

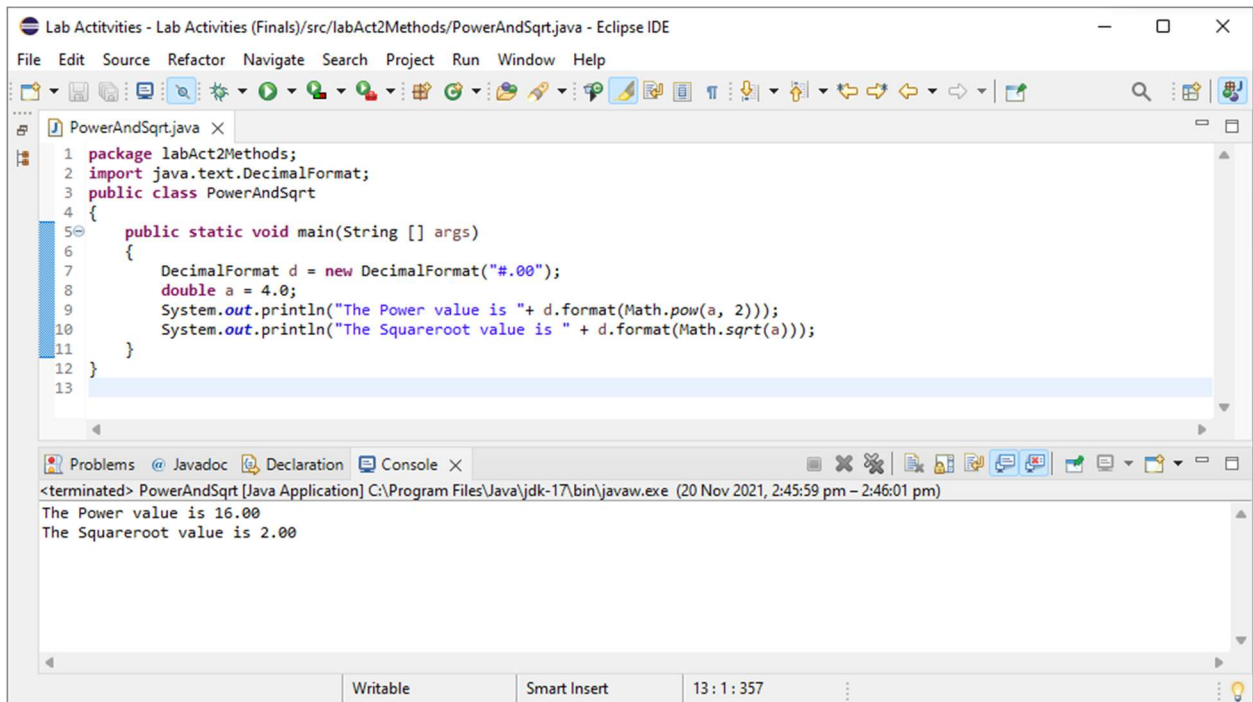
## DOCUMENTATION

### Laboratory Activity 2

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1-BSEMC-.1  
BS Computer Science

November 20, 2021

#### PowerAndSqrt (main method only)



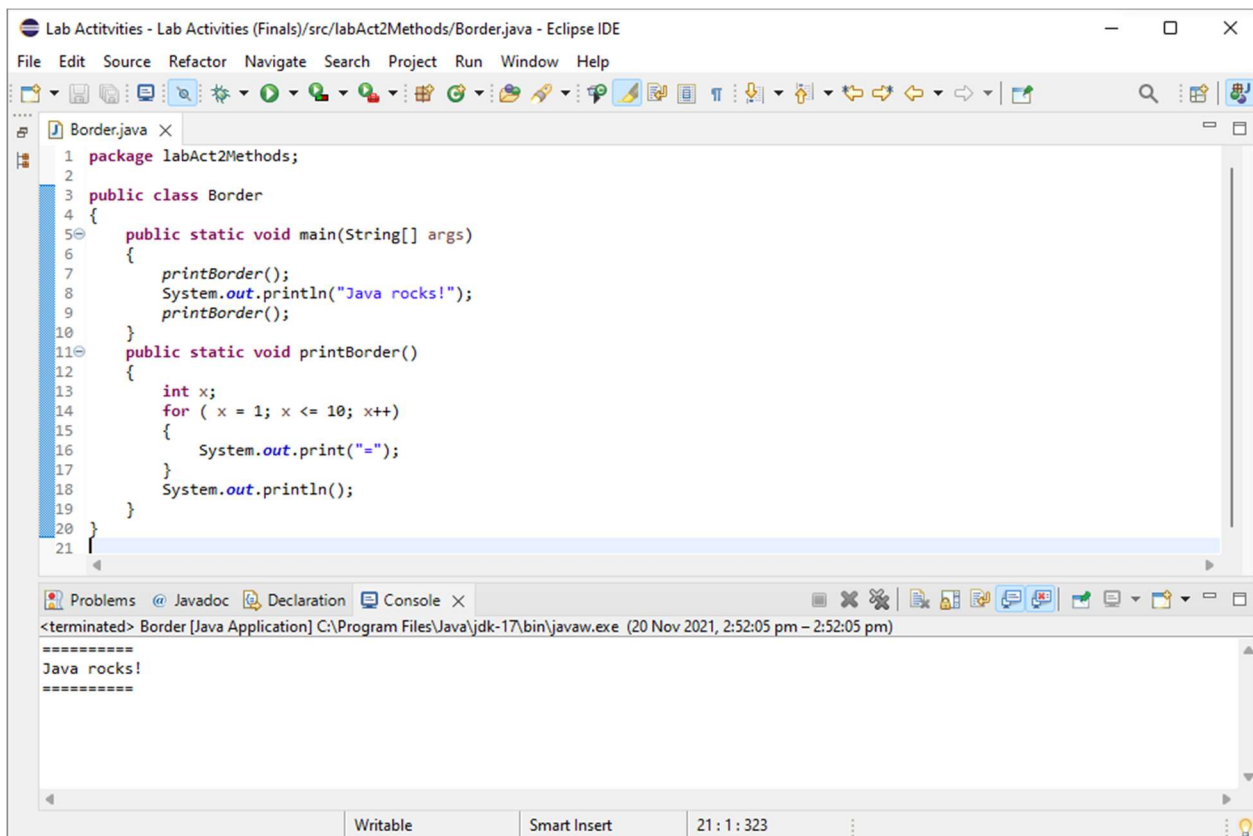
The screenshot shows the Eclipse IDE with the file `PowerAndSqrt.java` open. The code defines a class `PowerAndSqrt` with a `main` method that calculates the power and square root of a number. The console output shows the results of the program execution.

```
1 package labAct2Methods;
2 import java.text.DecimalFormat;
3 public class PowerAndSqrt
4 {
5     public static void main(String [] args)
6     {
7         DecimalFormat d = new DecimalFormat("#.00");
8         double a = 4.0;
9         System.out.println("The Power value is " + d.format(Math.pow(a, 2)));
10        System.out.println("The Squareroot value is " + d.format(Math.sqrt(a)));
11    }
12 }
13
```

Console Output:

```
<terminated> PowerAndSqrt [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (20 Nov 2021, 2:45:59 pm - 2:46:01 pm)
The Power value is 16.00
The Squareroot value is 2.00
```

#### Border (using separate methods)



The screenshot shows the Eclipse IDE with the file `Border.java` open. The code defines a class `Border` with a `main` method that prints a border of asterisks and the text "Java rocks!". The console output shows the results of the program execution.

```
1 package labAct2Methods;
2
3 public class Border
4 {
5     public static void main(String[] args)
6     {
7         printBorder();
8         System.out.println("Java rocks!");
9         printBorder();
10    }
11    public static void printBorder()
12    {
13        int x;
14        for ( x = 1; x <= 10; x++)
15        {
16            System.out.print("=");
17        }
18        System.out.println();
19    }
20 }
21
```

Console Output:

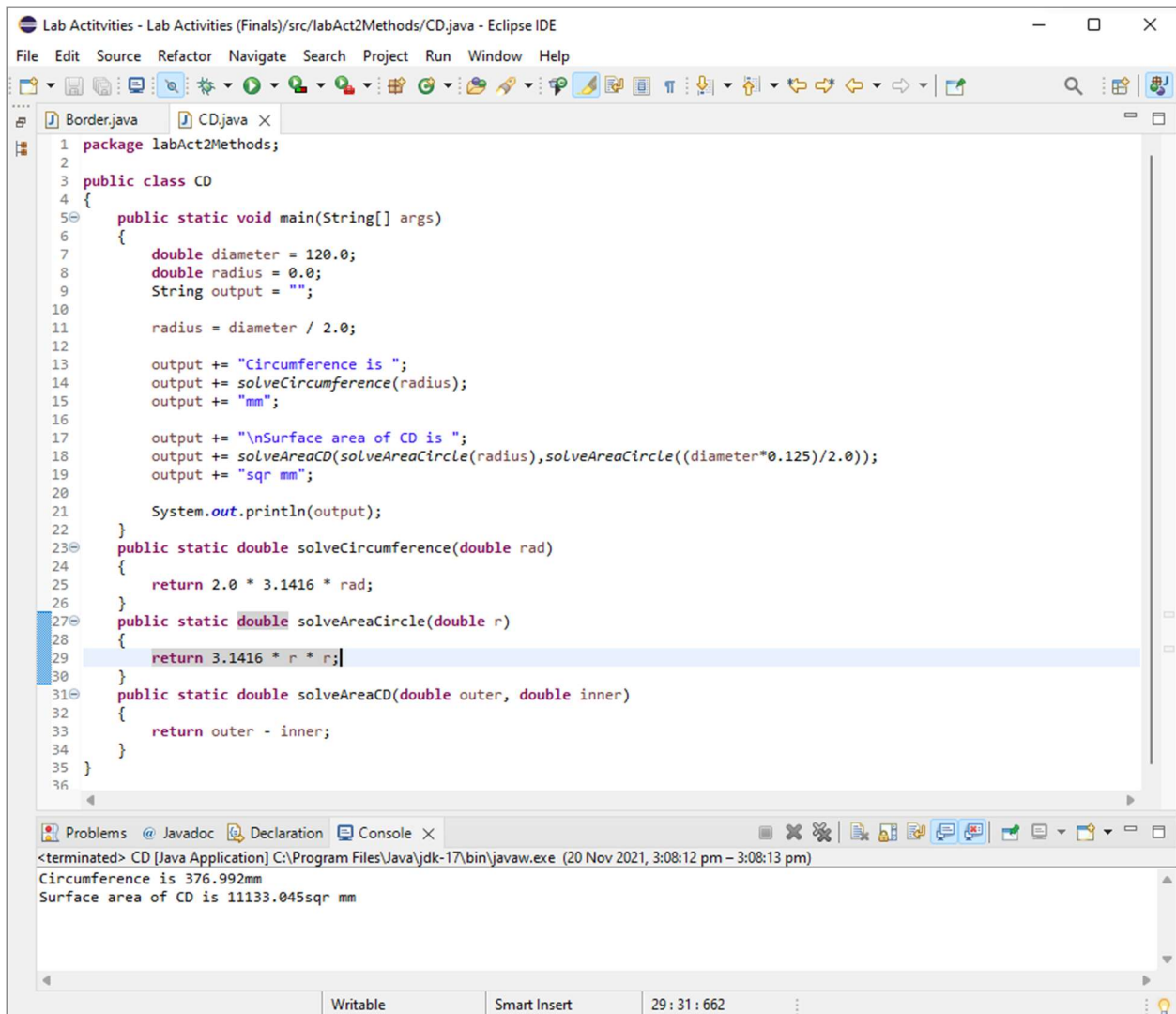
```
<terminated> Border [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (20 Nov 2021, 2:52:05 pm - 2:52:05 pm)
=====
Java rocks!
=====
```

**DOCUMENTATION**  
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**CD (using separate methods with return value)**



The screenshot shows the Eclipse IDE with a Java project named 'Lab Activities - Lab Activities (Finals)/src/labAct2Methods/CD.java'. The code defines a class 'CD' with a 'main' method and three static methods: 'solveCircumference', 'solveAreaCircle', and 'solveAreaCD'. The 'main' method calculates the radius from a diameter of 120.0, then uses the other methods to calculate the circumference and surface area. The console output shows the results: 'Circumference is 376.992mm' and 'Surface area of CD is 11133.045sqr mm'.

```
1 package labAct2Methods;
2
3 public class CD
4 {
5     public static void main(String[] args)
6     {
7         double diameter = 120.0;
8         double radius = 0.0;
9         String output = "";
10
11         radius = diameter / 2.0;
12
13         output += "Circumference is ";
14         output += solveCircumference(radius);
15         output += "mm";
16
17         output += "\nSurface area of CD is ";
18         output += solveAreaCD(solveAreaCircle(radius), solveAreaCircle((diameter*0.125)/2.0));
19         output += "sqr mm";
20
21         System.out.println(output);
22     }
23     public static double solveCircumference(double rad)
24     {
25         return 2.0 * 3.1416 * rad;
26     }
27     public static double solveAreaCircle(double r)
28     {
29         return 3.1416 * r * r;
30     }
31     public static double solveAreaCD(double outer, double inner)
32     {
33         return outer - inner;
34     }
35 }
36
```

Problems | Javadoc | Declaration | Console | X

<terminated> CD [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (20 Nov 2021, 3:08:12 pm – 3:08:13 pm)

Circumference is 376.992mm  
Surface area of CD is 11133.045sqr mm

Writable | Smart Insert | 29 : 31 : 662

## DOCUMENTATION

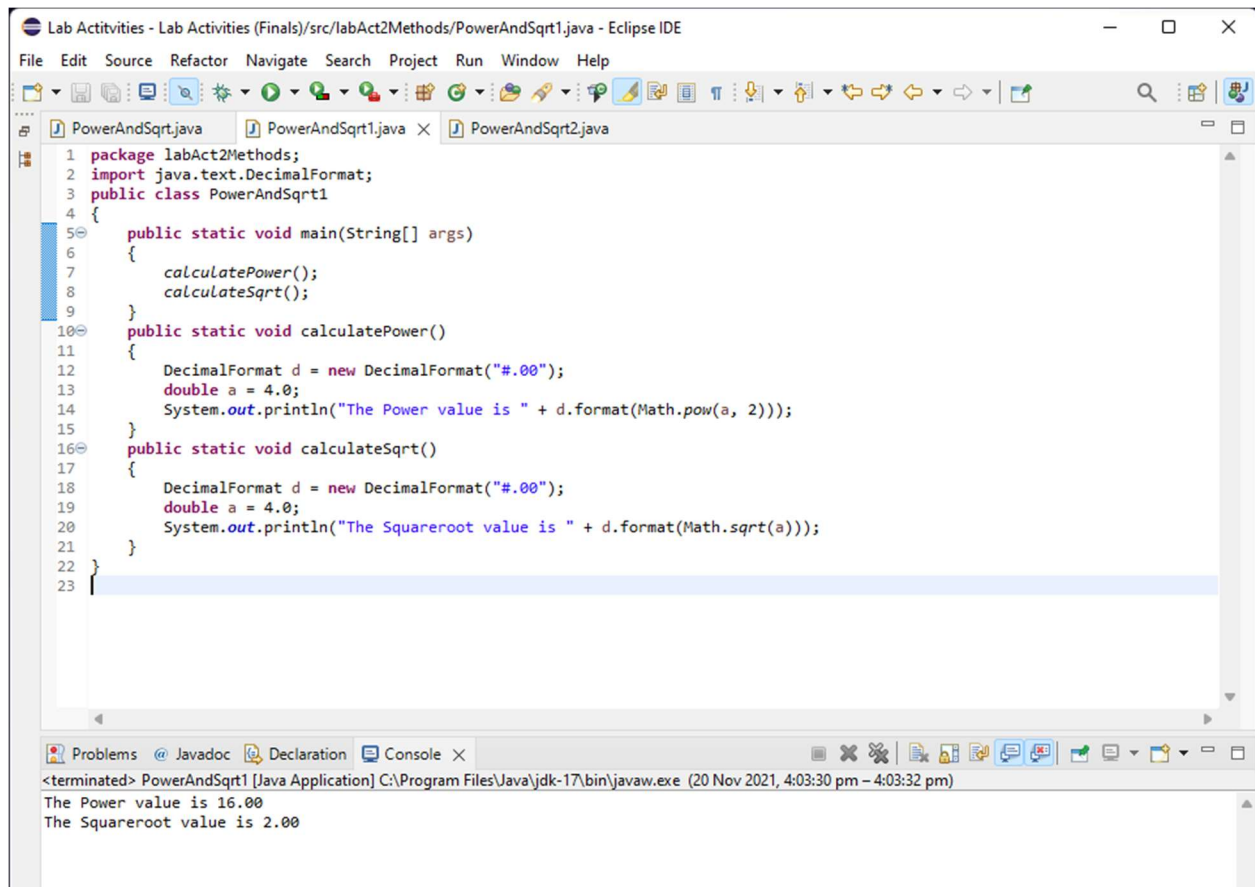
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#### Bonus Activity (ver)

Video Link: <https://drive.google.com/file/d/1ZZTM3SnYEP60N9jVymwuz5Ze-lhgbuTy/view?usp=sharing>



```
1 package labAct2Methods;
2 import java.text.DecimalFormat;
3 public class PowerAndSqrt1
4 {
5     public static void main(String[] args)
6     {
7         calculatePower();
8         calculateSqrt();
9     }
10    public static void calculatePower()
11    {
12        DecimalFormat d = new DecimalFormat("#.00");
13        double a = 4.0;
14        System.out.println("The Power value is " + d.format(Math.pow(a, 2)));
15    }
16    public static void calculateSqrt()
17    {
18        DecimalFormat d = new DecimalFormat("#.00");
19        double a = 4.0;
20        System.out.println("The Squareroot value is " + d.format(Math.sqrt(a)));
21    }
22 }
23
```

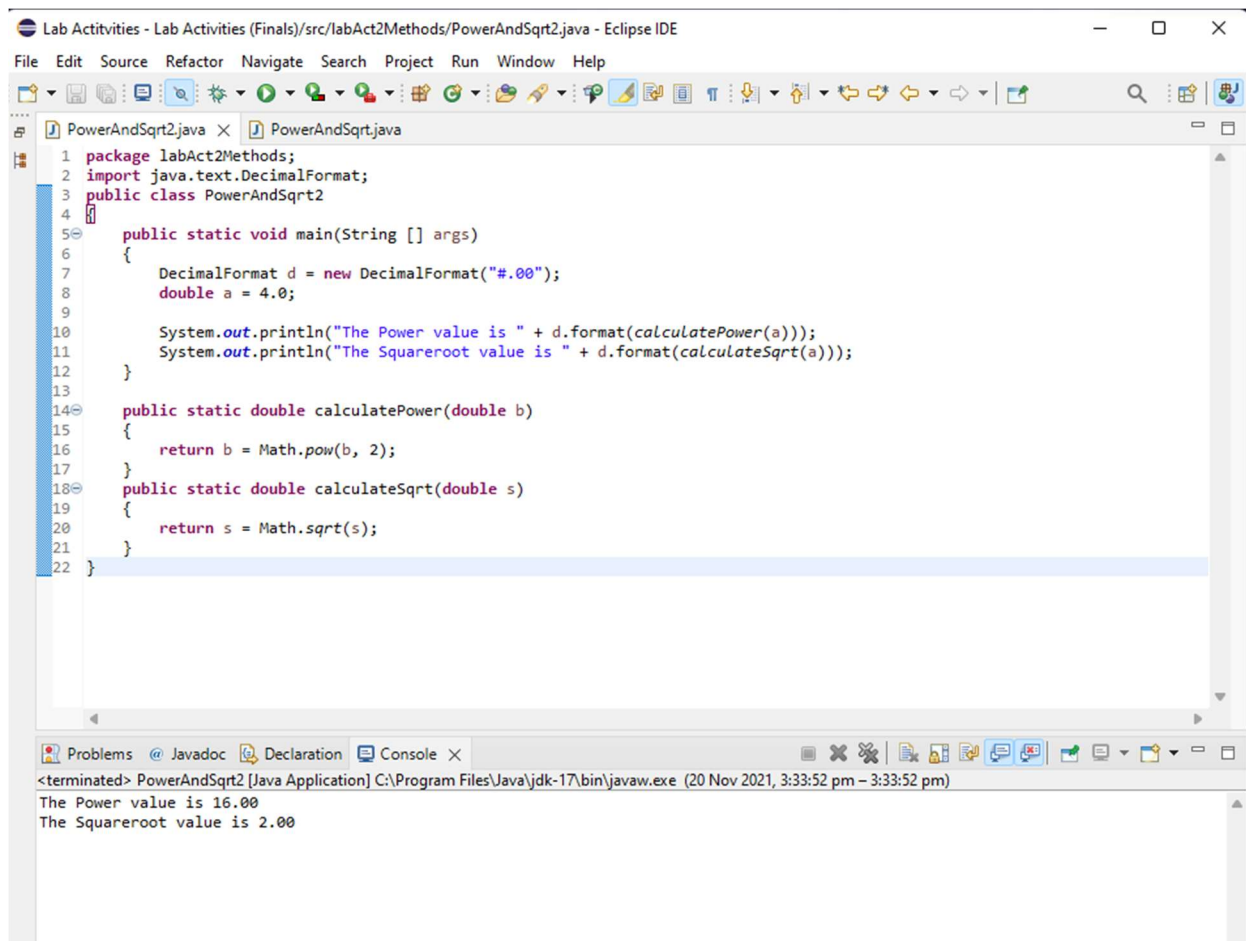
Problems @ Javadoc Declaration Console X

<terminated> PowerAndSqrt1 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (20 Nov 2021, 4:03:30 pm – 4:03:32 pm)

The Power value is 16.00  
The Squareroot value is 2.00

#### Bonus Activity (ver2)

Video Link: <https://drive.google.com/file/d/1HlJVjZcRdFc6hMUvQBz9Bkqq2NixXO54/view?usp=sharing>



```
1 package labAct2Methods;
2 import java.text.DecimalFormat;
3 public class PowerAndSqrt2
4 {
5     public static void main(String [] args)
6     {
7         DecimalFormat d = new DecimalFormat("#.00");
8         double a = 4.0;
9
10        System.out.println("The Power value is " + d.format(calculatePower(a)));
11        System.out.println("The Squareroot value is " + d.format(calculateSqrt(a)));
12    }
13
14    public static double calculatePower(double b)
15    {
16        return b = Math.pow(b, 2);
17    }
18    public static double calculateSqrt(double s)
19    {
20        return s = Math.sqrt(s);
21    }
22 }
```

Problems @ Javadoc Declaration Console X

<terminated> PowerAndSqrt2 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (20 Nov 2021, 3:33:52 pm – 3:33:52 pm)

The Power value is 16.00  
The Squareroot value is 2.00