Lob Prgm 4

WAP to create an abstract class called shape that contains two integers and an empty method named print dress (). Provide three classes named nectangle, Triangle and a Circle such that each one of the classes entends the class shape buch one of the classes contain only the method frint Area () that frints the cores of the given shape.

emport java util Scannor; import jaws long. math; abstract class Shape

> int length, breadth; Scanner ss = new Scanner (Lystem.cn); abstract roid print drea();

class Rectangle entendo Shape

void frint drea ()

System. out printly ("Forter fre length and length = ss.nent2nt();

breadth = ss. nent Int ();

int area = length * breadth;

Lystem out println (Ara of rectoral = 1) + area >)

```
extends Shape
                                        void print tras ()
          Lystem out println (" Inter loan, length and height");
           length = ss. next ant ();
           broadth = Ss. next 2nt ();
           int was = (length * breadth) /2;
           System . out. println (" Area of the triangle = " * + 2 rea);
   class circle extends shape
           void print for ()
              Edward System out println( " Enter fre radius");
                 length=ss.nextant();
                 to intrasca.
                    double ares: Math. AI * (length * length);
              System out friently (" Area of the circle="+ares);
    3
class Shape_ Main
    public states roid main (string arr ())
       Scanner man 31 = neus Lanner (dystom.in);
       Lystem out frintln ("Lelect Shape ->
                                           1. Rectingle In a - Tringle n
                                               3. (iral:11);
```

```
chosea ch=s1.nentant();
         dwitch (sh)
            Ž
              case !: Rectongle . 6= now Rectangle ();
                           8- print drea ();
              case 2: Priangle t = new Pricingle();
                         t- print franc);
                           broak;
              case 3: Circle ( = now (ircle ();
                         C. printdroa ().
                         break;
                 default : Lystem out printly ("Invalid Input");
 Select shape
 1- Rectongle
2- Priongle
3 - Circle
Enter length and breadth
```

Avea of Rectorale = 200

@ Select Shape The second of th 1. Rectangle a. Triangle to age of the second of the se 3. Circle Inter pare length and breight. drea of triongli = 3) delect shape

1. Rectangle 3- Circl 3 2. Priangle

Ante the radius: dres of the exicle: The second of the second of

and the second of the second

prest the end of Joseph Commercial Section of

```
<u>File Edit Format ⊻iew H</u>elp
                                                                                      :\Users\bmsce\Desktop\Aryan>java Lab4
                                                                                     Select shape-->1.Rectangle 2. Triangle 3.Circle
class Circle extends Shape
                                                                                      Enter height and width of rectangle
      Scanner s=new Scanner(System.in);
       void printArea()
                       System.out.println("Enter radius of Circle");
                                                                                      Area of Rectangle is 500
                       h=s.nextInt();
                       System.out.println("Area of Circle is "+(Math.PI*(h*h)));
                                                                                       :\Users\bmsce\Desktop\Aryan>java Lab4
                                                                                      Select shape-->1.Rectangle 2. Triangle 3.Circle
               Circle(){}
                                                                                      Enter height and base of rectangle
                                                                                       Area of Trianle is 300.0
class Lab4
                                                                                       :\Users\bmsce\Desktop\Aryan>java Lab4
public static void main(String xx[])
       Scanner s=new Scanner(System.in);
                                                                                      Select shape-->1.Rectangle 2. Triangle 3.Circle
       System.out.println("\n\nSelect shape-->1.Rectangle 2. Triangle 3.Circle"
       int ch=s.nextInt();
                                                                                      Enter radius of Circle
       switch(ch)
                                                                                       Area of Circle is 1963.4954084936207
       case 1: Rectangle r=new Rectangle();
                                                                                       :\Users\bmsce\Desktop\Aryan>
                r.printArea();
       break;
case 2:Triangle t=new Triangle();
               t.printArea();break;
       case 3:Circle c=new Circle();
       c.printArea();break;
default:System.out.println("Invalid input");
                                                                                                                                          Activate Windows
                                Ln 43. Col 54
                                              100% Windows (CRLF) UTF-8
```