

PROGRAMMING FOR PROBLEM SOLVING LAB

PAPER CODE: ESCS 291

Assignment	Experiment Name	Date of Experiment	Date of Submission
Assignment 1	1. Write a C program to print "Hello World".	Group A&B 21/03/2024	Group A& B 01/04/2024
	2. Write a C program for addition, subtraction, multiplication and division of two numbers.		
	3. Write a C program to calculate the average of three numbers.		
	4. Write a C program to calculate Simple Interest. $[SI=Principal*Interest\ rate*Time]$		
	5. Write a C program to convert temperature in Fahrenheit to Celsius and Celsius to Fahrenheit.		
Assignment 2	6. Write a C program for swapping of two numbers using a temporary variable.	Group A & B 01/04/2024	Group A & B 04/04/2024
	7. Write a C program for swapping of two numbers without using a temporary variable.		
	8. Write a C program to find the area of a triangle using Heron's formula. $[Area=\sqrt{S * (S - a) * (S - b) * (S - c) }]$, <i>where $S = (a + b + c)/2$, S is semi -perimeter]</i>		
	9. Write a C program to calculate Compound Interest. $[CI=Principal*(1 + \frac{Rate}{100})^{Time}]$		
	10. Write a C program to calculate distance between two points. $[D = \sqrt{(x2 - x1)^2 + (y2 - y1)^2}]$		
Assignment 3	11. Write a C program to check a number is ODD or EVEN.	Group A & B 04/04/2024	Group A & B 08/04/2024
	12. Write a C program to find the maximum of three numbers using if-else.		
	13. Write a C program to find the maximum of three numbers using Conditional/Ternary operator.		
	14. Write a C program to check a character is Vowel or not.		
	15. Write a C program to check a given year is Leap Year or not.		
	16. Write a C program to Calculate the Roots of a Quadratic Equation.		

Assignment 4	17. Write a C program to input any week day number and print corresponding week day name using switch case.	Group A 08/04/2024	Group B 12/04/2024
	18. Write a C program for grading the Students in an Academic Institution. The grading is done according to the following rules using switch-case. Grade Average marks 'O' 90-100 'E' 80-89 'A' 70-79 'B' 60-69 'C' 50-59 'D' 40-49 'F' 0-39	Group B 12/04/2024	Group B 15/04/2024
	19. Write a C program to check a number is ODD or EVEN using switch case.		
	20. Write a C program to design a Calculator with basic operations using switch case.		
Assignment 5	21. Write a C program to calculate the summation and average of first N natural numbers.	Group A & B 15/04/2024	Group A & B 18/04/2024
	22. Write a C program to find the factorial of a number.		
	23. Write a C program to print the Fibonacci series up to Nth term.		
	24. Write a C program to find the GCD of two numbers.		
	25. Write a C program to check a number is prime or not.		
Assignment 6	26. Write a C program to count the number of digits and calculate the sum of digits of an integer.	Group A & B 15/04/2024	Group A & B 18/04/2024
	27. Write a C program to reverse an integer and check an integer is Palindrome or not.		
	28. 2Write a C program to check an integer is Armstrong number or not.		
	29. Write a C program to check an integer is Perfect number or not.		
	30. Write a C program to check an integer is Strong number or not.		

Assignment 7	31. Write C Programs to print the following patterns	Group B 25/04/2024Group A 26/04/2024	Group A & Group B29/04/2024
<pre>* * * * * * * * * * * * * * *</pre>	<pre>* * * * * * * * * * * * * * *</pre>	<pre>* * * * * * * * * * * * * * *</pre>	
<pre> * * * * * * * * * * * * * * * * * * * * *</pre>	<pre>A A B A B C A B C D A B C D E</pre>	<pre>A B A C B A D C B A E D C B A</pre>	
<pre> * * * * * * * * * * * * * * * * * * * * * * * *</pre>	<pre>* * * * * * * * * * * * * * * * * * * * * * * * *</pre>	<pre>* * * * * * * * * * * * * * * * *</pre>	
<pre> * * * * * * * * * *</pre>	<pre>* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *</pre>	<pre>* *</pre>	

Assignment 8	32. Write C Programs to print the following series I. 1 4 9 16 25 36..... II. 1 11 111 1111 11111..... III. 1+(1+2)+(1+2+3)+(1+2+3+4)+(1+2+3+4+5)+..... IV. 0 7 26 63..... V. 1 - 1/4 + 1/9- 1/16 +..... VI. 1 - $\frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots$	Group A 29/04/2024 Group B 16/05/2024	Group A 3/05/2024 Group B 22/05/2024
	33. Write a C program to accept n elements of	Group A& B	Group A& B

Assignment 9	an array and print the sum of even and odd numbers.	21/05/2024	27/05/2024
	34. Write a C program to accept n elements of an array and print the maximum and minimum elements of the array.		
	35. Write a C program to accept n elements of an array and reverse the elements on the same array and print the resultant array.		
	36. Write a C program to check if an array elements are Palindrome or not.		
	37. Write a C program to Search an element whether it is present or not in the array.		
Assignment 10	38. Write a C program to Insert an element at a required position in to an array.	Group A& B 27/05/2024	Group A& B 30/05/2024
	39. Write a C program toDelete an element at a required position from an array.		
	40. Write a C program for addition of two matrices.		
	41. Write a C program for multiplication of two matrices.		
	42. Write a C program for transpose of a matrix.		
Assignment 11	43. Write a C program to swap elements using call by value.	Group A& B 30/05/2024	Group A& B 03/06/2024
	44. Write a C programto swap elements using call by reference		
	45. Write aC Program to Store Information of Students Using Structure.		
	46. Write aC Program to Store Information of Books Using Structure.		
Assignment 12	47. Write a C Program using recursive function to compute the Factorial of a number.	Group A& B 30/05/2024	Group A& B 03/06/2024
	48. Write a C Program using recursive function to compute the Fibonacci number in the nth position.		
	49. Write a C program to reverse a string without using String Handling function.		
	50. Write a C program to Find the frequency of a Character in a String		