

III B.Tech. II Semester Computer Science Engineering

ACN & UNIX PRIGRAMMING LAB SYLLABUS INDEX

S. No.	DESCRIPTION
PART – A	
1.	Implement the data link layer framing methods such as character stuffing and bit stuffing.
2.	Implement on a data set of characters the three CRC polynomials – CRC 12,CRC 16 and CRC CCIP.
3.	Implement Dijkstra’s algorithm to compute the shortest path thru a graph.
4.	Take an example subnet graph with weights indicating delay between nodes. Now obtain Routing table at each node using distance vector routing algorithm.
5.	Take an example subnet of hosts. Obtain broadcast tree for it.
PART – B	
	Commands to learn for doing programs in vi editor
6.	Write a shell script to generate a multiplication table.
7.	Write a shell script that copies multiple files to a directory.
8.	Write a shell script that counts the number of lines and words present in a given file.
9.	Write a shell script that displays the list of all files in the given directory.
10.	Write a shell script (small calculator) that adds, subtracts, multiples and divides the given two integers. There are two division options: one returns the quotient and shell other returns remainder. The script requires 3 arguments an: The operation to be used and two integer numbers. The options are add (-a), subtract (-s), multiply (-m), quotient (-c) & remainder (-r).
11.	Write a shell script to reverse the rows and columns of a matrix.
12.	Write a C program that counts the number of blanks in a text file. a) Using standard I/O b) Using system calls.
13.	Implement in C the following UNIX commands using system calls. a) cat b) ls c) mv
14.	Write a program that takes one or more file/directory names as command line input and reports the following information on the file: a) File type. b) Number of links. c) Time of last access. d) Read, Write and Execute permissions.

15.	Write a C program that illustrates uses of mkdir, opendir, readdir, closedir, and rmdir APIs.
16.	Write a C program that illustrates how to execute two commands concurrently with a command pipe.
17.	Write a C program that illustrates the following: a) Two-Way communication with unidirectional pipes. b) Two-way communication with bidirectional pipes.
18.	Write a C program that illustrates the creation of child process using fork system call.
19.	Write a C program that displays the real time of day every 60 seconds.
ADDITIONAL EXPERIMENTS	
20.	A shell script to convert Filenames to Lowercase.
21.	A shell script for bubble sort
22.	Write a program to explain file locking
23.	Write a program for client – server communication using sockets for connection –oriented protocol.
24.	Write a program for client – server communication using sockets for connectionless protocol.