UPES
UNIVERSITY WITH A PURPOSE

School of Computer Science
University of Petroleum and Energy Studies
P.O. Bidholi, Via-Prem Nagar DEHRADUN-248007

Issue Date: 15 August 2020

Bachelors of Technology in Computer Science & Engineering

Minor ✓ Major

Project Title	Data Link Layer(L2 Routing) Implementation (TCP/ IP Stack Functionality)	Mentor Name	Project Number Ms. Avita Katal

S. No	Roll Number	Branch	Name	Role	Signature
1.	R171218058	CSE-DEVOPS	Kshitiz Saini	Developer + GitHub Maintainer	Kshitiz Saini
2.	R110218131	CSE-CCVT	Saloni Saxena	Developer + Tester	Saloni Saxena
3.	R110218107	CSE-CCVT	Pratyusha Agarwal	Developer + Documentation	Pratyusha Agarwal

Project Mentor | **Head of Department**

Date							Project Status	
	Title Approval	Synopsis	Mid-Term	End-Term	Progress Report	Total Marks	Authenticity	Yes/ No
R. No	Timely Submission	Marks	MARKS	MARKS	MARKS	MARKS	Satisfactory	Yes/ No
R171218058								
R110218131								
R110218107								
							Activity Coordinator	

Synopsis Evaluation

Roll Number		30 Marks					FEEDBACK	30 Marks						Documents	40 Marks	
		Reviewer1	Reviewer2	Reviewer3	Reviewer4	Reviewer5		Body Language	Dress Code	Communication Skill	Presentation Skill	Analytical Skill	Team Spirit		PPT	Report
R171218058	VIVA							1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218131								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218107								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			

Panel Remark

Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5

Mid- Term Evaluation

Rollnumber		30 Marks					FEEDBACK	30 Marks						Documents	40 Marks	
		Reviewer1	Reviewer2	Reviewer3	Reviewer4	Reviewer5		Body Language	Dress Code	Communication Skill	Presentation Skill	Analytical Skill	Team Spirit		PPT	Report
R171218058	VIVA									1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218131								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218107								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			

Panel Remark

Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5

End-Term Evaluation

Rollnumber		30 Marks					FEEDBACK	30 Marks						Documents	40 Marks	
		Reviewer1	Reviewer2	Reviewer3	Reviewer4	Reviewer5		Body Language	Dress Code	Communication Skill	Presentation Skill	Analytical Skill	Team Spirit		PPT	Report
R171218058	VIVA							1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218131								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
R110218107								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			
								1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5			

Panel Remark

Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5

UPES
UNIVERSITY WITH A PURPOSE

School of Computer Science
University of Petroleum and Energy Studies
P.O. Bidholi, Via-Prem Nagar DEHRADUN-248007

Branch Bachelors of Technology in Computer Science Engineering **Minor** ✓ **Major**

Project Title	Data Link Layer(L2 Routing) Implementation (TCP/ IP Stack Functionality)	**Mentor Name**	Ms. Avita Katal

Abstract

In today's world, fast and efficient communication on the network between the sender and receiver is very important. For this communication, data is converted into packets and sent over the network using various routing algorithms. In a network or over multiple networks, routing refers to the process of determining a path for a packet to travel from. L2 Routing is based on the concept of Data Link layer and happens when data is to be transferred between the same subnet.

In this project, we aim to implement the functionality of Data Link Layer like creating ARP tables, L2 Routing, MAC learning, L2 Switching & implementing VLAN forwarding.

Objective

The main objective of the project is to implement the concept of Data Link Layer. Another major objective is to tackle the issue of Thrashing, Collision and reducing the broadcast domain.

For this, we will implement the APR Tables, L2 Routing, MAC Learning, L2 Switching and VLAN Forwarding.

Methodology

Agile methodology of software development will be followed for the proposed project. The project is divided into 12 saints where the sprint 7 and 8 will consist of parallel development by different members of the team. Each sprint is provided ample time to complete itself as well as to maintain the product's backlog (if any). The project can accommodate changes if required at any stage of the project. The sprints 1, 2 and 3 are specifically for requirement analysis and designing of the project. One sprint is specifically designed for setting the environment like maintaining the Version Control (Git in our case) and MakeFile. Each development sprint is followed by Unit Testing and an Integration Testing at the end. Sprints are also designed for the reviewing as well as retrospection part. After all the sprints the project is expected to complete by November 30.

Progress 1

Mentor Remark

	Marks	10	10	10	10	10	10	10	10	10	10
	Rollno/Marks(10)	**Step 1**	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**	**Step 7**	**Synopsis**	**Mid-term**	**End-Term**
	R171218058										
	R110218131										
	R110218107										
	Date/Mentor Signature										

Progress 2

Mentor Remark

	Marks	10	10	10	10	10	10	10	10	10	10
	Rollno	**Step 1**	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**	**Step 7**	**Synopsis**	**Mid-term**	**End-Term**
	R171218058										
	R110218131										
	R110218107										
	Date/Mentor Signature										

Guideline: 1) A project group can be of maximum 4 members and no alteration in the group member will be entertained later.
Guideline: 2) Methodology should have following steps Step1: Literature Review; Step2: Identification Of Requirement (Type Of Data source, Amount Of Data, & Format of Data); Step3: Identification of Algorithm; Step4 : Comparative study; Step5: Design and Development of System/Architecture; Step 6: Implementation; Step7: Results
Guideline:3) Student should upload softcopies of all the documents (reports and power point presentations) in "Project Directory", 24 hrs prior to evaluation.
Guideline:4) Panel member will give feedback to individual on the scale of 1 to 5 and this scale will change for defaulter i.e. 1 to 3 scale.
1: Poor 2: Average 3: Good 4: Excellent 5: Outstanding