```
package com.project.virtualproject;
import java.io.IOException;
import java.util.Scanner;
public class Menus {
   Scanner scan = new Scanner(System.in);
   OperationsDAO dao = new OperationsDAO();
   public void introScreen() {
       System.out.println();
   System.out.println("*
                              DEVELOPED BY RUCHITHA
CHAMATAM
   System.out.println("*
VIRTUALPROJECT.COM
                          *");
   System.out.println("*
                              A VIRTUALPROJECT FOR
FILE HANDLING
   System.out.println("\n\n");
   }
   public void exitScreen() {
       System.out.println("*
*");
       System.out.println("*
                              KEEP VISITING
                        *");
VIRTUALPROJECT.COM
       System.out.println("*
*");
       System.out.println("\n\n");
   }
   public void mainMenuOptions() {
```

```
System.out.println("|
                                          USER INTERFACE
                            |");
MENU
        System.out.println("-----
----");
        System.out.println("|
                                  Enter your choice which
you want to select: |");
       System.out.println("|
                                  1 - List All Files in
ascending order
                                   2 - Business-level
       System.out.println("|
                         |");
operation menu
       System.out.println("|
                                   3 - Exit from the
application
                          |");
System.out.println("Enter your choice : ");
    public void subMenuOptions() {
        System.out.println("|
                                         MAIN MENU
| " ) ;
       System.out.println("-----
        -----");
        System.out.println("| Enter your choice for business
level operations:
                             |");
       System.out.println("|
                            1 - Add a file
|");
       System.out.println("|
                            2 - Delete a file from a directory
|");
       System.out.println("| 3 - Searching a file
|");
       System.out.println("| 4 - Exit from BUSINESS LEVEL
                                         |");
OPERATIONS
======="");
       System.out.println("Enter your choice : ");
    }
    public void mainMenu() {
        int choice = 0;
        char decision = 0;
        do {
             mainMenuOptions();
             try {
                 choice = Integer.parseInt(scan.nextLine());
             } catch (NumberFormatException e) {
                 System.out.println("\nInvalid Input");
```

```
mainMenu();
                 switch (choice) {
                 case 1:
                             System.out.println();
                             try {
                                   dao.listAllFiles(Main.path);
                             }catch(NullPointerException e) {
                                   System.out.println(e.getMessage());
                             }catch(IllegalArgumentException e) {
                                   System.out.println(e.getMessage());
                             }catch(Exception e) {
                                   System.out.println(e.getMessage());
                             break;
                 case 2:
                             System.out.println();
                             subMenu();
                             break;
                 case 3:
                             System.out.println("\n Are you sure you want
to exit ? ");
                             System.out.println(" (Y) ==> Yes
                                                                    (N) ==>
No
          ");
                             decision =
scan.nextLine().toUpperCase().charAt(0);
                             if(decision == 'Y') {
                                   System.out.println("\n");
                                   exitScreen();
                                   System.exit(1);
                             }else if(decision == 'N') {
                                   System.out.println("\n");
                                   mainMenu();
                             }else {
                                   System.out.println("\nInvalid Input
\nValid Inputs : (Y/N) \n");
                                   mainMenu();
                             }
                 default:
                             System.out.println("\nInvalid Input");
                             mainMenu();
                  }
            }while(true);
```

```
}
      public void subMenu() {
           String file = null;
           String fileName = null;
           int choice = 0;
           do {
                 subMenuOptions();
                 try {
                       choice = Integer.parseInt(scan.nextLine());
                  } catch (NumberFormatException e) {
                       System.out.println("Invalid Input");
                       subMenu();
                 }
                 switch (choice) {
                 case 1:
                             System.out.println("\n==> Adding a
File...");
                             System.out.println("Please enter the file
which you want to add : ");
                             file = scan.nextLine();
                             fileName = file.trim();
                             try {
                                   dao.createNewFile(Main.path, fileName);
                             }catch (NullPointerException e) {
                                   System.out.println(e.getMessage());
                             }catch(IOException e) {
                                   System.out.println("Error occurred
while adding file..");
                                   System.out.println("Please try
again...");
                             }catch(Exception e) {
                                   System.out.println("Error occurred
while adding file..");
                                   System.out.println("Please try
again...");
                             }
                             break;
                 case 2:
                             System.out.println("\n==> Deleting a
File...");
                             System.out.println("Please enter the file
which you want to delete : ");
                             file = scan.nextLine();
                             fileName = file.trim();
```

```
try {
                                   dao.deleteFile(Main.path, fileName);
                             }catch(NullPointerException e) {
                                   System.out.println(e.getMessage());
                             }catch(IOException e) {
                                   System.out.println("Error occurred
while Deleting File..");
                                   System.out.println("Please try
again...");
                             }catch(Exception e) {
                                   System.out.println("Error occurred
while Deleting File..");
                                   System.out.println("Please try
again...");
                             }
                             break;
                 case 3:
                             System.out.println("\n==> Searching a
File...");
                             System.out.println("Please enter the file
which you want to search : ");
                             file = scan.nextLine();
                             fileName = file.trim();
                             try {
                                   dao.searchFile(Main.path, fileName);
                             }catch(NullPointerException e) {
                                   System.out.println(e.getMessage());
                             }catch(IllegalArgumentException e) {
                                   System.out.println(e.getMessage());
                             }catch(Exception e) {
                                   System.out.println(e.getMessage());
                             }
                             break;
                 case 4: mainMenu();
                             break;
                 default:
                       System.out.println("Invalid Input");
                       subMenu();
                 }
            file = null;
            fileName = null;
            }while(true);
      }
```