

JAIN UNIVERSITY

SUBJECT :- SCALA PROGRAMMING

NAME :- KRISH DODHIA

USN:- 22BTRAD020

Q) Write a Scala program that creates an abstract class Shape with an abstract method area. Implement subclasses Rectangle and Circle that override the area method.

Ans:-

```
abstract class Shape{
  def area: Double
}

class Rectangle(width: Double, height: Double) extends Shape {
  override def area: Double = width * height
}

class Circle(radius: Double) extends Shape {
  override def area: Double = math.Pi * radius * radius
}

object ShapeApp {
  def main(args: Array[String]): Unit = {
    val rectangle = new Rectangle(7, 5)
    println(s"Rectangle Area: ${rectangle.area}")
    val circle = new Circle(4.5)
    println(s"Circle Area: ${circle.area}")
  }
}
```

HelloWorld.scala3zm8a4fj4NEWSCALARUN

```
1- abstract class Shape {
2-   def area: Double
3- }
4- class Rectangle(width: Double, height: Double) extends Shape {
5-   override def area: Double = width * height
6- }
7- class Circle(radius: Double) extends Shape {
8-   override def area: Double = math.Pi * radius * radius
9- }
10- object ShapeApp {
11-   def main(args: Array[String]): Unit = {
12-     val rectangle = new Rectangle('a', 5)
13-     println(s"Rectangle Area: ${rectangle.area}")
14-     val circle = new Circle(4.5)
15-     println(s"Circle Area: ${circle.area}")
16-   }
17- }
18
```

STDIN

Input for the program (Optional)

Output:

Rectangle Area: 485.0
Circle Area: 63.61725123519331