

JAVA FUNDAMENTALS COURSE

ARRAYS OF ONE DIMENSION IN JAVA

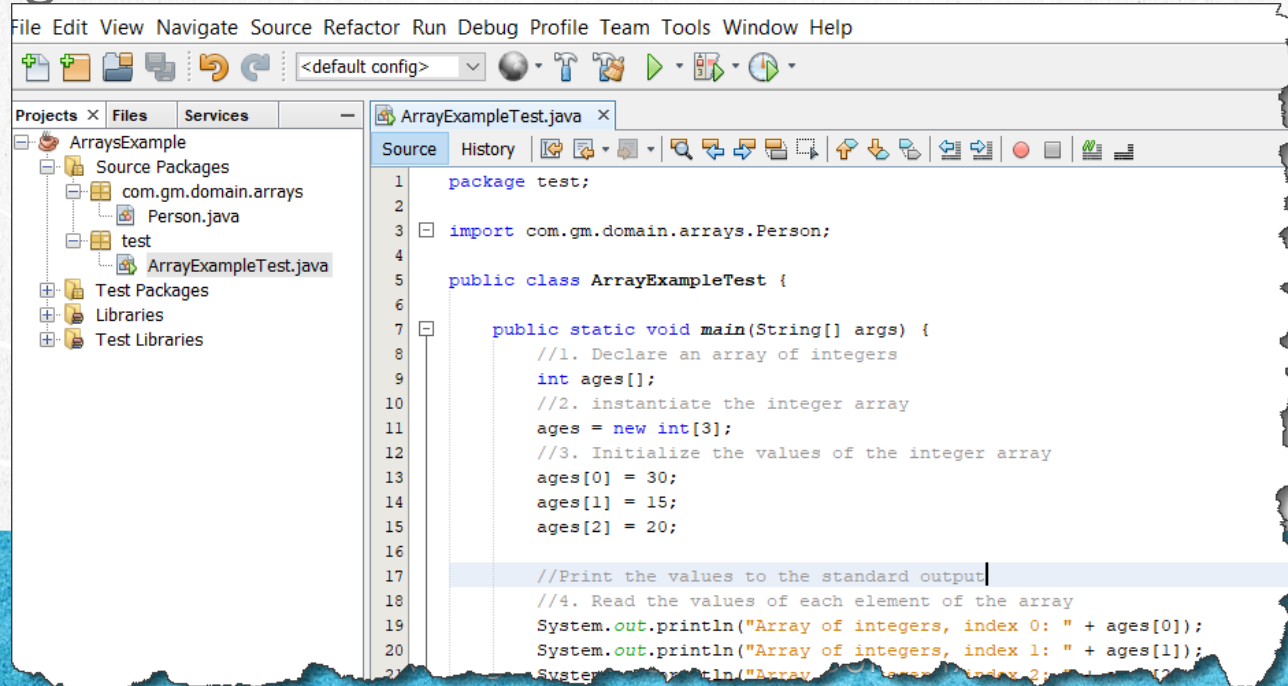


By the expert: Ubaldo Acosta



EXERCISE OBJECTIVE

Put into practice the concept of One-dimensional Arrangements in Java. At the end we should observe the following:



```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default config>
Projects x Files Services
ArraysExample
  Source Packages
    com.gm.domain.arrays
      Person.java
    test
      ArrayExampleTest.java
  Test Packages
  Libraries
  Test Libraries
Source History
1 package test;
2
3 import com.gm.domain.arrays.Person;
4
5 public class ArrayExampleTest {
6
7     public static void main(String[] args) {
8         //1. Declare an array of integers
9         int ages[];
10        //2. instantiate the integer array
11        ages = new int[3];
12        //3. Initialize the values of the integer array
13        ages[0] = 30;
14        ages[1] = 15;
15        ages[2] = 20;
16
17        //Print the values to the standard output
18        //4. Read the values of each element of the array
19        System.out.println("Array of integers, index 0: " + ages[0]);
20        System.out.println("Array of integers, index 1: " + ages[1]);
21        System.out.println("Array of integers, index 2: " + ages[2]);
22    }
```


1. CREATE A PROJECT

Create a new 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).

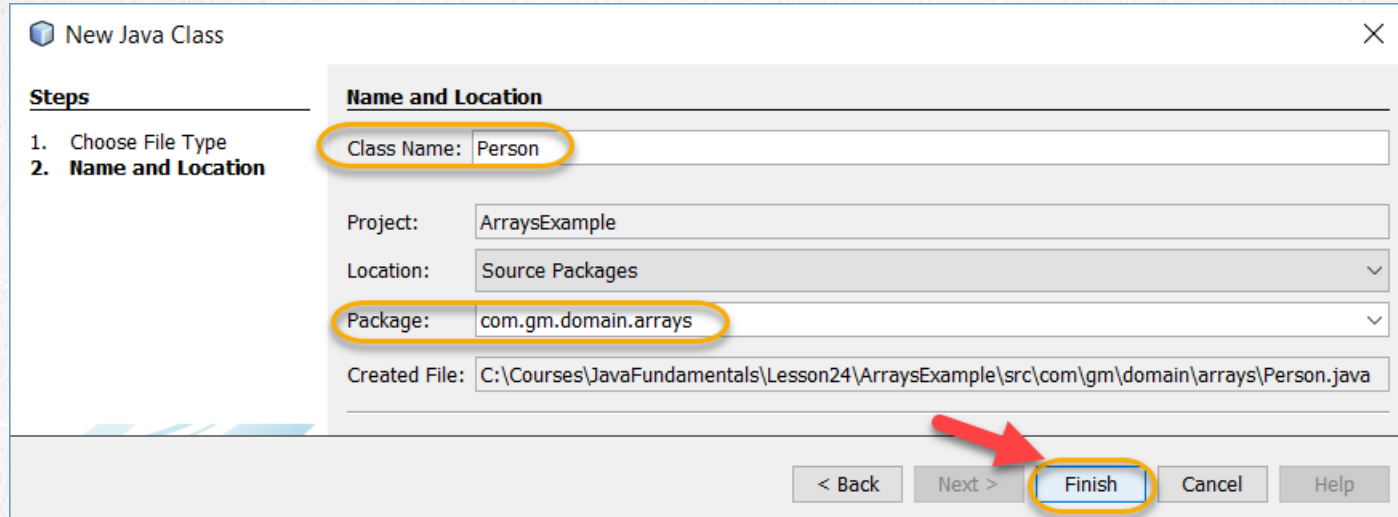
☐ Create Main Class

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2. CREATE A NEW CLASS

Create a new 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

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3. MODIFY THE CODE

Person.java:

```
package com.gm.domain.arrays;

public class Person {

    private String name;

    public Person(String name) {
        this.name = name;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    @Override
    public String toString() {
        return "Person{" + "name=" + getName() + '}';
    }
}
```


4. CREATE A NEW CLASS

Create a new 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

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5. MODIFY THE CODE

ArrayExampleTest.java:

```
package test;

import com.gm.domain.arrays.Person;

public class ArrayExampleTest {

    public static void main(String[] args) {
        //1. Declare an array of integers
        int ages[];
        //2. instantiate the integer array
        ages = new int[3];
        //3. Initialize the values of the integer array
        ages[0] = 30;
        ages[1] = 15;
        ages[2] = 20;

        //Print the values to the standard output
        //4. Read the values of each element of the array
        System.out.println("Array of integers, index 0: " + ages[0]);
        System.out.println("Array of integers, index 1: " + ages[1]);
        System.out.println("Array of integers, index 2: " + ages[2]);
    }
}
```

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5. MODIFY THE CODE

ArrayExampleTest.java:

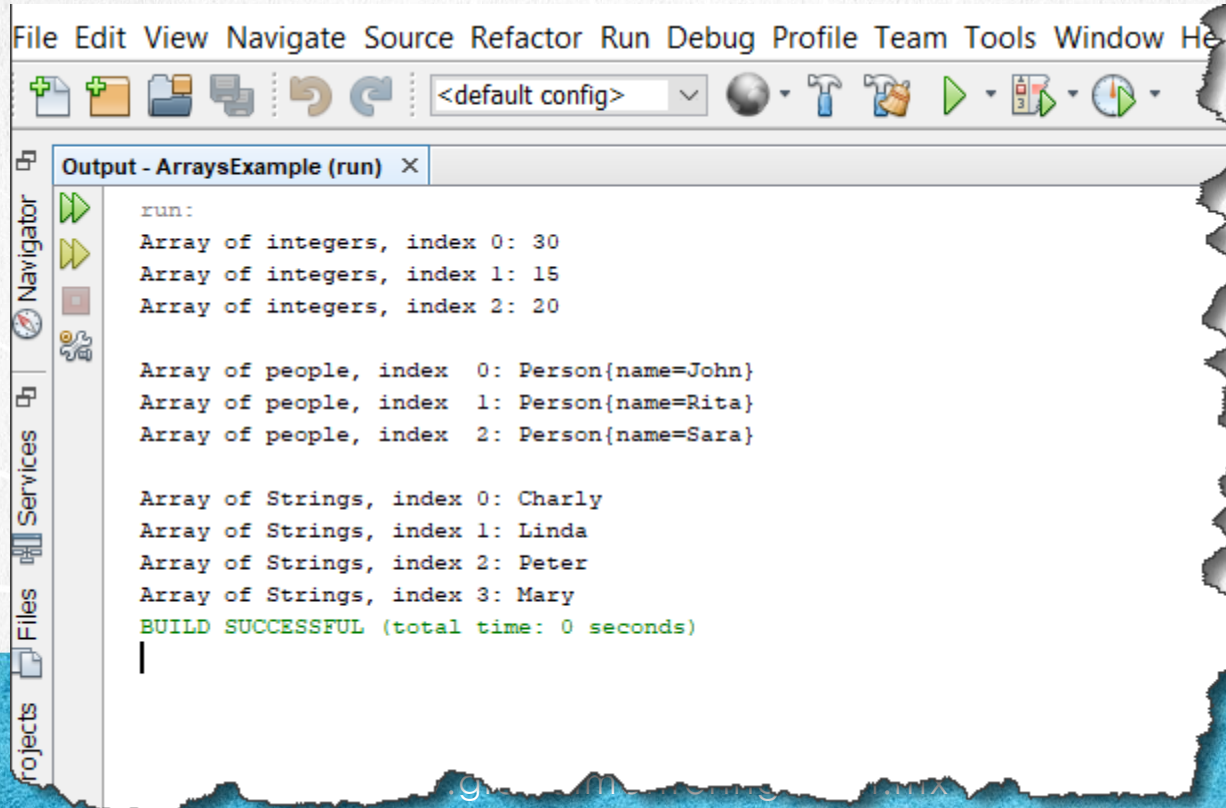
```
//1. Declare an array of Person type
Person people[];
//2. Instantiate the people array
people = new Person[4];
//3. Initialize the values of the people array
people[0] = new Person("John");
people[1] = new Person("Rita");
people[2] = new Person("Sara");

//Print the values to the standard output
//4. Read the values of each element of the array
System.out.println("");
System.out.println("Array of people, index 0: " + people[0]);
System.out.println("Array of people, index 1: " + people[1]);
System.out.println("Array of people, index 2: " + people[2]);

//1. String Array, simplified notation
String names[] = {"Charly", "Linda", "Peter", "Mary"};
//Print the values to the standard output
//2. Iterate the String array with a for loop
System.out.println("");
for (int i = 0; i < names.length; i++) {
    System.out.println("Array of Strings, index " + i + ": " + names[i]);
}
}
```


6. EXECUTE THE PROJECT

The result is as follows:



```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
+ + [Icons] <default config> [Icons] [Run] [Stop] [Refresh]
Output - ArraysExample (run) X
run:
Array of integers, index 0: 30
Array of integers, index 1: 15
Array of integers, index 2: 20

Array of people, index 0: Person{name=John}
Array of people, index 1: Person{name=Rita}
Array of people, index 2: Person{name=Sara}

Array of Strings, index 0: Charly
Array of Strings, index 1: Linda
Array of Strings, index 2: Peter
Array of Strings, index 3: Mary
BUILD SUCCESSFUL (total time: 0 seconds)
```

EXERCISE CONCLUSION

- With this exercise we have put into practice the concept of one-dimensional arrays in Java.
- We have seen how to declare, instantiate, initialize, assign and read data from an array.
- In addition we saw how to iterate through a loop for the elements of an array. In the next lesson we will see how we can work with two-dimensional arrays.

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JAVA

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