Week-8

Lab programs

1.
```
import java.util.Scanner;
abstract class Shape
{
int a,b;
abstract void printArea();
}
class Rectangle extends Shape
{
 Rectangle (int x, int y)
{ a=x;
   b=y;
 }
void printArea()
{ System.out.println("Area of the rectangle
 is:" +(a*b));
}
}
class Triangle extends Shape
{
  Triangle (int x, int y)
  {
    a=x;
    b=y;
  }
  void printArea()
  { System.out.println("Area of the triangle
   is:" + (0.5*a*b));
  }
}
class Circle extends Shape
{  Circle (int x)
    { a=x;
    }
```

```
void printArea()
{ System.out.printf(" Area of the circle is:
"%.2f", (3.14 * a * a));
}}
class ShapeMain
{
public static void main(String args[])
{ int x, y;
Scanner sc = new Scanner(System.in);
System.out.println("Enter the length and
width of the rectangle");
x = sc.nextInt();
y = sc.nextInt();
Rectangle ob1 = new Rectangle(x, y);
ob1.printArea();
System.out.println("Enter the base length
and height of the triangle");
x = sc.nextInt();
y = sc.nextInt();
Triangle ob2 = new Triangl(x, y);
ob2.printArea();
System.out.println("Enter the radius of the circle");
x = sc.nextInt();
Circle ob3 = new Circle(x);
ob3.printArea();
}
}
```