III B. Tech I Semester	COMPUTER NETWORKS LAB	L	T	P	C
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Course Objectives:

Learn basic concepts of computer networking and acquire practical notions of protocols with the emphasis on TCP/IP. A lab provides a practical approach to Ethernet/Internet networking: networks are assembled, and experiments are made to understand the layered architecture and how do some important protocols work

List of Experiments:

1. Study of Network devices in detail and connect the computers in Local Area Network.
2. Write a C Program to implement the data link layer farming methods such as
   i) Character stuffing ii) bit stuffing.
3. Write a C Program to implement data link layer farming method checksum.
4. Write a C Program for Hamming Code generation for error detection and correction.
5. Write a C Program to implement on a data set of characters the three CRC polynomials – CRC 12, CRC 16 and CRC CCIP.
6. Write a C Program to implement Sliding window protocol for Goback N.
7. Write a C Program to implement Sliding window protocol for Selective repeat.
8. Write a C Program to implement Stop and Wait Protocol.
9. Write a C Program for congestion control using leaky bucket algorithm
10. Write a C Program to implement Dijkstra‘s algorithm to compute the Shortest path through a graph.
11. Write a C Program to implement Distance vector routing algorithm by obtaining routing table at each node (Take an example subnet graph with weights indicating delay between nodes).
12. Wireshark
    i. Packet Capture Using Wire shark
    ii. Starting Wire shark
    iii. Viewing Captured Traffic
    iv. Analysis and Statistics & Filters.
13. How to run Nmap scan
14. Operating System Detection using Nmap
15. Do the following using NS2 Simulator
    i. NS2 Simulator-Introduction
    ii. Simulate to Find the Number of Packets Dropped
    iii. Simulate to Find the Number of Packets Dropped by TCP/UDP
    iv. Simulate to Find the Number of Packets Dropped due to Congestion
    v. Simulate to Compare Data Rate& Throughput.