

Innovative Teaching Practice

Course Information:

Faculty Name	: Dr. D.Anveshini,Mr.R.Veera Babu
Course Name	: Mobile computing
Class	: III B.Tech II Semester
Academic Year	: 2023-2024
Activity Name	: Collaborative Learning
Topic	: Mobile Transport Layer

Objective of the Activity:

objective of the Collaborative Learning activity is to engage students in a group-based exploration of the concept of Mobile Transport Layer. Through collaborative discussion, students will identify the types and responsibilities to thrashing, which occurs when excessive paging leads to a sharp decline in system performance. By working together, students will strengthen their understanding of how control packet flow between the transmitter and receiver can lead to mobile Transport layer and how it can be mitigated.

Pre-Class Preparation:

Students are required to:

- **Review the textbook or online resources** on major responsibilities of TCP, types of TCP
- **Prepare notes** on key topics like:
 - Provide reliable in-order transport of data: to not allow losses of data.
 - Control congestions in the networks: to not allow degradation of the network performance,
 - Control a packet flow between the transmitter and the receiver: to not exceed the receiver's
- **Formulate questions** on any areas of thrashing that seem unclear, such as how a system detects and recovers from thrashing.

In-Class Collaborative Learning Activity:

Instructions:

1. Group Formation (5 minutes):

- Students will be divided into small groups of 4-5. Each group will be assigned a set of tasks related to mobile transport layer, where they will collaborate to solve the problem and discuss the concepts in detail.

2. Collaborative Exploration (15 minutes):

- Each group will work together on the following questions and tasks:

1. **Define mobile Transport Layer.**
2. **Discuss the major responsibilities of TCP in an active session.**
3. **Discuss types of TCP.**
4. **Propose potential solutions** for preventing or mobile TCP, including how thefast retransmit or fast recovery.
5. **Case Study Discussion:** Groups will be provided with a hypothetical scenario. They must propose a plan for how they provide reliable in-order transport of data and control congestions in the network.



3. Group Presentation (15 minutes):

- Each group will present their findings to the class. Presentations should include:
 - A definition of mobile Transport Layer.
 - Types of TCP.
 - Discuss snooping TCP, Indirect TCP, Mobile TCP.

Class Discussion (10 minutes):

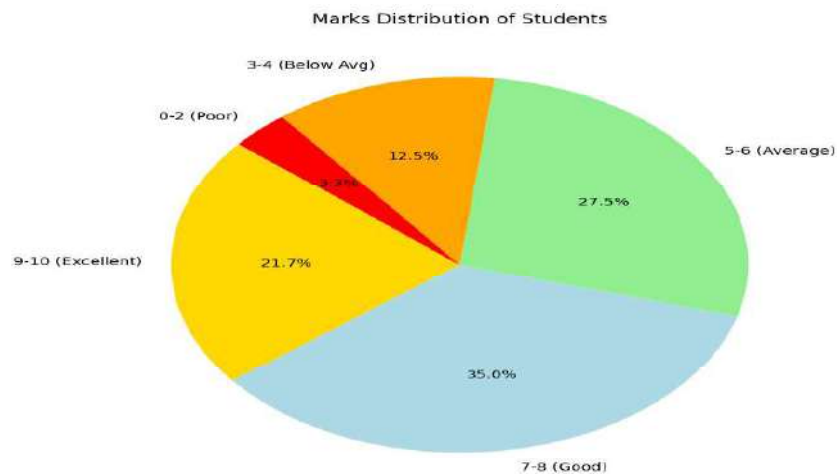
After the presentations, the class will engage in a broader discussion about the concept of Mobile Transport Layer, with the instructor clarifying any misconceptions or providing additional examples from industry or research on TCP issues.

Screenshot of the practice

Collaborative Learning	Screenshot of the practice
On the topic Mobile Transport Layer by 21NN1A1223 21NN1A1224 21NN1A1225	
On the topic Mobile Transport layer by 21NN1A1231 21NN1A1232 21NN1A1209	

Assessment Analysis:

Marks Range	Number of Students	Percentage
9-10 (Excellent)	26	21.67%
7-8 (Good)	42	35.00%
5-6 (Average)	33	27.50%
3-4 (Below Avg)	15	12.50%
0-2 (Poor)	4	3.33%
Total	120	100%



Conclusion:

The collaborative learning activity aims to deepen students' understanding of the Mobile Transport Layer by engaging them in group discussions and problem-solving exercises. Through this process, students will explore the responsibilities and types of TCP, methods to ensure reliable data transport, and strategies to mitigate thrashing and congestion in mobile networks.

Signature of the Faculty

Head of the Department