# WEEK-5

Develop a Java program to create an abstract class named Shape that contains

two integers and an empty method named printArea( ). Provide three classes

named Rectangle, Triangle and Circle such that each one of the classes

extends the class Shape. Each one of the classes contain only the method

printArea( ) that prints the area of the given shape.

```java
abstract class figure
{
    int x,y;
    figure(int a,int b){
        x=a;
        y=b;
    }
    abstract double area();
```

```java
}

class rectangle extends figure{
    rectangle(int a,int b){
        super(a,b);}
        double area(){
            return x*y;
        }
    }


class triangle extends figure{
    triangle(int a, int b){
        super(a,b);}
        double area(){
            return 0.5*x*y;
        }
```

```java
    }

class circle extends figure{
    circle(int a,int b){
        super(a,b);}
        double area(){
            return 3.14*x*x;
        }
    }

class abst{
    public static void main(String args[]){
        rectangle r=new rectangle(10,20);
        triangle t=new triangle(4,5);
        circle c=new circle(3,3);
```

```
figure f;

f=r;
double a1=f.area();
System.out.println("area of rectangle:"+a1);

f=t;
double a2=f.area();
System.out.println("area of triangle:"+a2);

f=c;
double a3=f.area();
System.out.println("area of circle:"+a3);
```

```
        }

    }
```

```
C:\Users\Admin>set path="C:\Program Files\Java\jdk-19\bin"

C:\Users\Admin>cd "Desktop"

C:\Users\Admin\Desktop>javac abst.java

C:\Users\Admin\Desktop>java abst
area of rectangle:200.0
area of triangle:10.0
area of circle:28.259999999999998

C:\Users\Admin\Desktop>
```