**ASSIGNMENT NO 1**

1. Write a C program to compute the sum of the two given integer values. If the two values are the same, then return triple their sum.

2. Write a C program cmi.c that accepts a distance in inches and prints the corresponding value in cms. Note that 1 inch = 2.54 cm.

3. Write a C program to return the quotient and remainder of a division.

4. Write a C program that accepts 4 real numbers from the keyboard and prints out the difference (using 4-decimal places) of the maximum and minimum values of these numbers. Test data and expected

Output : Enter four numbers: -1.5 2 7.5 11.2

Difference is 12.7000

5. Write a C program that accepts a real number x from the keyboard and prints out the corresponding value of sin(1/x) using 4-decimal places

6. Write a C program that accepts coordinates of two-dimensional points A and B and prints out (using two decimal places) the distance between A and B. It also prints out the coordinates (using two decimal places) of the midpoint of A and B.

7. Compute the roots of the equation ax2+bx+c= 0 and print using three-decimal places. The roots are real−b±√D2aif the discriminate D=b2−4acis non-negative. If the discriminate is negative, then the roots are complex conjugate−b2a±√−D2ai. The program proceeds in the following steps.

(a) It accepts the values of a, b and c from the keyboard.

(b) No solution if both a and b are zero. The program finishes with appropriate message.

(c) Linear equation if a= 0 but b 6= 0 and the root is−c/b. The program prints out the root with appropriate message and the program finishes.

(d) Calculates the discriminate D and determines the corresponding roots.

(e) Prints out the roots with appropriate message and the program finishes.

8. Write a program which takes three integers as input representing a date as day, month, year, and print out the number day, month and year for the following day’s date. The program should check whether the input numbers are acceptable. Typical input: 28 2 1992 Typical output: Date following 28:02:1992 is 29:02:1992

9. Write a program which reads characters from a line and calculates the number of vowel sin the line. Then it prints out the line and the number of vowels in the line.

10. Write a program which reads a single letter of alphabet. If it is a lowercase between ’a’ and ’g’, the program prints out the alphabet in uppercase form. If it is anything else, the program should print out uppercase ’X’.

11. Write a C program that accepts a positive integer from the keyboard. If the input is invalid, it stops with appropriate message. For a valid input, it determines the first and last digits of the number. Further, it checks whether the first digit or the last digit is multiple of the other with appropriate message.