**KIET Group of Institutions, Delhi-NCR**



**Department of Computer Applications**

**(An ISO – 9001: 2008 Certified & ‘A+’ Grade accredited Institution by NAAC)**

**Programming Lab (KCA – 151)**

**List of Practical**

**Session – (2022-23)**

**Practical – 1: Basic Input/Output Operation**

1. Program to read two integer and two floating point numbers.
2. Program to accept the marks of 5 subjects and finds the sum and percentage marks obtained by the student.
3. Program to calculate the simple interest and compound interest (The Principal, Amount, Rate of Interest and Time are entered through keyboard).
4. Program to calculate the area and circumference of a circle.
5. Program that accepts temperature in Centigrade and converts into Fahrenheit using the formula C/5 = (F-32)/9.
6. Program that swaps values of two variables using a third variable.
7. Program that swaps the values of two variables without using a 3rd variable.
8. Program to calculate and print the area of triangle, where the three sides of the triangle is given as input.

**Practical – 2: Program to implement conditional statements**

1. Program that checks whether the two numbers entered by the user are equal or not.
2. Program to find the greatest of three numbers.
3. Program to find whether a given number is even or odd.
4. Program that tells whether a given year is leap year or not.
5. The working hours based on age of the laborer is given

Age Working Hour

0-10 0

11-15 0

16-20 3

21-25 6

>25 8

Write a program to calculate working hour of a person for a given age.

1. Program to find the roots of a quadratic equation.
2. WAP to print the given number is even or odd using “conditional operator”.

**Practical – 3: Program to implement switch-case statement**

1. Write a Program to read two numbers and an operator (+, -, \*, /) which performs the specified operation and display the result
2. Write a program to display the color name according to the code entered. The coding scheme is as follows

1: “RED”

2: “GREEN”

3: “WHITE”

4: “YELLOW”

5: “ORANGE”

1. User is going to enter a value from 1 to 12. Month name should be displayed accordingly like 1 – January, 2 – February etc. Write a program for the same.
2. User is going to enter a value from 1 to 7. day of the week should be displayed accordingly like 1 – Monday, 2 – Tuesday etc. Write a program for the same.

**Practical – 4: Program to implement Looping Constructs**

1. Program to display the first N numbers.
2. Program to print the sum of all numbers up to a given number.
3. Program to find the factorial of a given number.
4. Program to print sum of even and odd numbers from 1 to N numbers.
5. Program to print the Fibonacci series.
6. Program to check whether the entered number is prime or not.
7. Program to find the sum of digits of the entered number.
8. Program to find the reverse of a number.
9. Program to print Armstrong numbers between two intervals.
10. Write a program to print the pattern

1

1. 2

1 2 3

1 2 3 4

1. Write a program in C to display table of number 1 to 10 using nested loop

**Practical – 5: Program to implement One-Dimensional Array**

1. Program that simply takes elements of the array from the user and finds the sum of these elements.
2. Program that inputs two arrays and saves sum of corresponding elements of these arrays in a third array and prints them.
3. Program to find the minimum and maximum element of the array.
4. Program to search an element in a array using Linear Search.
5. Program to sort the elements of the array in ascending order using Bubble Sort technique.
6. Program to print the elements of the array in reverse order.
7. Write a program to find the sum of even numbers in the array.

**Practical – 6: Program to implement Two-Dimensional Array**

1. Write a program in C to enter some value in 2D array and display it using any loop
2. Program to add and multiply two matrices of order n x n
3. Program that finds the sum of diagonal elements of a m x n matrix.
4. Program to find the transpose of a matrix.
5. Program to find the row sum and the column sum of a matrix of order m x n.

**Practical – 7: Program to implement User Defined Function and string manipulation functions.**

1. Write a function named Swap, which will swap the values of two variables. (Use the concept of call by value).
2. Write a function named CheckPrime, which will check an input number is prime or not.
3. Program to implement strlen (), strcat (),strcpy () using the concept of Functions.
4. Write a function named GetMax, that will find the maximum among array of numbers.
5. Write a program to check whether the entered string is palindrome or not.

**Practical – 8: Program to implement Structure and Union**

1. Write C program to create, declare and initialize structure.
2. Write C program to read and print an employee's detail using structure.
3. Write C program to demonstrate example of nested structure.
4. Write C program to demonstrate example structure pointer (structure with pointer).
5. Write C program to declare, initialize a union, example of union.
6. Write C program to demonstrate example of array of structures.
7. Define a structure data type named student containing the following details

Name, roll, marks of 3 subjects. Write a program to perform the following tasks

1. Calculate the total marks & % of the students
2. Display the student details

**Practical – 9: Program to implement pointer**

1. Write a C program to create, initialize and use pointers.
2. Write a program to implement the function interchange to swap the values of two variables (call by reference).
3. Write a C program to add two numbers using pointers.
4. Write a C program to input and print array elements using pointer.
5. Write a C program to search an element in array using pointers.

**Practical – 10: Program to implement Storage Class**

1. Write C program to illustrate the properties of a static variable.
2. Write C program to illustrate the properties of an auto variable.
3. Write C program to illustrate the properties of an extern variable.
4. Write C program to illustrate the properties of a register variable.

**Practical – 11: Program to implement Dynamic Memory Allocation & File Handling Operations**

1. Write a program to copy the content of one file into another
2. Write a program to count the number of words and number of characters in a file.
3. Write a program to implement malloc().
4. Write a program to implement calloc().

**Practical 12: Program to implement Graphical Operations**

1. Write C program to draw line.
2. Write C program to draw circle.
3. Write C program to draw rectangle.
4. Write C program to move circle one location to another on pressing enter key.
5. Write C program to draw 10 concentric circles.

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