

JAVA FUNDAMENTALS COURSE

EXCERCISE

PRECEDENCE OF OPERATORS IN JAVA



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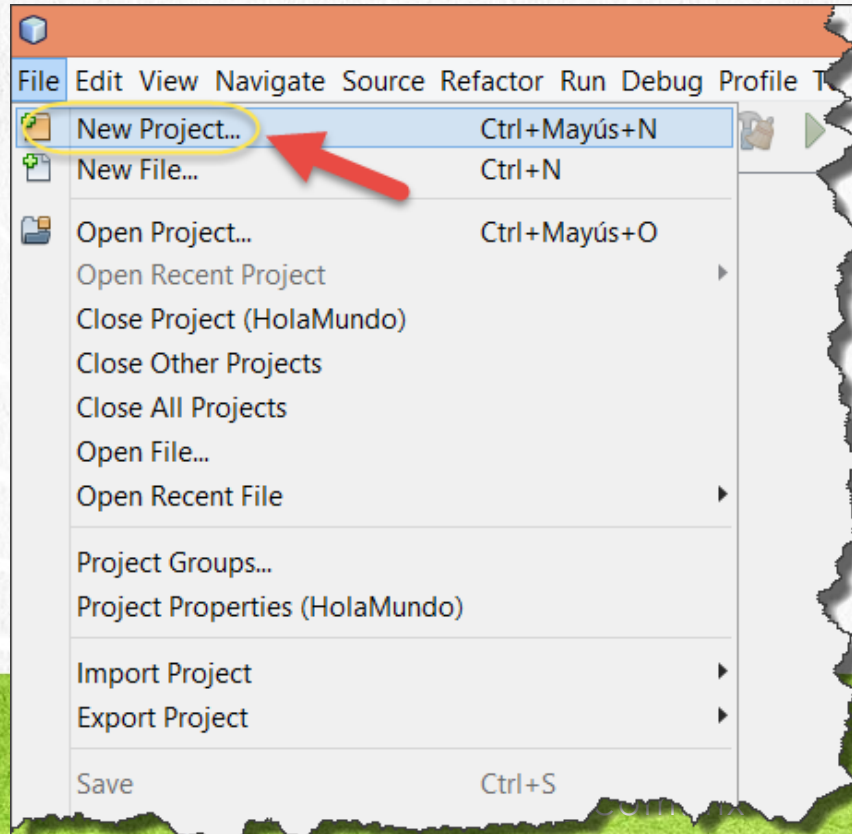
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EXERCISE OBJECTIVE

Create a program to practice the Precedence of Operators in Java. At the end we should observe the following:

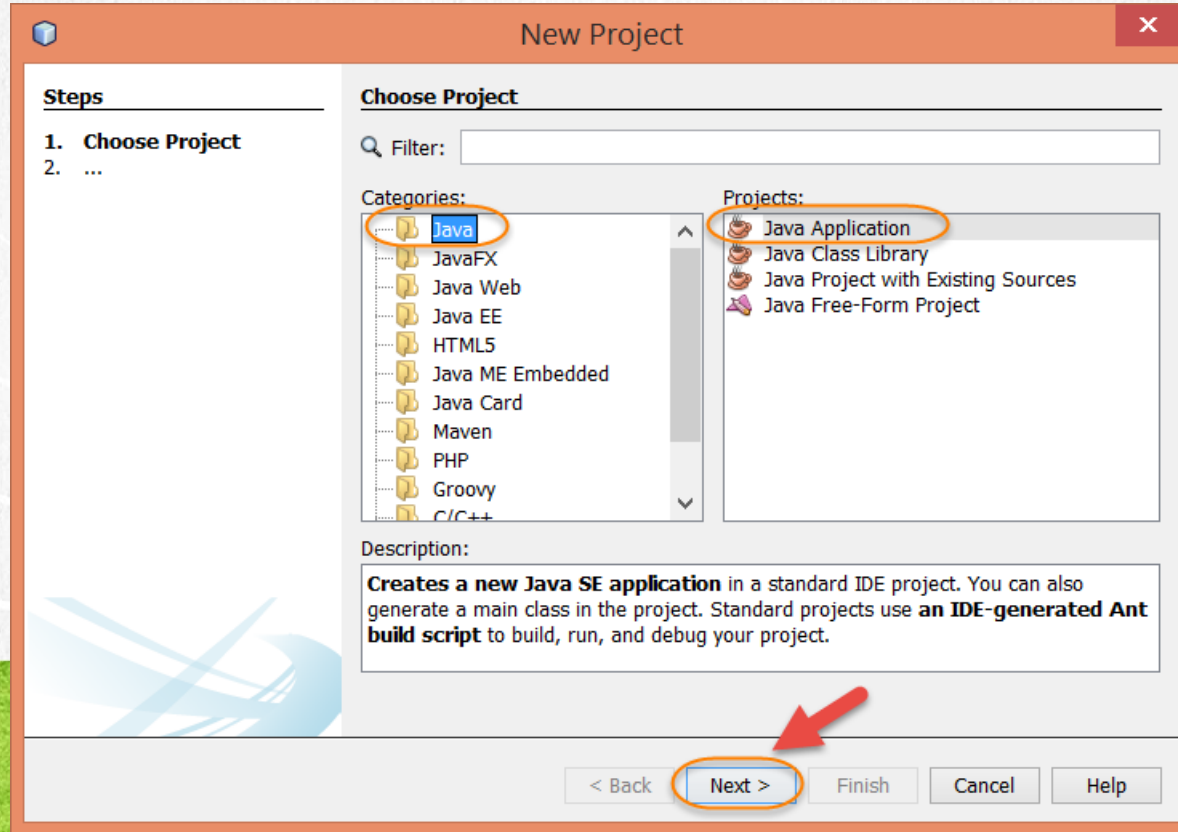
1. CREATE A NEW PROJECT

Create the PrecedenceOfOperators Project:



1. CREATE A NEW PROJECT (CONT)

Select Java -> Java Application and click on Next:



1. CREATE A NEW PROJECT (CONT)

Create the PrecedenceOfOperators Project:

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name:

Project Location:

Project Folder:

☐ Use Dedicated Folder for Storing Libraries

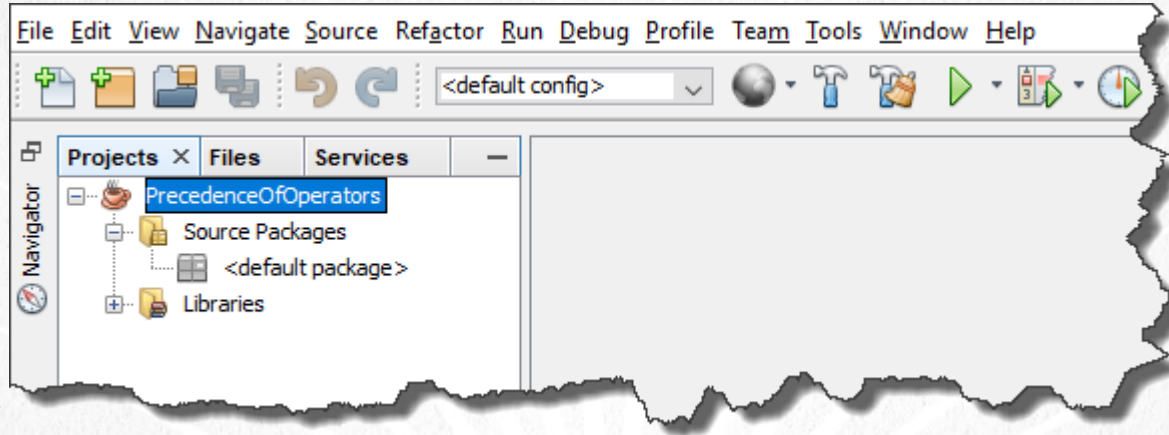
Libraries Folder:

Different users and projects can share the same compilation libraries (see Help for details).

☒ Create Main Class

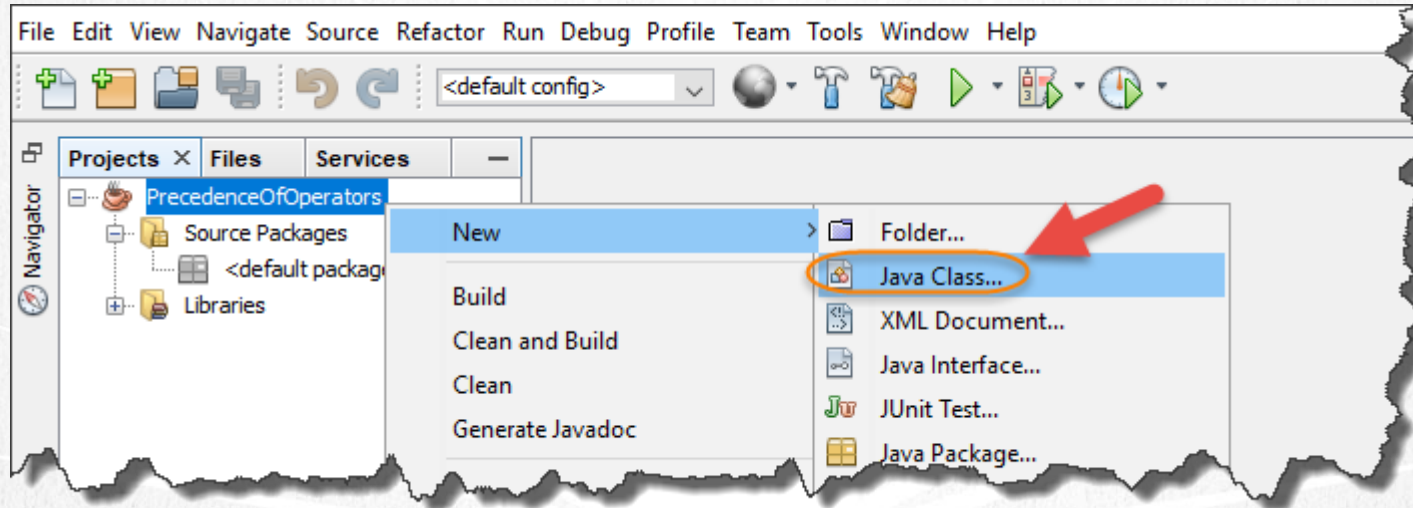
1. CREATE A NEW PROJECT (CONT)

The Project has the desired structure.



2. CREATE A CLASS

Create the PrecedenceOfOperatorsTest.java class. Right click on PrecedenceOfOperators Project -> New -> Java Class:



2. CREATE A CLASS (CONT)

Class Name: PrecedenceOfOperatorsTest , package: operators and click on Finish.

New Java Class

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

Class Name: PrecedenceOfOperatorsTest

Project: PrecedenceOfOperators

Location: Source Packages

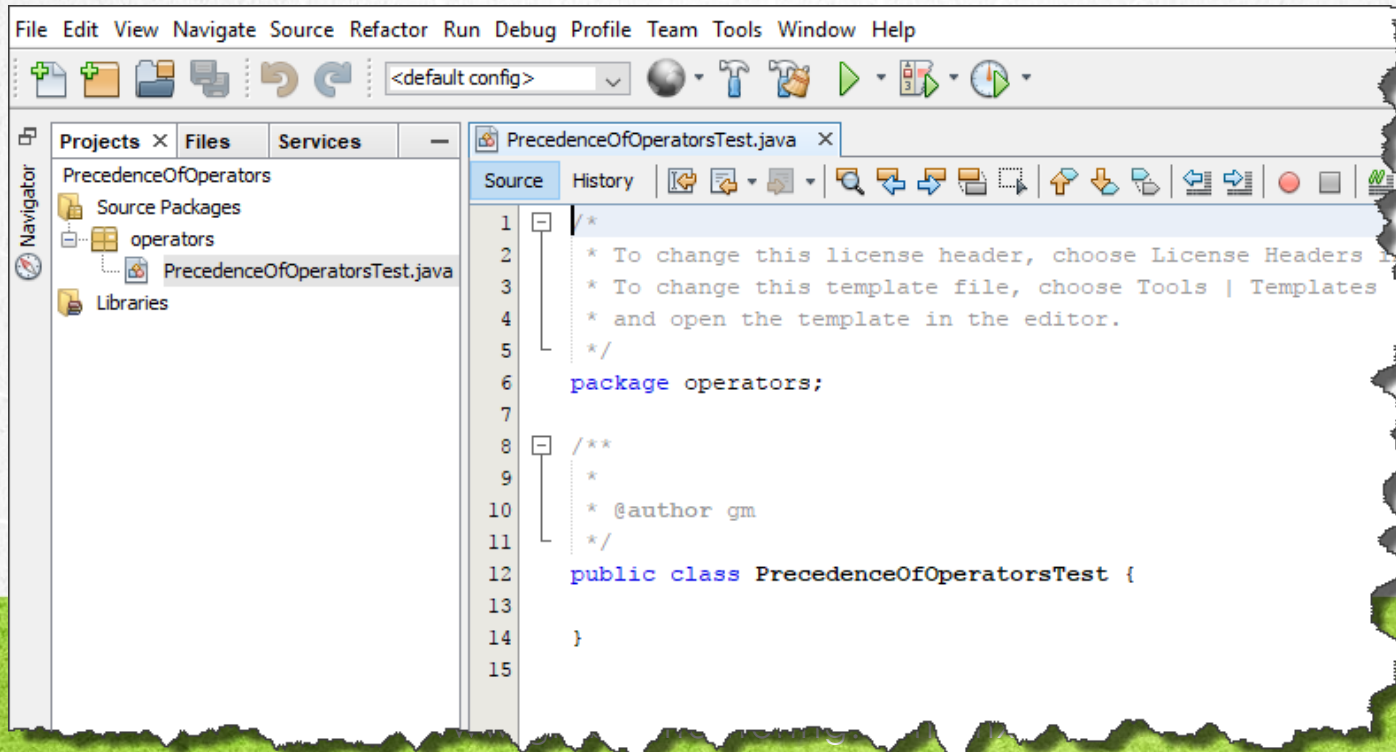
Package: operators

Created File: C:\Courses\JavaFundamentals\Lesson03\PrecedenceOfOperators\src\operators\PrecedenceOfOperatorsTest.java

< Back Next > **Finish** Cancel Help

2. CREATE A CLASS (CONT)

This is the result of the created Java class. We will substitute the code with the following:



PASO 3. MODIFY THE CODE

[Archivo PrecedenceOperatorsTest.java:](#)

[Click to download the code](#)

```
package operators;

public class PrecedenceOfOperatorsTest {

    public static void main(String[] args) {
        System.out.println("First Example Precedence of Operators");
        int x = 5;
        int y = 10;
        int z = ++x * y--; //z=6*10 => z=60

        System.out.println("x = " + x); //prints x=6
        System.out.println("y = " + y); //prints y=9, it was pending the decrease
        System.out.println("z = " + z); //prints 60

        System.out.println("Example of Evaluation");
        System.out.println(4 + 5 * 6 / 3); //4+(5*6)/3 => 4+(30/3) => 4+10 => 14
        System.out.println((4 + 5) * (6 / 3)); //9*2=> 18

        System.out.println("Another Evaluation Example");
        System.out.println(1 + 2 - 3 * 4 / 5); // (1+2)-(3*4)/5 => 3-(12/5) => 3-2 => 1
        System.out.println(1 + 2 - (3 * (4 / 5))); //3-(3*0) => 3-0 => 3, the division takes the int part
```

PASO 3. MODIFY THE CODE

[Archivo PrecedenceOperatorsTest.java:](#)

[Click to download the code](#)

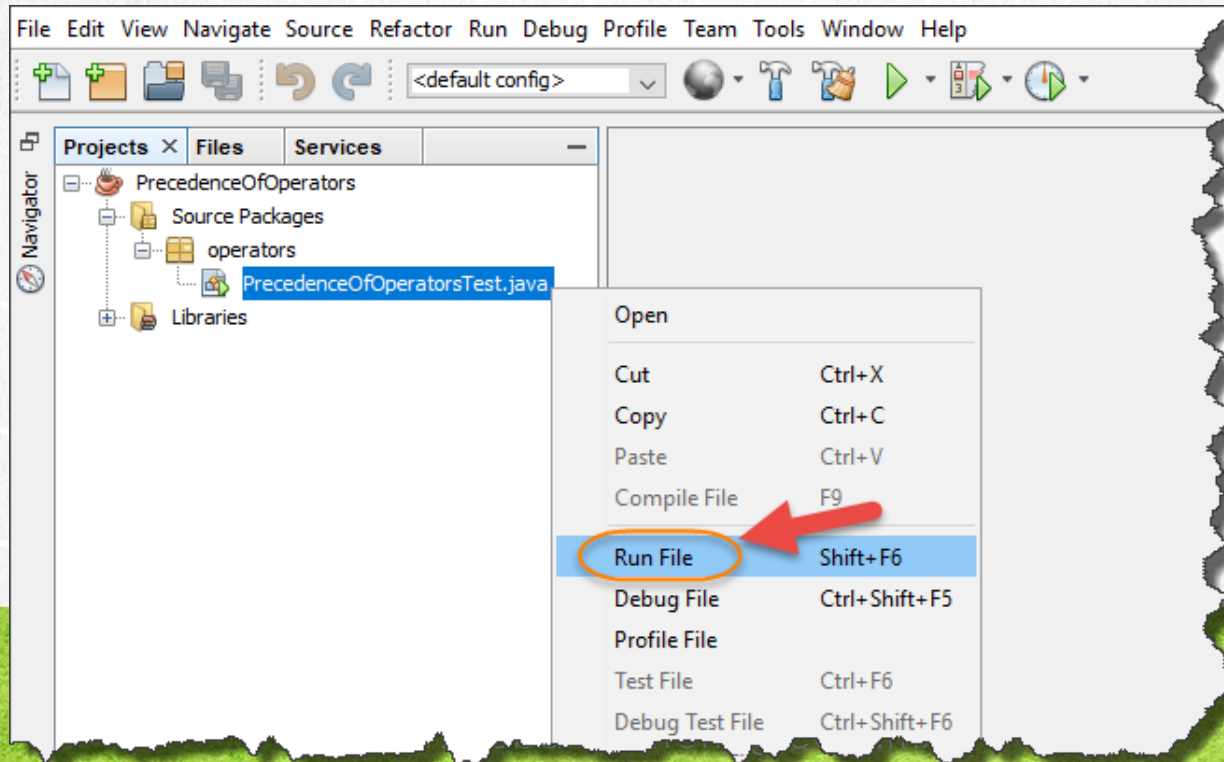
```
System.out.println("\nAnother example");  
//If it detects a String, the rest turns it into a String  
System.out.println("1 + 2 = " + 1 + 2); //concatenates, prints 12  
//The parentheses break this rule, as it has the highest priority  
System.out.println("(1 + 2) = " + (1 + 2)); //prints 3  
  
System.out.println("\nAnother example");  
//The + operator is associative to the left  
System.out.println(1 + 2 + "abc"); //Detects an operation first, prints 3abc  
System.out.println("abc" + 1 + 2); //Detects a String first, prints abc12  
}  
}
```

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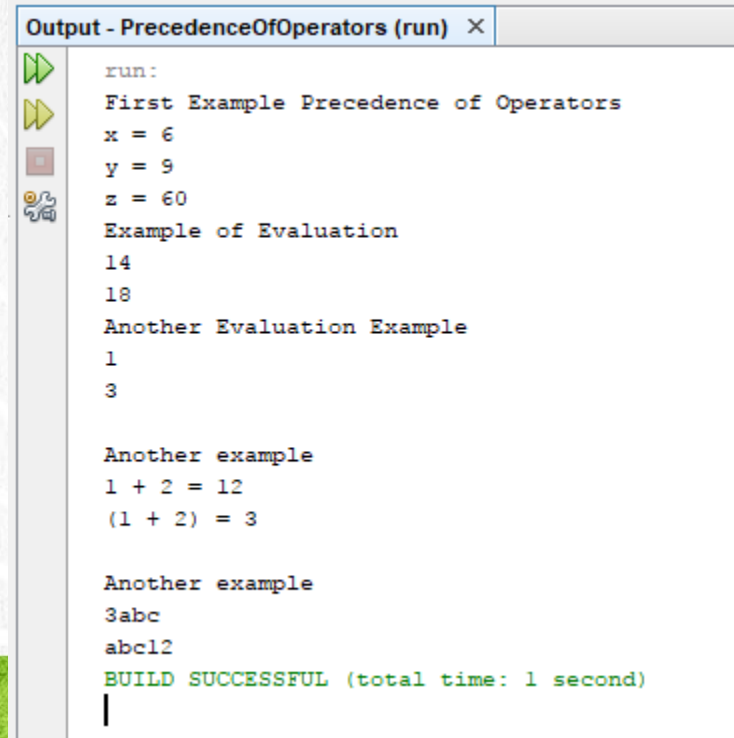
4. EXECUTE THE PROJECT

Execute our project. Right click over the class
PrecedenceOfOperatorsTest.java and click on Run File:



4. EXECUTE THE PROJECT(CONT)

The result is as follows:



```
run:
First Example Precedence of Operators
x = 6
y = 9
z = 60
Example of Evaluation
14
18
Another Evaluation Example
1
3

Another example
1 + 2 = 12
(1 + 2) = 3

Another example
3abc
abc12
BUILD SUCCESSFUL (total time: 1 second)
```

EXERCISE CONCLUSION

- With this exercise we have put into practice the precedence of operators in Java.
- For more information about the operators in Java, consult:
- <http://docs.oracle.com/javase/tutorial/java/nutsandbolts/operators.html>

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