LAB :1

Objective(s):

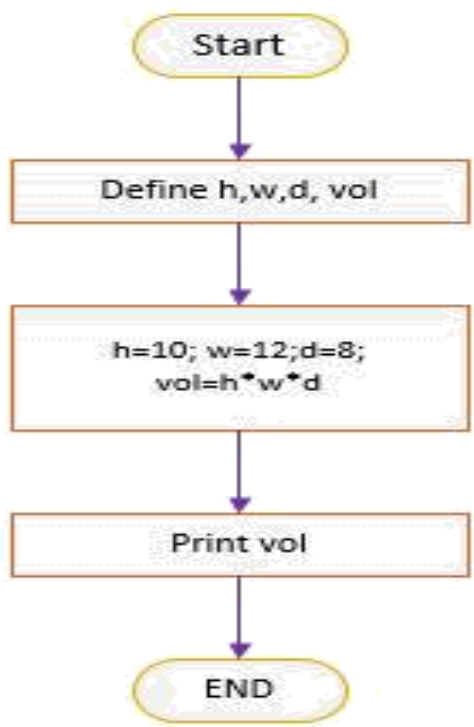
To be familiar with syntax and structure of C- programming.
To learn problem-solving techniques using C

Program: Write a Program to calculate and display the volume of a CUBE having its height (h=10cm), width (w=12cm) and depth (8cm).

Algorithm:

1. Start
2. Define variables: h(int), w(int), d(int), vol(int)
3. Assign value to variables: h = 10, w=12, d=8
4. Calculate the volume as: vol = h*w*d
5. Display the volume (vol)
6. Stop

Flowchart:



Code: *(Use comments wherever applicable)*

```
#include<stdio.h>
void main()
{
//start the program
int h,w,d,vol; //variables declaration
h=10;w=12;d=8; //assign value to variables
vol=h*w*d;              //calculation using mathematical formula
printf("The Volume of the cube is: %d",vol); //display the volume
getch();
//end the main program
}
```

Output :

```
The Volume of the cube is: 960
```

SAMPLE PROGRAMS

(Students are to code the following programs in the lab and show the output to instructor/course teacher)

Instructions

- *Write comment to make your programs readable.*
- *Use descriptive variables in your programs(Name of the variables should show their purposes)*

Programs List

1. Write a C program to display "This is my first C Program".
2. Write a C program to add two numbers (2 and 6) and display its sum.
3. Write a C program to multiply two numbers (4 and 5) and display its product.
4. Write a C program to calculate area and circumference of a circle.
5. Write a C program to perform addition, subtraction, division and multiplication of two numbers.
6. Write C program to evaluate each of the following equations.
   (i) $V = u + at$. (ii) $S = ut+1/2a$ (iii) $T=2*a+\sqrt{b}+9c$
7. Write a program that reads an employee's number, his/her worked hours number in a month and the amount he received per hour. Print the employee's number and salary that he/she will receive at end of the month, with two decimal places.

Input Samples	Output Samples
25 100 5.50	NUMBER = 25 SALARY = U$ 550.00
1 200 20.50	NUMBER = 1 SALARY = U$ 4100.00
6 145 15.55	NUMBER = 6 SALARY = U$ 2254.75

8. Little John wants to calculate and show the amount of spent fuel liters on a trip, using a car that does 12 Km/L. For this, he would like you to help him through a simple program. To perform the calculation, you have to read spent time (in hours) and the same average speed (km/h). In this way, you can get distance and then, calculate how many liters would be needed. Show the value with three decimal places after the point.

Input Sample	Output Sample
10 85	70.833
2 92	15.333
22 67	122.833