University of Science and Technology Chittagong

Department of Computer Science and Engineering

Lab Task 4

Object Oriented Programming (Java)

Programming Basics

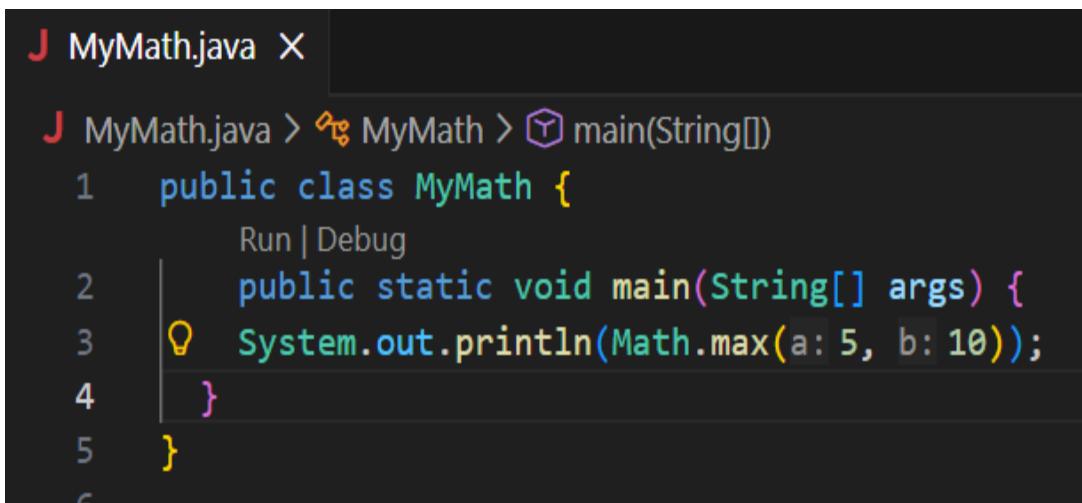Course Instructor: Debabrata Mallick

Submitted By: Reya Moni

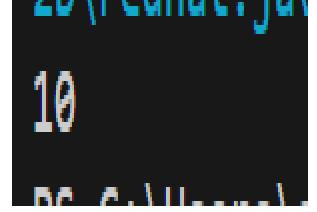Student ID: 0022520005101026

Roll No: 25070126

Semester: 2nd Semester 45th Batch

Submission Date:30/01/2026

Java Math

```java
public class MyMath {
    Run | Debug
    public static void main(String[] args) {
        System.out.println(Math.max(a: 5, b: 10));
    }
}
```

```
10
```
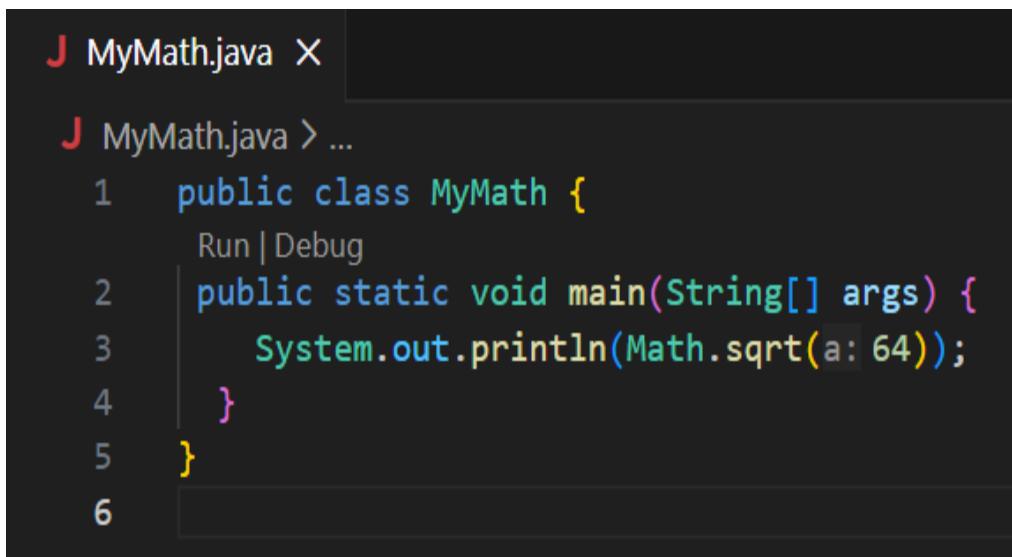
The Java Math class has many methods that allows you to perform mathematical tasks on numbers.

Math.max(x,y)

The Math.max(x,y) method can be used to find the highest value of x and y.

```java
public class MyMath {
    Run | Debug
    public static void main(String[] args) {
        System.out.println(Math.sqrt(a: 64));
    }
}
```

```
8.0
```

The Math.sqrt(x) method returns the square root of x.

```java
J MyMath.java ✕

J MyMath.java > ...
  1    public class MyMath {
       Run | Debug
  2        public static void main(String[] args) {
  3         System.out.println(Math.round(a: 4.6));
  4         System.out.println(Math.ceil(a: 4.1));
  5         System.out.println(Math.floor(a: 4.9));
  6        }
  7    }
  8
```

```
5
5.0
4.0
```

Rounding Methods

Java has several methods for rounding numbers:

- Math.round(x) - rounds to the nearest integer
- Math.ceil(x) - rounds up (returns the smallest integer greater than or equal to x)
- Math.floor(x) - rounds down (returns the largest integer less than or equal to x)

```java
J MyMath.java ✕

J MyMath.java > ⚙ MyMath > ⓨ main(String[])
  1    public class MyMath {
       Run | Debug
  2        public static void main(String[] args) {
  3         int randomNum = (int)(Math.random() * 101);
  4      💡 System.out.println(randomNum);
  5        }
  6    }
```

```
35
```

To get more control over the random number, for example, if you only want a random number between 0 and 100.

END