

# Program to Demonstrate Polymorphism

```
#include<iostream>
using namespace std;
class Shape
{
public:
    virtual float area()=0;
    virtual float perimeter()=0;
};
class Rectangle:public Shape
{
private:
    float length;
    float breadth;
public:
    Rectangle(int l=1,int b=1){length=1;breadth=b;}

    float area(){ return length*breadth;}
    float perimeter(){return 2*(length+breadth);}
};
class Circle:public Shape
{
private:
    float radius;
public:
    Circle(float r){radius=r;}
    float area(){return 3.1425*radius*radius;}
    float perimeter(){return 2*3.1425*radius;}
};
int main()
{
    Shape *s=new Rectangle(10,5);
    cout<<"Area of Rectangle "<<s->area()<<endl;
    cout<<"Perimeter of Rectangle "<<s->perimeter()<<endl;

    s=new Circle(10);
    cout<<"Area of Circle "<<s->area()<<endl;
    cout<<"Perimeter of Circle "<<s->perimeter()<<endl;
}
```