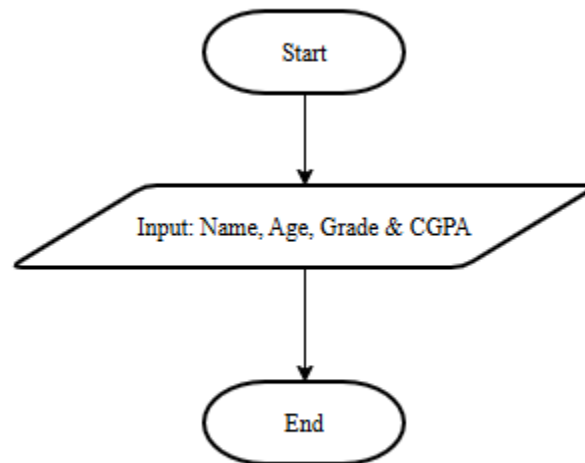


LAB # 01

Task 02:

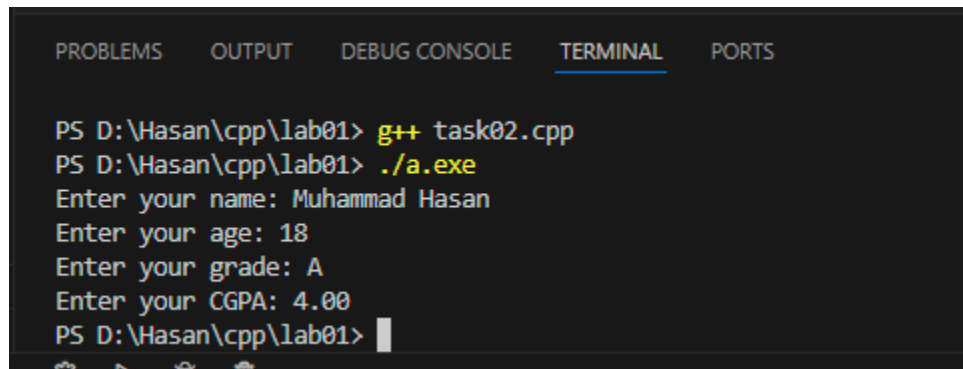
Draw a flowchart & Write a C++ program to store statement record such as (Name, Age, Grade and CGPA).

Flowchart:



Code:

```
#include<iostream>
#include<string>
using namespace std;
int main(){
    string name;
    int age = 0;
    string grade;
    float cgpa = 0.00;
    cout << "Enter your name: ";
    getline(cin,name);
    cout << "Enter your age: ";
    cin >> age;
    cout << "Enter your grade: ";
    cin.ignore();
    getline(cin,grade);
    cout << "Enter your CGPA: ";
    cin >> cgpa;
}
```

Output:

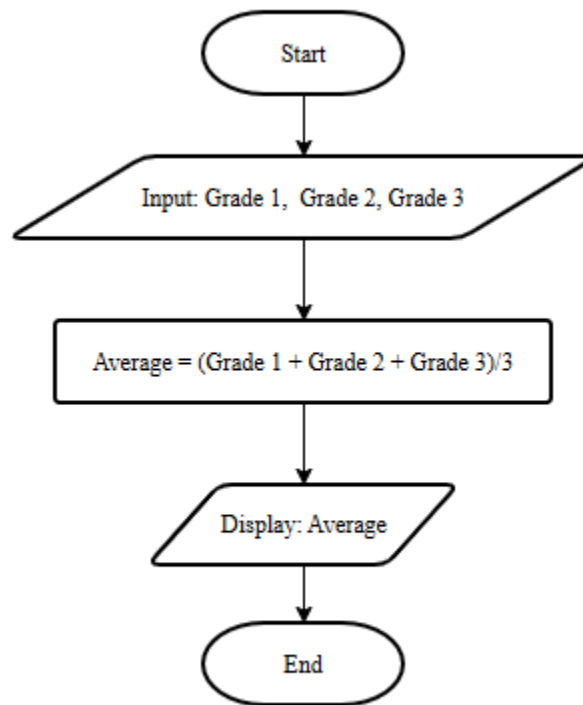
The screenshot shows a Visual Studio Code interface with the 'TERMINAL' tab selected. The terminal window displays the following text:

```
PS D:\Hasan\cpp\lab01> g++ task02.cpp
PS D:\Hasan\cpp\lab01> ./a.exe
Enter your name: Muhammad Hasan
Enter your age: 18
Enter your grade: A
Enter your CGPA: 4.00
PS D:\Hasan\cpp\lab01> 
```

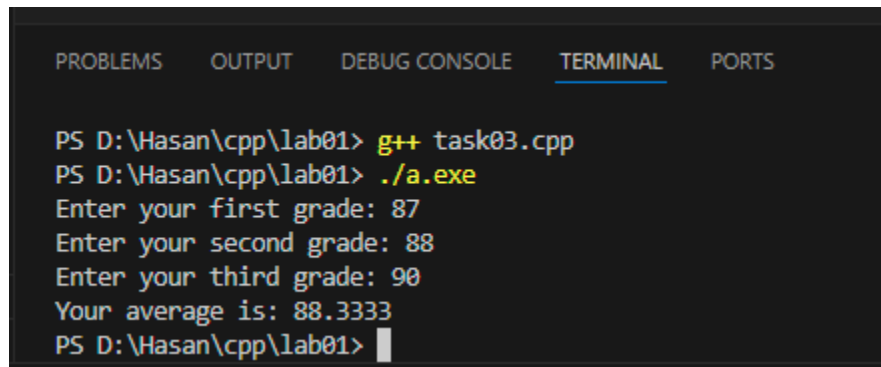
The terminal output shows the compilation of 'task02.cpp' using 'g++', followed by the execution of the resulting executable 'a.exe'. The program prompts the user for their name, age, grade, and CGPA, which are entered as 'Muhammad Hasan', '18', 'A', and '4.00' respectively. The terminal window has a dark background with light-colored text.

Task 03:

Draw a flowchart and Write a C++ program to read student's three grade, calculate the average of the grade, and then display the average grade.

Flowchart:**Code:**

```
#include<iostream>
using namespace std;
int main(){
    int g1 = 0, g2 = 0, g3 = 0; //g means Grade
    float avg = 0.00;
    cout << "Enter your first grade: ";
    cin >> g1;
    cout << "Enter your second grade: ";
    cin >> g2;
    cout << "Enter your third grade: ";
    cin >> g3;
    avg = (g1+g2+g3)/3.00; // calculating average
    cout << "Your average is: "<<avg;
}
```

Output:

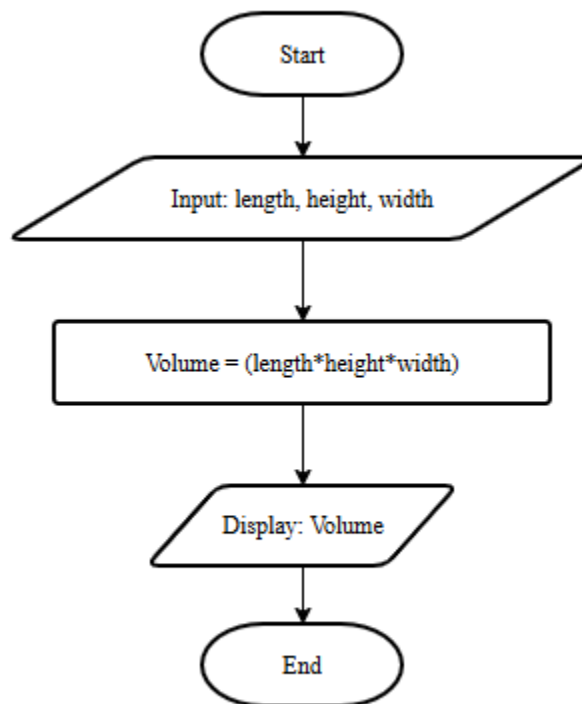
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Hasan\cpp\lab01> g++ task03.cpp
PS D:\Hasan\cpp\lab01> ./a.exe
Enter your first grade: 87
Enter your second grade: 88
Enter your third grade: 90
Your average is: 88.3333
PS D:\Hasan\cpp\lab01> 
```

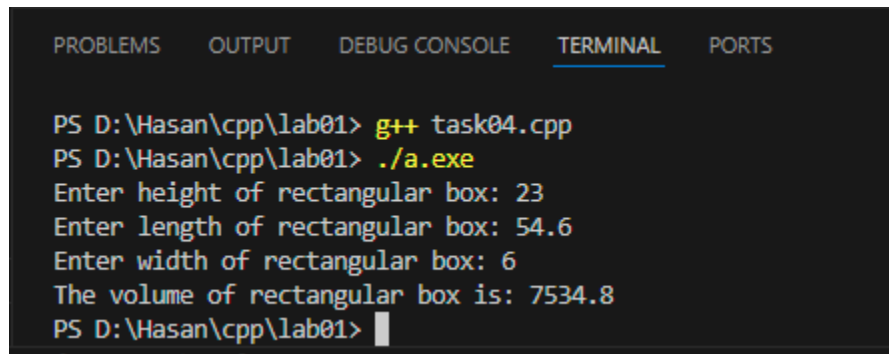
Task 04:

Write program & draw a flowchart that reads the height, length, and width of the rectangular box, Calculates and displays the volume.

Note: Volume = lwh.

Flowchart:**Code:**

```
#include<iostream>
using namespace std;
int main(){
    float length = 0.00, height = 0.00, width = 0.00, vol = 0.00;
    cout << "Enter height of rectangular box: ";
    cin >> height;
    cout << "Enter length of rectangular box: ";
    cin >> length;
    cout << "Enter width of rectangular box: ";
    cin >> width;
    vol = height*length*width;
    cout << "The volume of rectangular box is: "<<vol;
}
```

Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

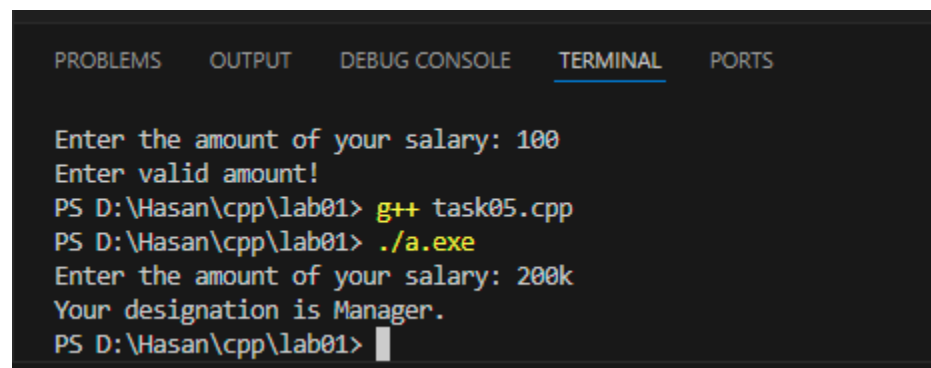
PS D:\Hasan\cpp\lab01> g++ task04.cpp
PS D:\Hasan\cpp\lab01> ./a.exe
Enter height of rectangular box: 23
Enter length of rectangular box: 54.6
Enter width of rectangular box: 6
The volume of rectangular box is: 7534.8
PS D:\Hasan\cpp\lab01> 
```

Task 05:

Write a program to read the salary of an employee and prints particular designation of the concern person for example Manager Salary = 200k, Supervisor = 150k and Technician = 80k.

Code:

```
#include<iostream>
using namespace std;
int main(){
    int sal = 0;
    cout << "Enter the amount of your salary: ";
    cin >> sal;
    if(sal == 200){
        cout << "Your designation is Manager.";
    }
    else if(sal == 150){
        cout << "Your designation is Supervisor.";
    }
    else if(sal == 80){
        cout << "Your designation is Technician.";
    }
    else{
        cout << "Enter valid amount!";
    }
}
```

Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

Enter the amount of your salary: 100
Enter valid amount!
PS D:\Hasan\cpp\lab01> g++ task05.cpp
PS D:\Hasan\cpp\lab01> ./a.exe
Enter the amount of your salary: 200k
Your designation is Manager.
PS D:\Hasan\cpp\lab01> 
```