File Operation code:

import java.io.File;

import java.io.IOException; import java.nio.file.Files; import java.nio.file.Path; import java.nio.file.Paths; import java.util.ArrayList; import java.util.Arrays; import java.util.Collections; import java.util.List;

import java.util.Scanner;

import java.util.stream.Collectors; import java.util.stream.IntStream;

public class FileOperations {

public static void createMainFolderIfNotPresent(String folderName) { File file = new File(folderName);

// If file doesn't exist, create the main folder if (!file.exists()) {

file.mkdirs();

}

}

public static void displayAllFiles(String path) { FileOperations.createMainFolderIfNotPresent("main");

// All required files and folders inside "main" folder relative to current

// folder

System.out.println("Displaying all files with directory structure in ascending

order\n");

// listFilesInDirectory displays files along with folder structure List<String> filesListNames = FileOperations.listFilesInDirectory(path, 0,

new ArrayList<String>());

System.out.println("Displaying all files in ascending order\n"); Collections.sort(filesListNames);

filesListNames.stream().forEach(System.out::println);

}

public static List<String> listFilesInDirectory(String path, int indentationCount, List<String> fileListNames) {

File dir = new File(path); File[] files = dir.listFiles();

List<File> filesList = Arrays.asList(files); Collections.sort(filesList);

if (files != null && files.length > 0) { for (File file : filesList) {

System.out.print(" ".repeat(indentationCount \* 2));

if (file.isDirectory()) {

System.out.println("`-- " + file.getName());

// Recursively indent and display the files fileListNames.add(file.getName()); listFilesInDirectory(file.getAbsolutePath(),

indentationCount + 1, fileListNames);

} else {

System.out.println("|-- " + file.getName()); fileListNames.add(file.getName());

}

}

} else {

System.out.print(" ".repeat(indentationCount \* 2)); System.out.println("|-- Empty Directory");

}

System.out.println(); return fileListNames;

}

public static void createFile(String fileToAdd, Scanner sc) { FileOperations.createMainFolderIfNotPresent("main"); Path pathToFile = Paths.get("./main/" + fileToAdd);

try {

Files.createDirectories(pathToFile.getParent()); Files.createFile(pathToFile); System.out.println(fileToAdd + " created successfully");

(Y/N)");

System.out.println("Would you like to add some content to the file? String choice = sc.next().toLowerCase();

sc.nextLine();

if (choice.equals("y")) {

System.out.println("\n\nInput content and press enter\n"); String content = sc.nextLine();

Files.write(pathToFile, content.getBytes()); System.out.println("\nContent written to file " + fileToAdd);

Notepad++");

System.out.println("Content can be read using Notepad or

}

} catch (IOException e) {

System.out.println("Failed to create file " + fileToAdd); System.out.println(e.getClass().getName());

}

}

public static List<String> displayFileLocations(String fileName, String path) { List<String> fileListNames = new ArrayList<>(); FileOperations.searchFileRecursively(path, fileName, fileListNames);

if (fileListNames.isEmpty()) {

System.out.println("\n\n\*\*\* Couldn't find any file with given file name

\"" + fileName + "\" \*\*\*\n\n");

} else {

System.out.println("\n\nFound file at below location(s):");

List<String> files = IntStream.range(0, fileListNames.size())

.mapToObj(index -> (index + 1) + ": " + fileListNames.get(index)).collect(Collectors.toList());

files.forEach(System.out::println);

}

return fileListNames;

}

public static void searchFileRecursively(String path, String fileName, List<String> fileListNames) {

File dir = new File(path); File[] files = dir.listFiles();

List<File> filesList = Arrays.asList(files);

if (files != null && files.length > 0) { for (File file : filesList) {

if (file.getName().startsWith(fileName)) { fileListNames.add(file.getAbsolutePath());

}

of required

fileName, fileListNames);

// Need to search in directories separately to ensure all files

// fileName are searched if (file.isDirectory()) {

searchFileRecursively(file.getAbsolutePath(),

}

}

}

}

public static void deleteFileRecursively(String path) {

File currFile = new File(path); File[] files = currFile.listFiles();

if (files != null && files.length > 0) { for (File file : files) {

String fileName = file.getName() + " at " + file.getParent(); if (file.isDirectory()) {

deleteFileRecursively(file.getAbsolutePath());

}

if (file.delete()) {

System.out.println(fileName + " deleted successfully");

} else {

System.out.println("Failed to delete " + fileName);

}

}

}

String currFileName = currFile.getName() + " at " + currFile.getParent(); if (currFile.delete()) {

System.out.println(currFileName + " deleted successfully");

} else {

System.out.println("Failed to delete " + currFileName);

}

}

}