



GL BAJAJ
Institute of Technology & Management

FIND YOUR SPARK

Programming For Problem Solving Lab Report

(BCS- 151/251)

Session: 2023-24



Submitted By:

Name:

Section:

Class Roll no:

G L Bajaj Institute Of Technology And Management
Greater Noida- 201306



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S. No	Exp. no	Name of Experiment	Date of Experiment	Date of Submission	Signature of Faculty with date	Course Outcome	Remarks
Lab 1	1.	WAP that accepts the marks of 5 subjects and finds the sum and percentage marks obtained by the student.				BCS15 1/251.1	
	2.	WAP that calculate the simple interest and compound interest. The principal amount, rate of interest and time are entered through the keyboard.					
	3.	WAP to calculate the area and circumference of a circle.					
	4.	WAP that accepts the temperature in Centigrade and converts into Fahrenheit using the formula $C/5 = (F - 32)/9$.					
Lab 2	5.	WAP that swaps values of two variables using a third variable.				BCS15 1/251.2	
	6.	WAP that checks whether the two numbers entered by the user are equal or not.					
	7.	WAP to find the greatest of three numbers.					
	8.	WAP that finds whether a given number is even or odd.					
Lab 3	9.	WAP that tells whether a given year is leap year or not.				BCS15 1/251.2	
	10.	WAP that accepts marks of five subjects and finds					



		percentage and prints grades according to the following criteria: Between 90-100%----- -Print 'A' 80-90%----- --Print 'B' 60-80%----- -Print 'C' Below 60%----- -Print 'D'				
	11.	WAP that takes two operands and one operator from the user and perform the operation and prints the result by using Switch statement.			BCS15 1/251.2	
Lab 4	12.	WAP to print the sum of all numbers up to a given number.			BCS15 1/251.2	
	13.	WAP to find the factorial of a given number.				
	14.	WAP to print sum of even and odd numbers from 1 to N numbers.				
Lab 5	15.	WAP to print the Fibonacci series.			BCS15 1/251.2	
	16.	WAP to check whether the entered number is prime or not.				
	17.	WAP to find the sum of digits of the entered number.				



Lab 6	18.	WAP to find the reverse of a number.				BCS15 1/251.2
	19.	WAP to print Armstrong numbers from 1 to 100.				
	20.	WAP to convert binary number into decimal number and vice versa.				
	21.*	WAP a program to print the following pattern: 1 1 1 1 2 1 1 3 3 1 1 4 6 4 1 1 5 10 10 5 1				
Lab 7	22.	WAP that simply takes elements of the array from the user and finds the sum of these elements.				BCS15 1/251.4 & BCS15 1/251.5
	23.	WAP that inputs two arrays and saves sum of corresponding elements of these arrays in a third array and prints them.				
	24.	WAP to find the minimum and maximum element of the array.				
	25.	WAP to search an element in a array using Linear Search.				
LAB 8	26.*	WAP to arrange the elements of an array using insertion sort techniques.				BCS15 1/251.5
	27.*	WAP to sort an array				



		element using selection sort.					
LAB 8	28.	WAP to sort the elements of the array in ascending order using Bubble Sort technique.				BCS15 BCS15 1/251.4 & BCS15 1/251.5	
	29.*	WAP to search an element in an array using binary search techniques.					
	30.	WAP to add and multiply two matrices of order nxn.					
Lab 9	31.	WAP that finds the sum of diagonal elements of an mxn matrix.				BCS15 1/251.4 & BCS15 1/251.5	
	32.	WAP to implement strlen(), strcat(), strcpy() using the concept of Functions.					
Lab 9	33.	Define a structure data type TRAIN_INFO. The type contain Train No.: integer type Train name: string Departure Time: aggregate type TIME Arrival Time: aggregate type TIME Start station: string End station: string The structure type Time contains two integer members: hour and minute. Maintain a train timetable and implement the following operations: (i) List all the trains (sorted according to train number) that depart from a particular section. (ii) List all the trains that depart from a particular station at a particular time. (iii) List all the trains that				BCS15 1/251.4 & BCS15 1/251.5	



		depart from a particular station within the next one hour of a given time. (iv) List all the trains between a pair of start station and end station.					
LAB 10	34.	WAP to swap two elements using the concept of pointers.					
	35.	WAP to compare the contents of two files and determine whether they are same or not.					
	36.	WAP to check whether a given word exists in a file or not. If yes then find the number of times it occurs.					BCS15 1/251.3
	37.*	WAP to find the largest no among 20 integers using dynamic memory location.					BCS15 1/251.5
	38.*	WAP to find the factorial of given number using command line argument.					