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| **Date** |  |  | |  |  |  |  |  |  | **Project Status** | |
|  | **Title Approval** | | **Synopsis** | | **Mid-Term** | **End-Term** | **Progress Report** | | **Total Marks** | **Authenticity** | **Yes/ No** |
| **R.No** | **Timly Submission** | | **Marks** | | **MARKS** | **MARKS** | **MARKS** | | **MARKS** | **Satisfactory** | **Yes/ No** |
|  |  | |  | |  |  |  | |  | **Activity Coordinator** | |
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| **School Of Computer Science** | **IssueDate:** |
| **University Of Petroleum and Energy Studies** |  |
| **P.O. Bidholi, Via-Prem Nagar DEHRADUN-248007** |  |

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| **Bachelors of Technology in Computer Science &**  **Engineering Minor** | | | | 1  ✓ |
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| **Project Title** | Data Link Layer (L2 Routing) Implementation  (TCP/ IP Stack Functionality) | **Mentor Name** | **Project Number** | |
| Ms. Avita Katal | |

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| **S.No** | **Rollnumber** | **Branch** | **Name** | **Role** | **Signature** |
| 1 | R171218058 | CSE-DEVOPS | Kshitiz Saini |  |  |
| 2 | R110218131 | CSE-CCVT | Saloni Saxena |  |  |
| 3 | R110218107 | CSE-CCVT | Pratyusha Agarwal |  |  |
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| **Project Mentor** |

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| **Head Of Department** |

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| **Synopsis Evaluation** | | | | | | | | | | | | | | | | | |
|  | | **30 Marks** | | | | |  | **30 Marks** | | | | | | |  | **40 Marks** | |  |
| **Rollnumber** | **V I V A** | **Reviewer1** | **Reviewer2** | **Reviewer3** | **Reviewer4** | **Reviewer5** | **F E E D B A C**  **K** | **Body Language** | **Dress Code** | **Communication Skill** | | **Presentation Skill** | **Analytical Skill** | **Team Spirit** | **D**  **o c u m e n**  **t s** | **PPT** | **Report** |
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| **Panel Remark** | |  | | | | | | | | | | | | | | | |
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| **Reviewer 1** | | | **Reviewer 2** | | | **Reviewer 3** | | | **Reviewer 4** | | | **Reviewer 5** | | | |
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| **Mid- Term Evaluation** | | | | | | | | | | | | | | | | | |  |
|  | | **30 Marks** | | | | |  | **30 Marks** | | | | | | |  | **40 Marks** | |  |
| **Rollnumber** | **V I V A** | **Reviewer1** | **Reviewer2** | **Reviewer3** | **Reviewer4** | **Reviewer5** | **F E E D B A**  **C K** | **Body Language** | **Dress Code** | **Communication Skill** | | **Presentation Skill** | **Analytical Skill** | **Team Spirit** | **D**  **o c u m**  **e t**  **n s** | **PPT** | **Report** |
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| **Panel Remark** | |  | | | | | | | | | | | | | | | |
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| **Reviewer 1** | | | **Reviewer 2** | | | **Reviewer 3** | | | **Reviewer 4** | | | **Reviewer 5** | | | |
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| **End-Term Evaluation** | | | | | | | | | | | | | | | | | |  |
|  | | **30 Marks** | | | | |  | **30 Marks** | | | | | | |  | **40 Marks** | |  |
| **Rollnumber** | **V I V A** | **Reviewer1** | **Reviewer2** | **Reviewer3** | **Reviewer4** | **Reviewer5** | **F E E D B A**  **C K** | **Body Language** | **Dress Code** | **Communication Skill** | | **Presentation Skill** | **Analytical Skill** | **Team Spirit** | **D**  **o c u m**  **e t**  **n s** | **PPT** | **Report** |
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| **Panel Remark** | |  | | | | | | | | | | | | | | | |
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| **Reviewer 1** | | | **Reviewer 2** | | | **Reviewer 3** | | | **Reviewer 4** | | | **Reviewer 5** | | | |
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# School Of Computer Science University Of Petroleum and Energy Studies

**P.O. Bidholi, Via-Prem Nagar DEHRADUN-248007**

**Branch**

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| Bachelors of Technology in Computer Science Engineering **Minor** | | | | | | | | | | | | | 1  ✓ |
| **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. | | | | | | | | | | | | |
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| **Objective** | The main objective is to implement the data link layer.  Sub-objectives for the project are: Developing a generic graph topology, tackling the issues of thrashing, collision and reducing broadcast domain, implementing ARP, L2 routing, MAC learning and L2 switching & VLAN forwarding | | | | | | | | | | | | |
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| **Methodology** |  | | | | | | | | | | | | |
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| **Progress 1** |  | | | | | | | | | | | | |
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|  | **Marks** | **10** | **10** | **10** | **10** | **10** | **10** | **10** | | **10** | **10** | **10** |
| **Mentor Remark** |  | **RollNo/Marks(10)** | **Step 1** | **Step 2** | **Step 3** | **Step 4** | **Step 5** | **Step 6** | **Step 7** | | **Synopsis** | **Mid- term** | **End- Term** |
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| **Date/Ment or Signature** |  |  |  |  |  |  |  | |  |  |  |
| **Progress 2** |  | | | | | | | | | | | | |
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| **Mentor Remark** |  | **RollNo** | **Step 1** | **Step 2** | **Step 3** | **Step 4** | **Step 5** | **Step 6** | **Step 7** | | **Synopsis** | **Mid- term** | **End- Term** |
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| **Date/Ment or 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)**MethodologyshouldhavefollowingstepsStep1:LiteratureReview;Step2:IdentificationOfRequirement(TypeOfDatasource,AmountOfData,&Format ofData);Step3:IdentificationofAlgorithm;Step4:Comparativestudy;Step5:DesignandDevelopmentofSystem/Architecture;Step6:Implementation;Step7:Results **Guideline:3)**Studentshoulduploadsoftcopiesofallthedocuments(reportsandpowerpointpresentations)in“ProjectDirectory”,24hrspriortoevaluation.

**Guideline:4)** Panelmemberwillgivefeedbacktoindividualonthescaleof1to5andthisscalewillchangefordefaulteri.e.1to3scale. 1:Poor 2:Average 3:Good 4:Excellent 5:Outstanding