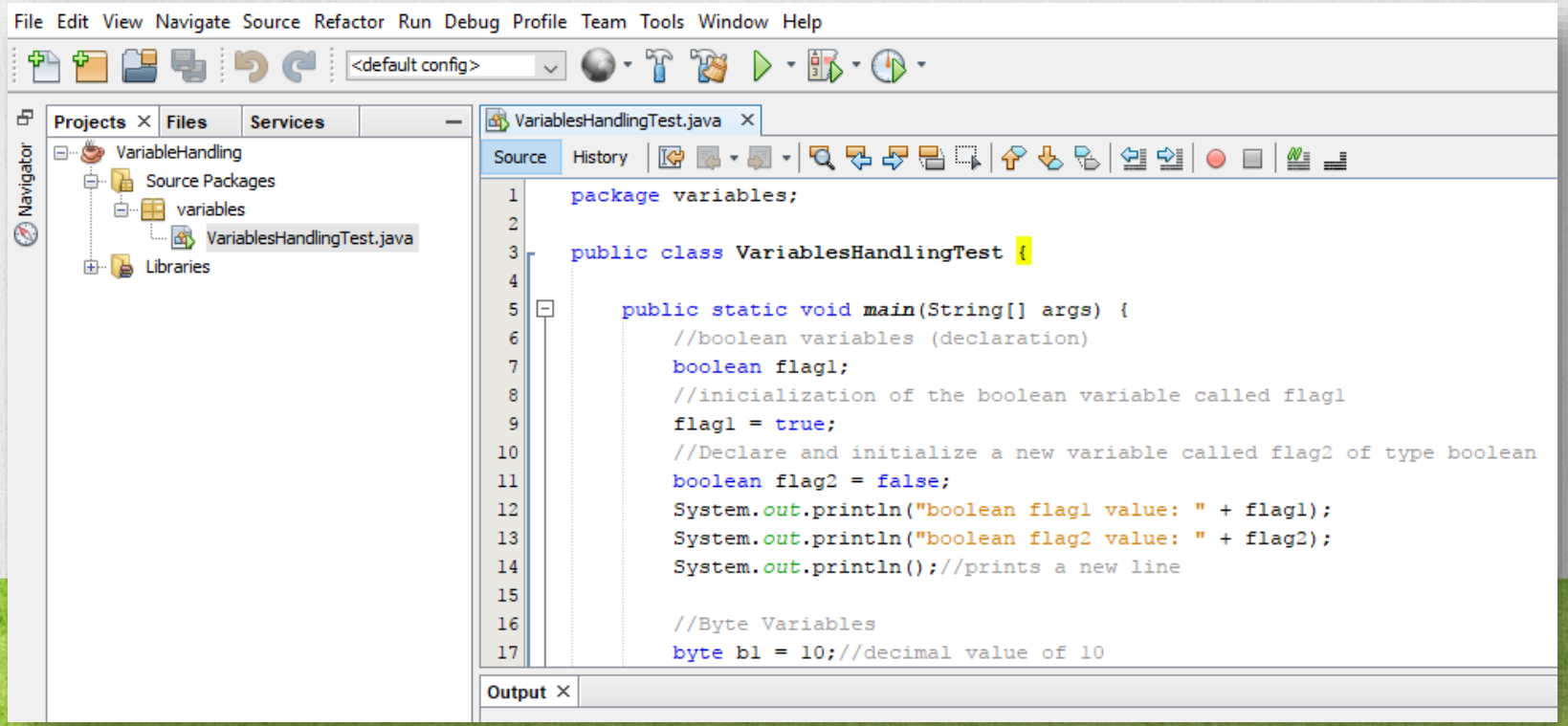
JAVA FUNDAMENTALS COURSE

EXERCISE

VARIABLES HANDLING

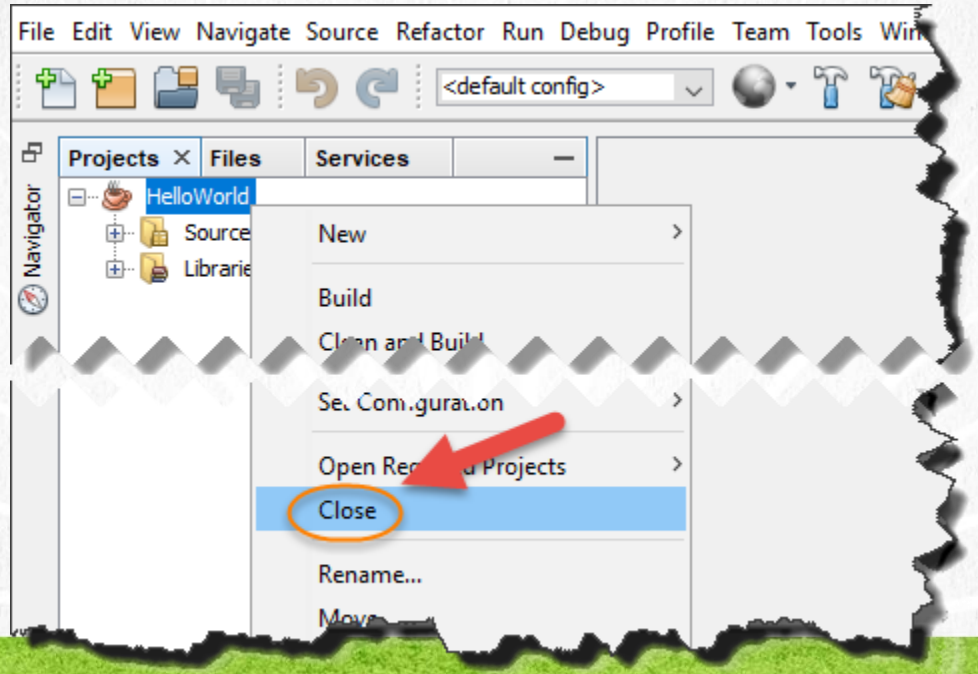
EXERCISE OBJETIVE

Create a program to practice creating variables in Java. In the end we should observe the following:



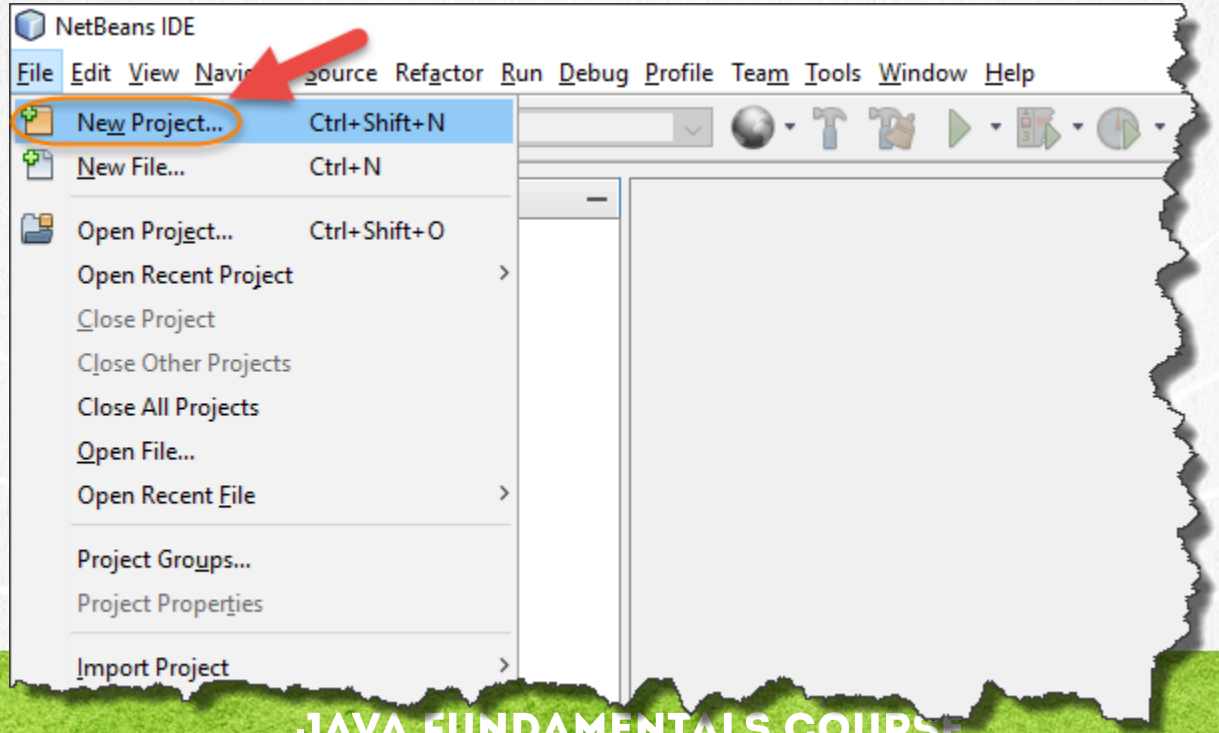
CLOSE ANY OTHER PROJECT

We close any project that is open:



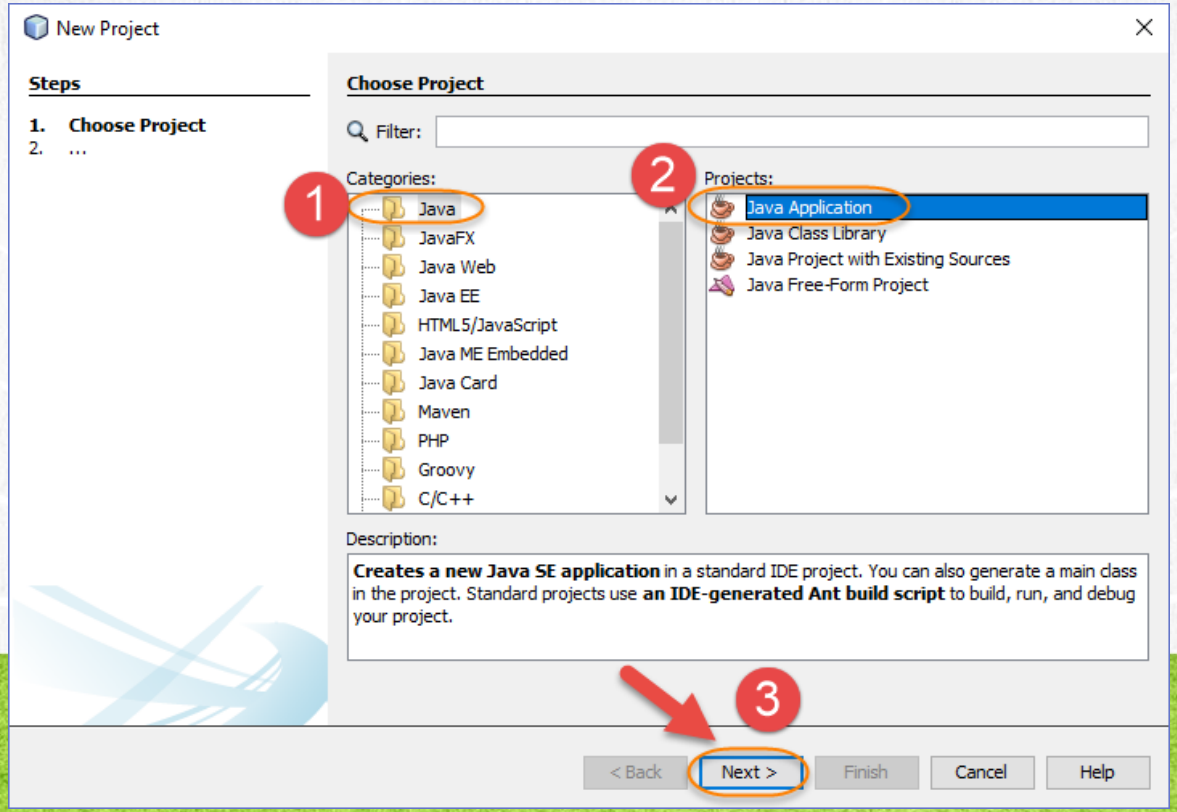
1. CREATE A NEW PROJECT

We create a new project VariableHandling:



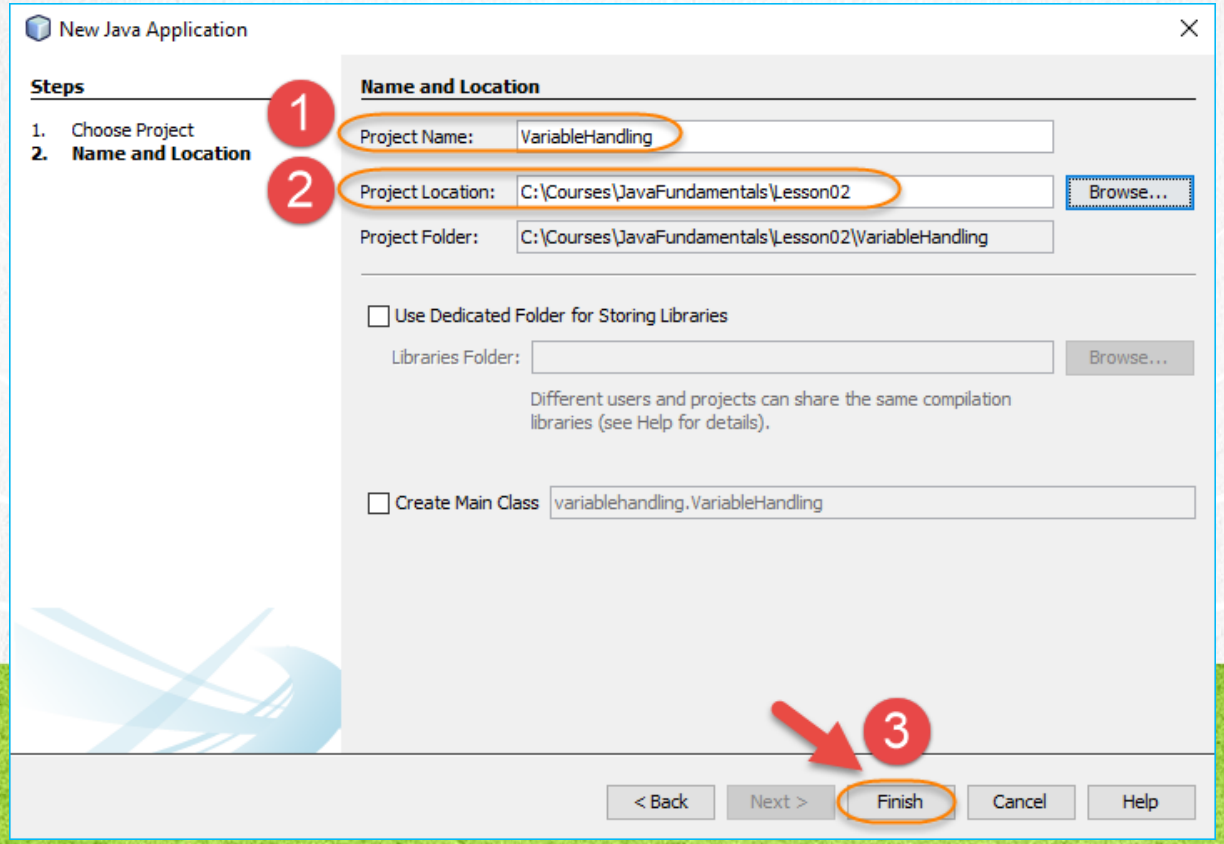
1. CREATE A NEW PROJECT

We select the Java category and a Java Application:



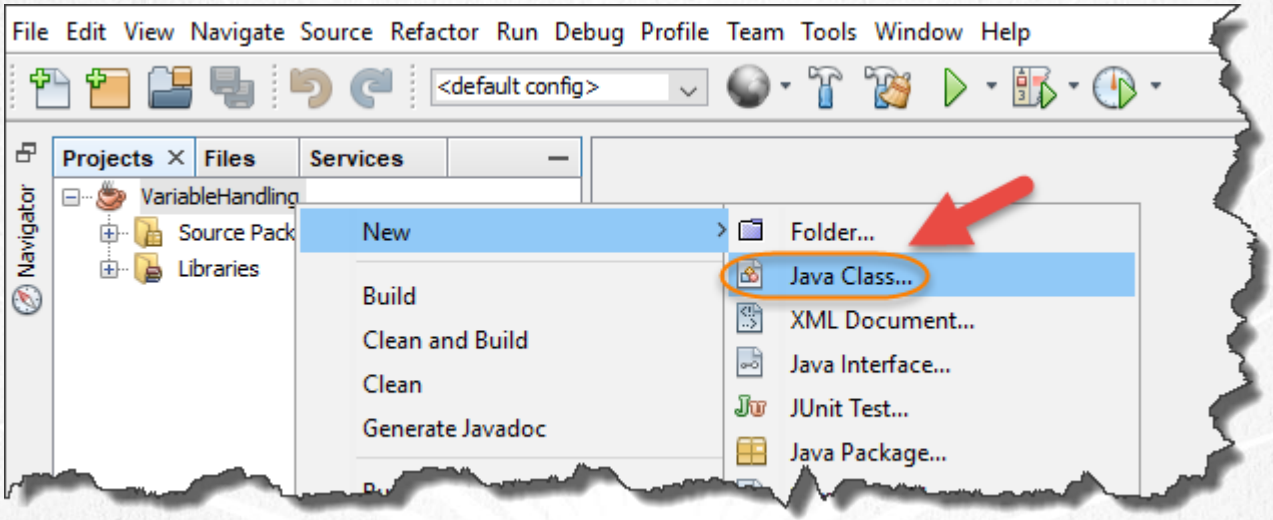
1. CREATE A NEW PROJECT (CONT)

We assign a name and a path for our new project as show below:



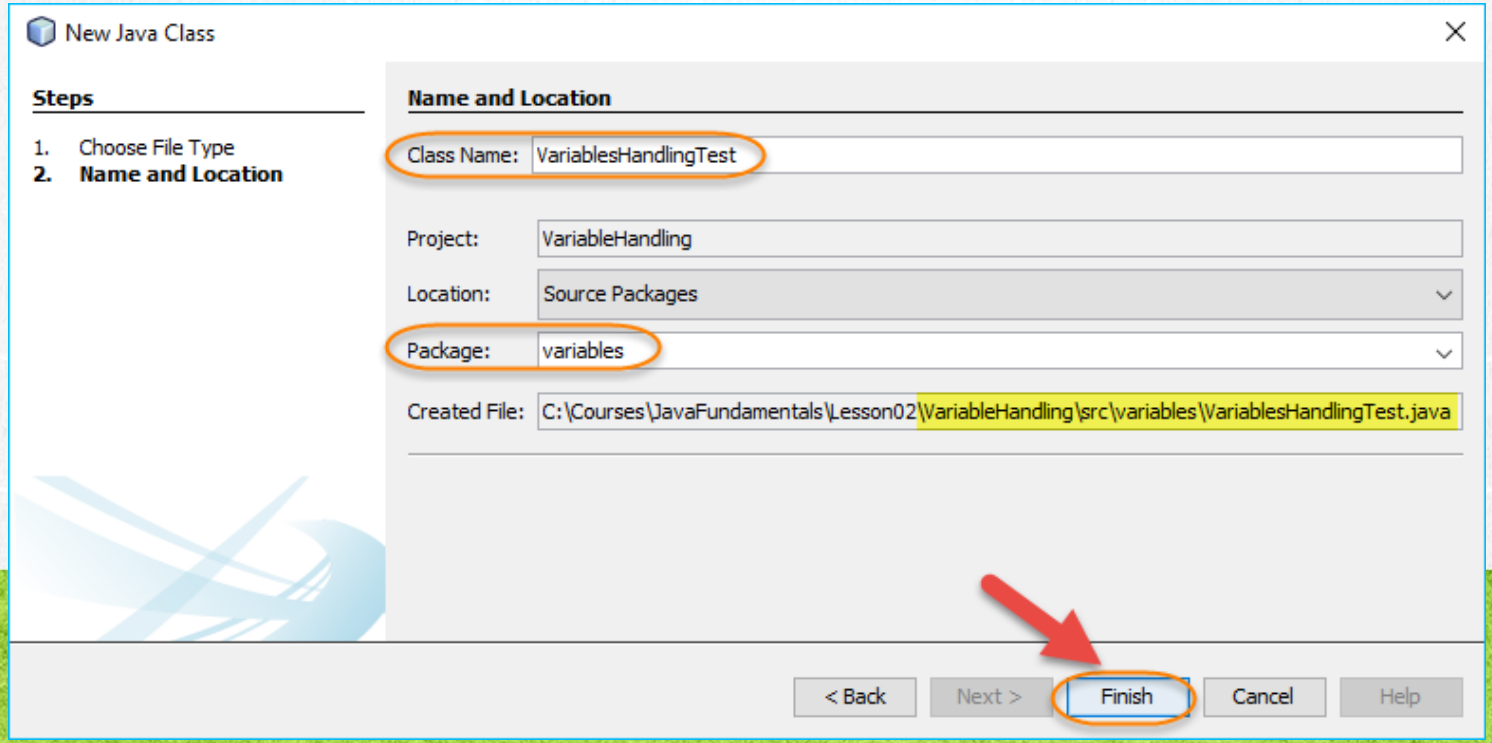
2. CREATE A JAVA CLASS

We will create a new Java class:



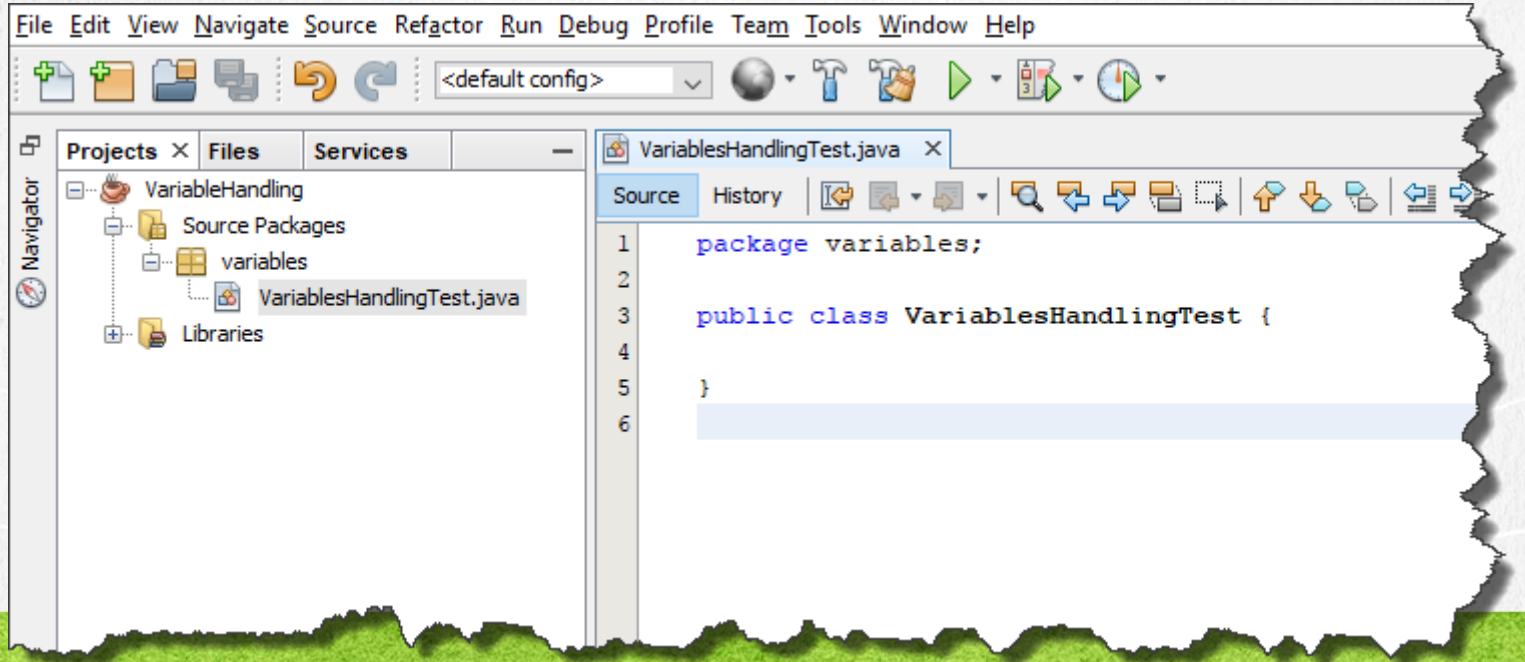
2. CREATE A JAVA CLASS (CONT)

We assign the name VariablesHandlingTest to our new class, and assign to a new package named variables. Remember that a package is like a folder. We will cover the topic of packages later in the course. Click on finish:



2. CREATE A JAVA CLASS (CONT)

This is the result of the created class. We are going to modify this class with the following code:



3. MODIFY THE CODE

File VariablesHandlingTest.java:

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```
package variables;

public class VariablesHandlingTest {

    public static void main(String[] args) {
        //boolean variables (declaration)
        boolean flag1;
        //inicialization of the boolean variable called flag1
        flag1 = true;
        //Declare and initialize a new variable called flag2 of type boolean
        boolean flag2 = false;
        System.out.println("boolean flag1 value: " + flag1);
        System.out.println("boolean flag2 value: " + flag2);
        System.out.println();//prints a new line

        //Byte Variables
        byte b1 = 10;//decimal value of 10
        //Literal en hexadecimal starts with 0x
        byte b2 = 0xa;//0xa is hexadecimal, equals to 10 in decimal
        System.out.println("byte1 value:" + b1);
        System.out.println("byte2 value:" + b2);
        System.out.println("");//prints a new line too
```

3. MODIFY THE CODE

File VariablesHandlingTest.java:

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```
//Short Variables
short s1 = 2;
System.out.println("short value:" + s1);
System.out.println("");//prints a new line

//char Variable, declaration and inicializacion in one line of code
//The first declaration is in UNICODE
//http://www.icursos.net/referencias/TablaUnicode.html
char ch1 = 65, ch2 = 'A';
System.out.println("char1 value:" + ch1);//prints A (unicode value of 65)
System.out.println("char2 value:" + ch2);//prints A
System.out.println("");

//int Variables
int decimal = 100;
int octal = 0144;//An octal value starts with 0
int hexa = 0x64;//An hexadecimal value starts with 0x or OX
System.out.println("int decimal value:" + decimal);//printls 100
System.out.println("int octal value:" + octal);//prints 100 too
System.out.println("int hexadecimal value:" + hexa);//prints 100 too
System.out.println();
```

3. MODIFY THE CODE

File VariablesHandlingTest.java:

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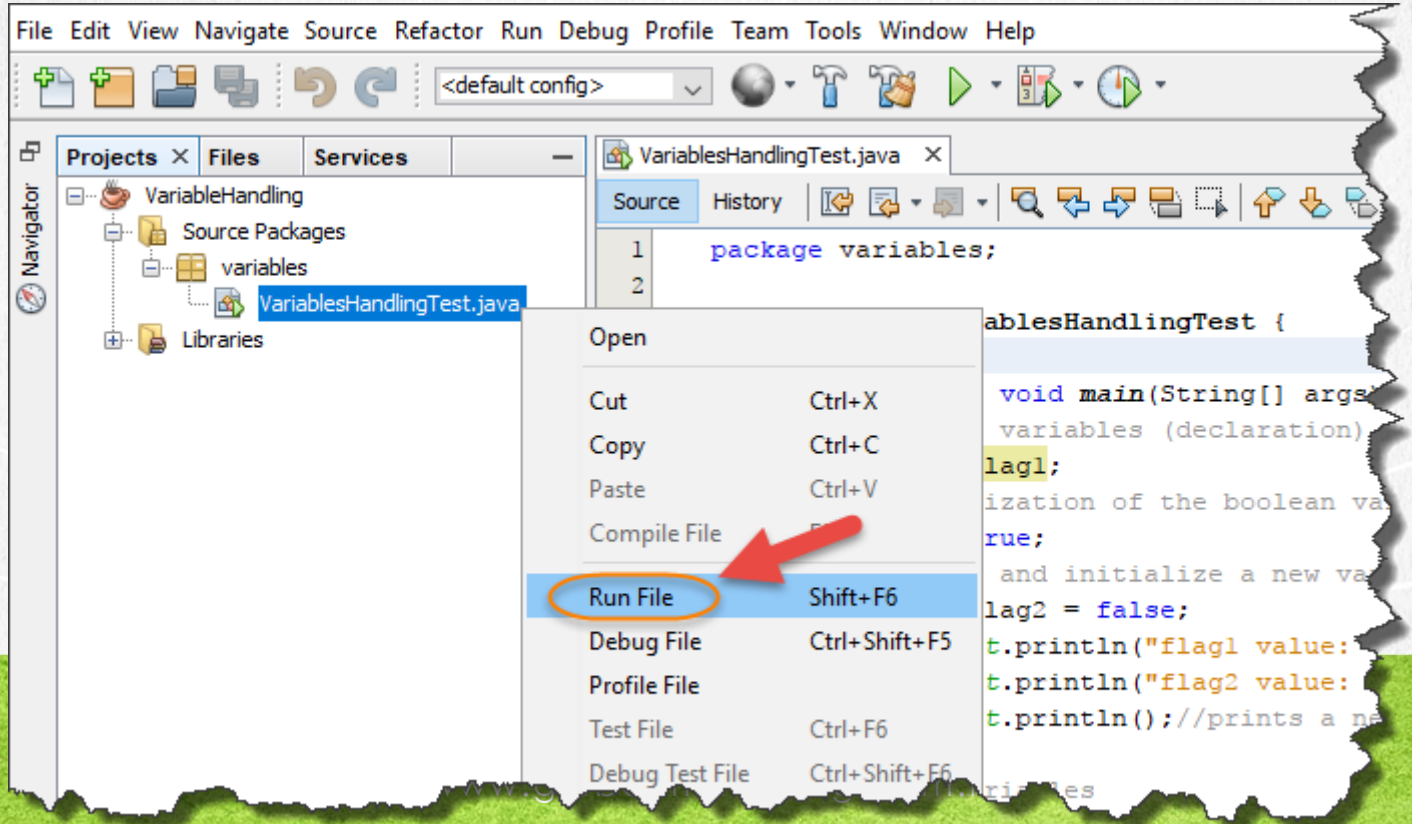
```
        //long variables
        long long1 = 10;//by default a literal is of type int
        long long2 = 20L;//with the sufix l or L the literal is converted to long
        System.out.println("long1 value:" + long1);
        System.out.println("long2 value:" + long2);
        System.out.println();

        //Variables float
        float f1 = 15;//by default a float literal is of type double
        float f2 = 22.3F;//with the sufix f or F the literal is converted to float
        System.out.println("float1 value:" + f1);
        System.out.println("float2 value:" + f2);
        System.out.println();

        //double Variables
        double d1 = 11.0;//by default a float literal is of type double
        double d2 = 30.15D;//with the sufix D, converts a literal to double
        System.out.println("double1 value:" + d1);
        System.out.println("double2 value:" + d2);
        System.out.println();
    }
}
```

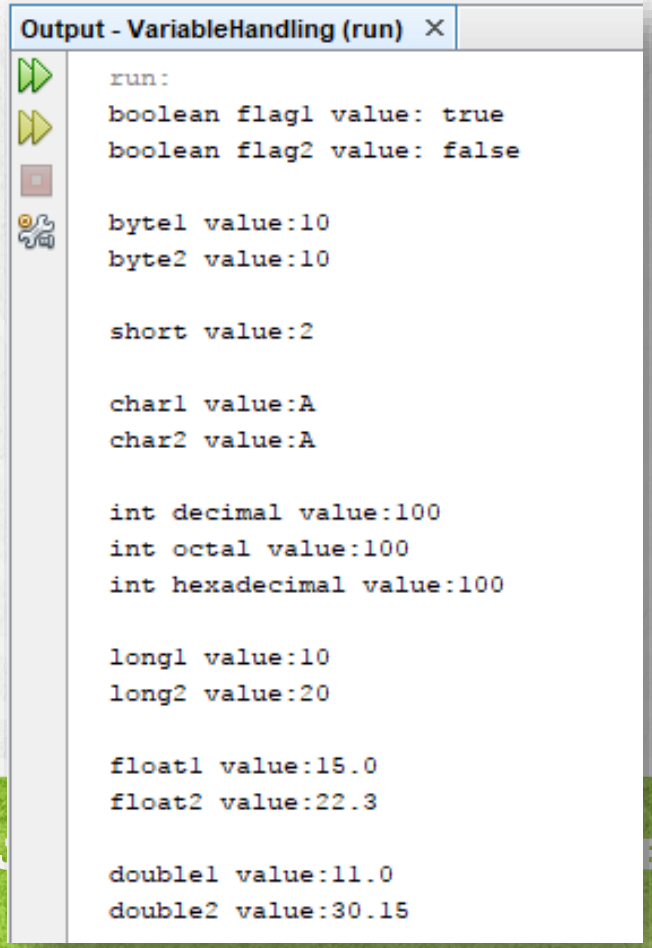
4. EXECUTE THE PROJECT

We execute our project. We give right click -> Run:



4. EXECUTE THE PROJECT (CONT)

The result is:



EXTRA TASKS OF THE EXERCISE

- Try creating more variables and verify the result.

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CONCLUSION OF THE EXERCISE

- With this exercise we have put into practice the creation of variables, which are the basis for storing information temporarily of our program.
- For more information on the topic of variables in Java, as well as their data types, see:
- http://docs.oracle.com/javase/tutorial/java/nutsandbolts/variables.html
- http://docs.oracle.com/javase/tutorial/java/nutsandbolts/datatypes.html

ONLINE COURSE

JAVA FUNDAMENTALS

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