EXERCISE

FILE MANAGEMENT IN JAVA

EXERCISE OBJECTIVE

Implement the concept of file management 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 | Files | Services | Favorites

- FileManagement
  - Source Packages
    - test
      - FileManagementTest.java
    - utility
      - Files.java
  - Test Packages
  - Libraries
  - Test Libraries

Files.java | FileManagementTest.java

Source | History

```
5   public class Files {
6
7       public static void createFile(String fileName) {
8           File file = new File(fileName);
9           try {
10              //Create the directory if not exist
11              new File("C:\\javaTest").mkdir();
12              //Create the file
13              PrintWriter output = new PrintWriter(new FileWriter(file));
14              //We close the writer in order to finish the file creation
15              output.close();
16              System.out.println("The file has been created correctly\n");
17          } catch (IOException ex) {
18              ex.printStackTrace(System.out);
19          }
```

Output - FileManagement (run)

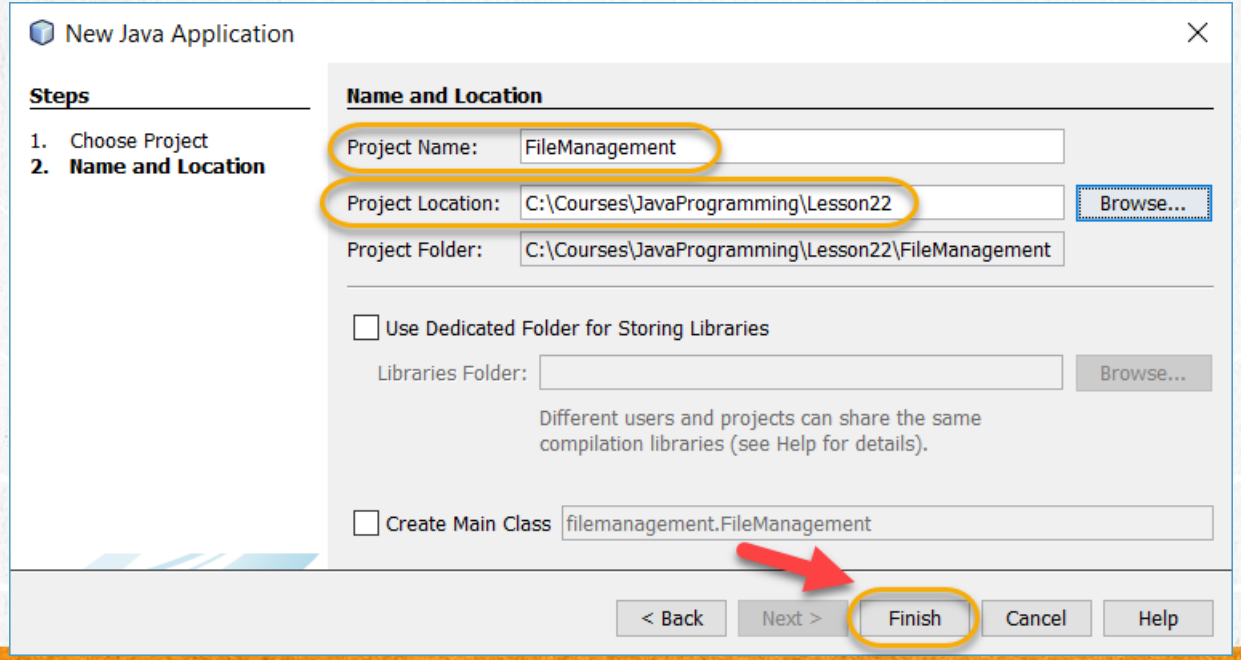
```
run:
The file has been created correctly

The file has been written correctly

Reading: This is the new content
Reading:
Reading: End of writing
The information has been appended correctly
```

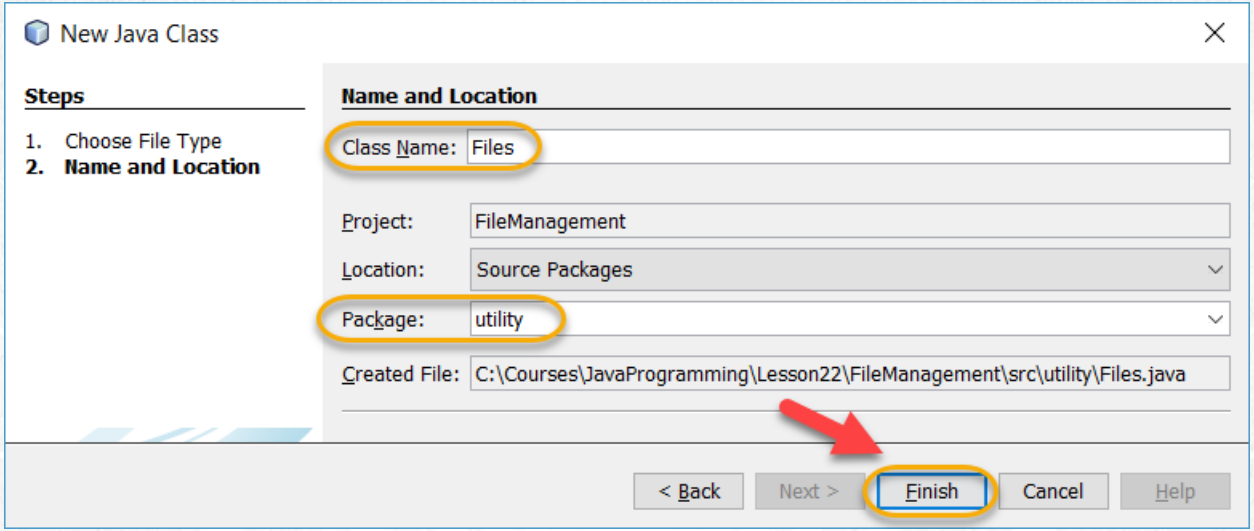
1. CREATE A NEW PROJECT

Create a new project:



2. CREATE A NEW CLASS

Create a new class:



3. MODIFY THE CODE

Files.java:

```
package utility;
import java.io.*;
public class Files {

    public static void createFile(String fileName) {
        File file = new File(fileName);
        try {
             //Create the directory if not exist
            new File("C:\\javaTest").mkdir();
            //Create the file
            PrintWriter output = new PrintWriter(new FileWriter(file));
            //We close the writer in order to finish the file creation
            output.close();
            System.out.println("The file has been created correctly\n");
        } catch (IOException ex) {
            ex.printStackTrace(System.out);
        }
    }
```

3. MODIFY THE CODE

Files.java:

```
public static void writeFile(String fileName, String content) {
    File file = new File(fileName);
    try {
        try (PrintWriter output = new PrintWriter(new FileWriter(file))) {
            output.println(content);
            output.println();
            output.println("End of writing");
        }
        System.out.println("The file has been written correctly\n");
    } catch (IOException ex) {
        ex.printStackTrace(System.out);
    }

}
```

3. MODIFY THE CODE

Files.java:

```
public static void readFile(String fileName) {
    File file = new File(fileName);
    try {
        try (BufferedReader input = new BufferedReader(new FileReader(file))) {
            String reading;
            reading = input.readLine();
            while (reading != null) {
                System.out.println("Reading: " + reading);
                reading = input.readLine();
            }
        }
    } catch (IOException ex) {
        ex.printStackTrace(System.out);
    }
}
```

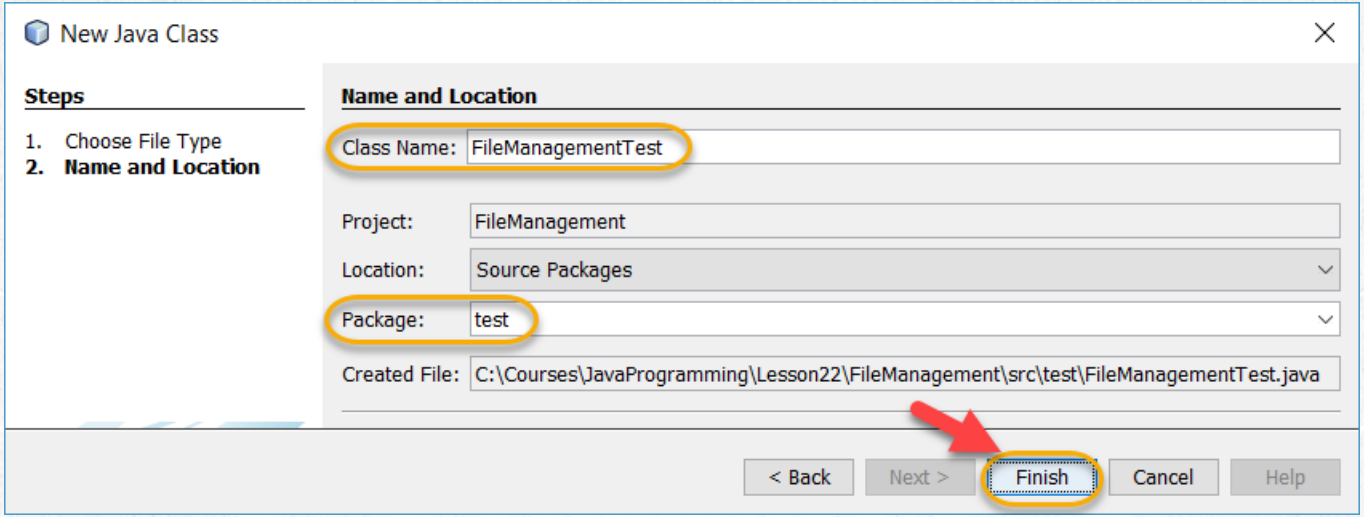
3. MODIFY THE CODE

Files.java:

```
    public static void appendFile(String fileName, String content) {
        File file = new File(fileName);
        try {
            try (PrintWriter output = new PrintWriter(new FileWriter(file, true))) {
                output.println(content);
                output.println();
                output.println("End of append");
            }
            System.out.println("The information has been appended correctly\n");
        } catch (IOException ex) {
            ex.printStackTrace(System.out);
        }
    }
}
```

PASO 4. CREATE A NEW CLASS

Create a new class:



5. MODIFY THE CODE

FileManagementTest.java:

```java
package test;

import static utility.Files.*;

public class FileManagementTest {

    //Note: The folder on which you are going to work must already be created
    //And if necessary write permissions must be assigned to the folder
    private static final String FILE_NAME = "c:\\javaTest\\javaFile.txt";

    public static void main(String[] args) {

        //Create a file
        createFile(FILE_NAME);

        //Write to a file
        writeFile(FILE_NAME, "This is the new content");

        //Read from a file
        readFile(FILE_NAME);

        //Append to a file
        appendFile(FILE_NAME, "Appending information to the file");

        //Leer de un archivo
        readFile(FILE_NAME);
    }
}
```

6. EXECUTE THE PROJECT

The result is as follows:

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window

<default config>

Output - FileManagement (run)

```
run:
The file has been created correctly

The file has been written correctly

Reading: This is the new content
Reading:
Reading: End of writing
The information has been appended correctly

Reading: This is the new content
Reading:
Reading: End of writing
Reading: Appending information to the file
Reading:
Reading: End of append
BUILD SUCCESSFUL (total time: 0 seconds)
```

EXERCISE CONCLUSION

- With this exercise we have put into practice the concept of File Management in Java.

- We have seen several operations, such as creating, writing, reading and append information to a file. With this, we have the bases to understand the operation of file management from Java.

ONLINE COURSE

JAVA PROGRAMMING

By: Eng. Ubaldo Acosta