```
LAB program - 4
  Develop a Java program to create abstract class named shap
   contain two integers and an empty method named
   print Area() Provide Mree classes named Rectarigle, Triang
   and circle such mat each one of the classes exlands
  the class shape Each one of the classes containing in
( method printArea() that print the area of the give
    import java. util. Scanner ()
    import Java lang. Marh. *;
   abstract class shape {
                public inta;
                 public intb;
                 abstract public void print Area();
                 Scanners = new (Segmner (System.in
   class nectange extends snapes
               public void printareact) s
              System. out. print ("Enter length and
                                    breadh")
             float a = 5. next float()
              float b = S. next float();
           My float area = axb;
               system. out. println ("Area = "+
          area + "sq. units");
                sample in principal in it is
           T: william of the temples colors of well
            postanous cel printigos strasti sofi es
           his marks oblined in a decrees.
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class tring extends shape { ? .....
public void print Area()
       system out print (" Enter the Horse sides")
        float a = s. nextfloat();
        1109+ b = S. next/100/();
        1001 ( = 5. nex + 1001())
        1100+ d= (atb+c)/2;
 double avea = Math. sqrt (d*-a).*
                      (d-b)*(d-c));
      system.out, printin ("Area = "+ areat"
                             59. Unils);
 is in mer by ships of sing
class figures } (11) destour
      public static void main (3tning ang 8[]);
       civile extends shape {
      Charpobic, rold print Area () {
 class
     System. out. print ("Enter the nadius of
    float a = s. nextfloat()
        float tyea = 22/7 * a*a;
system out printin ("Area = "+ area+"
```

```
class figure 2
public static void moin & string anger.
          shape r = new rectangle();
          shape t = new mingle ();
           shape c= new circle ();
         for Cint 1=0, 1<100; 1++>{
   system. out. printlin (" In 1) Triangle In 2)
               (deti) Rectange (n3) circle
  System.out. prinlin ("Enter your choice;
    Sanner S = new Scanner (system. in);
        mt ch = S, next Ini();
           Switch (ch) {
            case 1: t.printArea();
              case 2: 8. print Area();
                 ") break;
             case: c.prin+Area();
                     break;
             default; system, out, printin
                          ("Invalid choice");
```

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personal and the body on a compared
        output
                                                                                         CONTRACTOR STATE OF THE STATE O
                                                                                        it is not be the delice been the they be compared to
      1) Triangle
                                                                                            of the we will and in a practity the
       2) rectangle.
                                                                                                        time fat come a tited blanks ton
       3> Crycle
        Enter your choice ! 1
         Enter three sides of mangle: 45 6
           Area = 9.92156741 59. Units
               1> Triangle
              27 reclangle
               3> circle
              Enter your choice : 23
                 Enter the length and breadth of rectangle; 34 5
                       Area = 170.0 squnis
                 1> Triangle
             27 rectangle.
37 arch
                      Enter your choice: 3
Enter the lervadius of circle: 10
                            Area = 300.0 sq. units
```

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C:\javaprograms>javac figure.java
C:\javaprograms>java figure
1)Triangle
2)Rectangle
3)Circle
Enter your choice:
Enter three sides of triangle: 2 3 5
Area=0.0sq.units
1)Triangle
2)Rectangle
3)Circle
Enter your choice:
Enter length and breadth of rectangle: 2 4
Area=8.0sq.units
1)Triangle
2)Rectangle
3)Circle
Enter your choice:
3
Enter radius of circle: 4
Area=48.0sq.units
1)Triangle
2)Rectangle
3)Circle
Enter your choice:
```