SUBJECT: 210247:Data Structures Lab

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Sr. No	Date of Performance	Date of Completion	Title of Experiment	Page No.	Sign/ Remarks
			GROUP-A		
1			In Second year Computer Engineering class of M students, set A of students play cricket and set B of students play badminton. Write C/C++ program to find and display- i. Set of students who play either cricket or badminton or both ii. Set of students who play both cricket and badminton iii. Set of students who play only cricket iv. Set of students who play only badminton v. Number of students who play neither cricket nor badminton (Note- While realizing the set duplicate entries are to avoided)		
2			Write C/C++ program for storing matrix. Write functions for a) Check whether given matrix is upper triangular or not b) Compute summation of diagonal elements c) Compute transpose of matrix d) Add, subtract and multiply two matrices		
3			Set A=(1,3, a, s, t, i} represent alphanumeric characters permitted to be used to set the password of length 4. Write C/C++ program to generate all possible passwords		
			GROUP - B		
4			Department of Computer Engineering has student's club named 'Pinnacle Club'. Students of Second, third and final year of department can be granted membership on request. Similarly one may cancel the membership of club. First node is reserved for president of club and last node is reserved for secretary of club. Write C++ program to maintain club member's information using singly linked list. Store student PRN and Name. Write functions to a) Add and delete the members as well as president or even secretary. b) Compute total number of members of club c) Display members d) Display list in reverse order using recursion e) Two linked lists exists for two divisions. Concatenate two lists.		
5			Second year Computer Engineering class, set A of students like Vanilla Ice-cream and set B of students like butterscotch ice-cream. Write C/C++ program to store two sets using linked list. compute and display- i. Set of students who like either vanilla or butterscotch or both ii. Set of students who like both vanilla and butterscotch iii. Set of students who like only vanilla not butterscotch iv. Set of students who like only butterscotch not vanilla v. Number of students who like neither vanilla nor butterscotch		
6			Write C++ program for storing binary number using doubly linked lists. Write functions- a) to compute 1's and 2's complement b) add two binary numbers		
			GROUP -C		
7			In any language program mostly syntax error occurs due to unbalancing delimiter such as (),{},[]. Write C++ program using stack to check whether given expression is well parenthesized or not.		
8			Implement C++ program for expression conversion as infix to postfix and its evaluation using stack based on given conditions i. Operands and operator, both must be single character. ii. Input Postfix expression must be in a desired format. iii. Only '+', '-', '*' and '/ ' operators are expected.		
			GROUP-D		
9			Queues are frequently used in computer programming, and a typical example is the creation of a job queue by an operating system. If the operating system does not use priorities, then the jobs are processed in the order they enter the system. Write C++ program for simulating job queue. Write functions to add job and delete job from queue		
10			Pizza parlor accepting maximum M orders. Orders are served in first come first served basis. Order once placed cannot be cancelled. Write C++ program to simulate the system using circular queue using array.		
			GROUP-E		
11			Write C++ program to store roll numbers of student in array who attended training program in random order. Write function for- a) Searching whether particular student attended training program or not using linear search and sentinel search. b) Searching whether particular student attended training program or not using binary search and Fibonacci search		
12			Write C++ program to store second year percentage of students in array. Write function for sorting array of floating point numbers in ascending order using a) Insertion sort b) Shell Sort and display top five scores.		
13			Write C++ program to store first year percentage of students in array. Sort array of floating point numbers in ascending order using quick sort and display top five scores.		
			GROUP F(CONTENT BEYOND SYLLABUS)		
14			Write c++ program to implemented BFS on tree (common)		
15			To study android surface,its architecture and working.		

CERTIFICATE

Certified that Mr./Miss._____ Roll No. _____ of _____ class has carried out

above practical/term work within the four wall of the college. His/ Her performance is satisfactory & attendance is_____%

DATE   Staff Member in-charge   Head of the Department