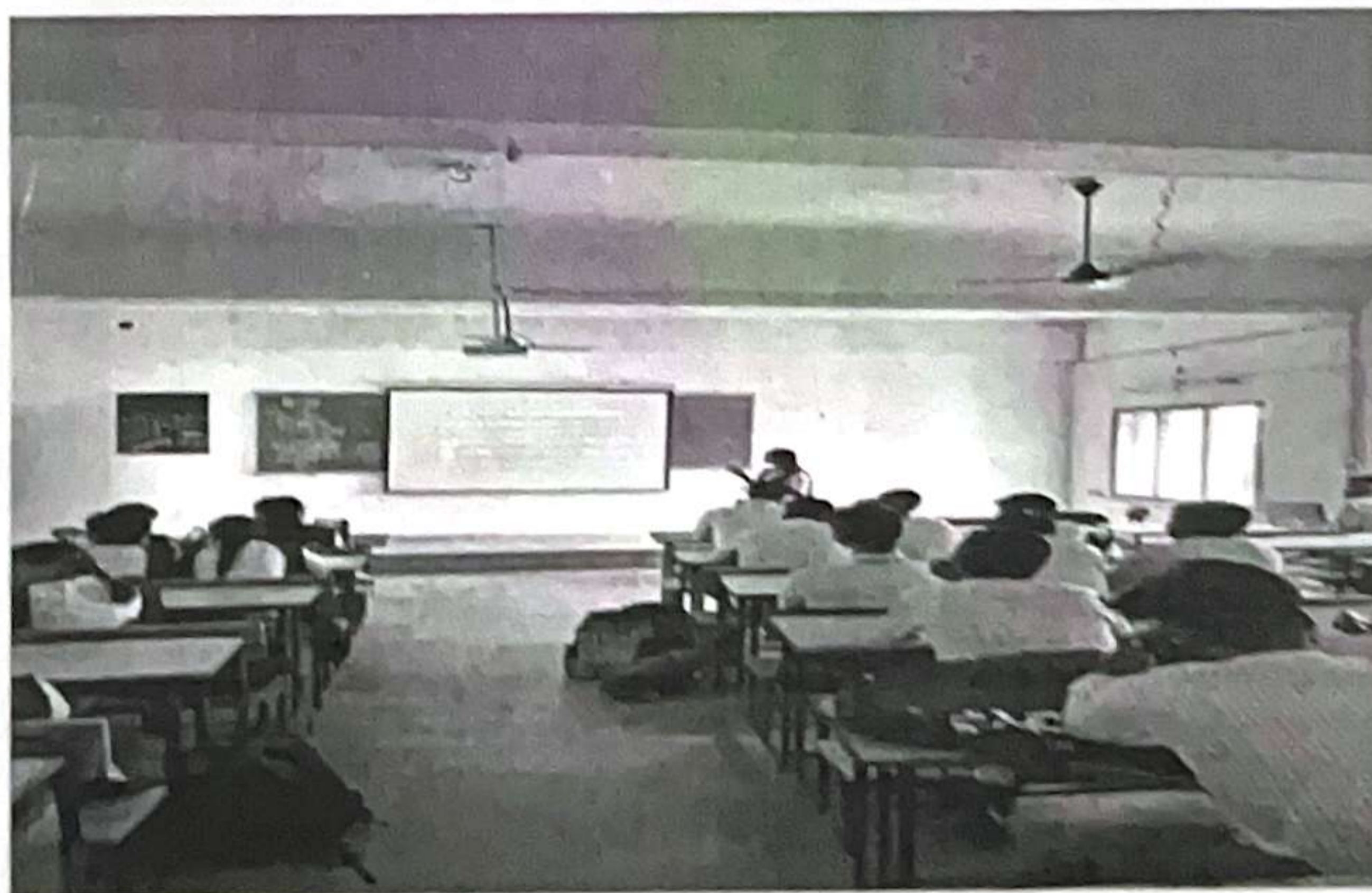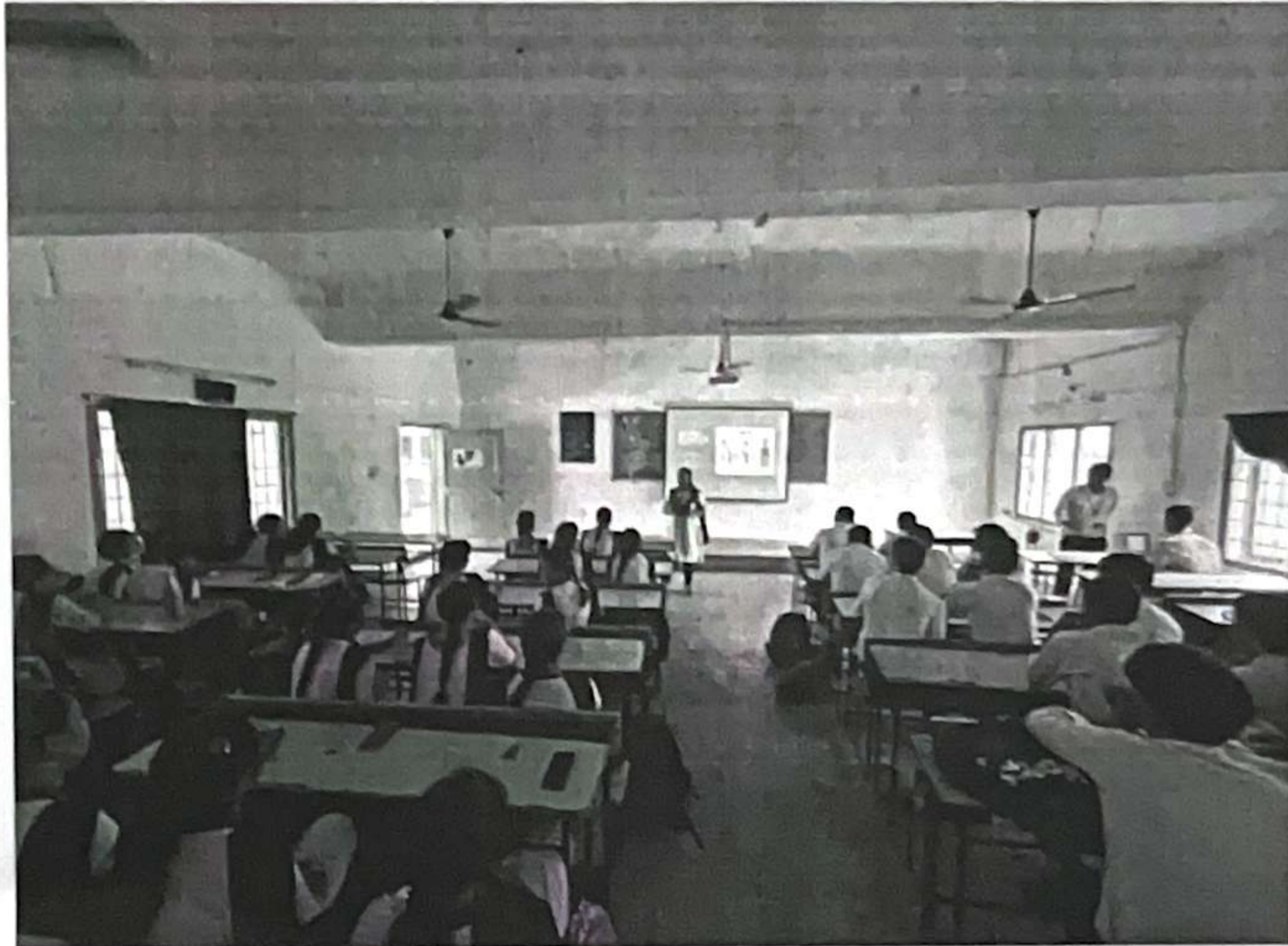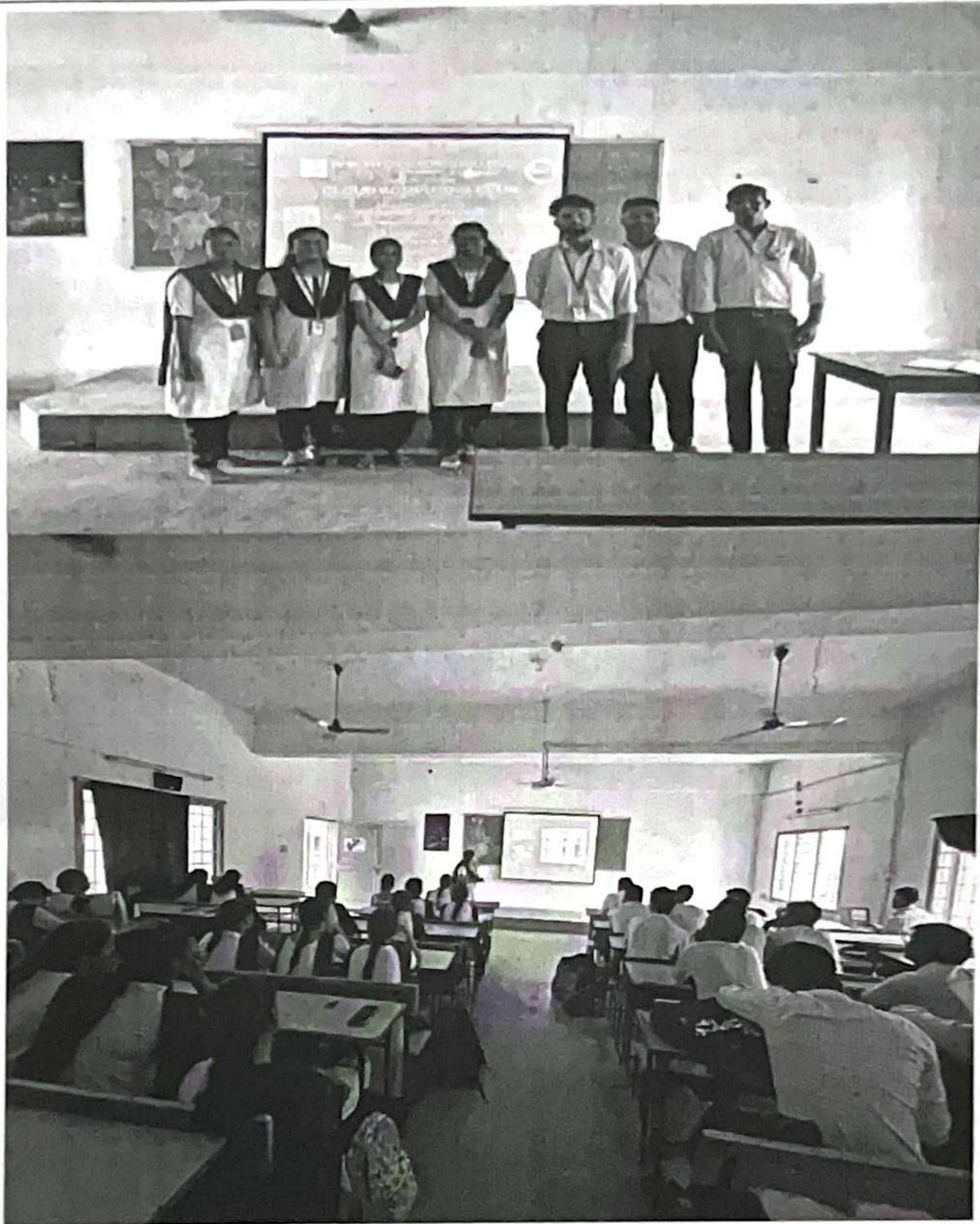
What is API:

- APIs are mechanisms that enable two software components to communicate with each other using a set of definitions and protocols.
- GCP includes services for computing, storage, data analytics, machine learning, and networking, among others, leveraging Google's robust global infrastructure.

API Management important in Cloud Computing:

- Centralized Control
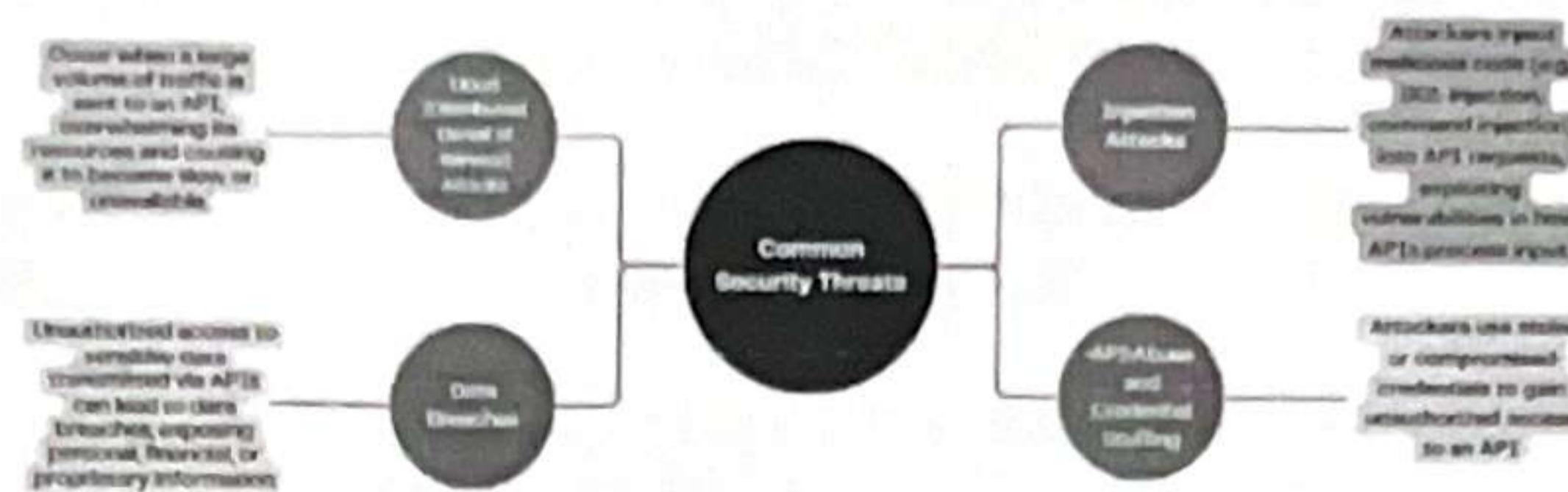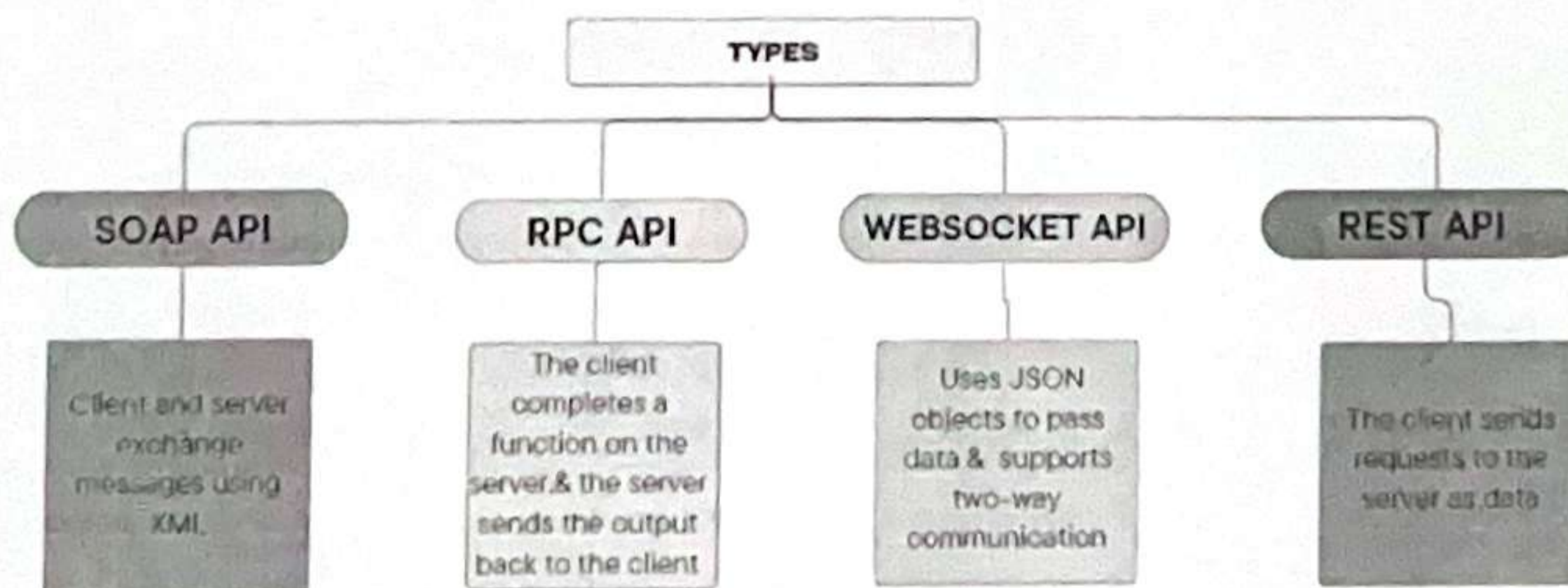- Scalability and Flexibility

- Security and Compliance
- Enhanced Developer Experience

API Security in the Cloud

Security Best Practices

1. <u>OAuth (Open Authorization)</u>: OAuth is an open standard for access delegation, allowing third-party services to access user information without exposing their credentials.

2. <u>JWT (JSON Web Tokens)</u>: JWTs are a compact, URL-safe means of representing claims between two parties. They are often used for secure data transmission.

3. <u>API Keys</u>: API keys are unique identifiers assigned to clients to authenticate API requests.

4. <u>SSL/TLS Encryption</u>: SSL (Secure Sockets Layer) and TLS (Transport Layer Security) are cryptographic protocols that secure data transmitted over a network.

5. <u>Rate Limiting and Throttling</u>: These techniques control the number of API requests a client can make within a specified time frame.

TYPES			
SOAP API	RPC API	WEBSOCKET API	REST API
Client and server exchange messages using XML	The client completes a function on the server & the server sends the output back to the client	Uses JSON objects to pass data & supports two-way communication	The client sends requests to the server as data

Challenges in Cloud API Management

Latency and Performance: APIs hosted in the cloud can experience latency issues due to network constraints, load balancing, and the complexity of cloud infrastructure.

Cost Management : API management in the cloud can incur significant costs, especially when dealing with high traffic, complex architectures, and multi-region deployments.

Scalability : Managing API traffic during traffic spikes or unexpected loads can strain infrastructure. APIs must be able to scale up and down to meet demand without degrading performance or causing downtime.

Vendor Lock-in : Relying too heavily on a single cloud provider's API management platform can lead to vendor lock-in, making it difficult to migrate to another provider or implement a multi-cloud strategy.

Data Privacy and Residency :Different regions may have specific data privacy laws and regulations that require data to be stored within certain geographic boundaries.

Success Story:
Twilio, a cloud communications platform, enabled healthcare providers to deliver remote patient monitoring services during the COVID-19 pandemic through its APIs. Using Twilio's APIs, healthcare organizations could quickly set up communication channels such as SMS, voice calls, and video conferencing to connect with patients remotely.

Key Success Factors:
Speed of Deployment: Twilio's APIs allowed healthcare providers to rapidly deploy remote monitoring solutions without needing to build infrastructure from scratch.
Scalability: Twilio's cloud-based architecture ensured that services could scale to meet the increased demand during the pandemic.
Interoperability: Twilio's APIs integrated seamlessly with existing healthcare systems and platforms, reducing the burden on IT teams and ensuring continuity of care.

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Link : https://forms.gle/yskejvSyiHWgVdxR7

S.No.	NAME	ROLL	YEAR	FEEDBACK
1	p.l.reethuka	22A31A1220	III	Good
2	Samireddi Adilakshmi	22A31A1223	III	Excellent
3	Ummanboyina Triveni	22a31a1226	III	Good
4	N. Vasavi	22A31A1219	III	Good
5	BODDU SRI VISHNU	22A31A1237	III	Excellent
6	M.Ramasuresh	23A35A1203	III	Excellent
7	Gadamsetti Manikanta	22A31A1242	III	Excellent
8	M PAVITHRA	23A35A1202	III	Excellent
9	G.R.L.Deepika	22A31A1209	III	Good
10	Deepak	22A31A1247	III	Excellent
11	Dakshayani salapu	22A31A1222	III	Good
12	Sukumar	22A31A1249	III	Excellent
13	Channa rama sathwik	22A31A1239	III	Good
14	Vallabhaneni V V N Sri Vaishnavi	22A31A1229	III	Good
15	K.Radha	22A31A1214	III	Good
16	JADA MOUNIKA SRI	22A31A1212	III	Good
17	Jahnavi	22A31A1207	III	Good
18	Ram Kiran Tadi	22A31A1261	III	Excellent
19	Asritha Dasari	22A31A0506	III	Good
20	Abhishek	22A31A4299	III	Good
21	P Kanya Gowri	22A31A1221	III	Excellent
22	G Manasa sree vyshnavi	22A31A4406	III	Good
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37	U.Rama sahithi	22A31A1227	III	Excellent
38	P.Hamsini	23A31A1221	III	Average
39	G. Navya Deepthi	23A31A1211	III	Average
40	M.Ramasuresh	23A35A1203	III	Good
41	Gedda Lalitha Raja Sri	22A31A1208	III	Good
42	GIRADA Urmila	23A31A1208	III	Average
43	Channa rama sathwik	22A31A1239	III	Excellent
44	UMA SAI KIRAN.PONNADA	22A31A1255	III	Excellent
45	Navya	23A31A1201	III	Average
46	Dakshayani salapu	22A31A222	III	Good
47	Renuka Chowdary	22A31A1218	III	Excellent
48	SAYED MAHABUB YOUNIS	22A31A1258	III	Good
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63	PENKE SREERAMKASULU	22A31A42C0	III	Excellent

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We collected feedback from all the students via offine. We have designed a feedback form for this. Student's feedback on the event is presented below:

FEEDBACK	NO OF STUDENTS
Excellent	29
Good	28
Average	06
Total	63

FACULTY CO-ORDINATOR

HOD-IT