

Assignment 1

```
abstract class Shape2 {  
    abstract void calculateArea();  
}
```

```
class Circle2 extends Shape2 {  
    double radius;
```

```
    Circle2(double radius) {  
        this.radius = radius;  
    }
```

```
    @Override
```

```
    void calculateArea() {  
        double area = Math.PI * radius * radius;  
        System.out.println("Area of Circle: " + area);  
    }  
}
```

```
class Square2 extends Shape2 {  
    double length;
```

```
    Square2(double length) {  
        this.length = length;  
    }
```

```
    @Override
```

```
    void calculateArea() {  
        double area = length * length;  
        System.out.println("Area of Square: " + area);  
    }
```

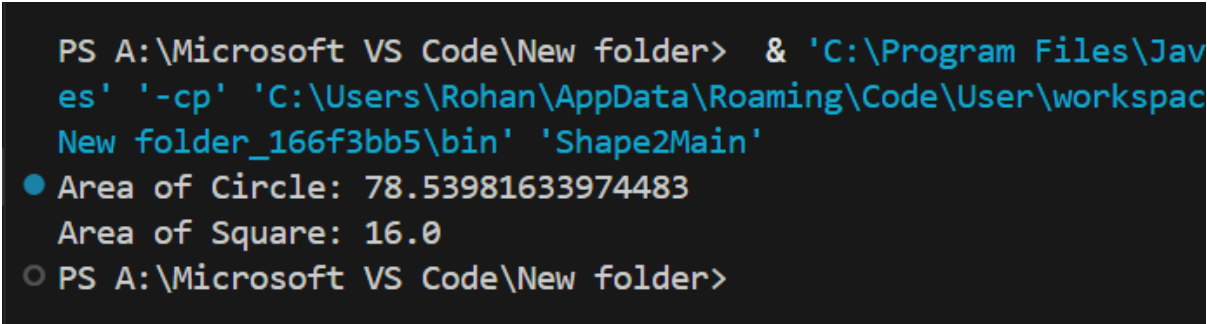
```

    }
}

class Shape2Main{
    public static void main(String[] args) {
        Circle2 circle = new Circle2(5);
        Square2 square = new Square2(4);
        circle.calculateArea();
        square.calculateArea();
    }
}

```

OUTPUT:



```

PS A:\Microsoft VS Code\New folder> java -cp 'C:\Program Files\Java\jre-8\bin' 'C:\Users\Rohan\AppData\Roaming\Code\User\workspace\New folder_166f3bb5\bin' 'Shape2Main'
● Area of Circle: 78.53981633974483
  Area of Square: 16.0
○ PS A:\Microsoft VS Code\New folder>

```

Assignment 2

```

import java.util.Scanner;

public class Animal2 {
    void makeSound() {

```

```
        System.out.println("The Animal makes sound");
    }
}
```

```
class Dog2 extends Animal2 {
    @Override
    void makeSound() {
        System.out.println("The Dog barks");
    }
}
```

```
class Cat2 extends Animal2 {
    @Override
    void makeSound() {
        System.out.println("The Cat meows");
    }
}
```

```
class Animal2Main{
    public static void main(String[] args) {
        System.out.println("Choose an Animal:");
        System.out.println("1. Dog");
        System.out.println("2. Cat");
        Scanner scanner = new Scanner(System.in);
        int choice = scanner.nextInt();
        switch(choice) {
            case 1:
                Dog2 dog = new Dog2();
                dog.makeSound();
                break;

            case 2:
```

```

        Cat2 cat = new Cat2();

        cat.makeSound();

        break;

default:

    Animal2 animal = new Animal2();

    animal.makeSound();

    break;

}

scanner.close();

}

}

```

OUTPUT:

```

● PS A:\Microsoft VS Code\New folder> a:; cd 'a:\Microsoft VS Code\New folder'; &
X:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Rohan\AppData\Roaming\Code
2b6e7920\redhat.java\jdt_ws\New folder_166f3bb5\bin' 'Animal2Main'
Choose an Animal:
1. Dog
2. Cat
1
The Dog barks
PS A:\Microsoft VS Code\New folder> a:; cd 'a:\Microsoft VS Code\New folder'; &
X:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Rohan\AppData\Roaming\Code
● 2b6e7920\redhat.java\jdt_ws\New folder_166f3bb5\bin' 'Animal2Main'
Choose an Animal:
1. Dog
2. Cat
2
The Cat meows
PS A:\Microsoft VS Code\New folder> a:; cd 'a:\Microsoft VS Code\New folder'; &
X:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Rohan\AppData\Roaming\Code
● 2b6e7920\redhat.java\jdt_ws\New folder_166f3bb5\bin' 'Animal2Main'
Choose an Animal:
1. Dog
2. Cat
6
The Animal makes sound
○ PS A:\Microsoft VS Code\New folder>

```

