

```
#define _USE_MATH_DEFINES
```

```
#include <iostream>
```

```
#include <cmath>
```

```
using namespace std;
```

```
void area_circle(){
```

```
    float radius;
```

```
    cout<<"Please Enter the Radius of the Circle: ";
```

```
    cin>>radius;
```

```
    float area;
```

```
    area=M_PI*radius*radius;
```

```
    cout<<"Area of the Circle is : "<<area;
```

```
}
```

```
void area_triangle(){
```

```
    float base;
```

```
    float height;
```

```
    cout<<"Please Enter the Length of the base of triangle: ";
```

```
    cin>>base;
```

```
    cout<<"Please Enter the Length of the height of triangle: ";
```

```
    cin>>height;
```

```
    float area;
```

```
    area=0.5*base*height;
```

```
    cout<<"Area of the Triangle is : "<<area;
```

```
}
```

```
void area_rectangle(){
```

```
    float area;
```

```

float length;

float breadth;

cout<<"Please Enter the Length of the triangle: ";

cin>>length;

cout<<"Please Enter the Breadth of the triangle: ";

cin>>breadth;

area=length*breadth;

cout<<"Area of the Rectangle is : "<<area;

}

int main()
{

string shape;

cout<<"Please Enter the Shape of the object you want to calculate the area of: ";

cin>>shape;

cout<< "The shape you entered is a: "<<shape<<endl;

if(shape=="CIRCLE" || shape=="circle"){

    area_circle();

}

else if(shape=="TRIANGLE" || shape=="triangle"){

    area_triangle();

}

else if(shape=="RECTANGLE" || shape=="rectangle"){

    area_rectangle();

}

```

```

else{
    cout<<"Invalid Shape entered. Please enter the shape in CAPITAL LETTERS."<<endl;
    cout<<"Please Enter the Shape of the object you want to calculate the area of: ";
    cin>>shape;

    cout<< "The shape you entered is: "<<shape;
    if(shape=="CIRCLE" || shape=="circle"){

        area_circle();
    }
    else if(shape=="TRIANGLE" || shape=="triangle"){
        area_triangle();

    }
    else if(shape=="RECTANGLE" || shape=="rectangle"){
        area_rectangle();
    }
    else{
        cout<<"Wrong input received."<<endl;
        return 1;
    }

}

cout<<" sq. units."<<endl<<endl<<endl;
return 0;

```

