**==========**

**APP CLASS**

**==========**

package filemagic.com.app;

import filemagic.com.util.\*;

public class App {

public static void main(String[] args) {

// TODO Auto-generated method stub

try {

Welcome wel = new Welcome();

wel.displayWelcome();

MainMenu menuMain = new MainMenu();

menuMain.displayMainMenu();

} catch (Exception e) {

System.out.println("Something gone wrong .....");

System.out.println("File Magic is exiting .....");

e.printStackTrace();

}

}

}

**==============**

**Service Class**

**==============**

package filemagic.com.service;

import java.io.File;

import java.io.IOException;

import java.util.Arrays;

import java.util.Scanner;

public class Service {

public void serviceApp(Scanner scanner, String operation) {

// TODO Auto-generated method stub

String directoryPath;

initialServiceMessage(operation);

directoryPath = scanner.nextLine();

System.out.println("The provided path is: " + directoryPath);

File directory = new File(directoryPath);

if (validateDirectory(directory) == true) {

switch (operation) {

case "DISPLAYING":

displayFiles(directory);

break;

case "CREATING":

String fileToCreate = retrieveFilename(scanner);

createFile(directoryPath, fileToCreate);

break;

case "DELETING":

String fileToDelete = retrieveFilename(scanner);

deleteFile(directoryPath, fileToDelete);

break;

case "SEARCHING":

String fileToSearch = retrieveFilename(scanner);

searchFile(directoryPath, fileToSearch);

break;

default:

System.out.println(" Something gone wrong ... invalid input value in Service class ");

break;

}

}

}

private void initialServiceMessage(String message) {

System.out.println(

" =================================================================================================== ");

if (message == "DISPLAYING") {

System.out.println("Please provide the path of the directory for " + message + " the files.");

} else {

System.out.println("Please provide the path of the directory for " + message + " your file.");

}

;

System.out.println(

"An example of a path in WINDOWS is C:\\Users\\strat\\REPOS\\Simplelearn-Phase1-End-Project\\ProjectDir");

System.out.println(

" ==================================================================================================== ");

}

private boolean validateDirectory(File directoryName) {

if (directoryName.exists() && directoryName.isDirectory()) {

System.out.println("The directory indeed exists.");

return true;

} else {

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

System.out.println("The provided directory does not exist. ");

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

return false;

}

}

private void displayFiles(File directory) {

try {

File[] files = directory.listFiles();

Arrays.sort(files);

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

System.out.println("Below is the list of files in ascending order: ");

for (File file : files) {

if (file.isFile()) {

System.out.println(file.getName());

}

}

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

} catch (Exception e) {

System.out.println("You may not have the permissions to list the files.");

e.printStackTrace();

}

}

private String retrieveFilename(Scanner retrieveScanner) {

System.out.println(" Please provide the name of the filename. ");

String fileName = retrieveScanner.nextLine();

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

return fileName;

}

private void createFile(String userDirectory, String createFileName) {

String fullPath = userDirectory + File.separator + createFileName;

File file = new File(fullPath);

if (file.exists()) {

System.out.println("The file " + createFileName + " was already found in the specified directory");

} else {

// Create a new empty file in the given directory

try {

boolean created = file.createNewFile();

if (created) {

System.out

.println(" File " + createFileName + " has been created successfully in " + userDirectory);

} else {

System.out.println(" File creation failed.");

}

} catch (IOException e) {

System.out.println("Something went wrong during file creation ......");

e.printStackTrace();

}

}

}

private void deleteFile(String userDirectory, String deleteFileName) {

String fullPath = userDirectory + File.separator + deleteFileName;

File file = new File(fullPath);

if (!file.exists()) {

System.out.println("The file " + deleteFileName + " was not found in the specified directory.");

} else {

// Delete an existing file in the given directory

boolean deleted = file.delete();

if (deleted) {

System.out.println(" File " + deleteFileName + " has been successfully deleted in " + userDirectory);

} else {

System.out.println(" File deletion failed.");

}

}

}

private void searchFile(String userDirectory, String searchFileName) {

String fullPath = userDirectory + File.separator + searchFileName;

File file = new File(fullPath);

if (!file.exists()) {

System.out.println("The file " + searchFileName + " was not found in the specified directory.");

} else {

System.out.println("The file " + searchFileName + " was found in the specified directory.");

}

}

}

**===============**

**MainMenu Class**

**===============**

package filemagic.com.util;

import java.util.Scanner;

import java.util.InputMismatchException;

import filemagic.com.service.Service;

public class MainMenu {

public void displayMainMenu() {

int mainMenuChoice; // user's choice in main menu

String mainMenuCon = "n"; // check if user wants to continue or not

Scanner scanner = new Scanner(System.in);

SubMenu mainSubMenu = new SubMenu();

Service mainMenuServ = new Service();

do {

mainMenuMessage();

try {

mainMenuChoice = scanner.nextInt();

} catch (InputMismatchException e) {

// TODO Auto-generated catch block

// we pass to switch block the invalid value 999 in order to present an invalid

// input

// Thus the program will present the same error message in the case of invalid

// integer number

// or an input mismatch

mainMenuChoice = 999;

}

scanner.nextLine();

switch (mainMenuChoice) {

case 1:

mainMenuServ.serviceApp(scanner, "DISPLAYING");

break;

case 2:

mainSubMenu.displaySubMenu(scanner);

displayMainMenu();

break;

case 0:

exitMainMenuMessasge();

System.exit(0);

break;

default:

invalidMainMenuOptionMessage();

break;

}

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

System.out.println(" Please press Y or N in order to continue or not to main menu.");

mainMenuCon = scanner.nextLine();

if (!mainMenuCon.equalsIgnoreCase("y") && !mainMenuCon.equalsIgnoreCase("n")) {

System.out.println(" You have provided an invalid option. ");

System.out.println(" Valid options are Y and N. ");

}

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

System.out.println();

} while (!mainMenuCon.equalsIgnoreCase("n"));

scanner.close();

exitMainMenuMessasge();

}

private void exitMainMenuMessasge() {

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

System.out.println(" Thank you for using FileMagic App. ");

System.out.println(" The application has exited. ");

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

}

private void mainMenuMessage() {

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

System.out.println(" FileMagic provides the below options:");

System.out.println(" 1: Display the files of a folder in ascending order.");

System.out.println(" 2: Business level operation (for adding, deleting and searching a file).");

System.out.println(" 0: To exit from the app.");

System.out.println(" Please enter your choice <0-2>");

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

System.out.println();

}

private void invalidMainMenuOptionMessage() {

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

System.out.println(" You have provided an invalid option. ");

System.out.println(" Valid options in main menu are integers from 0-2. ");

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

System.out.println();

}

}

**===========**

**SubMenu**

**===========**

package filemagic.com.util;

import java.util.Scanner;

import filemagic.com.service.Service;

import java.util.InputMismatchException;

public class SubMenu {

public void displaySubMenu(Scanner scanner) {

// TODO Auto-generated method stub

int businessMenuChoice;

String businessMenuCon = "y";

Service subServ = new Service();

do {

subMenuMessage();

try {

businessMenuChoice = scanner.nextInt();

} catch (InputMismatchException e) {

// we pass to switch block the invalid value 999 in order to present an invalid

// input

// Thus the program will present the same error message in the case of invalid

// integer number

// or an input mismatch

businessMenuChoice = 999;

}

scanner.nextLine();

switch (businessMenuChoice) {

case 1:

subServ.serviceApp(scanner, "CREATING");

break;

case 2:

subServ.serviceApp(scanner, "DELETING");

break;

case 3:

subServ.serviceApp(scanner, "SEARCHING");

break;

case 0:

businessMenuCon = "n";

break;

default:

invalidSubMenuOptionMessage();

break;

}

// We want the below code block not to be executed when user has already selected not to

// continue in business sub menu which means businessMenuChoice is equal to zero

if (businessMenuChoice != 0) {

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

System.out.println(" Please press Y or N in order to continue or not to business sub menu.");

businessMenuCon = scanner.nextLine();

if (!businessMenuCon.equalsIgnoreCase("y") && !businessMenuCon.equalsIgnoreCase("n")) {

System.out.println(" You have provided an invalid option. ");

System.out.println(" Valid options are Y and N. ");

businessMenuCon = "y";

}

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

System.out.println();

}

} while (businessMenuCon.equalsIgnoreCase("y"));

exitSubMenuMessasge();

}

private void subMenuMessage() {

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

System.out.println(" FileMagic provides the below business options:");

System.out.println(" 1: To create a file.");

System.out.println(" 2: To delete a file.");

System.out.println(" 3: To search a file.");

System.out.println(" 0: Exit sub menu.");

System.out.println(" Please enter your choice <0-3>.");

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

}

private void invalidSubMenuOptionMessage() {

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

System.out.println(" You have provided an invalid option. ");

System.out.println(" Valid options in sub menu are integers from 0-3. ");

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

System.out.println();

}

private void exitSubMenuMessasge() {

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

System.out.println(" You have exited from sub menu.");

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

System.out.println();

}

}

**==================**

**Welcome Class**

**==================**

package filemagic.com.util;

public class Welcome {

public void displayWelcome() {

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

System.out.println(" Welcome to the new application deleloped by Lockers Pvt. Ltd");

System.out.println(" Application's Name: FileMagic ");

System.out.println(" Developer's name: Efstratios Gaitanidis ");

System.out.println(" Contact details: efstratios.gaitanidis@vodafone.com");

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

System.out.println();

}

}