



Centurion
UNIVERSITY

School: Campus:

Academic Year: Subject Name: Subject Code:

Semester: Program: Branch: Specialization:

Date:

Applied and Action Learning (Learning by Doing and Discovery)

Name of the Experiment : Build the Network – Peer-to-Peer Simulation

*** Coding Phase: Pseudo Code / Flow Chart / Algorithm**

- Start**
- Initialize the network environment.**
- Create multiple nodes (peers) in the network.**
- Connect each node to other nodes using peer-to-peer connections.**
- Each node shares data (message or file) with connected peers.**
- Receiving nodes validate and forward data to other peers.**
- Continue message propagation until all peers receive the data.**
- Display successful communication between all nodes.**
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Software used

1. Language: Python
2. IDE: VS Code
3. Library: Socket (for network connection)
4. Operating System: Windows

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* As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)

- **Network Initialized:**
The peer-to-peer network environment was successfully created.
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- **Nodes Created:**
- Multiple peers (Node1, Node2, Node3, Node4) were added to the network.
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- **Connections Established:**
Each node connected to others directly without a central server.
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- **Data Transmission:**
- Message sent from Node1 was received and validated by all other nodes.
- **Result:**
Every node communicated successfully, proving the working of the peer-to-peer network.

* Observations:

- All nodes in the network connected directly without a central authority.
- Data sent from one node was received by all connected peers.
- Each peer validated and forwarded the message efficiently.
- Network communication remained stable with no transmission errors.
- The peer-to-peer system showed decentralized and reliable data sharing.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Signature of the Student:

Name :

Signature of the Faculty:

Regn. No. :

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