

JAVA PROGRAMMING COURSE

FOREACH IN JAVA



By the expert: Ubaldo Acosta

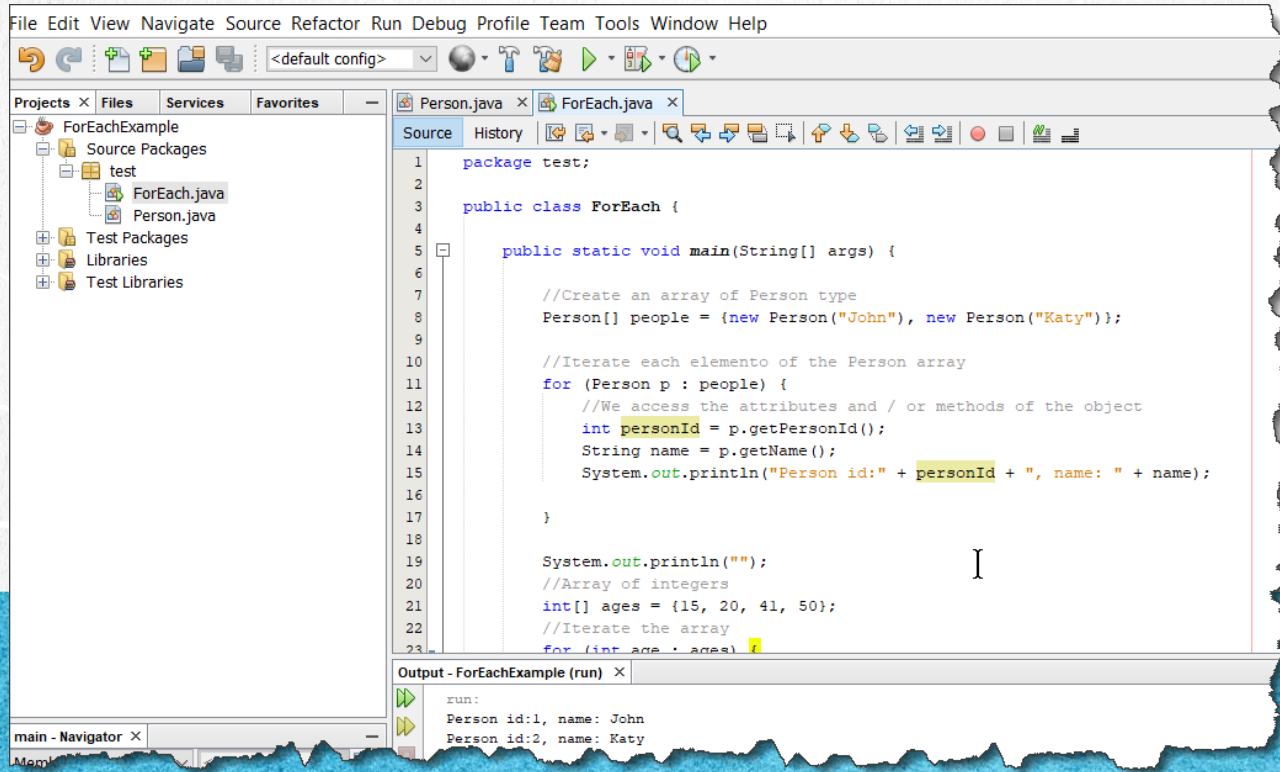


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EXERCISE OBJECTIVE

Put into practice the concept of ForEach in Java. 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 undo, redo, save, run, and other IDE functions.
- Project Explorer (Left):** Shows a project named 'ForEachExample' with a 'test' package containing 'ForEach.java' and 'Person.java'. There are also 'Test Packages', 'Libraries', and 'Test Libraries' listed.
- Source Editor (Center):** Displays the code for 'ForEach.java'. The code is as follows:

```
1 package test;
2
3 public class ForEach {
4
5     public static void main(String[] args) {
6
7         //Create an array of Person type
8         Person[] people = {new Person("John"), new Person("Katy")};
9
10        //Iterate each element of the Person array
11        for (Person p : people) {
12            //We access the attributes and / or methods of the object
13            int personId = p.getPersonId();
14            String name = p.getName();
15            System.out.println("Person id:" + personId + ", name: " + name);
16        }
17
18        System.out.println("");
19        //Array of integers
20        int[] ages = {15, 20, 41, 50};
21        //Iterate the array
22        for (int age : ages) {
```
- Output Console (Bottom):** Shows the output of the program:

```
run:
Person id:1, name: John
Person id:2, name: Katy
```


1. CREATE A NEW PROJECT

Create a new Project:

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name: ForEachExample

Project Location: C:\Courses\JavaProgramming\Lesson06 Browse...

Project Folder: C:\Courses\JavaProgramming\Lesson06\ForEachExample

☐ Use Dedicated Folder for Storing Libraries

Libraries Folder: Browse...

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

☒ Create Main Class foreachexample.ForEachExample

< Back Next > **Finish** Cancel Help

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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 test;

public class Person {

    private final int personId;
    private String name;
    private static int peopleCounter;

    Person(String name){
        personId = ++peopleCounter;
        this.name = name;
    }

    public String getName() {
        return name;
    }

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

    public int getPersonId(){
        return this.personId;
    }
}
```


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

ForEach.java:

```
package test;

public class ForEach {

    public static void main(String[] args) {

        //Create an array of Person type
        Person[] people = {new Person("John"), new Person("Katy")};

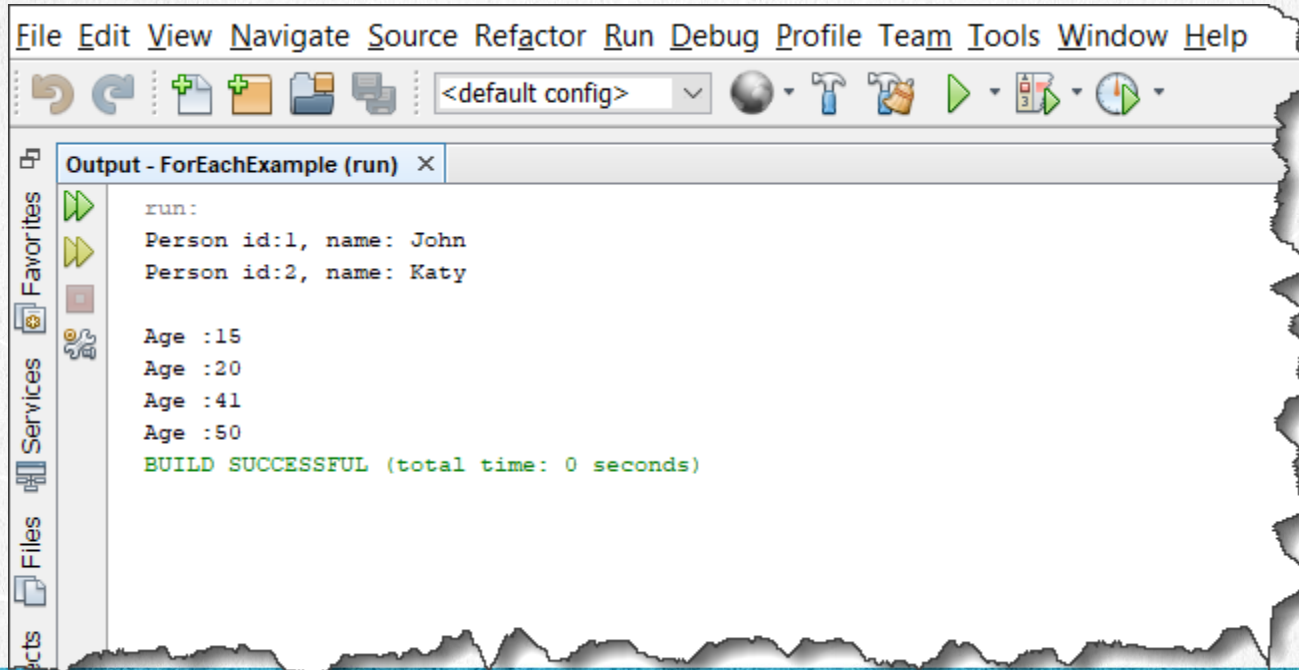
        //Iterate each element of the Person array
        for (Person p : people) {
            //We access the attributes and / or methods of the object
            int personId = p.getPersonId();
            String name = p.getName();
            System.out.println("Person id:" + personId + ", name: " + name);

        }

        System.out.println("");
        //Array of integers
        int[] ages = {15, 20, 41, 50};
        //Iterate the array
        for (int age : ages) {
            System.out.println("Age :" + age);
        }
    }
}
```

6. EXECUTION OF THE PROJECT

The result is as follows:

A screenshot of an IDE's output window titled "Output - ForEachExample (run)". The window displays the output of a Java program. The output text is as follows:

```
run:  
Person id:1, name: John  
Person id:2, name: Katy  
  
Age :15  
Age :20  
Age :41  
Age :50  
BUILD SUCCESSFUL (total time: 0 seconds)
```

The IDE interface includes a menu bar with options like File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, and Help. Below the menu bar is a toolbar with various icons for file operations and running the program. On the left side of the IDE, there is a sidebar with icons for Favorites, Services, Files, and Projects.

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EXERCISE CONCLUSION

With this exercise we have put into practice the for each loop.

We have also commented that it is not always convenient to use this loop, but if we want to go through the entire array or data collection then it is feasible to use and take advantage of the simplified syntax of the for each loop.



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