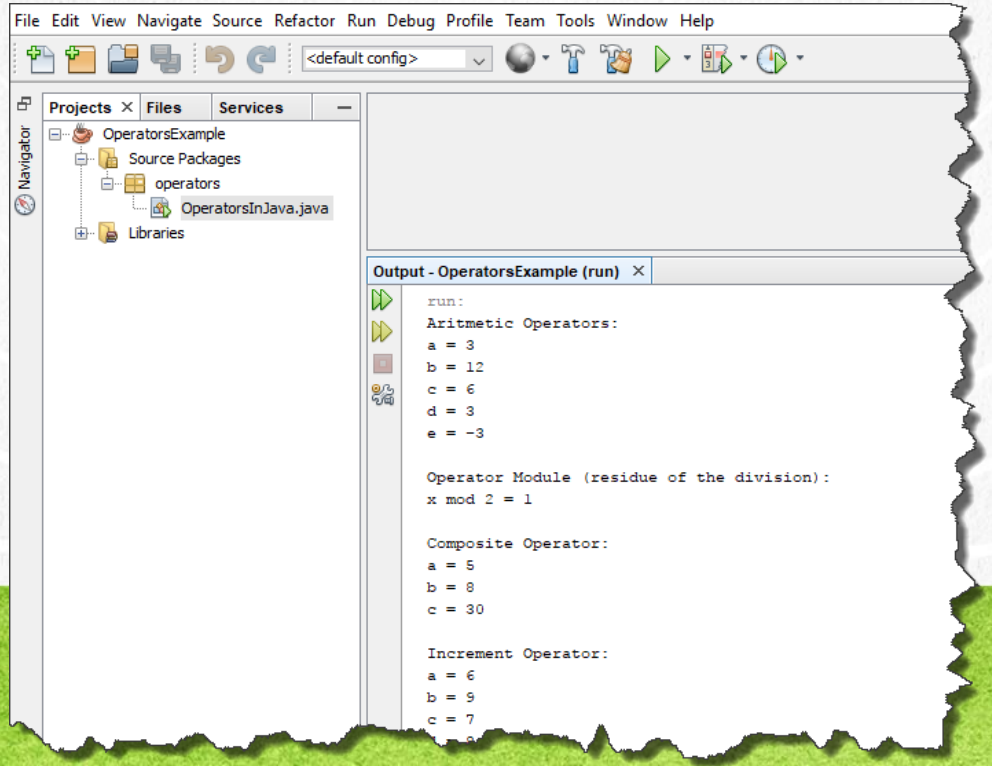
EXCERCISE

OPERATORS IN JAVA

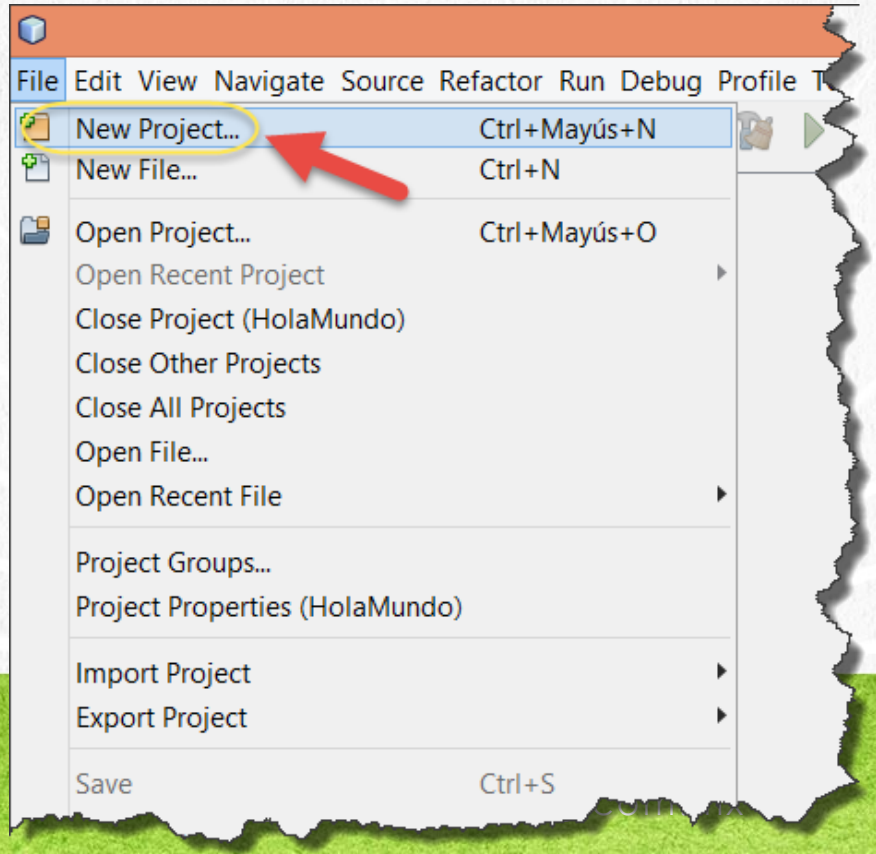
EXERCISE OBJECTIVE

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



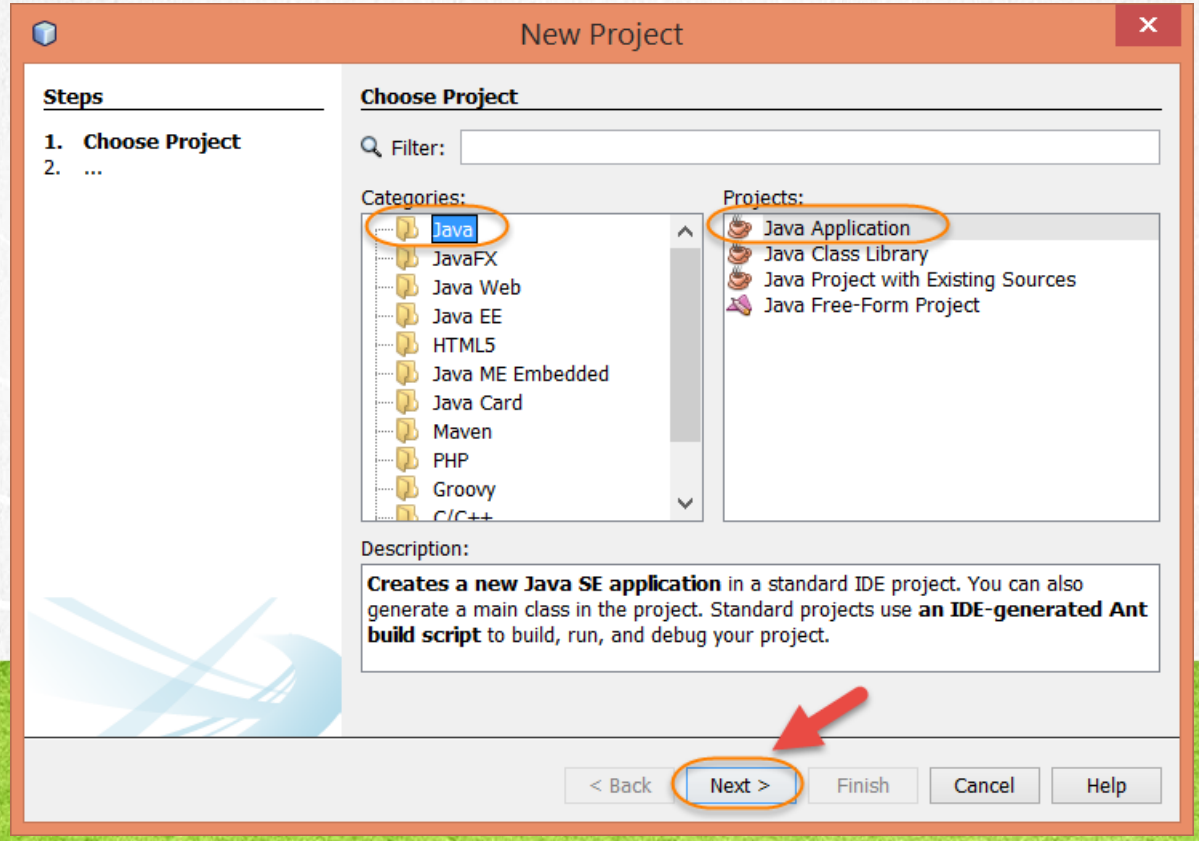
1. CREATE A NEW PROJECT

Create the OperatorsExample Project:



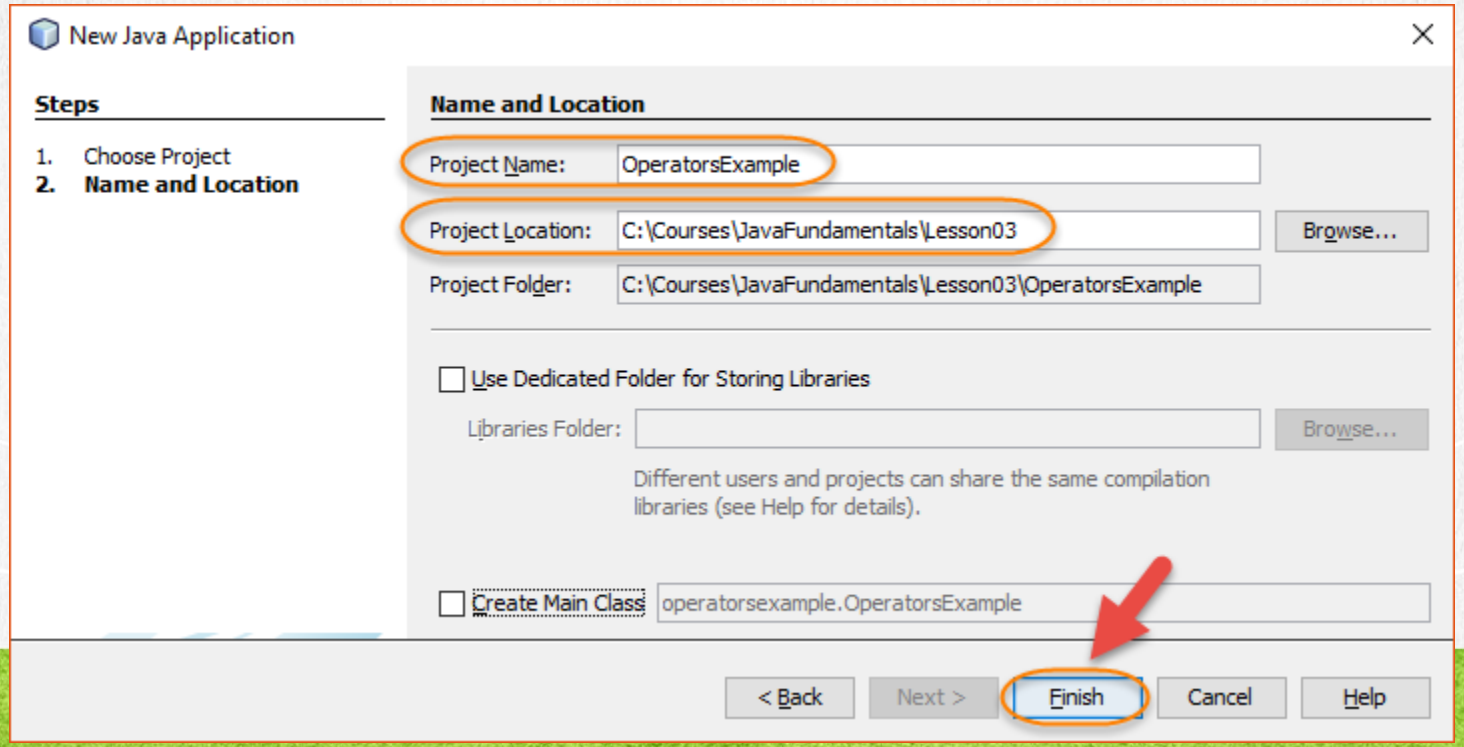
1. CREATE A NEW PROJECT (CONT)

Select Java -> Java Application and click on Next:



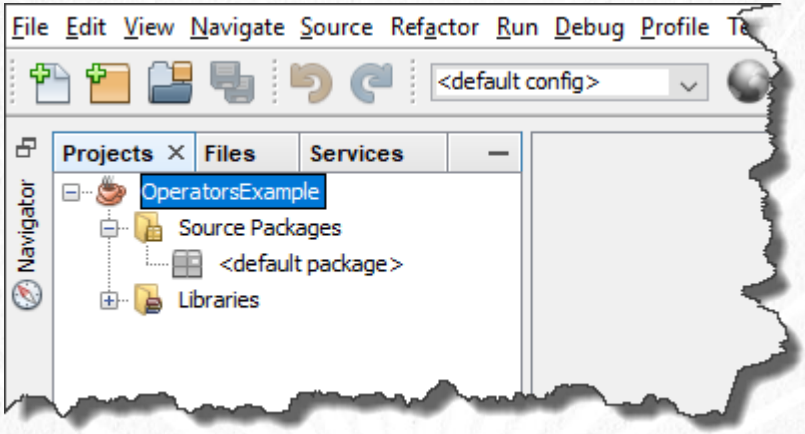
1. CREATE A NEW PROJECT (CONT)

Create the OperatorsExample Project:



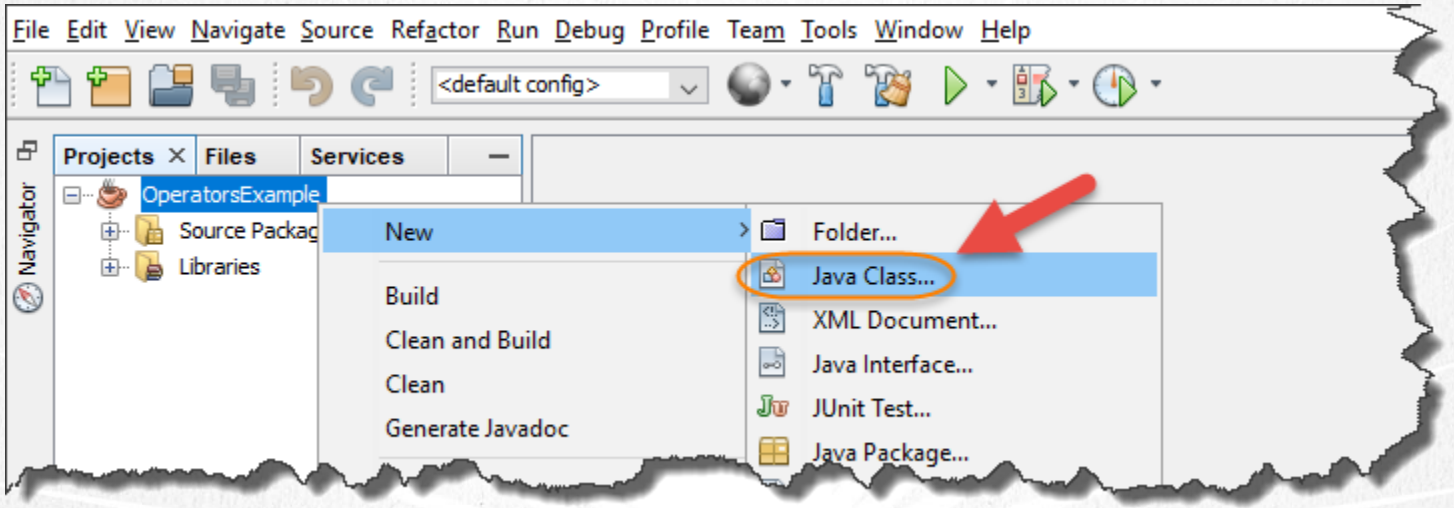
1. CREATE A NEW PROJECT (CONT)

The Project has the desired structure.



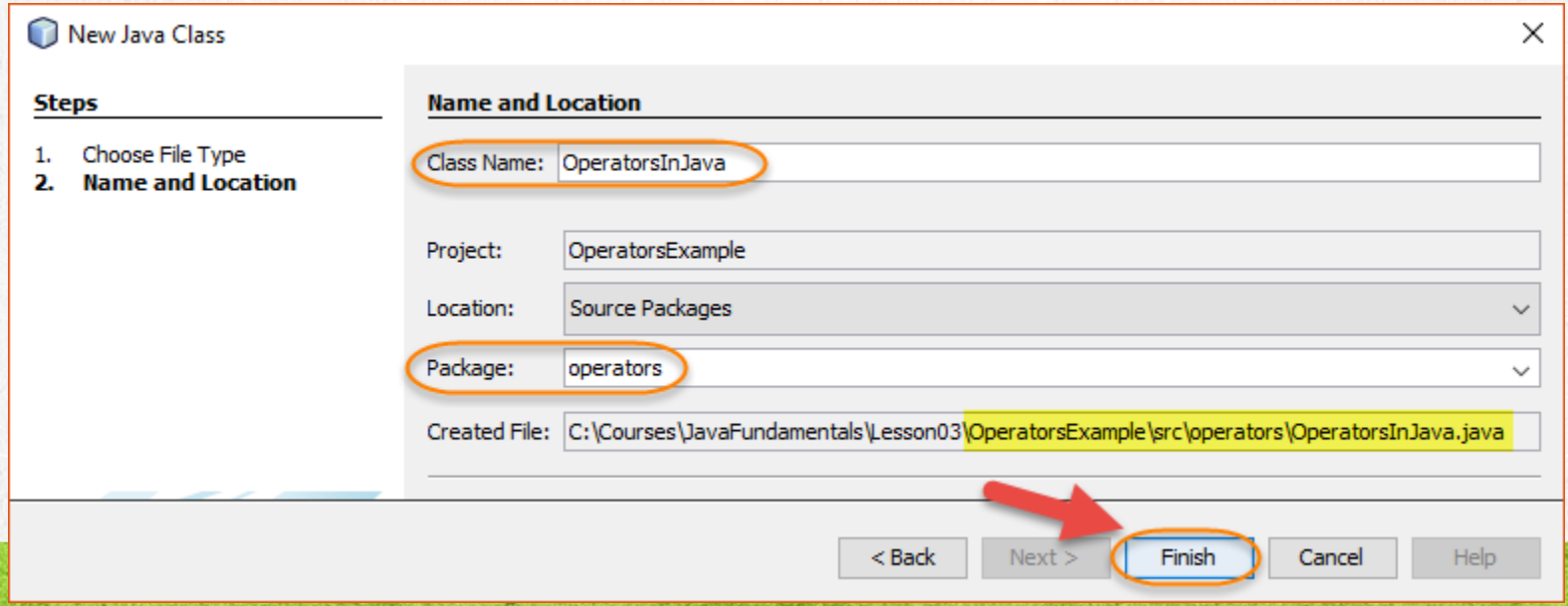
2. CREATE A CLASS

Create the Operators.java class. Right click on OperatorsExample Project -> New -> Java Class:



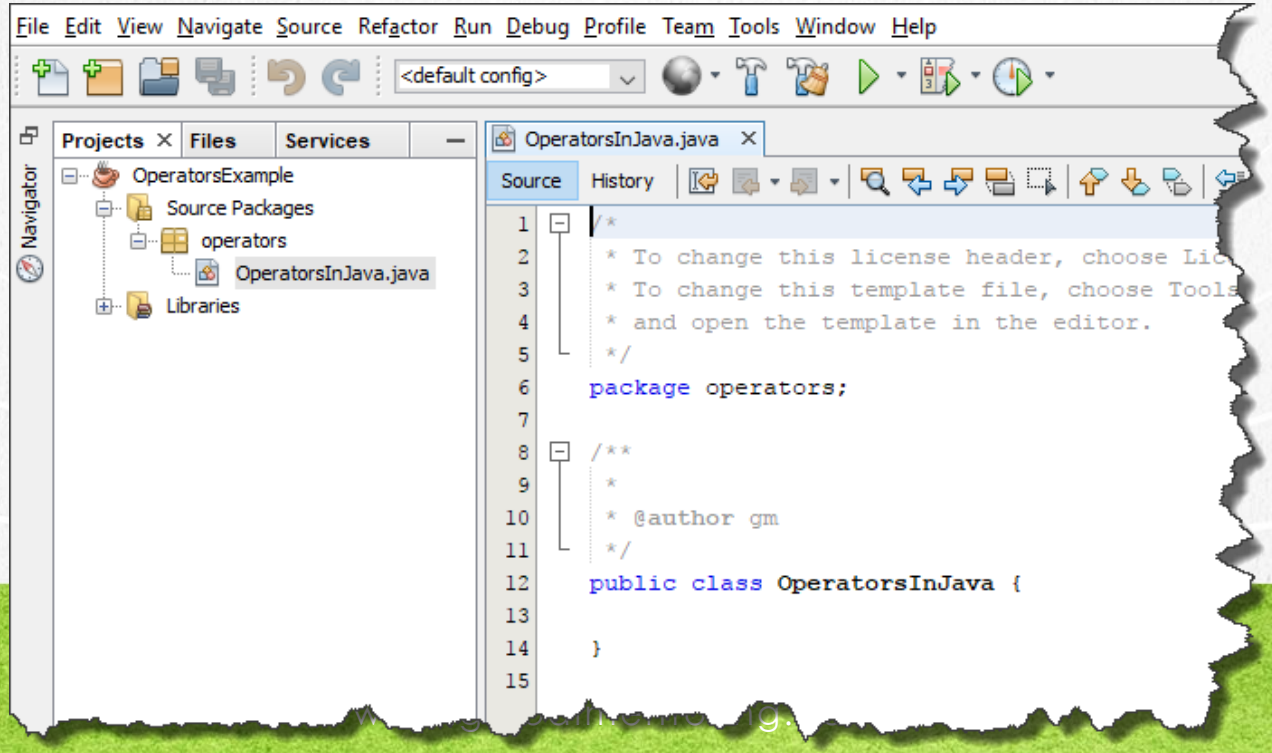
2. CREATE A CLASS (CONT)

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



2. CREATE A CLASS (CONT)

This is the result of the created java class. We will sustitute the code with the following:



PASO 3. MODIFY THE CODE

Archivo OperatorsInJava.java:

Click to download the code

```
package operators;

public class OperatorsInJava {

    public static void main(String[] args) {
        System.out.println("Aritmetic Operators:");
        int a = 1 + 2;//a=3
        int b = a * 4;//b=3*4 => b=12
        int c = b / 2;//c=12/2 => c=6 (the division gives an int result, not float)
        int d = c - a;//b=6-3 => d=3
        int e = -d;//e=-3
        System.out.println("a = " + a);//prints a=3
        System.out.println("b = " + b);//prints b=12
        System.out.println("c = " + c);//prints c=6
        System.out.println("d = " + d);//prints d=3
        System.out.println("e = " + e);//prints e=-3

        System.out.println("\nOperator Module (residue of the division):");
        System.out.println("x mod 2 = " + a % 2);//3%2 => 1 (int residue)

        System.out.println("\nComposite Operator:");
        a += 2;//a=a+2 => a=3+2 => a=5
        b -= 4;//b=b-4 => b=12-4 => b=8
        c *= a;//c=c*a => c=6*5 => c=30
        System.out.println("a = " + a);//prints a=5
        System.out.println("b = " + b);//prints b=8
        System.out.println("c = " + c);//prints c=30
```

PASO 3. MODIFY THE CODE

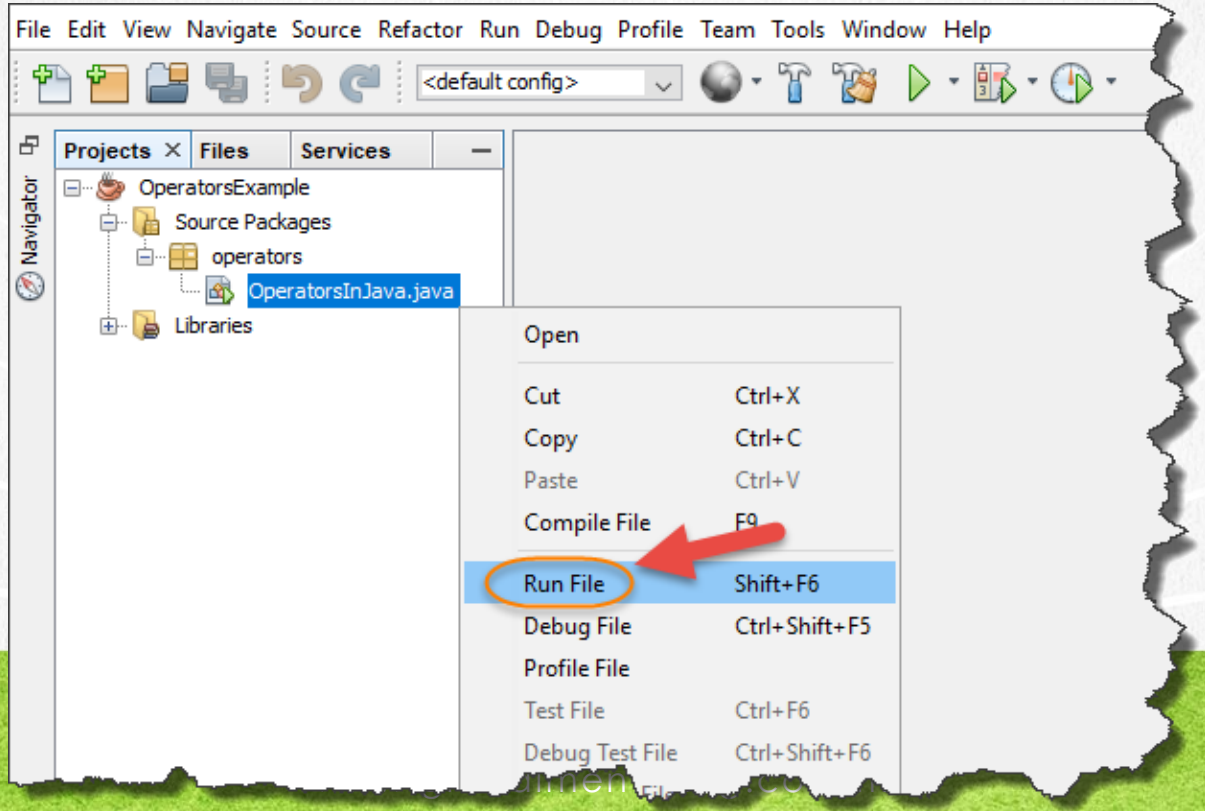
Archivo OperatorsInJava.java:

Click to download the code

```
        System.out.println("\nIncrement Operator:");
        a++;//a=a+1
        System.out.println("a = " + a);//prints a=6

        //Preincrement/decrement (is increased before using the value)
        c = ++a;//c=(a+1) => c=7
        //Postincrement/decrement (is increased after using the value)
        //The next time b is used, it is when it's increased
        d = b++;//d=b => d=8
        System.out.println("b = " + b);//prints b=9, b was waiting to increase the next time it was used
        System.out.println("c = " + c);//prints c=7
        System.out.println("d = " + d);//prints c=8

        System.out.println("\nRelational operator:");
        boolean res = a < b;//a is less than b => res=7<9 => res=true
        System.out.println("res = " + res);

        System.out.println("\nTernary Operator:");
        int min = (a < b) ? a : b;//(7<9)=true => assign first value (a), if not assign second value (b)
        System.out.println("min = " + min);//prints a => min = 7

        System.out.println("\nAssignment Operator:");
        int i, j, k;
        //Many assignments at one time
        i = j = k = 100; // i, j, and k are equal to 100
        System.out.println("i = " + i);//prints i=100
        System.out.println("j = " + j);//prints j=100
        System.out.println("k = " + k);//prints k=100
    }
}
```

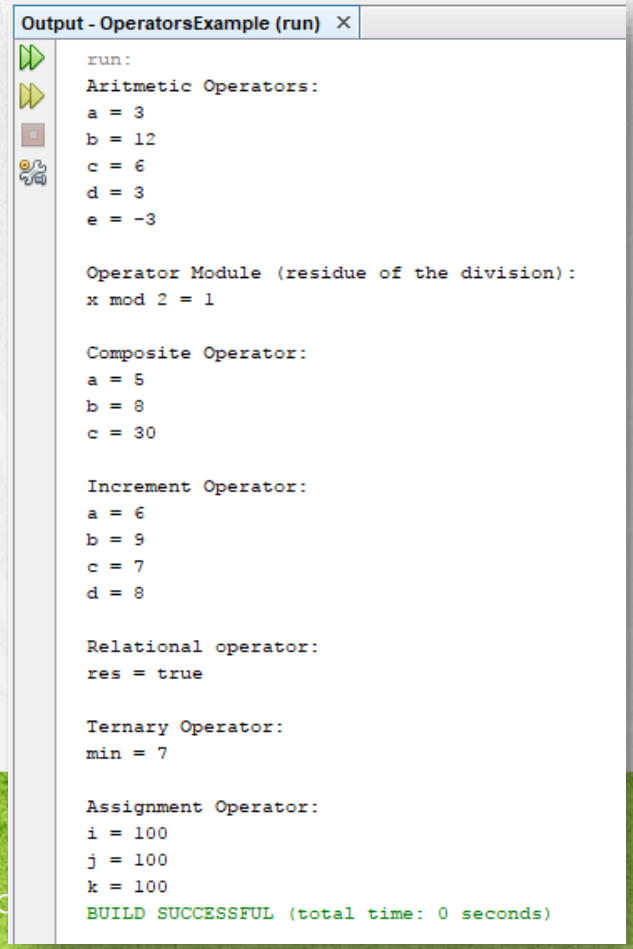
4. EXECUTE THE PROJECT

Execute our project. Right click over OperatorsInJava.java -> Run File:



4. EXECUTE THE PROJECT(CONT)

The result is as follows:



EXERCISE CONCLUSION

- With this exercise we have put into practice some of the most common operators in Java.

- For more information about the operators in Java, consult:
- http://docs.oracle.com/javase/tutorial/java/nutsandbolts/operators.html

- In the following exercise we will see the use of operator precedence.

ONLINE COURSE

JAVA FUNDAMENTALS

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