

Course Information

- **Faculty Name:** Dr. D. Anveshini
- **Course Name:** Computer Networks
- **Class:** III B.Tech I Semester
- **Academic Year:** 2023-2024
- **Activity Name:** Collaborative Learning
- **Topic :** Network Protocols & Architecture

Objective of the Activity

The objective of the Collaborative Learning activity was to enable students to work together to understand the fundamental concepts of Network Protocols and Architecture. By engaging in group-based discussions and problem-solving tasks, students developed a deeper understanding of layered architectures like the OSI model and the TCP/IP model, their respective protocols, and their roles in enabling communication over networks.

Pre-Class Preparation

Instructor Preparation:

· Prepared a detailed handout explaining:

- Key network architectures: OSI and TCP/IP models.
- Core protocols such as HTTP, FTP, SMTP, DNS, TCP, IP, and UDP.
- Real-world examples of protocol usage.
- Developed problem sets and scenarios requiring students to analyze and design protocol-based solutions.

· Student Preparation:

- Reviewed the provided handout and supplementary video lecture.
- Listed examples of protocols they encounter in daily life (e.g., HTTP for web browsing, SMTP for emails).
- Prepared questions or points for discussion on how protocols ensure interoperability in networks.

In-Class Collaborative Learning Implementation

Images / S

Group Formation:

1. Students were divided into small groups (4–5 members each) to ensure balanced participation and diverse viewpoints.

Task Assignment:

1. Each group was assigned a specific layer of the OSI model or TCP/IP model to focus on.
2. Groups worked on tasks such as:
 - Explaining the functions of the assigned layer.
 - Identifying the protocols associated with the layer.
 - Mapping real-world applications to the protocols.
3. Groups collaborated to create diagrams, flowcharts, or presentations illustrating their findings.

Peer Sharing:

1. Groups presented their work to the class, highlighting how their assigned layer interacts with others in the model.
2. Classmates provided feedback or raised questions, promoting cross-group learning.

Problem-Solving Session:

1. Groups analyzed a network communication scenario (e.g., accessing a webpage or sending an email) and mapped out the sequence of protocol interactions across the layers.



Assessment Criteria:

- **Group Collaboration** – 10 Marks
- **Understanding of Concepts** – 10 Marks
- **Presentation and Discussion** – 10 Marks

Instructor Feedback:

The Collaborative Learning activity was highly effective in fostering teamwork and promoting a thorough understanding of Network Protocols and Architecture. Most groups displayed strong teamwork and successfully mapped theoretical concepts to practical scenarios. The class average marks ranged between **20-23 out of 30**, demonstrating good conceptual clarity and application skills.

Images / Screenshot of the practice

Collaborative Learning	Screenshot of the practice
On the topic Network Protocols & Architecture Presented by Batch 6	
On the topic Network Protocols & Architecture Presented by Batch 8	

Benefits of the Practice:

Enhanced Understanding: Students gained a comprehensive understanding of how protocols work together to ensure network communication.

Improved Problem-Solving Skills: Real-world scenarios helped students apply theoretical knowledge to practical problems.

Team Collaboration: Working in groups encouraged peer learning, communication, and collaboration.

Deeper Engagement: The activity stimulated critical thinking and active participation, making the topic more engaging and relatable.

D. Anushri

Signature of Faculty Member

Kunlanka

Head of the Department

Batch Number	Roll Number	Student Name	Group Collabora tion	Understanding of Concepts	Presentation and Discussion	Total(30 M)
1	21NN1A1226	GUNDA PRIYANAKA	8	9	7	24
	21NN1A1254	SHAIK SOFIYA	8	8	7	23
	21NN1A1240	MYNENI KAVYA SRI	8	7	6	21
	21NN1A1259	VUNNAM RAMYA SRI	6	7	6	19
	21NN1A1261	YALAGAPATI JYOTHIRMAI	6	5	7	18
2	21NN1A1225	GUNDA AKSHITHA	7	7	6	20
	21NN1A1256	UPPU BHAVANI	7	8	6	21
	21NN1A1234	KOLLI BHAGYA SRI	7	6	5	18
	21NN1A1262	YALAGAPATI KATYAYANI	7	7	8	22
	21NN1A1253	SHAIK SHAHANAZ BANU	6	7	7	20
3	21NN1A1237	KOTA SAI RAMA DEVI	9	8	8	25
	21NN1A1203	AVVARU EEKSHITHA MAINA	7	8	9	24
	21NN1A1236	KONDEBOYENA ANITHA	6	7	8	21
	21NN1A1222	GOLI HEMA	7	8	7	22
4	21NN1A1241	NAGALLA NAGA VENKATA SIVA SAI NAVYA	7	8	8	23
	21NN1A1249	RAYANKULA SRI BHAVANA	8	7	6	21
	21NN1A1233	KOLLA NAVEENA	7	9	8	24
	21NN1A1201	ADUSUMALLI BINDU PRIYA	7	6	7	20
5	21NN1A1218	DIRISALA JAHNAVI	8	7	8	23
	21NN1A1251	SARANAM SOWMYA	8	7	7	22
	21NN1A1209	CHALLA PADMAREDDY	5	6	5	16
	21NN1A1232	KANDULA BHAGYA LAKSHMI	8	8	8	24
6	21NN1A1208	CHADALAVADA PRANATI SAI	7	8	8	23
	21NN1A1243	NERELLA SUSHMA	7	8	6	21
	21NN1A1213	CHIRUMAMILLA BHARGAVI	6	7	7	20
	21NN1A1245	PAKANATI SINDHU	8	7	8	23
7	21NN1A1235	KONAKANANCHI PRATHYUSHA	7	6	6	19
	21NN1A1214	DANDIGALA DEEPTHI	6	7	8	21
	21NN1A1221	GANDURI HARSHITHA	8	7	9	24
	21NN1A1252	SHAIK NIKHATH	7	7	8	22
8	21NN1A1238	KOTHAMASU VENKATA NAGA KOMALI	5	5	7	17
	21NN1A1212	CHINTHALA TEJA SRI	7	6	7	20

	21NN1A1227	GUNDUMI RAMYA SRI	7	8	7	22
	21NN1A1215	DASARI KEDARESWARI	6	7	7	20
9	21NN1A1231	KANCHETI JYOSHNAVI	8	8	8	24
	21NN1A1220	EMANI KEERTHI	6	6	7	19
	21NN1A1258	VEMULAPALLI SUPRIYA	8	8	7	23
	21NN1A1230	KAMBALA PRATHIBHA	8	8	9	25
	21NN1A1211	CHILAMAKURI ASRITHA VENKATA NAGA SAI	5	5	6	16
10	21NN1A1239	MUNAGALA TANMAYI VARDHINI	8	9	8	25
	21NN1A1260	VUTHAKOLU TULASI	8	7	6	21
	21NN1A1228	JADDA VYSHNAVI	8	7	8	23
	21NN1A1205	BARNANA TRIVENI	5	7	6	18
11	21NN1A1207	BONDILI NAGASRI	7	7	6	20
	21NN1A1210	CHATARAJUPALLI DHARANI	6	8	8	22
	21NN1A1219	EJANDLA SRI HARSHITHA	7	8	8	23
	21NN1A1242	NANDIPATI VIJAYA LAKSHMI	6	7	6	19
12	21NN1A1244	NETTEM HARIKA	5	7	5	17
	21NN1A1223	GUDE SRILAKSHMI SOWJANYA	7	7	8	22
	21NN1A1257	VALLAMBOTLA DEEPTHI	8	7	9	24
	21NN1A1224	GUDIPUDI RUSHITHA	7	6	8	21
13	21NN1A1217	DEVIREDDY ANUSHA	7	6	7	20
	21NN1A1255	TADIBOINA VARSHINI	6	5	5	16
	21NN1A1202	AVANTHI NAIDU KONKALA	6	7	8	21
	21NN1A1216	DASARI SHALINI	8	8	7	23
14	21NN1A1247	RACHAMADUGU CHANDRIKA	6	6	7	19
	21NN1A1246	PODILI DIVYA SRI	9	8	7	24
	21NN1A1229	KAJJAYAM ASRITHA SRIJA	8	6	7	21
	21NN1A1248	RAVI SOWJANYA	6	7	7	20
15	21NN1A1250	REDLAM JYOTHIKA	7	5	5	17
	21NN1A1206	BODEPUDI SAI SWETHA	8	8	6	22
	21NN1A1204	BANDI SRAVITHA	7	6	5	18

S. Anushin.

Signature of the Faculty Member