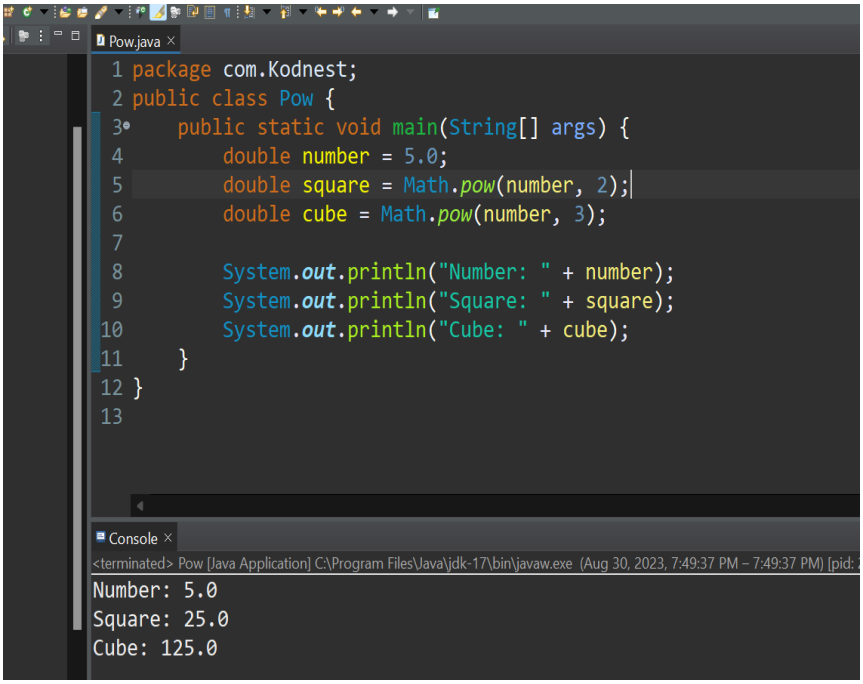
Assignment -1

➢ Math pow()

In Java, the **Math.pow()** function is used to calculate the power of a number. It takes two arguments: the base number and the exponent. The function returns the result of raising the base to the power of the exponent.

Math.pow() function returns a **double** value, so if you need an integer result, you might need to cast the result to an integer type.



Assignment -2

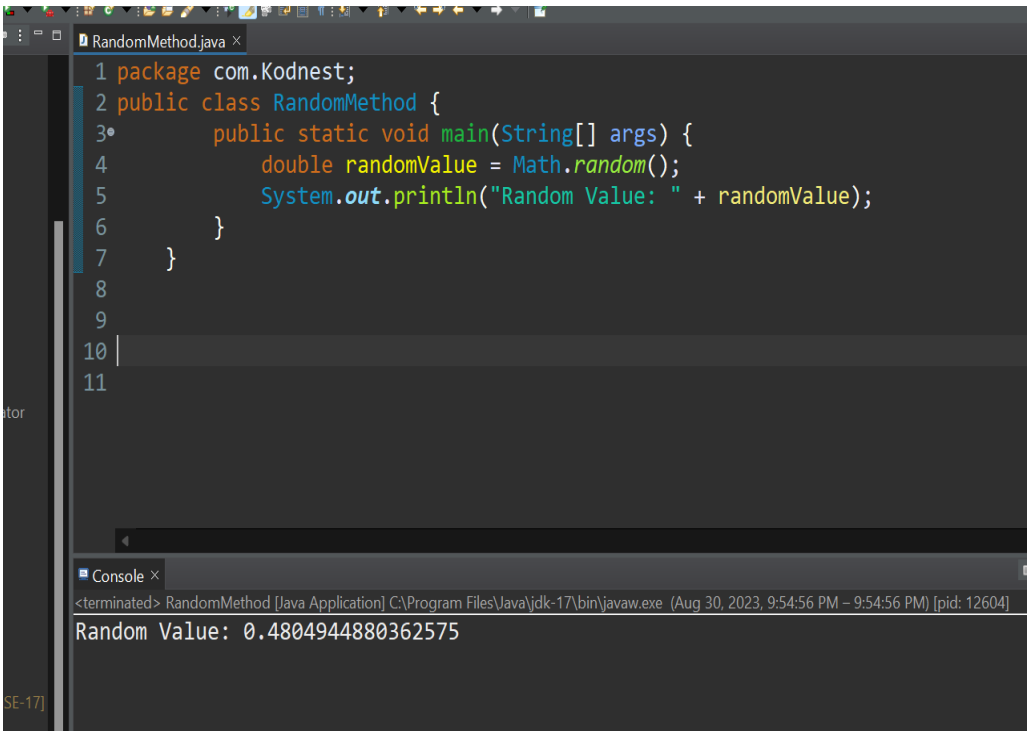
➢ Description of Random method

In Java, random() is not a standalone function. Instead, you typically use the java.util.Random class to generate random numbers. The Random class provides methods to generate random integers, doubles, floats, and other types of random values. The random() method is one of these methods and is used to generate random double values between 0.0 (inclusive) and 1.0 (exclusive).

Method Signature:

public static double random()

To use the random() method in Java, you need to create an instance of the Random class and then call the random() method on that instance. Here's an example:



Assignment -3

➢ Class Random

Certainly, the java.util.Random class in Java is used to generate pseudorandom numbers. It's a commonly used utility for various applications like simulations, games, cryptography, and more.

RandomMethod2.java

```java
package com.Kodnest;
import java.util.Random;

public class RandomMethod2 {
    public static void main(String[] args) {
        Random randomGenerator = new Random();
        int randomInt1 = randomGenerator.nextInt();
        int randomInt2 = randomGenerator.nextInt(100);
        System.out.println("Random Integer 1: " + randomInt1);
        System.out.println("Random Integer 2: " + randomInt2);
        double randomDouble1 = randomGenerator.nextDouble();
        double randomDouble2 = randomGenerator.nextDouble() * 100;
        System.out.println("Random Double 1: " + randomDouble1);
        System.out.println("Random Double 2: " + randomDouble2);
        boolean randomBoolean = randomGenerator.nextBoolean();
        System.out.println("Random Boolean: " + randomBoolean);
    }
}

```

Output:

Console

<terminated> RandomMethod2 [Java Application] C:\Program Files\Java\jdk-

```
Random Integer 1: 1905861562
Random Integer 2: 14
Random Double 1: 0.10180503165794208
Random Double 2: 41.13107313208243
Random Boolean: true
```

In the above example, we:

Create a Random instance using Random randomGenerator = new Random();.Use the nextInt() method to generate random integers, both without bounds and with an upper bound. Use the nextDouble() method to generate random double values, both without bounds (between 0.0 and 1.0) and with a modified range (between 0.0 and 100.0).Use the nextBoolean() method to generate random boolean values.