LAB # 02

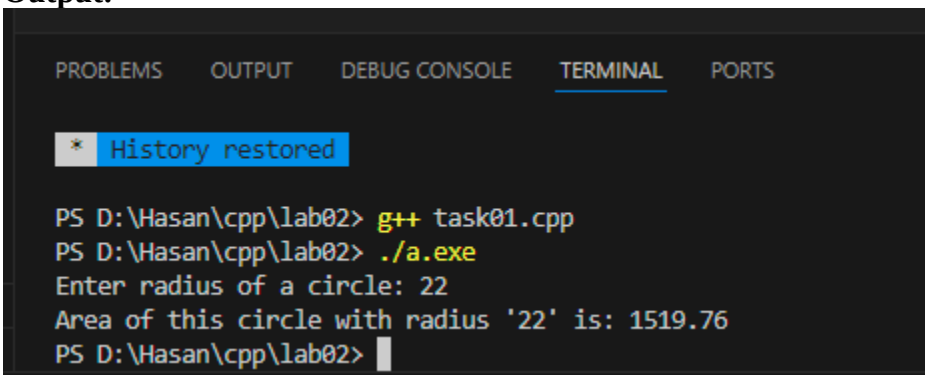
Task 01:

Write a program that takes input as radius then calculate area of circle. (Hint: $A = \pi r^2$).

Code:

```cpp
#include<iostream>
using namespace std;
int main(){
    float r = 0.00, a = 0.00, pi = 3.14;
    cout << "Enter radius of a circle: ";
    cin >> r;
    a = pi*(r*r);
    cout << "Area of this circle with radius \'"<<r<<"\' is: "<<a<<endl;
}
```

Output:



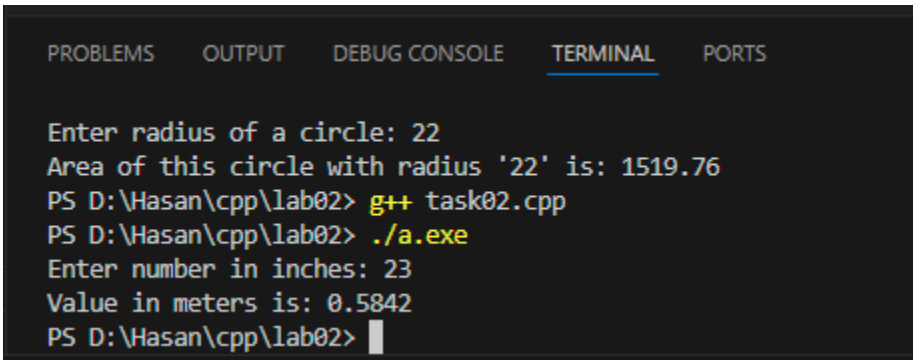
Task 02:

Write a C++ program that reads a number in inches and converts it to meters. Note: One inch is 0.0254 meter.

Code:

```cpp
#include<iostream>
using namespace std;
int main(){
    float value_inch = 0.00, value_meter = 0.00;
    cout << "Enter number in inches: ";
    cin >> value_inch;
    value_meter = value_inch*0.0254;
    cout << "Value in meters is: "<<value_meter<<endl;
}
```

Output:



Task 03:

Write a C++ program that prompt input roll number, student name and marks of three subjects:

1. Computer Programming = CP
2. Object Oriented Programming= OOP
3. Data Structures & Algorithms= DSA

Calculate total marks, percentage and division of student.

Marks percentage = marks obtained / total * 100

Code:

```
#include<iostream>
#include<string>
using namespace std;
int main(){
    string name;
    int rn = 0; // rn = roll number
    float cp = 0.00, oop = 0.00, dsa = 0.00, per = 0.00;
    cout << "Enter your name: ";
    getline(cin,name);
    cout << "Enter your roll number: ";
    cin >> rn;
    cout << "Enter your marks in Computer Programming CP: ";
    cin >> cp;
    cout << "Enter your marks in Object Oriented Programming OOP: ";
    cin >> oop;
    cout << "Enter your marks in Data Structures and Algorithms DSA: ";
    cin >> dsa;
    per = ((cp+oop+dsa)/(300))*100;
    cout << "Your percentage is: "<<per<<endl;

}
```

Ouput:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

Enter your name: Muhammad Hasan
Enter your roll number: 040
Enter your marks in Computer Programming CP: 98
Enter your marks in Object Oriented Programming OOP: 89
Enter your marks in Data Structures and Algorithms DSA: 98
Your percentage is: 95
PS D:\Hasan\cpp\lab02>
```

Task 04:

Write a program that reads a temperature in degrees Celsius and prints out the corresponding temperature in degrees Fahrenheit (F = (C * 9 / 5) + 32).

Code:

```cpp
#include<iostream>
using namespace std;
int main(){
    float temp_cel = 0.00, temp_fer = 0.00;
    cout << "Enter temperature in Celcius: ";
    cin >> temp_cel;
    temp_fer = ((temp_cel*9/5) + 32);
    cout << "Temperature in Fahrenheit is: "<<temp_fer<<endl;
}
```

Output: