

## Experiment No.1

Aim:- Write a C++ program to calculate the area of the circle.

Objective:

To learn the basic structure of C++

Software used - Linux Operating system, gcc

Concept: Basic function available in C++ language

Theory:- This is the simplest program to display the area of the square.

- i) cout: It is used to display the content on the screen.
- ii) cin: To take input from the user.
- iii) variables: variable are used to store the value

Algorithm:-

- i) Start
- ii) Declare two variable one for side & another for area.
- iii) Take input from the user
- iv) Display the area
- v) End

Input:

Enter the radius:-

5

Output: Area of circle is 78.5



Conclusion:

Now, we are familiar with the basic syntax of C++ language.

## **Write a program to calculate the area of circle:**

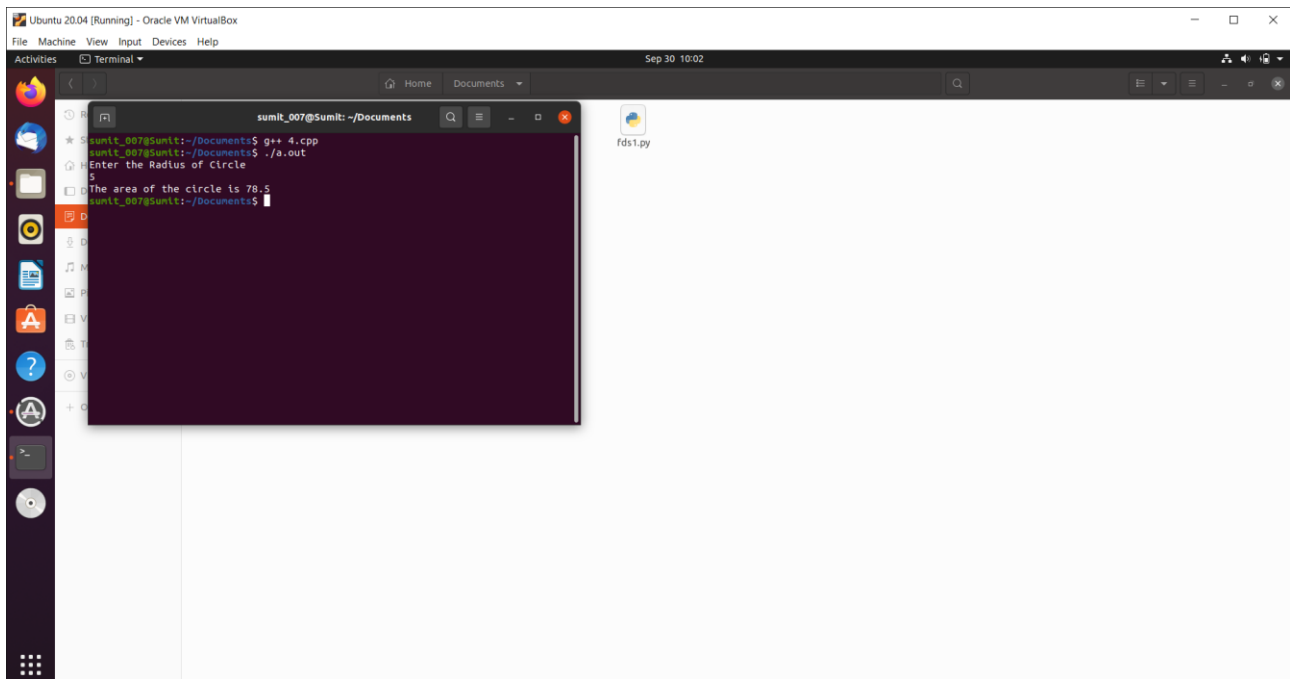
```
#include<iostream>
using namespace std;
int main()
{
    //declare vairable type float
    float a,area;
    // Input the radius and save it in 'a'
    cout<<"Enter the Radius of Circle"<<endl;
    cin>>a;
    if (a >= 0)
    {

        //calculate the area of the circle
        area=3.14*a*a;
        // Display the area of the Circle

        cout<<"The area of the circle is "<<area<<endl;
    }
    else
    {
        cout<<"Radius Cannot Be negative"<<endl;
    }

    return 0;
}
```

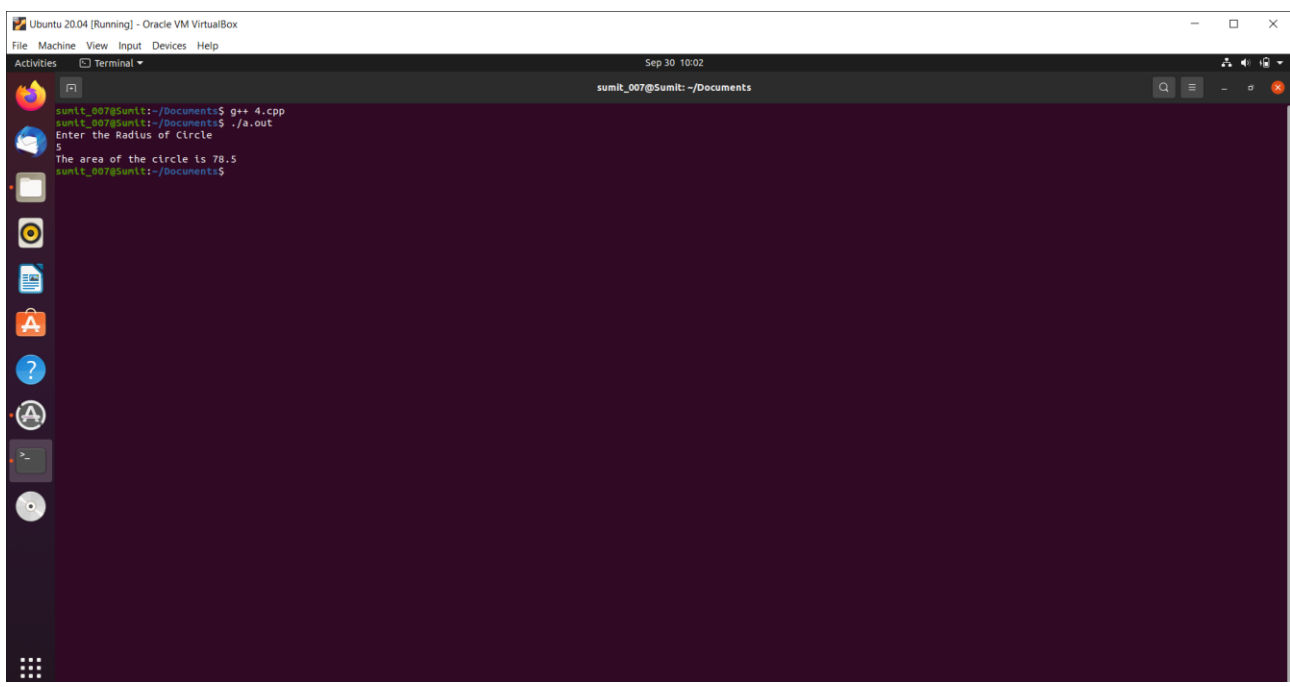
# OUTPUT:



The screenshot shows a terminal window titled "sumit\_007@Sumit: ~/Documents" within an Ubuntu 20.04 virtual machine. The terminal displays the following commands and output:

```
sumit_007@Sumit:~/Documents$ g++ 4.cpp
sumit_007@Sumit:~/Documents$ ./a.out
Enter the Radius of Circle
5
The area of the circle is 78.5
sumit_007@Sumit:~/Documents$
```

The terminal window is overlaid on a desktop environment with a sidebar containing various application icons and a file manager window showing a file named "fds1.py".



This screenshot is identical to the one above, showing the same terminal window with the same commands and output. The terminal window is titled "sumit\_007@Sumit: ~/Documents" and displays the following commands and output:

```
sumit_007@Sumit:~/Documents$ g++ 4.cpp
sumit_007@Sumit:~/Documents$ ./a.out
Enter the Radius of Circle
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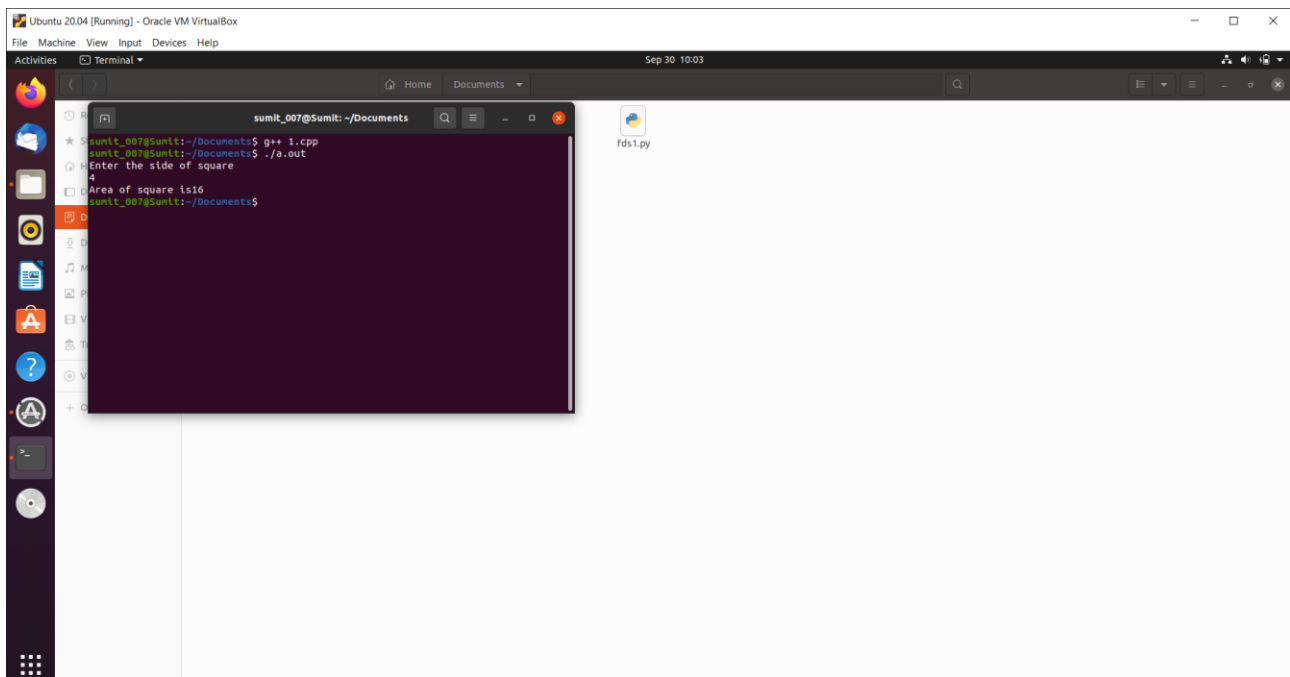
## **Write a program to calculate the area of square:**

```
#include<iostream>
using namespace std;

int main()
{
    //declare variable type float
    float a,area;
    //Input the side and store it in 'a'
    cout<<"Enter the side of square"<<endl;
    cin>>a;
    if (a >= 0){
        area=a*a;
        cout<<"Area of square is"<<area<<endl;
    }
    else
    {
        cout<<"Side cannot be negative";
    }

    return 0;
}
```

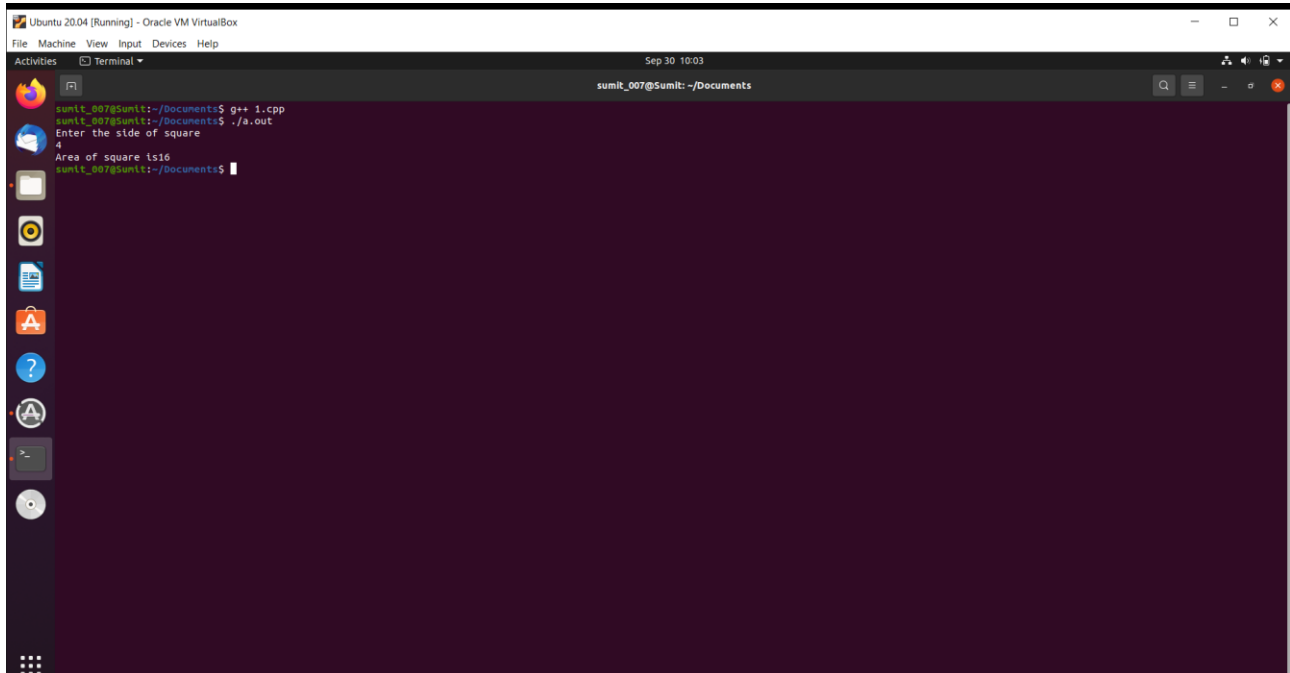
# OUTPUT:



The screenshot shows a terminal window titled "sumit\_007@sumit: ~/Documents" within an Ubuntu 20.04 virtual machine. The terminal displays the following commands and output:

```
sumit_007@sumit:~/Documents$ g++ 1.cpp
sumit_007@sumit:~/Documents$ ./a.out
Enter the side of square
4
Area of square is 16
sumit_007@sumit:~/Documents$
```

The background desktop shows a file named "fds1.py" and a sidebar with various application icons.



This screenshot is identical to the one above, showing the same terminal session with the C++ program being compiled and executed. The output is consistent: the program prompts for the side of a square, receives the input '4', and calculates the area as 16.