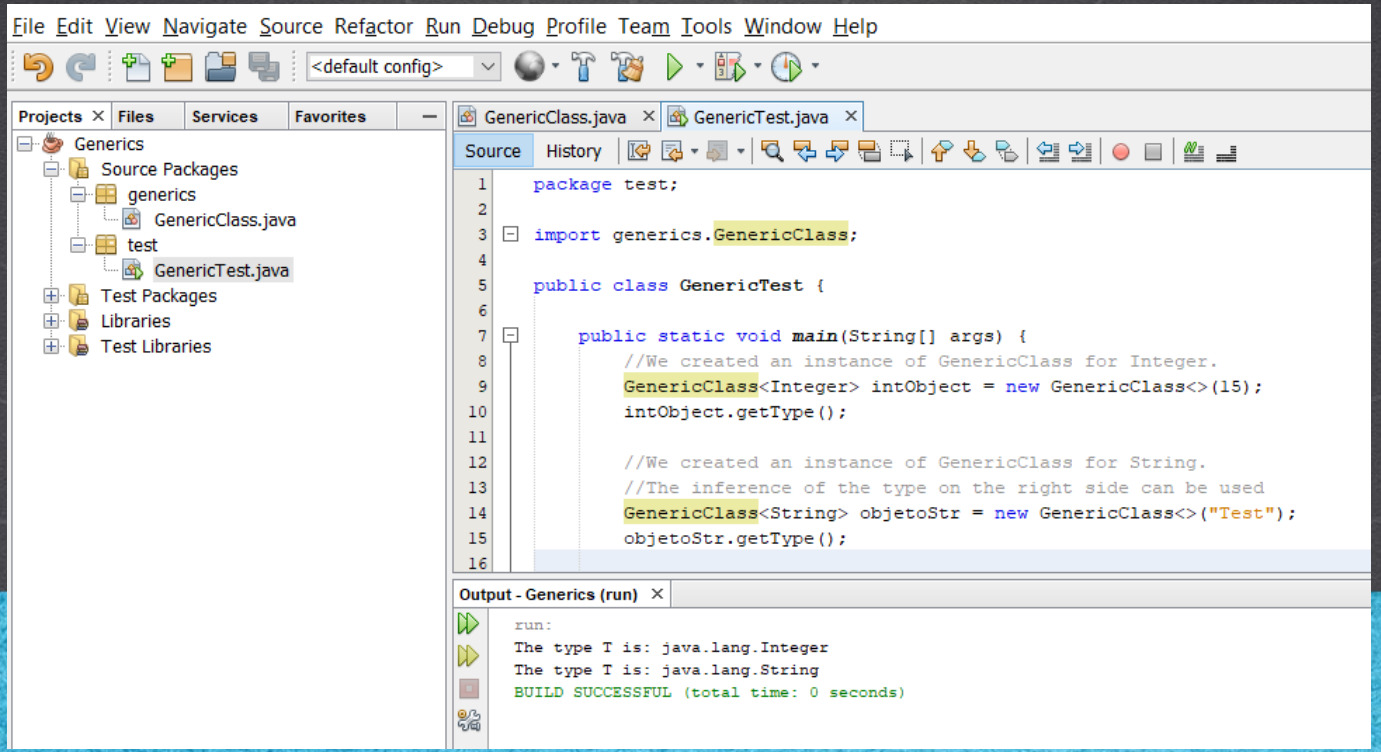
EXERCISE

GENERICS IN JAVA

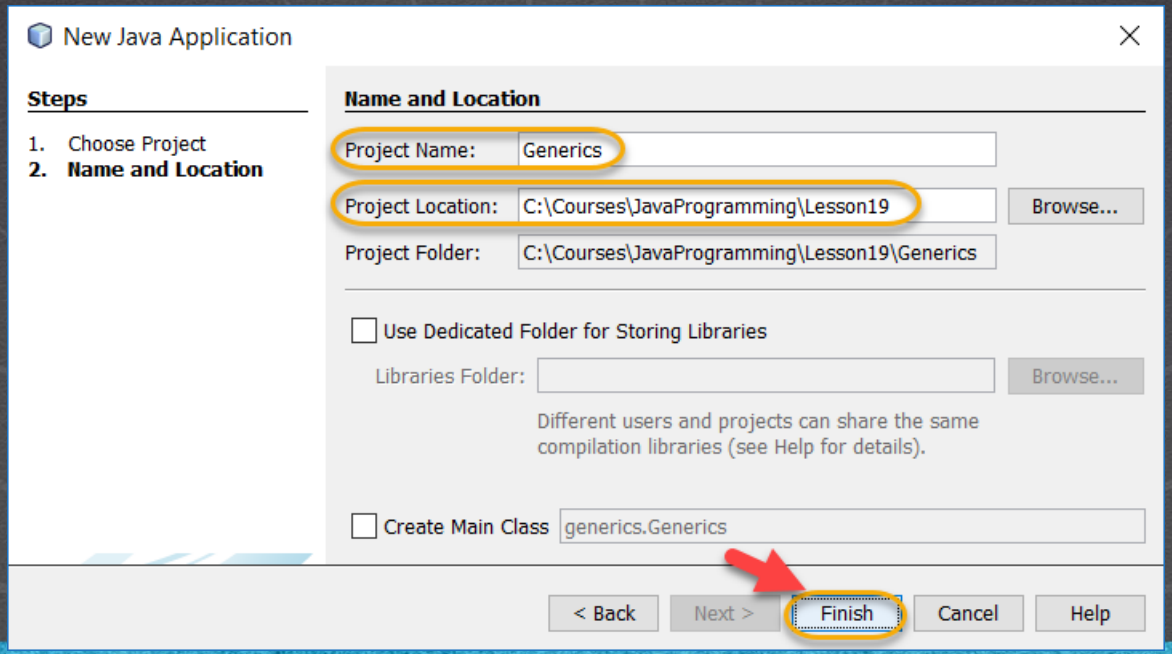
EXERCISE OBJECTIVE

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



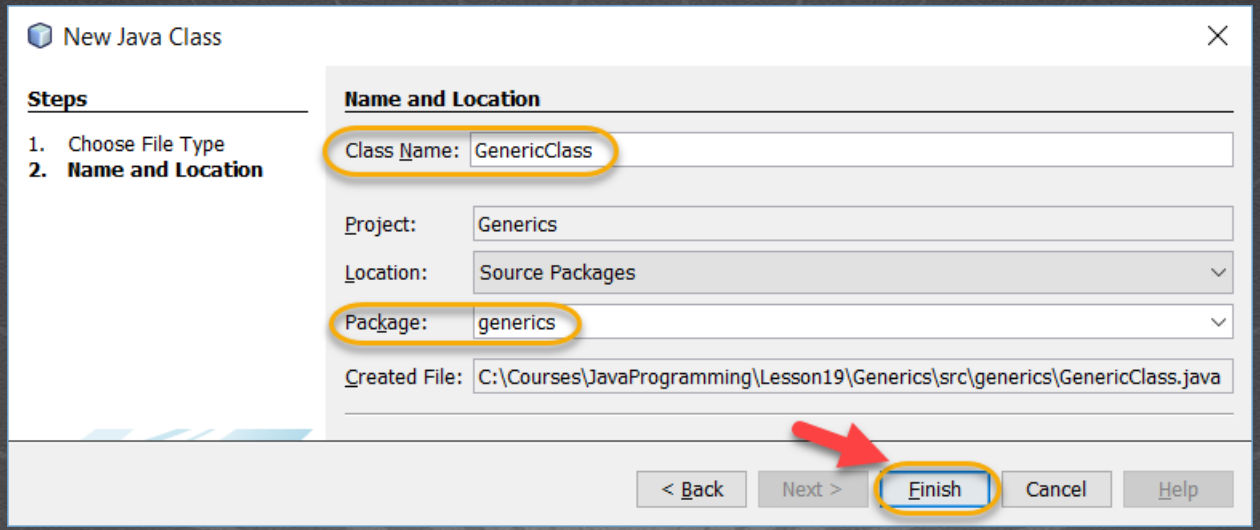
1. CREATE A NEW PROJECT

Create a new project:



2. CREATE A NEW CLASS

Create a new class:



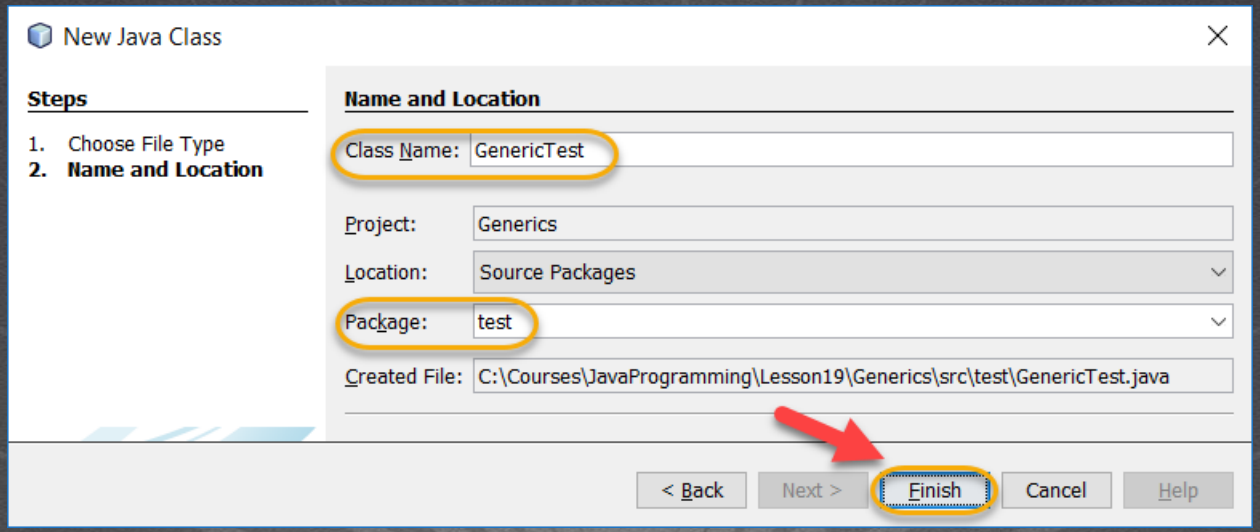
3. MODIFY THE CODE

GenericsClass.java:

```
package generics;

//We define a generic class with the diamond operator <>
public class GenericClass<T>{

    //We define a variable of generic type
    T object;

    //Constructor that initializes the type to be used
    public GenericClass(T object) {
        this.object = object;
    }

    public void getType() {
        System.out.println("The type T is: " + object.getClass().getName());
    }
}
```

4. CREATE A NEW CLASS

Create a new class:



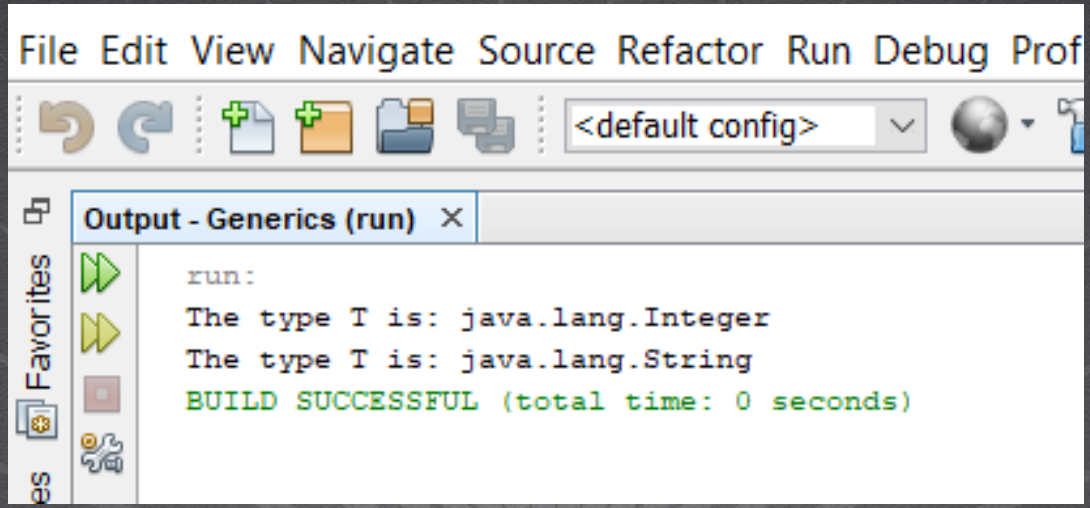
5. MODIFY THE CODE

GenericTest.java:

```
package test;

import generics.GenericClass;

public class GenericTest {

    public static void main(String[] args) {
        //We created an instance of GenericClass for Integer.
        GenericClass<Integer> intObject = new GenericClass<>(15);
        intObject.getType();

        //We created an instance of GenericClass for String.
        //The inference of the type on the right side can be used
        GenericClass<String> objetoStr = new GenericClass<>("Test");
        objetoStr.getType();

        //Generics can not be applied to primitive types
        //So this would mark a compilation error
        //GenericClass<int> intPrimitivo = new GenericClass<>(88);
    }
}
```

6. EXECUTE THE PROJECT

The result is as follow:



EXERCISE CONCLUSION

- With this exercise we have put into practice the basic management of generic types in Java.

- For more information consult:
- https://docs.oracle.com/javase/tutorial/java/generics/index.html

ONLINE COURSE

JAVA PROGRAMMING

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