# Source Code

FileOperations Class

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**Course: Implement OOPS using JAVA with Data Structures and Beyond.**

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import java.util.List;

import java.io.File;

import java.io.FileNotFoundException;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.OutputStream;

import java.nio.file.DirectoryNotEmptyException;

import java.nio.file.FileSystems;

import java.nio.file.Files;

import java.nio.file.NoSuchFileException;

import java.nio.file.Path;

import java.nio.file.Paths;

import java.util.ArrayList;

import java.util.Scanner;

public class FileOperations {

public static String filePath= "C:\\Users\\PrishaKutty\\Documents\\Eclipse\\LockedMe";

//This Method adds the file to root directory

public void addFile() throws IOException

{

System.out.println("Please Enter the text file name to add: ");

Scanner sc = new Scanner(System.in);

String fileName;

fileName=sc.next();

File file;

if (fileName.contains(".txt"))

{

//file = new File(fileName.toLowerCase());

fileName= fileName.toLowerCase();

}

else {

// file = new File(fileName.toLowerCase()+".txt");

fileName=(fileName.toLowerCase()+".txt");

}

file = new File(filePath+"\\"+fileName);

try {

if (file.exists())

{

System.out.println("File exists in the same name, try different name");

}

else {

OutputStream out = new FileOutputStream(file);

out.close();

out.flush();

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("The text file "+ fileName+ " is added to the Directory");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

} catch (FileNotFoundException e) {

e.printStackTrace();

}

}

//This Method Delete the file to root directory

public void deleteFile()

{

System.out.println("Please Enter the file name to delete: ");

Scanner sc1 = new Scanner(System.in);

String fileName;

fileName=sc1.next();

System.out.println("The file you selected to delete is "+ fileName);

if (fileName.endsWith(".txt"))

{

fileName= fileName.toLowerCase();

}

else

{

fileName=(fileName.toLowerCase()+".txt");

}

File file = new File(filePath+"\\\\"+fileName);

try {

if (file.exists())

{

Path path = FileSystems.getDefault().getPath(fileName);

try {

Files.delete(path);

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

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

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

catch (NoSuchFileException e) {

System.out.println(

"No such file/directory exists, please try again");

}

catch (DirectoryNotEmptyException e) {

System.out.println("Directory is not empty.");

}

catch (IOException e) {

System.out.println("Invalid permissions.");

}

}

else {

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("File "+ fileName+ " does not exist, please enter the file name correctly");

System.out.println("Failed to delete the file");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

} catch (Exception e) {

e.printStackTrace();

}

}

//This Method Search the file to root directory

public void SearchFile()

{

System.out.println("Please Enter the text file name to Search: ");

Scanner sc = new Scanner(System.in);

String fileName;

int flag =0;// flag to notify file not found

fileName=sc.next();

File file;

if (fileName.contains(".txt"))

{

fileName=fileName.toLowerCase();

}

else

{

fileName=fileName.toLowerCase()+".txt";

}

try {

file = new File(fileName);

File[] files = file.listFiles();

List <String> list = new ArrayList<String>();

for(File f: files)

{

list.add(f.getName());

}

for (int i = 0; i < list.size(); i++)

{

//System.out.println(fileName);

//System.out.println(list.get(i));

if (fileName.equals(list.get(i).toString()))

{

System.out.println("file "+ fileName+" found");

flag=1;

break;

}

}

if (flag==0)

{

System.out.println("file NOT found");

}

}

catch (Exception e) {

e.printStackTrace();}

}

}

# LockedMe Class

Source Code

import java.awt.List;

import java.io.File;

import java.io.IOException;

import java.util.ArrayList;

import java.util.InputMismatchException;

import java.util.Scanner;

public class LockedMe extends FileOperations{

static int userInput;

//Function with options

public static int optionsDisplay()

{

System.out.println("-------------------------------------------------");

System.out.println("Please Select from the following options ");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("\* 1. Retrieve files in Ascending order \*");

System.out.println("\* 2. Select to see more options \*");

System.out.println("\* 3. Close the Application \*");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("-------------------------------------------------");

int input=0;

Scanner sc = new Scanner(System.in);

while (sc.hasNextInt() != true)

{

System.out.println("Please select the valid option (1/2/3):");

sc = new Scanner(System.in);

}

input = sc.nextInt();

if (input!= 1 && input!=2 && input !=3 )

{ int input1=0;

System.out.println("Please select the valid option (1/2/3):");

Scanner sc1 = new Scanner(System.in);

input=input1;

}

return input;

}

public static void main(String[] args) {

LockedMe lm = new LockedMe();

//Welcome Message

System.out.println("-------------------------------------------------");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Welcome\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("\* Project: LockedMe.com \*");

System.out.println("\* Developer: Arulselvi Amirrthalingam \*");

System.out.println("\* Software Analyst \*");

System.out.println("\* September 18 2022 \*");

System.out.println("\* @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ \*");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("-------------------------------------------------");

//End of Welcome Message

try {

int userInput = lm.optionsDisplay();

while(userInput != 3)

{

//Retrieves file names in ascending order

if (userInput == 1)

{

System.out.println("you have selected option " + userInput);

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

File file = new File("C:\\Users\\PrishaKutty\\Documents\\Eclipse\\LockedMe");

File[] files = file.listFiles();

System.out.println("The list of files in ascending order");

System.out.println("------------------------------------");

for(File f: files)

{

if (f.getName().endsWith(".txt"))

{

System.out.println(" "+ f.getName()+ " ");

}

}

System.out.println("------------------------------------");

userInput = lm.optionsDisplay();

}

else if (userInput == 2)

{

System.out.println("Please Select from the following options ");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.println("\* 1. Add a file \*");

System.out.println("\* 2. Delete a file \*");

System.out.println("\* 3. Search for file \*");

System.out.println("\* 4. Navigate to the main context \*");

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

Scanner sc1 = new Scanner(System.in);

FileOperations fo = new FileOperations();

int fileOptionSelected =0;

if (sc1.hasNextInt())

{

fileOptionSelected = sc1.nextInt();

}

if (fileOptionSelected != 1 && fileOptionSelected!=2 && fileOptionSelected!=3 && fileOptionSelected != 4)

{

System.out.println("Please select the valid option (1/2/3/4):");

}

if (fileOptionSelected ==1)

{

try {

fo.addFile();

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

else if(fileOptionSelected == 2)

{

fo.deleteFile();

}

else if(fileOptionSelected == 3)

{

fo.SearchFile();

}

if (fileOptionSelected == 4)

{

userInput = lm.optionsDisplay();

}

}//end of while

}

if (userInput == 3)

{

System.out.println("Closing the Application, Thank you");

System.exit(0);

}

} catch (Exception e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

finally {

System.exit(0);

}

}

}