**Write Up:**

**Step 1:** Create a project.

**Step 2:** Created a package named proj1.

**Step 3:** Created a class name Virtual Key.

**Step 4:** I have defined a method named Virtual Key in this method I have defined directory of the folder and created a new folder.

**Step 5:** Created a method named oper1 in this method business level operation is performed based on user input. The operations are:

**1.**Type of file in the directory.

**2**.Add ,Delete ,Search Operation

**3.**Exit

**Step 6:** Created a method named oper2 in this method operations has been performed based on user input. The operations are add a file, delete a file, search a file.

**Step 7:** To access the operation I have created methods to this each operations add ,delete and search.

**Step 8:** Run the program, output will be displayed in the output console and user can select which operation to be performed and hence operation is performed based on the user input.

**Source Code:**

**package** proj1;

**import** java.io.IOException;

**import** java.util.Arrays;

**import** java.util.Scanner;

**import** java.io.File;

**public** **class** VirtualKey {

**static** String *Directory*;

File NewFolder;

**public** VirtualKey()

{

*Directory*= System.*getProperty*("user.dir");

NewFolder = **new** File("D:\\Project Files");

**if** (! NewFolder.exists())

NewFolder.mkdirs();

System.***out***.println("\nFilePath : "+ NewFolder.getAbsolutePath());

}

**private** **static** **final** String ***WELCOME\_TO\_THIS\_PORTAL*** =

"\n Welcome to LockedMe.com Project " + " " + "\n By Siddiq Ali " + " " + "\n From: Company Lockers Pvt. Ltd";

**private** **static** **final** String ***Business\_Level\_Operations*** =

"\nMAIN MENU - \nSelect any one of the following operations: \n"+

"1 - To List the types of files in directory\n"+

"2 - To Perform functions like Delete,Add,Search\n"+

"3 - Exit";

**private** **static** **final** String ***Operations*** =

" \nSelect any one of the following operations: \n"+

" 1 - Add file\n"+

" 2 - Delete file\n"+

" 3 - To Search file\n"+

" 4 - Go Back to business level operations";

**void** Oper1() {

System.***out***.println(***Business\_Level\_Operations***);

**try**(Scanner scanner = **new** Scanner(System.***in***)){

**int** option = scanner.nextInt();

**switch** (option){

**case** 1 : {

DisplayListOfFiles();

Oper1();

}

**case** 2 : {

Oper2();

}

**case** 3 : {

System.***out***.println("Thank You For Your Response");

System.*exit*(0);

}

**default**: Oper1();

}

}

**catch** (Exception e){

System.***out***.println("select 1, 2 or 3");

Oper1();

}

}

**void** Oper2() {

System.***out***.println(***Operations***);

**try**(Scanner scanner = **new** Scanner(System.***in***))

{

**char**[] input = scanner.nextLine().toLowerCase().trim().toCharArray();

**char** logic = input[0];

**switch** (logic){

**case** '1' : {

System.***out***.print("Please Enter a File Name you want to Add : ");

String filename = scanner.next().trim().toLowerCase();

addFile(filename);

**break**;

}

**case** '2' : {

System.***out***.print("Please Enter a File Name you want to Delete : ");

String filename = scanner.next().trim();

deleteFile(filename);

**break**;

}

**case** '3' : {

System.***out***.print("Please Enter a File Name you want to Search For : ");

String filename = scanner.next().trim();

searchFile(filename);

**break**;

}

**case** '4' : {

System.***out***.println("Going back to the business level operations");

Oper1();

**break**;

}

**default** : System.***out***.println("Please enter valid input to search the data in list");

}

Oper2();

}

**catch** (Exception e){

System.***out***.println("Please enter valid value to search the data in list");

Oper2();

}

}

**void** DisplayListOfFiles() {

**if** ( NewFolder.list().length==0)

System.***out***.println("Folder Empty");

**else** {

String[] list = NewFolder.list();

System.***out***.println("The files in "+ NewFolder +" are :");

Arrays.*sort*(list);

**for** (String str:list) {

System.***out***.println(str);

}

}

}

**void** addFile(String filename) **throws** IOException {

File filepath = **new** File( NewFolder +"/"+filename);

String[] list = NewFolder.list();

**for** (String file: list) {

**if** (filename.equalsIgnoreCase(file)) {

System.***out***.println("File " + filename + " already exists at " + NewFolder);

**return**;

}

}

filepath.createNewFile();

System.***out***.println("File "+filename+" added to "+ NewFolder);

}

**void** deleteFile(String filename) {

File filepath = **new** File( NewFolder +"/"+filename);

String[] list = NewFolder.list();

**for** (String file: list) {

**if** (filename.equals(file) && filepath.delete()) {

System.***out***.println("File " + filename + " deleted from " + NewFolder);

**return**;

}

}

System.***out***.println("Delete Operation failed. FILE NOT FOUND");

}

**void** searchFile(String filename) {

String[] list = NewFolder.list();

**for** (String file: list) {

**if** (filename.equals(file)) {

System.***out***.println("FOUND : File " + filename + " exists at " + NewFolder);

**return**;

}

}

System.***out***.println("File Not found (FNF)");

}

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

System.***out***.println(***WELCOME\_TO\_THIS\_PORTAL***);

VirtualKey menu = **new** VirtualKey();

menu.Oper1();

}

}