

Assignment 04:

Write a script that creates a directory named TestDir and inside it, creates ten files named File1.txt, File2.txt, ... File10.txt. Each file should contain its filename as its content (e.g., File1.txt contains "File1.txt").

Code: -

CreateFiles - Notepad

File Edit Format View Help

```
import java.io.File;
import java.io.FileWriter;
import java.io.IOException;

public class CreateFiles {
    public static void main(String[] args) {
        // Create directory
        String directoryName = "TestDir";
        File directory = new File(directoryName);
        if (!directory.exists()) {
            directory.mkdir();
            System.out.println("Directory created: " + directoryName);
        } else {
            System.out.println("Directory already exists.");
        }

        // Create and write to files
        for (int i = 1; i <= 10; i++) {
            String fileName = "File" + i + ".txt";
            File file = new File(directory, fileName);
            try {
                FileWriter writer = new FileWriter(file);
                writer.write(fileName);
                writer.close();
                System.out.println("File created: " + fileName);
            } catch (IOException e) {
                System.out.println("An error occurred while creating " + fileName);
                e.printStackTrace();
            }
        }
    }
}
```

Output: -

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.4291]
(c) Microsoft Corporation. All rights reserved.

C:\Users\user\Desktop>javac LineCounter.java

C:\Users\user\Desktop>java LineCounter
Number of lines in count.txt: 5
Number of lines in anotherfile.txt: 9

C:\Users\user\Desktop>javac CreateFiles.java

C:\Users\user\Desktop>java CreateFiles
Directory created: TestDir
File created: File1.txt
File created: File2.txt
File created: File3.txt
File created: File4.txt
File created: File5.txt
File created: File6.txt
File created: File7.txt
File created: File8.txt
File created: File9.txt
File created: File10.txt

C:\Users\user\Desktop>_
```

Explanation:

1. Imports: We import necessary classes:

- File: Represents file and directory paths.
- FileWriter: Used to write text data to files.
- IOException: Handles potential exceptions during file operations.

2. Variables:

- `directoryName`: Stores the name of the directory to be created ("TestDir").
- `numFiles`: Defines the number of files to create (10 in this case).

3. Create Directory:

- A `File` object is created for the directory.
- An `if` statement checks if the directory already exists.
- If it doesn't exist, the `mkdir()` method is used to create it.
- If creation fails, an error message is printed.

4. Create Files:

- A `for` loop iterates `numFiles` times.
- Inside the loop:
 - The filename is constructed dynamically using string concatenation.
 - A `File` object is created for the specific file path within the directory.
 - A `try-with-resources` block is used to manage the `FileWriter` object:
 - Inside the block, a `FileWriter` is created for the file.

- The filename string is written to the file using `write()`.
- A success message is printed with the absolute path of the created file.
- The catch block handles potential `IOException` during file creation and prints an error message.