

JAVA FUNDAMENTALS COURSE

EXERCISE

ARITHMETIC PROJECT

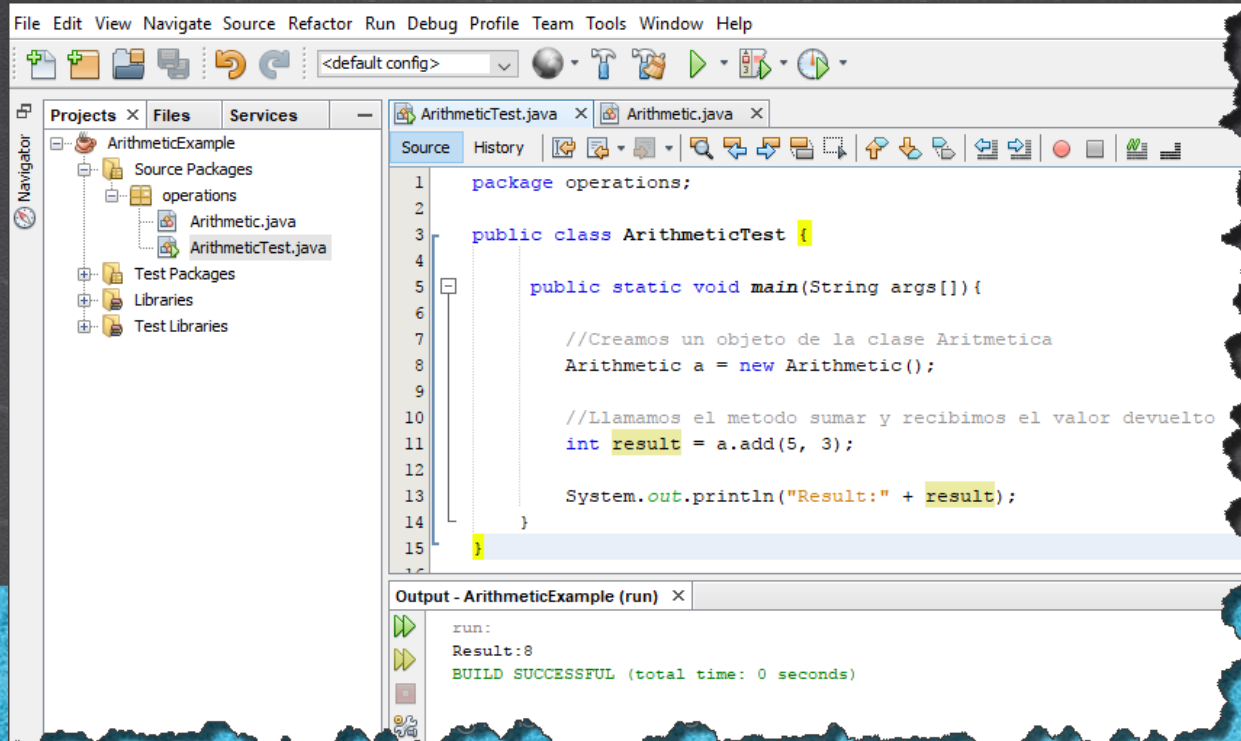


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EXERCISE OBJECTIVE

Create the Arithmetic exercise. At the end we should observe the following:



The screenshot shows an IDE window with the following components:

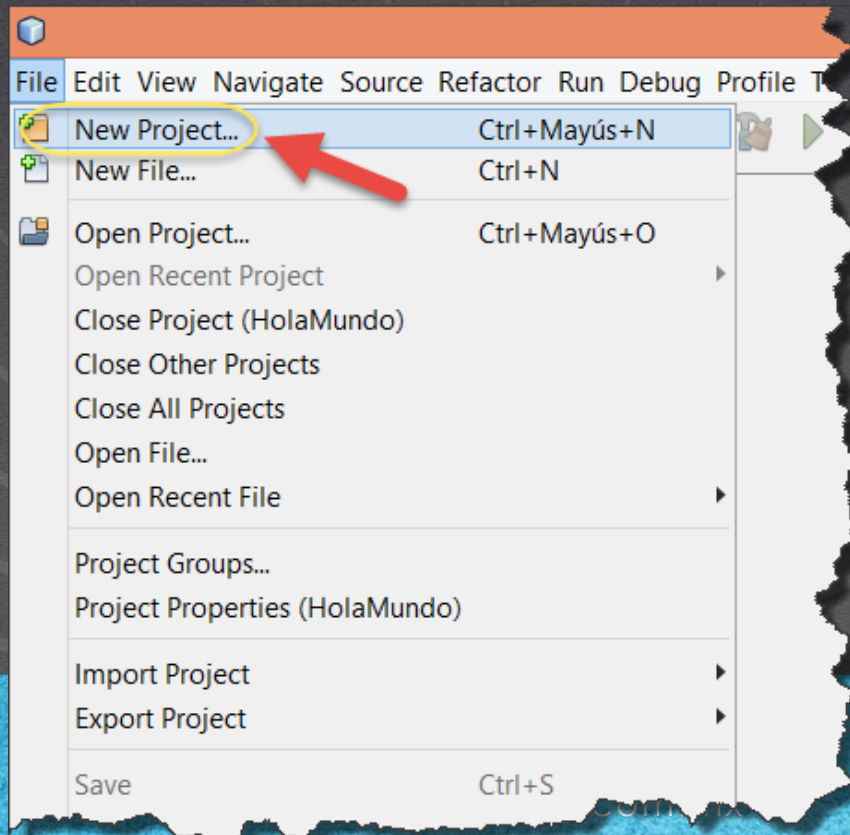
- Menu Bar:** File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help.
- Toolbar:** Includes icons for file operations, a configuration dropdown set to "<default config>", and execution buttons (run, debug, test).
- Navigator:** Shows a project structure with "ArithmeticExample" containing "Source Packages" (operations) and "Test Packages" (Libraries, Test Libraries). The "ArithmeticTest.java" file is selected under "operations".
- Source Editor:** Displays the code for "ArithmeticTest.java":

```
1 package operations;
2
3 public class ArithmeticTest {
4
5     public static void main(String args[]) {
6
7         //Creamos un objeto de la clase Aritmetica
8         Arithmetic a = new Arithmetic();
9
10        //Llamamos el metodo sumar y recibimos el valor devuelto
11        int result = a.add(5, 3);
12
13        System.out.println("Result:" + result);
14    }
15 }
```
- Output Console:** Shows the execution results for "ArithmeticExample (run)":

```
run:
Result:8
BUILD SUCCESSFUL (total time: 0 seconds)
```

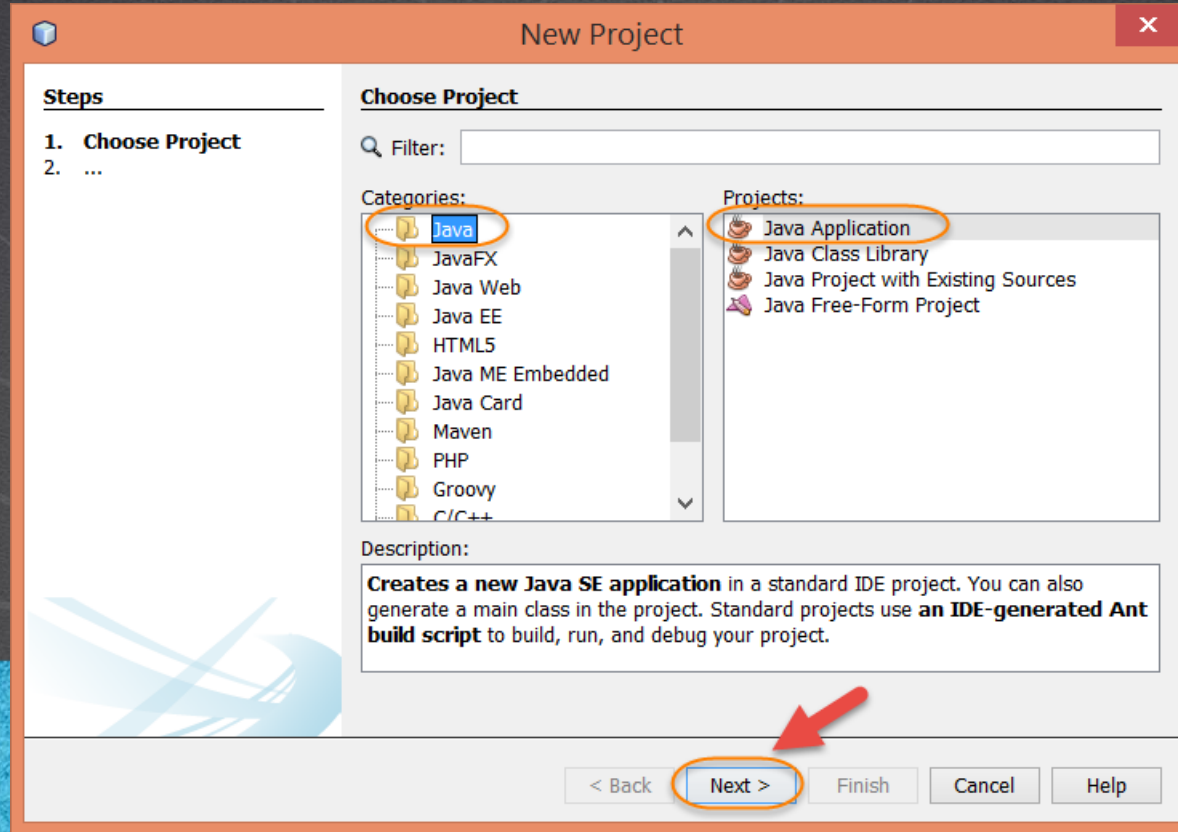

1. CREATE A NEW PROJECT

We are going to create the Arithmetic project:



1. CREATE A NEW PROJECT (CONT)

Select Java -> Java Application:



1. CREATE A NEW PROJECT (CONT)

We are going to create the Arithmetic 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

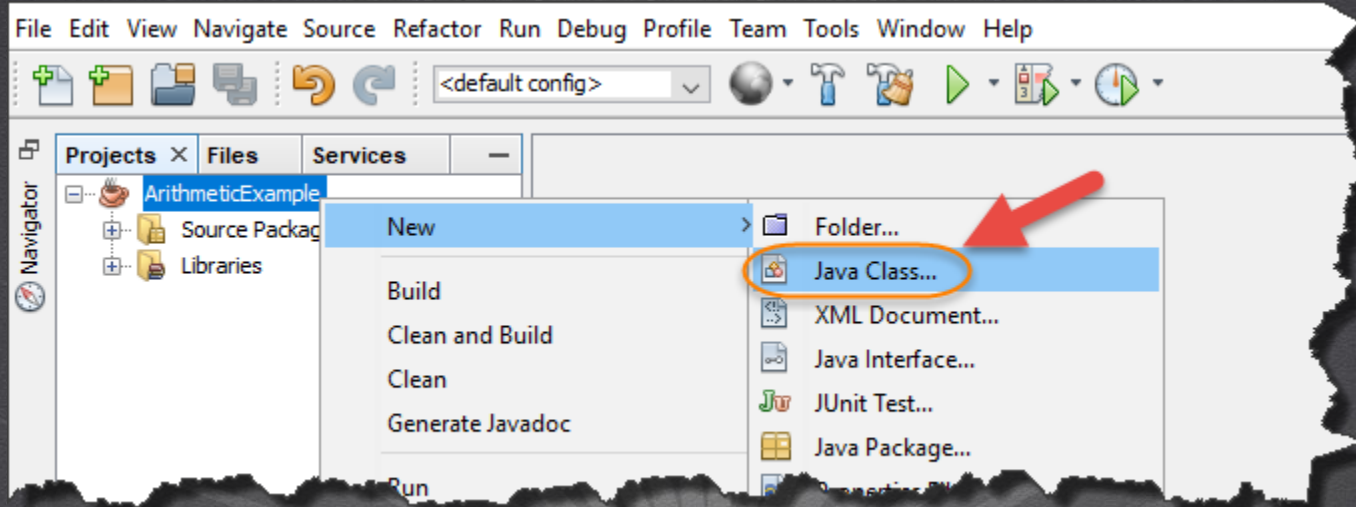
Libraries Folder:

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

☐ Create Main Class

2. ARITHMETIC CLASS CREATION

We create the Arithmetic class :



2. ARITHMETIC CLASS CREATION

We create the Arithmetic class:

New Java Class

Steps

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

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

< Back Next > **Finish** Cancel Help

3. MODIFY THE CODE

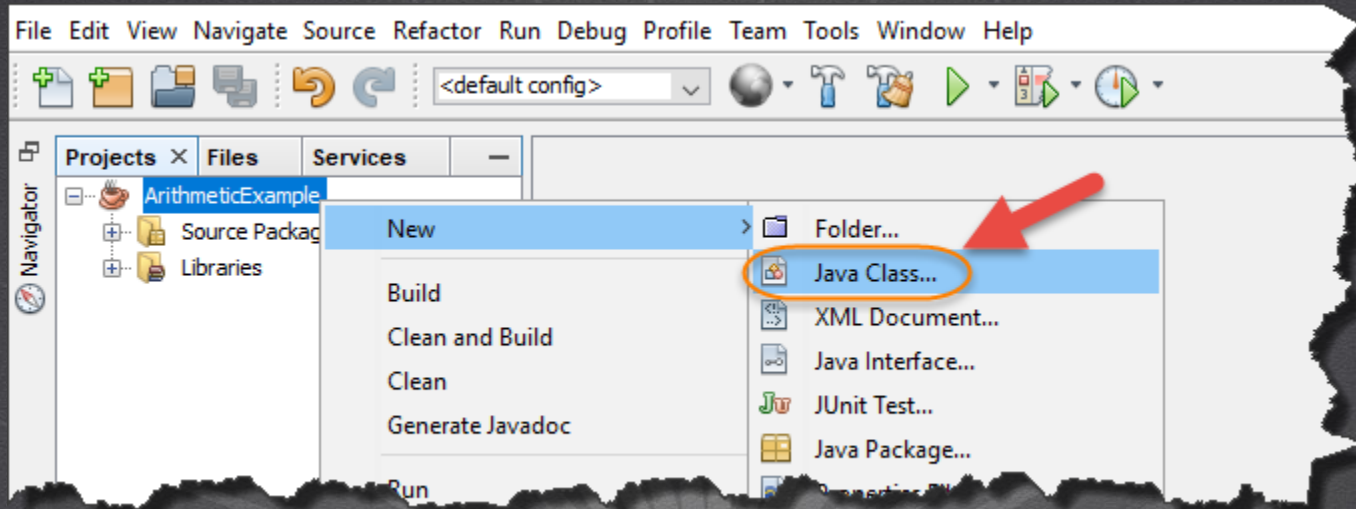
Arithmetic.java:

```
package operations;

public class Arithmetic {
    //add operation
    int add(int a, int b) {
        return a + b;
    }
}
```


4. CREATION TEST CLASS

Create the ArithmeticTest class :



4. CREATION TEST CLASS (CONT)

Create the ArithmeticTest class :

New Java Class

Steps

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

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

< Back Next > **Finish** Cancel Help

5. MODIFY THE CODE

ArithmeticTest.java:

```
package operations;

public class ArithmeticTest {

    public static void main(String args[]){

        //We create an object of the Arithmetic class
        Arithmetic a = new Arithmetic();

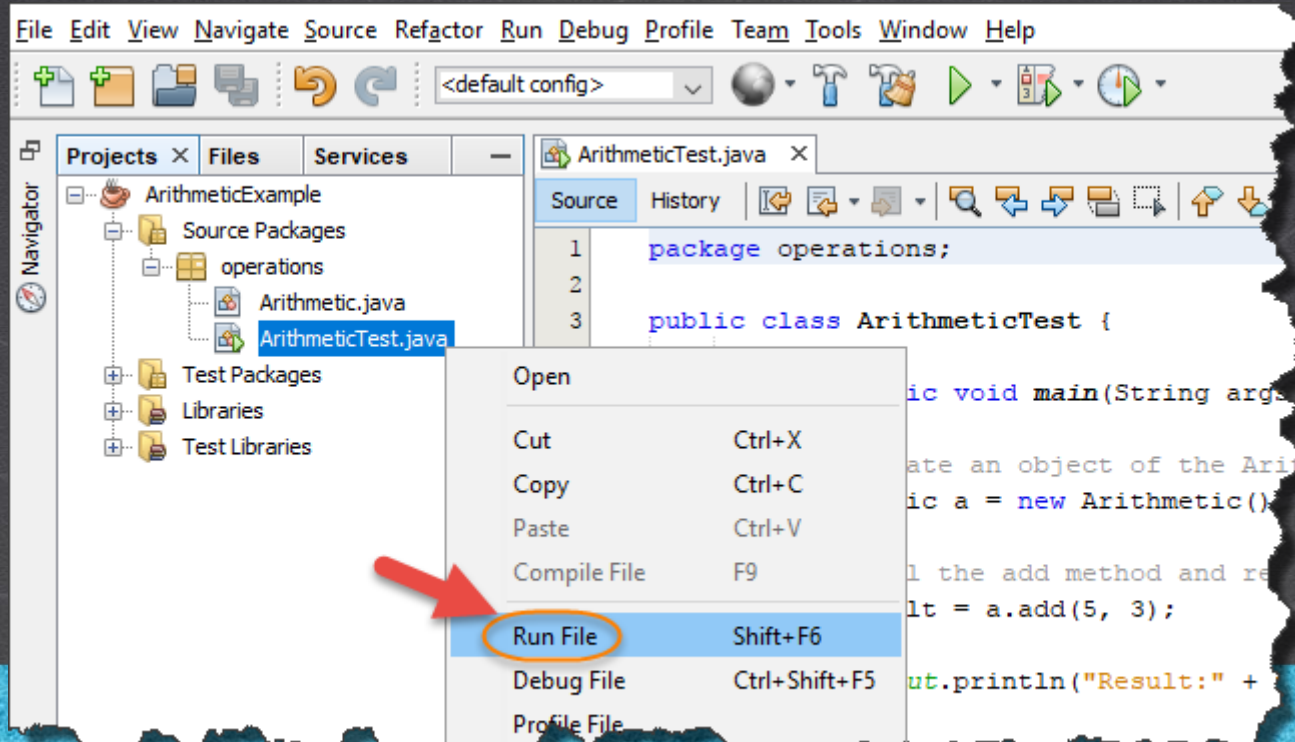
        //We call the add method and receive the returned value
        int result = a.add(5, 3);

        System.out.println("Result:" + result);

    }
}
```

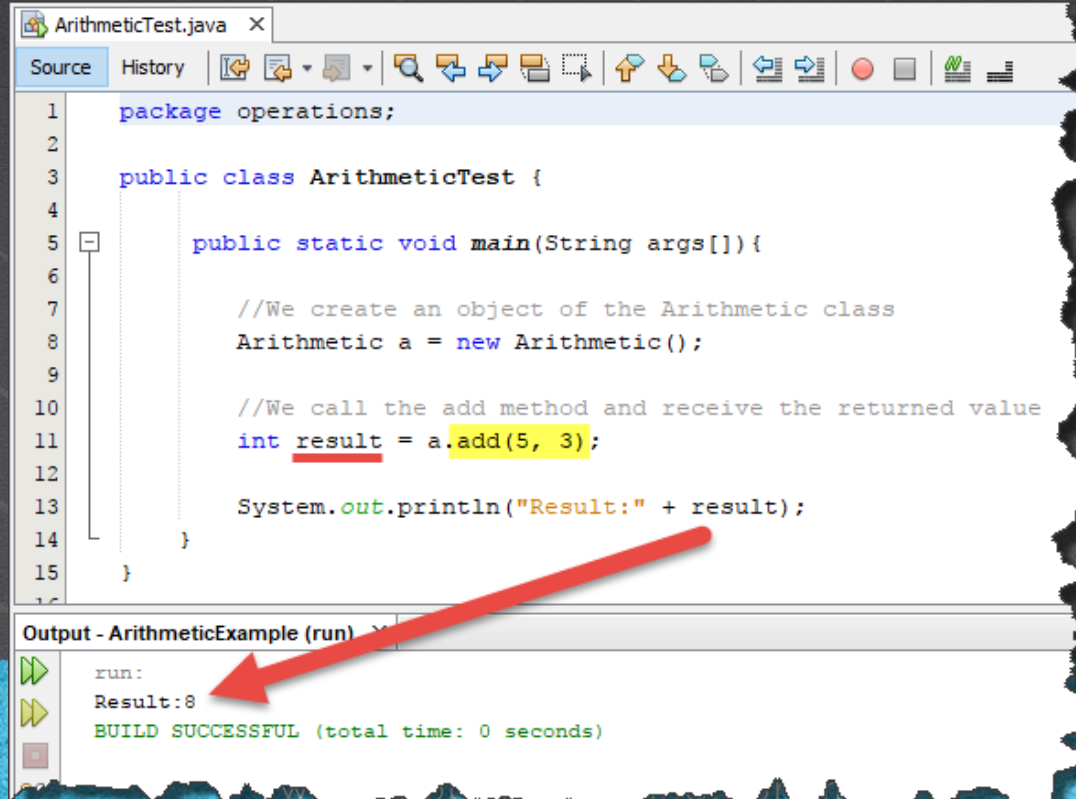

6. EXECUTE THE PROJECT

Right click over the test class and select Run:



6. EXECUTE THE PROJECT

The result is as follows:



```
ArithmeticTest.java x
Source History
1 package operations;
2
3 public class ArithmeticTest {
4
5     public static void main(String args[]){
6
7         //We create an object of the Arithmetic class
8         Arithmetic a = new Arithmetic();
9
10        //We call the add method and receive the returned value
11        int result = a.add(5, 3);
12
13        System.out.println("Result:" + result);
14    }
15 }

Output - ArithmeticExample (run) x
run:
Result:8
BUILD SUCCESSFUL (total time: 0 seconds)
```


EXERCISE CONCLUSION

- With this exercise we have put into practice the concept of methods in Java.
- As we observe a method has a name, it can receive input arguments, and it has a return value. This is a simple method but it allows us to put into practice the handling of methods, little by little we will be adding more complex methods.

ONLINE COURSE

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