**FileMain**

**package** fileopeations;

**import** java.io.\*;

**import** java.util.Scanner;

**public** **class** FileMain

{

**private** **static** Scanner *sc*;

**public** **static** **void** main(String[] args) **throws** IOException, FileNotFoundException, NumberFormatException

{

*sc* = **new** Scanner(System.***in***); // scan the input

**int** option = 0;

**int** suboption = 0;

//creating class objects

sortFiles sf = **new** sortFiles();

addFile af = **new** addFile();

deleteFile df = **new** deleteFile();

searchFile sef = **new** searchFile();

//Welcome Screen and Menu

System.***out***.println("©2020 - Virtual Key Repositories-(VKR) by Manish Kumar Arora\n");

System.***out***.println("---Main Menu---");

System.***out***.println("1. Sort the files in asscending order");

System.***out***.println("2. Add, Delete or Search a file");

System.***out***.println("3. Close");

System.***out***.println("Choose your option between 1 to 3 and press enter: ");

/\*do while loop includes switch statement cases runs till you didn't press option 3 and option 2 includes further sub-switch statements \*/

**do**

{

**try**

{

option = Integer.*parseInt*(*sc*.nextLine()); // take input from user

}

**catch**(NumberFormatException e)

{

}

**switch**(option) // pass the user specified input

{

**case** 1:

System.***out***.println("You choose an option 1 to sort files.");

sf.SortingFiles(); // calls the method to sort files

**break**;

**case** 2:

System.***out***.println("A. Press 1 to Add a file");

System.***out***.println("B. Press 2 to Delete a file");

System.***out***.println("C. Press 3 to Search a file");

suboption = Integer.*parseInt*(*sc*.nextLine());

**switch**(suboption)

{

**case** 1:

System.***out***.println("You choose option 1 to add a file");

af.AddingFiles(); // calls the method to add a file

**break**;

**case** 2:

System.***out***.println("You choose option 2 to delete a file");

df.DeletingFiles(); // calls the method to delete files

**break**;

**case** 3:

System.***out***.println("You choose option 3 to search a file");

sef.SearchingFile(); // calls the method to search files

**break**;

}

**break**;

**case** 3:

System.***out***.println("Thank you for using VKR. Bye-Bye..");

**break**;

**default**:

System.***out***.println("Invalid Option! Choose only number between 1 to 3");

**break**;

}

}

**while**(option!=3);

}

}

Sort

**package** fileopeations;

**import** java.io.File;

//import java.io.FileNotFoundException;

**import** java.io.IOException;

**import** java.util.\*;

**public** **class** sortFiles

{

Scanner sc = **new** Scanner(System.***in***); // scan user input

**public** **void** SortingFiles() **throws** IOException, NumberFormatException

{

System.***out***.println("Enter your directory path where you want to sort the files - ");

String afn = sc.nextLine(); // take user input

File fd = **new** File(afn); // create new file instance

// File fd = new File("D:\\eclipse-Oxy\\Simplilearn\\Phase1\_Project1\_FileSADS\\FileFolder");

**if**(fd.isDirectory()) // check if the given input is a directory or not

{

List<String> l = Arrays.*asList*(fd.list()); // Returns an array of strings as a list

/\*if condition to check any file present or not if yes then list of files pass to collection sort method to sort the files in ascending order\*/

**if**(fd.list().length>0)

{

Collections.*sort*(l);

System.***out***.println("Sorting the files in ascending Order...\n");

**for**(String s:l) // iterate the list

{

File f = **new** File(s); // creating new file instance

**if**(f.isFile()) // check only for files

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

}

}

**else**

{

System.***out***.println(fd.getName() + " This folder is empty...");

System.***out***.println("Please choose option 2 and add some files.\n");

FileMain.*main*(**null**);

}

}

**else**

{

System.***out***.println(fd.getAbsolutePath() + " is not a directory");

System.***out***.println("Please Enter correct path and try again..\n");

SortingFiles();

}

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

System.***out***.println("Press 9 to return to the main menu: ");

**int** i=0;

/\*do while loop to return to the main menu will continue to run till 9 not pressed\*/

**do**

{

**try**

{

i = Integer.*parseInt*(sc.nextLine());

**if**(i==9)

{

FileMain.*main*(**null**);

}

**else**

{

System.***out***.println("Wrong Input! " +i +" is not a valid number. Press 9 to return-");

}

}

**catch**(NumberFormatException e)

{

System.***out***.println(e.getMessage()+ " is not a number. Press number 9 and enter to return-");

}

}

**while**(i!=9);

}

}

Add

**package** fileopeations;

**import** java.io.File;

**import** java.io.IOException;

**import** java.util.Scanner;

**public** **class** addFile

{

Scanner sc = **new** Scanner(System.***in***); // scan user input

**public** **void** AddingFiles() **throws** IOException, NumberFormatException

{

System.***out***.println("Enter directory path:");

String a = sc.nextLine(); // take user input for directory path

System.***out***.println("Enter new file name:");

String af = sc.nextLine(); // take user input for adding a file

File adfile = **new** File(a,af);

// File adfile = new File("D:\\eclipse-Oxy\\Simplilearn\\Phase1\_Project1\_FileSADS\\FileFolder");

**boolean** result;

**try**

{

result = adfile.createNewFile(); // create a new file

**if**(result) // test if successfully created a new file

{

System.***out***.println("New File added: " + adfile.getCanonicalPath());

}

**else**

{

System.***out***.println("File with same name already exist at a location: " + adfile.getCanonicalPath());

System.***out***.println("Please try again.. ");

AddingFiles();

}

}

**catch**(IOException e)

{

System.***out***.println(e.getMessage());

}

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

System.***out***.println("A. Press 9 to return to the main menu");

System.***out***.println("B. Press 7 to try again or add more files");

**int** i=0;

/\*do while loop to return to the main menu or adding more files. Loop will continue to run till 9 not pressed\*/

**do**

{

**try**

{

i = Integer.*parseInt*(sc.nextLine());

**if**(i==9)

{

FileMain.*main*(**null**);

}

**else** **if**(i==7)

{

AddingFiles();

}

**else**

{

System.***out***.println("Wrong Input! " +i +" is not a valid number. Press 9 to return or 7 to add more files-");

}

}

**catch**(NumberFormatException e)

{

System.***out***.println(e.getMessage()+ " is not a number. Press number 9 and enter to return or 7 to add more files-");

}

}

**while**(i!=9);

}

}

Delete

**package** fileopeations;

**import** java.io.File;

**import** java.io.FileNotFoundException;

**import** java.io.IOException;

**import** java.util.Scanner;

**public** **class** deleteFile

{

//Scanner d = new Scanner(System.in); //

**private** Scanner sc;

**public** **void** DeletingFiles() **throws** IOException, FileNotFoundException

{

sc = **new** Scanner(System.***in***); // take user input for directory path

System.***out***.println("Enter directory path: ");

String dir = sc.nextLine();

File dp = **new** File(dir); // creating new file instance passing user input

String contents[] = dp.list(); //creating the list and passing it to array contents

System.***out***.println("List of files in the specified directory:");

**for**(**int** i=0; i<contents.length; i++) //iterate the array list and print the list of files

{

System.***out***.println(contents[i]);

}

System.***out***.println("\nEnter the name of file you want to delete: ");

String name = sc.nextLine(); //take user input for file name to delete

**int** i=0;

**try**

{

**while**(i<=contents.length) //loop runs until all file iterate and finds a match

{

/\* check the file name entered matches the file in directory with respect to case sensitivity if yes then delete else break the loop\*/

**if**(contents[i].equals(name))

{

File f = **new** File(dir,name); //creating new file instance and passing path and file name to it.

**if**(f.delete())

{

System.***out***.println(f.getName()+ " deleted successfully");

**break**;

}

}

i++;

}

}

**catch**(Exception e)

{

System.***out***.println("File Not Found ");

}

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

System.***out***.println("A. Press 9 to return to the main menu");

System.***out***.println("B. Press 7 to try again or delete more files");

**int** k=0;

/\*do while loop to return to the main menu or deleting more files. Loop will continue to run till 9 not pressed\*/

**do**

{

**try**

{

k = Integer.*parseInt*(sc.nextLine());

**if**(k==9)

{

FileMain.*main*(**null**);

}

**else** **if**(k==7)

{

DeletingFiles();

}

**else**

{

System.***out***.println("Wrong Input! " +k +" is not a valid number. Press 9 to return-");

}

}

**catch**(NumberFormatException e)

{

System.***out***.println(e.getMessage()+ " is not a number. Press number 9 and enter to return-");

}

}

**while**(k!=9);

}

}

Search

**package** fileopeations;

**import** java.io.File;

**import** java.io.IOException;

**import** java.io.FileNotFoundException;

**import** java.util.Scanner;

**public** **class** searchFile

{

**private** Scanner sc;

**public** **void** SearchingFile() **throws** IOException, FileNotFoundException

{

sc = **new** Scanner(System.***in***); // scan the input

System.***out***.println("Enter directory path: ");

String dir = sc.nextLine(); // take user input for directory path

File dp = **new** File(dir); // creates new file instance and passing user given input

String contents[] = dp.list(); //creating the list and passing it to array contents

System.***out***.println("List of files in the specified directory:");

**for**(**int** i=0; i<contents.length; i++) //iterate the array list and print the list of files

{

System.***out***.println(contents[i]);

}

System.***out***.println("Enter File name to search:");

String searchfile = sc.nextLine(); //take user input for file name to search

**int** i=0;

**try**

{

**while**(i<=contents.length) //loop runs until all file iterate and finds a match

{

/\* check the file name entered matches the file in directory with respect to case sensitivity if yes then print the location and break the loop\*/

**if**(contents[i].equals(searchfile))

{

File f = **new** File(dir,searchfile);

**if**(f.isFile()&&f.exists())

{

System.***out***.println(f.getName()+ " found at location: " +f.getAbsolutePath());

**break**;

}

}

i++;

}

}

**catch**(Exception e)

{

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

}

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

System.***out***.println("A. Press 9 to return to the main menu");

System.***out***.println("B. Press 7 to try again or search more files");

**int** k=0;

/\*do while loop to return to the main menu or searching more files. Loop will continue to run till 9 not pressed\*/

**do**

{

**try**

{

k = Integer.*parseInt*(sc.nextLine());

**if**(k==9)

{

FileMain.*main*(**null**);

}

**else** **if**(k==7)

{

SearchingFile();

}

**else**

{

System.***out***.println("Wrong Input! " +k +" is not a valid number. Press 9 to return to main menu or 7 to search more-");

}

}

**catch**(NumberFormatException e)

{

System.***out***.println(e.getMessage()+ " is not a number. Press number 9 and return to main menu or 7 to search more-");

}

}

**while**(k!=9);

}

}