LAB PROGRAM – 4

Q. 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.

```
abstract class shape
double a,b;
shape(int x, int y)
 a=x;
 b=y;
abstract void printArea();
class rectangle extends shape{
rectangle(int x, int y)
super(x,y);
void printArea()
 System.out.println("Area of rectangle is" +(a*b));
class triangle extends shape{
triangle(int x, int y)
super(x,y);
void printArea()
 System.out.println("Area of triangle is" +(0.5*a*b));
}
class circle extends shape{
circle(int x, int y)
```

```
super(x,y);
void printArea()
 System.out.println("Area of circle is" +(3.14*a*a));
}
}
class shapearea{
public static void main(String args[])
rectangle r1= new rectangle(18,28);
triangle t1= new triangle(15,16);
circle c1= new circle(8,0);
 shape r;
 r=r1;
 r.printArea();
r=t1;
 r.printArea();
r=c1;
 r.printArea();
```

```
Horogram - 4 Routop a given program to because an abstract class randed simpled that contains the Interest and an empty method named produced or provide three days named sectionals, triangle and larch such that each one of the class extends the class shape. Each one of the class contain only the method brinday that brinds the country given shape.
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      abstract class shape ?
       double a, b;
                                                                                                                      day shapearea?
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vuectorale vi = new vuectorale (1020);

triangle ti = new triangle (5,10);

circle (1 = new Circle (3,10);
      Shape (intx, inty)
       g b= y;
     abstract void brint area ();
                                                                                                                        Shape x;
                                                                                                                       H= K1;
      class rectangle extends shape & rectangle (mix, inty)
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                                                                                                                       11. print Auea ();
        super (x, y);
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     groid printages ()
        3ystem.ad. frinten ("Area of vactoright is "+(++6));
                                                                                                                        v. print Area ();
    class trionals extends. Shape ? triangle (lintx, intr)
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Anno of trianglati 25.0
Anno of walk is 28.2599.
      Super (x,y);
     void print trea ()
class circle extends shape &
cincle (intx, inty)
  super (x, y);
```

Area of rectangle is504.0 Area of triangle is120.0 Area of circle is200.96