

Source Code:

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package com;

import java.io.File;
import java.util.ArrayList;
import java.util.Collections;
import java.util.Scanner;

public class FileSystem {

    // ArrayList to store the names of files
    private static ArrayList<String> files = new ArrayList<>();

    public static void main(String[] args) {
        // Print welcome message and developer information
        System.out.println("Welcome to File Management System");
        System.out.println("Developed by Talha Shaikh");
        System.out.println("-----");

        // Get all the files in the current folder and add them to the ArrayList
        File folder = new File(".");
        File[] listOfFiles = folder.listFiles();
        for (int i = 0; i < listOfFiles.length; i++) {
            files.add(listOfFiles[i].getName());
        }

        // Scanner to read user input
        Scanner sc = new Scanner(System.in);

        // Run the menu loop
        while (true) {
            // Main menu options
            System.out.println("1. Display Files in Ascending Order");
            System.out.println("2. Add/Delete/Search a File");
            System.out.println("3. Close Application");
            System.out.print("Enter your choice: ");

            int option = 0;
            boolean validOption = false;

            // Validate user input and only accept integer inputs
            if (sc.hasNextInt()) {
                option = sc.nextInt();
                sc.nextLine(); // to consume the newline character

                // Check if the input is between 1 and 3
                if (option >= 1 && option <= 4) {
                    validOption = true;
                } else {
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        System.out.println("Invalid option. Please try again.");
    }
} else {
    System.out.println("Invalid input. Only integers are allowed.");
    sc.nextLine(); // to consume the invalid input
}

// Main menu switch case
switch (option) {
    case 1:
        // Sort the files in ascending order and print them
        Collections.sort(files, String.CASE_INSENSITIVE_ORDER);
        System.out.println("Files in Ascending Order: ");
        for (String file : files) {
            System.out.println(file);
        }
        break;
    case 2:
        // Inner menu options
        System.out.println("1. Add a File");
        System.out.println("2. Delete a File");
        System.out.println("3. Search a File");
        System.out.println("4. Back to Main Menu");
        System.out.print("Enter your choice: ");

        int innerChoice = sc.nextInt();

        // Inner menu switch case
        switch (innerChoice) {
            case 1:
                // Add a file to the ArrayList
                System.out.print("Enter the name of the file to add: ");
                String fileToAdd = sc.next();
                files.add(fileToAdd);
                System.out.println("File added successfully.");
                break;
            case 2:
                // Delete a file from the ArrayList
                System.out.print("Enter the name of the file to delete: ");
                String fileToDelete = sc.next();
                if (files.contains(fileToDelete)) {
                    files.remove(fileToDelete);
                    System.out.println("File deleted successfully.");
                } else {
                    System.out.println("File not found.");
                }
                break;
            case 3:
                // Search a file from the ArrayList
                System.out.print("Enter the name of the file to search: ");
                String fileToSearch = sc.next();

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        if (files.contains(fileToSearch)) {
            System.out.println("File found.");
        } else {
            System.out.println("File not found.");
        }
        break;
    case 4:
        // Take back to main menu
        break;
    default:
        System.out.println("Invalid choice.");
        break;
    }
    break;
case 3:
    // Exiting the application
    System.out.println("Exiting the application...");
    System.exit(0);
    break;
}
}
}
```