**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 |
| 1. Write a C program for addition, subtraction, multiplication and division of two numbers. |
| 1. Write a C program to calculate the average of three numbers. |
| 1. Write a C program to calculate Simple Interest. ***[SI=Principal\*Interest rate\*Time]*** |
| 1. Write a C program to convert temperature in Fahrenheit to Celsius and Celsius to Fahrenheit. |
|  | | | |
| Assignment 2 | 1. 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 |
| 1. Write a C program for swapping of two numbers without using a temporary variable. |
| 1. Write a C program to find the area of a triangle using Heron’s formula.   ***[Area=, where S= (a+ b+ c)/2, S is semi -perimeter]*** |
| 1. Write a C program to calculate Compound Interest. ***[CI=Principal\*]*** |
| 1. Write a C program to calculate distance between two points.   ***[D = ]*** |
|  | | | |
| Assignment 3 | 1. Write a C program to check a number is ODD or EVEN. | Group A & B  04/04/2024 | Group A & B  08/04/2024 |
| 1. Write a C program to find the maximum of three numbers using if-else. 2. Write a C program to find the maximum of three numbers using Conditional/Ternary operator. |
| 1. Write a C program to check a character is Vowel or not. |
| 1. Write a C program to check a given year is Leap Year or not. |
| 1. Write a C program to Calculate the Roots of a Quadratic Equation. |
|  | | | |
| Assignment 4 | 1. 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 | Group B  12/04/2024  Group B  15/04/2024 |
| 1. 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 |
| 1. Write a C program to check a number is ODD or EVEN using switch case. |
| 1. Write a C program to design a Calculator with basic operations using switch case. |
|  | | | |
| Assignment 5 | 1. 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 |
| 1. Write a C program to find the factorial of a number. |
| 1. Write a C program to print the Fibonacci series up to Nth term. |
| 1. Write a C program to find the GCD of two numbers. |
| 1. Write a C program to check a number is prime or not. |
|  | | | |
| Assignment 6 | 1. 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 |
| 1. Write a C program to reverse an integer and check an integer is Palindrome or not. |
| 1. 2Write a C program to check an integer is Armstrong number or not. |
| 1. Write a C program to check an integer is Perfect number or not. |
| 1. Write a C program to check an integer is Strong number or not. |

|  |  |  |  |
| --- | --- | --- | --- |
| Assignment 7 | 1. Write C Programs to print the   following patterns | Group B 25/04/2024 Group A 26/04/2024 | Group A & Group B 29/04/2024 |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
| Assignment 8 | 1. Write C Programs to print the following series 2. 1 4 9 16 25 36............. 3. 1 11 111 1111 11111.................. 4. 1+(1+2)+(1+2+3)+(1+2+3+4)+(1+2+3+4+5)+........ 5. 0 7 26 63.......… 6. 1 – 1/4 + 1/9- 1/16 +........ 7. 1 -  +  - +.......… | | Group A  29/04/2024  Group B  16/05/2024 | Group A  3/05/2024  Group B  22/05/2024 | |
|  | | | | | |
| Assignment 9 | 1. Write a C program to accept n elements of an array and print the sum of even and odd numbers. | Group A & B  21/05/2024 | | | Group A & B  27/05/2024 |
| 1. Write a C program to accept n elements of an array and print the maximum and minimum elements of the array. |
| 1. Write a C program to accept n elements of an array and reverse the elements on the same array and print the resultant array. |
| 1. Write a C program to check if an array elements are Palindrome or not. |
| 1. Write a C program to Search an element whether it is present or not in the array. |
|  | | | | | |
| Assignment 10 | 1. 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 |
| 1. Write a C program to Delete an element at a required position from an array. |
| 1. Write a C program for addition of two matrices. |
| 1. Write a C program for multiplication of two matrices. |
| 1. Write a C program for transpose of a matrix. |
|  | | | | | |
| Assignment 11 | 1. Write a C program to swap elements using call by value. | Group A & B  30/05/2024 | | | Group A & B  03/06/2024 |
| 1. Write a C program to swap elements using call by reference |
| 1. [Write aC Program to Store Information of Students Using Structure.](https://www.programiz.com/c-programming/examples/information-structure-array) |
| 1. [Write aC Program to Store Information of Books Using Structure.](https://www.programiz.com/c-programming/examples/information-structure-array) |
|  | | | | | |
| Assignment 12 | 1. 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 |
| 1. Write a C Program using recursive function to compute the Fibonacci number in the nth position. |
| 1. Write a C program to reverse a string without using String Handling function. |
| 1. Write a C program to Find the frequency of a Character in a String |