

Company Lockers Private Ltd.

Product LockedMe.com

Prototype of the Application

Name : RAJDEEP KUMAR GAUTAM

GitHub : <https://github.com/rajdeepkgautam/LockedMeRKG>

About

The prototype of the application is operated as a CLI (Command Line Program) without GUI. Its usage is to do file operations such as create new files along with content, delete a file or search a file from a specified directory and list them afterward in sorting order.

The implementation is done with the help of Java 8 and IDE IntelliJ.

PRODUCT's CAPABILITIES →

User Experience

1. It is a Full-Stack model, which has a completely new and modern design which serves as an interactive User Interface (UI).
2. Simple and Easy design with has a smooth work flow as the user proceed with the options.
3. Multiple options to proceed with each with an indicated option to click
4. User can easily enter the process, can go through the process, and can easily exit.

Technology Stack

1. Front-end and Back-end part is being implemented using Java Programming Language.
2. IntelliJ is used as the Integrated Development Environment(IDE) purpose.

3. Functionalities has been implemented using Data Structures and Sorting Techniques such as ArrayList, HashMap, Binary Search, Bubble Sort, and Strings.

Sprint Planning

The Implementation is done in two sprints which are mentioned below:

Sprint 1:

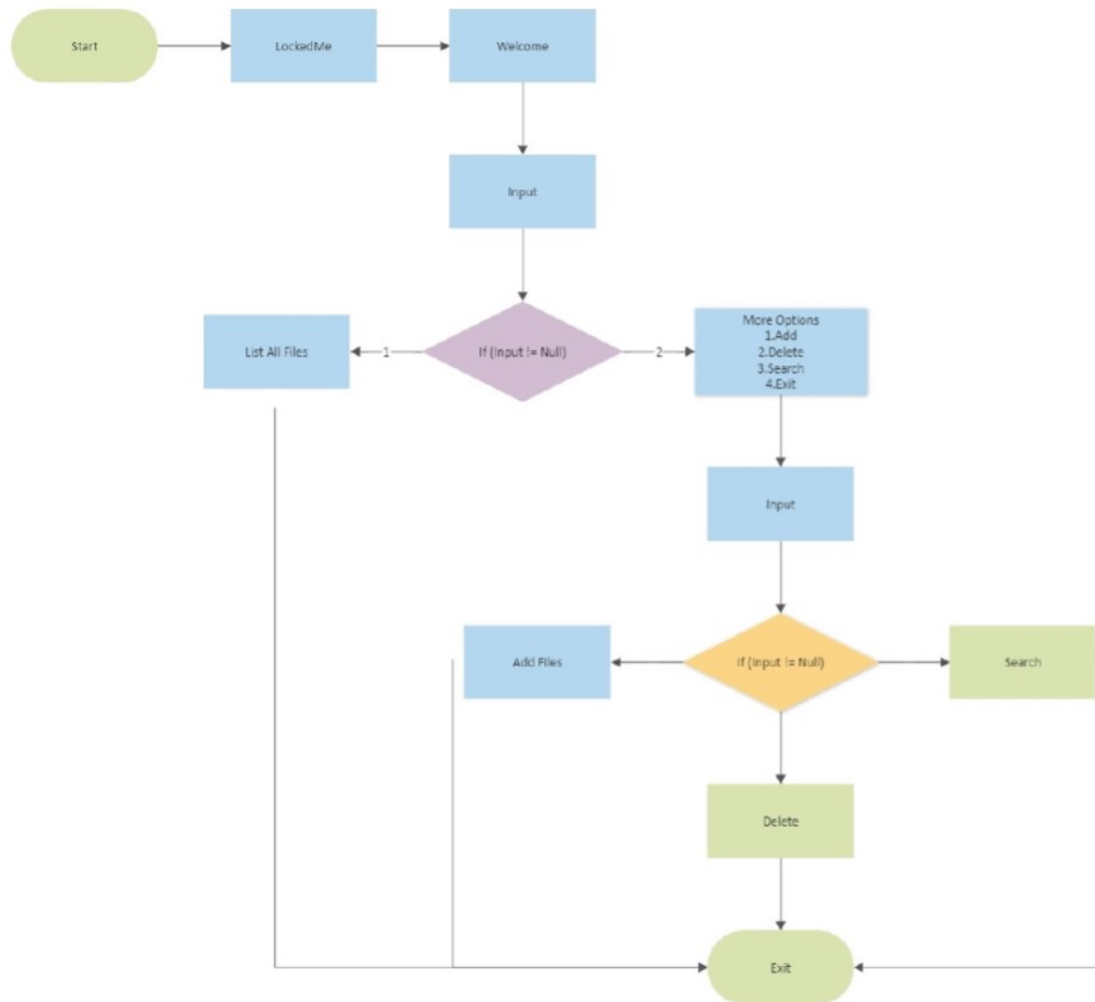
- Clarify the specification and requirements.
- Implement view content mechanism.
- Implement list of all files in sorted order.
- Implement functionality to close the program safely.

Sprint 2:

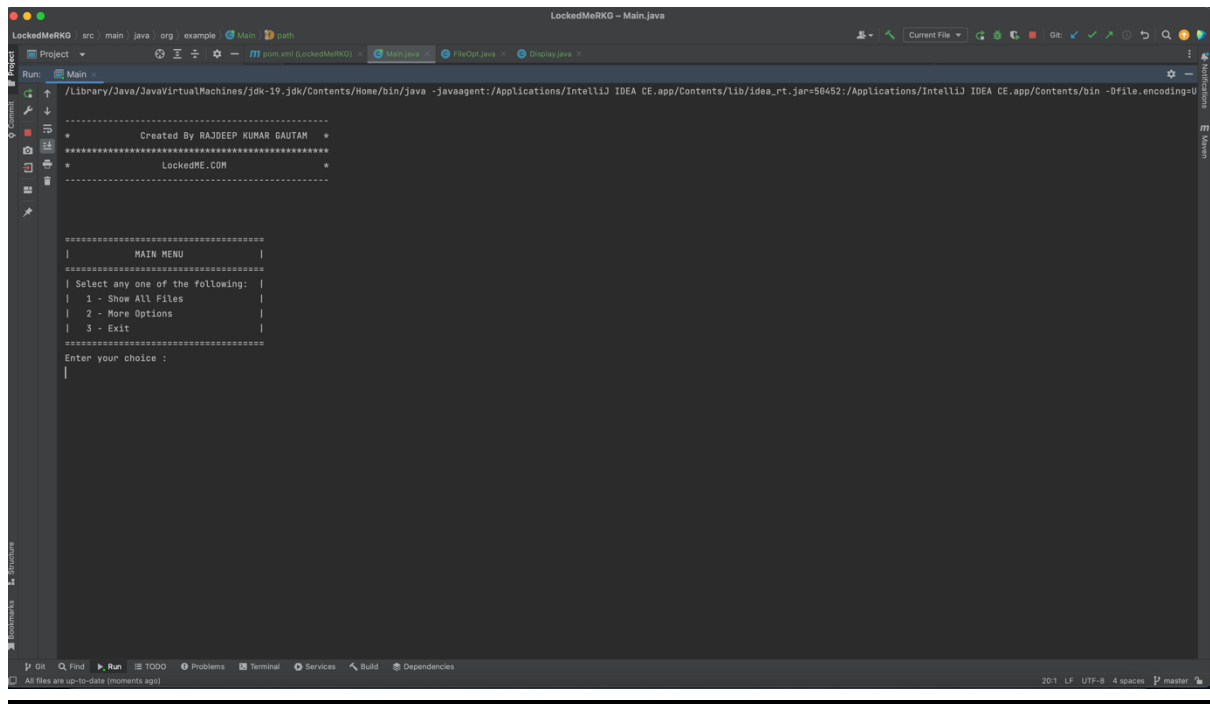
- Implement functionality to add create files along the content.
- Implement functionality to delete a file if it is present in that user specified directory.
- Implement functionality to search a file in the same directory.
- Documentation.

Flowchart-

LockedMe Application Flowchart

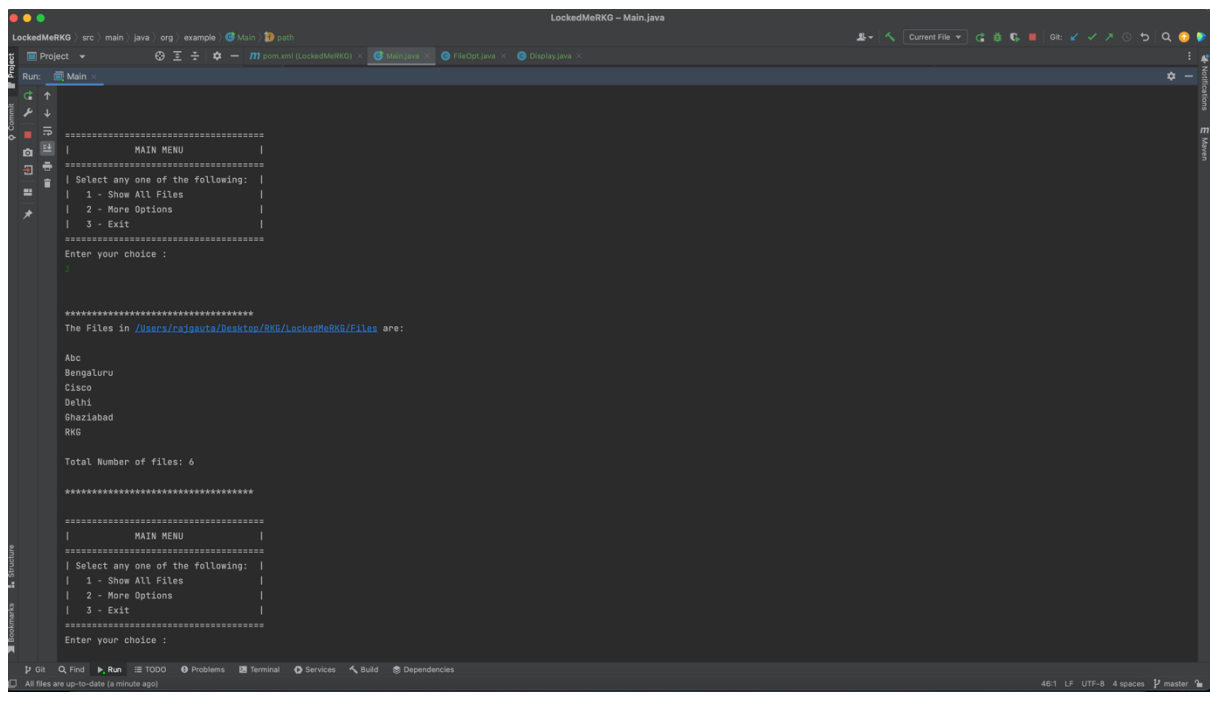


User Interface:-



The screenshot shows the IntelliJ IDEA IDE with a Java project named 'LockedMeRKG'. The 'Main.java' file is open, displaying the application's main menu. The menu is enclosed in a box with a title 'MAIN MENU' and a list of options: '1 - Show All Files', '2 - More Options', and '3 - Exit'. The user is prompted to 'Enter your choice :'. The IDE interface includes a project view on the left, a run console at the bottom, and a status bar at the very bottom.

```
LockedMeRKG - Main.java
src / main / java / org / example / Main path
Project
Run: Main
/Library/Java/JavaVirtualMachines/jdk-19_jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA CE.app/Contents/lib/idea_rt.jar=50452:/Applications/IntelliJ IDEA CE.app/Contents/bin -Dfile.encoding=UTF-8
Created By RAJDEEP KUMAR GAUTAM
*****
LockedME.COM
*****
*****
| MAIN MENU |
*****
| Select any one of the following: |
| 1 - Show All Files |
| 2 - More Options |
| 3 - Exit |
*****
Enter your choice :
|
```



This screenshot shows the application after the user has selected option '1 - Show All Files'. The output in the run console displays the files in the directory '/Users/rajgaut/Desktop/RKG/LockedMeRKG/Files'. The files listed are 'Abc', 'Bengaluru', 'Cisco', 'Delhi', 'Ghaziabad', and 'RKG'. The total number of files is 6. The main menu is displayed again at the bottom of the console output.

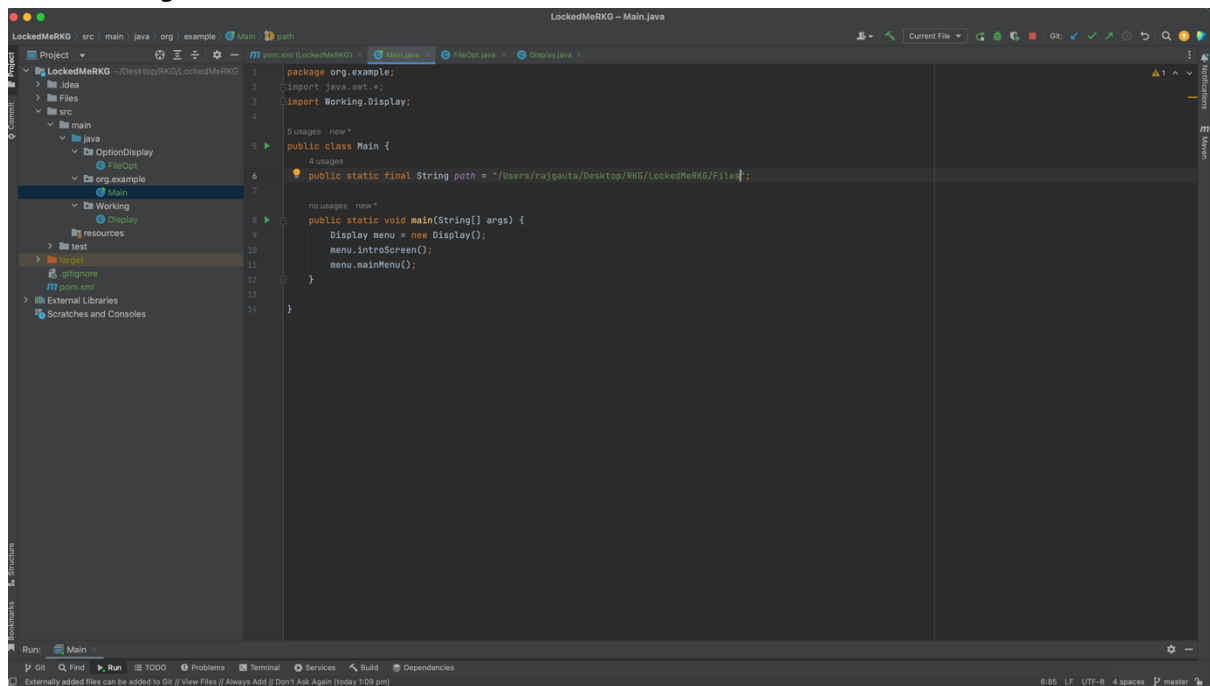
```
LockedMeRKG - Main.java
src / main / java / org / example / Main path
Project
Run: Main
*****
| MAIN MENU |
*****
| Select any one of the following: |
| 1 - Show All Files |
| 2 - More Options |
| 3 - Exit |
*****
Enter your choice :
1
*****
The Files in /Users/rajgaut/Desktop/RKG/LockedMeRKG/Files are:
Abc
Bengaluru
Cisco
Delhi
Ghaziabad
RKG
Total Number of files: 6
*****
| MAIN MENU |
*****
| Select any one of the following: |
| 1 - Show All Files |
| 2 - More Options |
| 3 - Exit |
*****
Enter your choice :
```

```
LockedMeRKG - Main.java
src: main | java | org | example | Main | path
pom.xml (LockedMeRKG) | Main.java | FileOpt.java | Display.java
Run: Main
*****
The Files in /Users/rajgauti/Desktop/RKG/LockedMeRKG/Files are:
Abc
Bengaluru
Cisco
Delhi
Ghaziabad
RKG
Total Number of files: 6
*****
| MAIN MENU |
| Select any one of the following: |
| 1 - Show All Files |
| 2 - More Options |
| 3 - Exit |
| Enter your choice : |
|
| SUB MENU |
| Select any one of the following: |
| 1 - Add a file |
| 2 - Delete a file |
| 3 - Search a file |
| 4 - Back |
| Enter your choice : |
|
| Git | Q | Find | Run | TODO | Problems | Terminal | Services | Build | Dependencies
All files are up-to-date (a minute ago)
5B1 LF UTF-8 4 spaces master
```

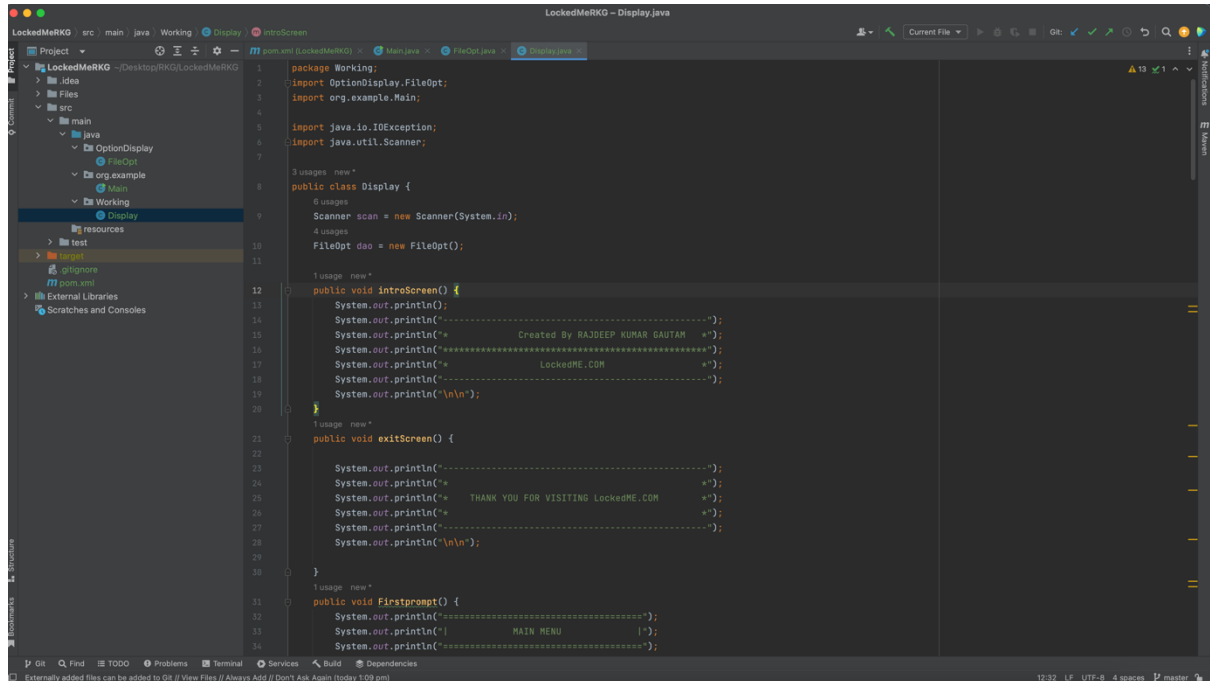
```
LockedMeRKG - Main.java
src: main | java | org | example | Main | path
pom.xml (LockedMeRKG) | Main.java | FileOpt.java | Display.java
Run: Main
==> Searching a File...
Please enter a file name to Search :
File Found at location: /Users/rajgauti/Desktop/RKG/LockedMeRKG/Files
*****
| SUB MENU |
| Select any one of the following: |
| 1 - Add a file |
| 2 - Delete a file |
| 3 - Search a file |
| 4 - Back |
| Enter your choice : |
|
| SUB MENU |
| Select any one of the following: |
| 1 - Add a file |
| 2 - Delete a file |
| 3 - Search a file |
| 4 - Back |
| Enter your choice : |
|
| Git | Q | Find | Run | TODO | Problems | Terminal | Services | Build | Dependencies
All files are up-to-date (2 minutes ago)
11B1 LF UTF-8 4 spaces master
```

Source Code

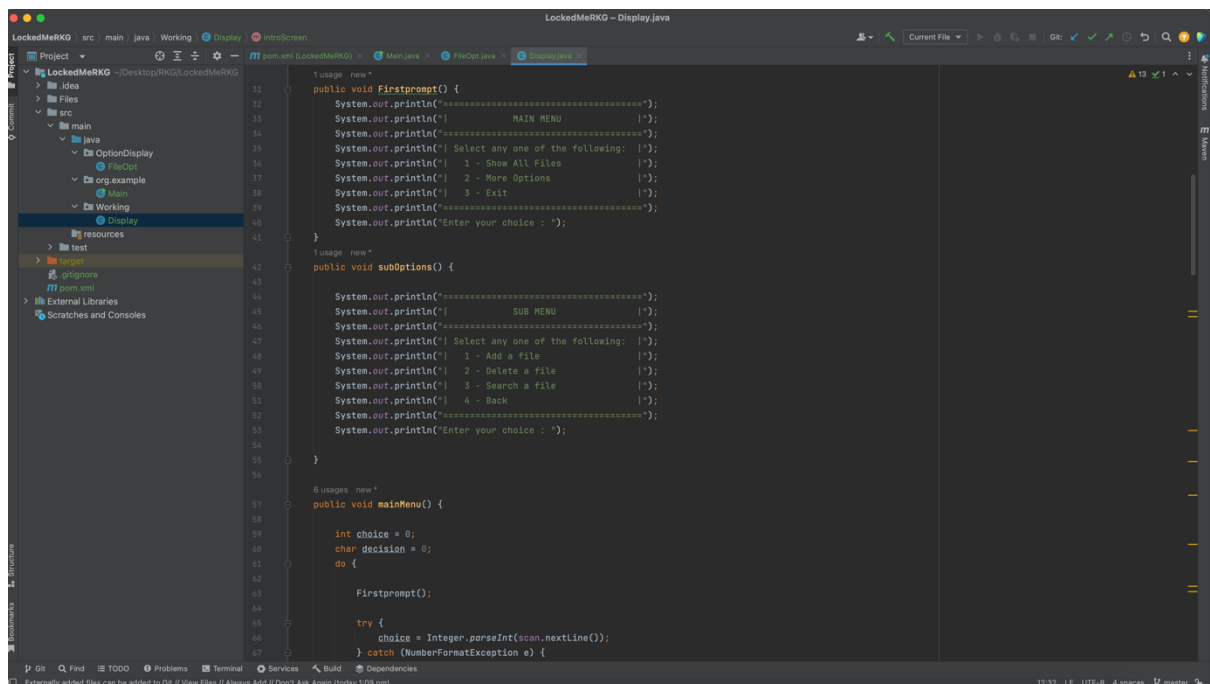
Main.java



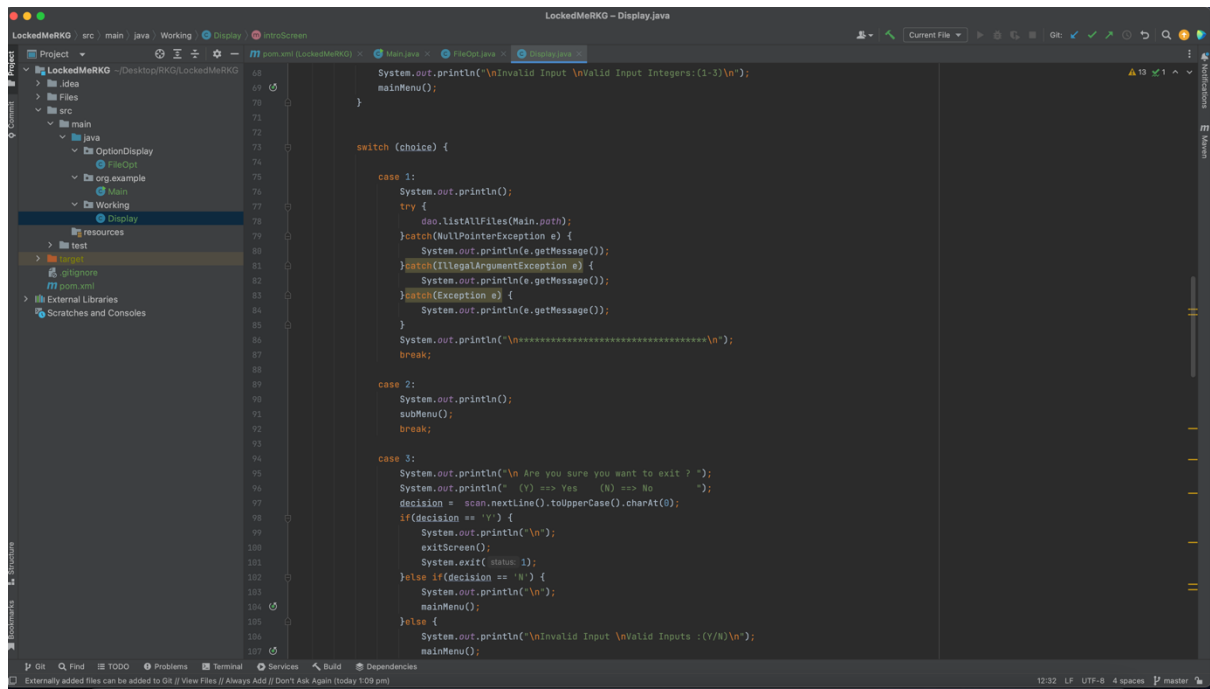
Display.java



```
1 package Working;
2 import OptionDisplay.FileOpt;
3 import org.example.Main;
4
5 import java.io.IOException;
6 import java.util.Scanner;
7
8 3 usages new *
9 public class Display {
10     6 usages
11     Scanner scan = new Scanner(System.in);
12     4 usages
13     FileOpt dao = new FileOpt();
14
15     1 usage new *
16     public void introScreen() {
17         System.out.println();
18         System.out.println("-----");
19         System.out.println("      Created By RAJDEEP KUMAR GAUTAM    ");
20         System.out.println("-----");
21         System.out.println("      LockedME.COM      ");
22         System.out.println("-----");
23         System.out.println("\n\n");
24     }
25
26     1 usage new *
27     public void exitScreen() {
28         System.out.println("-----");
29         System.out.println("      THANK YOU FOR VISITING LockedME.COM    ");
30         System.out.println("-----");
31         System.out.println("\n\n");
32     }
33
34     1 usage new *
35     public void firstPrompt() {
36         System.out.println("-----");
37         System.out.println("      MAIN MENU      ");
38         System.out.println("-----");
39     }
```



```
31     1 usage new *
32     public void firstPrompt() {
33         System.out.println("-----");
34         System.out.println("      MAIN MENU      ");
35         System.out.println("-----");
36         System.out.println("Select any one of the following: ");
37         System.out.println("1 - Show All Files      ");
38         System.out.println("2 - More Options      ");
39         System.out.println("3 - Exit      ");
40         System.out.println("-----");
41         System.out.println("Enter your choice : ");
42     }
43
44     1 usage new *
45     public void subOptions() {
46         System.out.println("-----");
47         System.out.println("      SUB MENU      ");
48         System.out.println("-----");
49         System.out.println("Select any one of the following: ");
50         System.out.println("1 - Add a file      ");
51         System.out.println("2 - Delete a file      ");
52         System.out.println("3 - Search a file      ");
53         System.out.println("4 - Back      ");
54         System.out.println("-----");
55         System.out.println("Enter your choice : ");
56     }
57
58     6 usages new *
59     public void mainMenu() {
60         int choice = 0;
61         char decision = 0;
62         do {
63             firstPrompt();
64             try {
65                 choice = Integer.parseInt(scan.nextLine());
66             } catch (NumberFormatException e) {
67                 // Handle exception
68             }
69         } while (choice != 0);
70     }
```




```
149 System.out.println("Error occurred while adding file..");
150 System.out.println("Please try again...");
151 }catch(exception e) {
152     System.out.println("Error occurred while adding file..");
153     System.out.println("Please try again...");
154 }
155 System.out.println("\n=====n");
156 break;
157
158 case 2:
159     System.out.println("\n==> Deleting a File...");
160     System.out.println("Please enter a file name to Delete : ");
161     file = scan.nextLine();
162     fileName = file.trim();
163     try {
164         dao.deleteFile(Main.path, fileName);
165     }catch(NullPointerException e) {
166         System.out.println(e.getMessage());
167     }catch(IOException e) {
168         System.out.println("Error occurred while Deleting File..");
169         System.out.println("Please try again...");
170     }catch(exception e) {
171         System.out.println("Error occurred while Deleting File..");
172         System.out.println("Please try again...");
173     }
174     System.out.println("\n=====n");
175     break;
176
177 case 3:
178     System.out.println("\n==> Searching a File...");
179     System.out.println("Please enter a file name to Search : ");
180     file = scan.nextLine();
181     fileName = file.trim();
182     try {
183         dao.searchFile(Main.path, fileName);
184     }catch(NullPointerException e) {
185         System.out.println(e.getMessage());
186     }catch(IllegalArgumentException e) {
187         System.out.println(e.getMessage());
188     }catch(exception e) {
189         System.out.println(e.getMessage());
190     }
191     System.out.println("\n=====n");
192     break;
193 case 4: mainMenu();
194     break;
195
196 default:
197     System.out.println("Invalid Input \nValid Input Integers:(1-4)");
198     subMenu();
199 }
200
201 file = null;
202 fileName = null;
203 }while(true);
204 }
```

```
175 break;
176
177 case 3:
178     System.out.println("\n==> Searching a File...");
179     System.out.println("Please enter a file name to Search : ");
180     file = scan.nextLine();
181     fileName = file.trim();
182     try {
183         dao.searchFile(Main.path, fileName);
184     }catch(NullPointerException e) {
185         System.out.println(e.getMessage());
186     }catch(IllegalArgumentException e) {
187         System.out.println(e.getMessage());
188     }catch(exception e) {
189         System.out.println(e.getMessage());
190     }
191     System.out.println("\n=====n");
192     break;
193 case 4: mainMenu();
194     break;
195
196 default:
197     System.out.println("Invalid Input \nValid Input Integers:(1-4)");
198     subMenu();
199 }
200
201 file = null;
202 fileName = null;
203 }while(true);
204 }
```

The image shows a screenshot of an IDE (likely IntelliJ IDEA) with a dark theme. The top toolbar includes icons for file operations and a 'Current File' dropdown. The sidebar on the left shows a project tree for 'LockedMeRKG' with folders like 'src', 'main', and 'resources'. The main editor displays the code for 'FileOpt.java'. The code defines a 'FileOpt' class with a 'listAllFiles' method that recursively lists files in a directory. The IDE interface includes a sidebar with project files, a top toolbar, and a bottom status bar. The status bar at the bottom shows 'Run: Main', 'Git', 'Find', 'Run', 'TODO', 'Problems', 'Terminal', 'Services', 'Build', and 'Dependencies'. The bottom right corner shows '1/23 LF UTF-8 4 spaces master'.

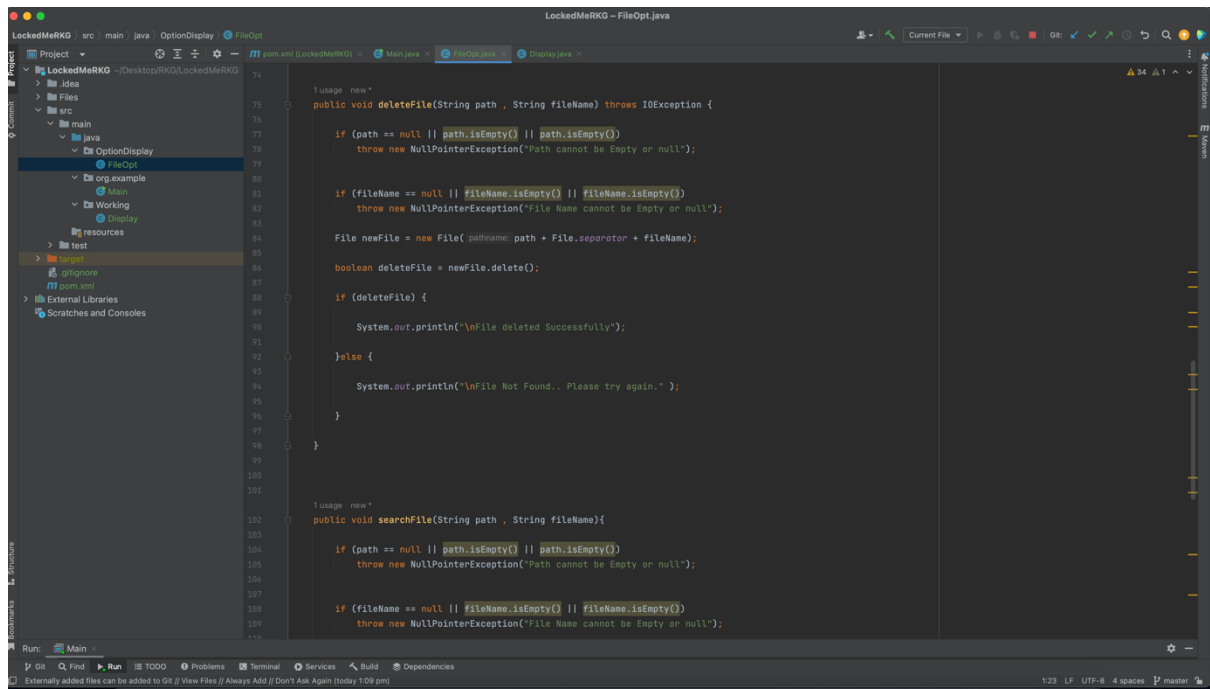
The screenshot shows the IntelliJ IDEA IDE interface. The top bar indicates the project is 'LockedMeRKG - FileOpt.java'. The left sidebar shows the project structure:

- Project: LockedMeRKG - Desktop\RGK\LockedMeRKG
 - idea
 - Files
 - src
 - main
 - java
 - OptionDisplay
 - FileOpt
 - org.example
 - Main
 - Working
 - Display
 - resources
 - test
 - target
 - gitignore
 - pom.xml
 - External Libraries
 - Scratches and Consoles

The main editor displays the code for 'Main.java' (lines 37-74):

```
37 }
38
39 System.out.println("\nTotal Number of files: " + filesList.size());
40 }else {
41
42     System.out.println("Directory is Empty");
43 }
44
45 }
46
47
48 //usage: new *
49 public void createNewFile(String path , String fileName) throws IOException {
50
51     if (path == null || path.isEmpty() || path.isEmpty())
52         throw new NullPointerException("Path cannot be Empty or null");
53
54     if (fileName == null || fileName.isEmpty() || fileName.isEmpty())
55         throw new NullPointerException("File Name cannot be Empty or null");
56
57     File newFile = new File( pathname: path + File.separator + fileName);
58
59     boolean createFile = newFile.createNewFile();
60
61     if (createFile) {
62
63         System.out.println("\nFile Successfully Created: " + newFile.getAbsolutePath());
64
65     }else if(!createFile) {
66
67         System.out.println("\nFile Already Exist.. Please try again." );
68
69     }
70
71 }
72
73
74 }
```

The bottom status bar shows 'Run: Main' and various toolbars for navigation and development.



Conclusion

- 1: The prototype is robust and platform independent.
- 2: User can easily use the prototype and safely exit out of it.
- 3: The prototype has a good interface with CLI (Command Line Interface).
- 4: As a developer, we can enhance it by introducing several new features such as appending in a file or overwriting a file and the file details for which user selected.
- 5: This prototype though is robust but user can only interact it with terminal or CLI so we can develop a good GUI interface for more better user-friendly.