A B B B B B B 000001016 # LAB-04 3a Develop a jova program to create an abstract class named shape that contains two integers and an empty method named Print Area () Provide three classes ramed Rectangle, triangle and circle such that each one of the classely extends the class shape. Each one of the classes contain only the Method printArea () that prints the area of the given shape. - Import java. utill. scanner; class Inputscanner ! scanner s = new Scanner (system . in); double get Input (string prompt) (system out print in (prompt); return s. next Double (); } } abstract class shape extends Input Scanner 1 double Gde 1 Side 2; abstract void area (); } class Rectangle extends shape { Rectangle (1) Sidel= get Input ("Enter length of rectangle") Side ? - get Input ("Enter bread to of rectory void and () double onea = side 1 + side 2 : system, out potent in ("Area of the rectorale M+ area); 41 class trange extends shape triangle () { Side 1 = get Input ("Enter base of the triangle:") side 2 = get Input (" Enter height of the triangle: "); }

vold areal) (double area = std 14 side 0/2; system. out print in ("Area of the Wangs -" target class circle overds shape ! strete o 1 side I = get en put ("Enter the radius of the dock: "); 5 void area () 1. double area = math. DI * 97d+1 * 97d+1; system out print in ("Area of the at = "+arealist class main ! public state vold ran (string ags [7) 1 Rectangle rectangle = new Adangle (); triangle Triangle = new triangle (); circle circle = new circle co rectangle : area (); Trangu area U; circle · area (): System. ov. Armth (" Pooja. Goilcoad 18422084) It regative valve to be checked class input scorner & scanner 5= new escanner (system in); ent get Input (string prompt) & double input ! doobby 15 system. out. print In (prompt); input = S. next pouble; it (input <0) }

system. out. println (Enter positive values of Just le (80pot 20); reton mput : !! # output: Enter lengths of rectangle: Enter breaden of rectange; Enter base of the trang 4; Enter the height of the triang 4; Enter the radius of the circle? Area of rectangle = 800.0 0/ 14 = 24.6 Arca of the carele = 50.26 Avea

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mport java.util.Scanner;
class InputScanner{
 Scanner s= new Scanner(System.in);
 double getInput(String prompt){
 System.out.println(prompt);
 return s.nextDouble();}}
 abstract class Shape extends InputScanner{
 double side1, side2;
 abstract void area();}
class Rectangle extends Shape{
 Rectangle(){
 side1=getInput("Enter length of rectangle:");
 side2=getInput("Enter breadth of rectangle:");}
 void area(){
 double area=side1*side2;
 System.out.println("Area of the Rectangle ="+area);}}
 class triangle extends Shape{
       triangle(){
       side1=getInput("Enter base of the triangle:");
       side2=getInput("Enter height of the triangle:");}
        void area(){
         double area=side1*side2/2;
 System.out.println("Area of the triangle="+area);}}
 class circle extends Shape{
circle(){
 side1=getInput("Enter the radius of the circle:");}
void area(){
 double area=Math.PI*side1*side1;
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System.out.println("Area of the triangle="+area);}}
class circle extends Shape{
circle(){
side1=getInput("Enter the radius of the circle:");}
void area(){
double area=Math.PI*side1*side1;
System.out.println("Area of the circle="+area);}}
class Main{
public static void main(String args[]){
Rectangle rectangle= new Rectangle();
triangle Triangle=new triangle();
circle Circle=new circle();
rectangle.area();
Triangle.area();
Circle.area();
System.out.println("Pooja Gaikwad-1BM22CS194");
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Enter length of rectangle:
21
Enter breadth of rectangle:
23
Enter base of the triangle:
40
Enter height of the triangle:
30
Enter the radius of the circle:
25
Area of the Rectangle =483.0
Area of the triangle=600.0
Area of the circle=1963.4954084936207
Pooja Gaikwad-1BM22CS194
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