```java
 1 package com.company;
 2
 3 import java.io.File;
 4 import java.io.IOException;
 5 import java.nio.file.*;
 6 import java.util.HashSet;
 7 import java.util.Scanner;
 8 import java.util.Set;
 9
10 public class Main {
11
12     public static void main(String[] args) throws IOException {
13
14         String welcomeText = """
15                     ======== Welcome to LockedMe.com =========
16                     """;
17
18         System.out.println(welcomeText);
19
20         while (true) {
21
22             String instructions = """
23             -----------------------------------------
24             Please enter one of the following options:
25             1 - List Files
26             2 - Interact with UI
27             3 - Close Program
28             -----------------------------------------
29             Your choice:\t""" ;
30
31             System.out.print(instructions);
32             Scanner scanner = new Scanner(System.in);
33             String user_input = scanner.nextLine();
34             System.out.println();
35             int choice;
36
37             try {
38                 choice = Integer.parseInt(user_input);
39             } catch (NumberFormatException e) {
40                 System.out.println("Invalid Input. You must enter a whole number.\n");
41                 continue;
42             }
43
44             switch (choice) {
45                 case 1:
46                     String currentWorkingDir = System.getProperty("user.dir");
47                     Set<String> files = listFiles(currentWorkingDir);
48                     if (files.isEmpty()) {
49                         System.out.println("The current directory does not have any files in it.\n");
50                         continue;
51                     }
52                     System.out.println("The current directory has the following files:");
53                     files.stream().sorted(String.CASE_INSENSITIVE_ORDER).forEach(System.out::println);
54                     break;
55                 case 2:
56                     subOptionMenu();
57                     break;
58                 case 3:
59                     System.out.println("You have closed the program. Goodbye!");
60                     System.exit(0);
61                     break;
62                 default:
63                     System.out.println("Invalid Input. You must enter 1, 2 or 3.");
64                     break;
65
66             }
67             System.out.println();
68         }
69
70     }
71
72     private static void subOptionMenu() throws IOException {
73
74         String subMenu = """
75             Sub menu
76             -----------------------------------------
```

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 77                 Please enter one of the following options:
 78                 1 - Add file
 79                 2 - Delete file
 80                 3 - Search file
 81                 4 - Main Menu
 82                 -----------------------------------------
 83                 Your choice:\t""" ;
 84
 85         boolean exit = false;
 86         while (true) {
 87
 88             System.out.print(subMenu);
 89             Scanner scanner = new Scanner(System.in);
 90             String user_input = scanner.nextLine();
 91             int choice;
 92             try {
 93                 choice = Integer.parseInt(user_input);
 94             } catch (NumberFormatException e) {
 95                 System.out.println("Invalid Input. You must enter a whole number.\n");
 96                 continue;
 97             }
 98
 99             switch (choice) {
100                 case 1:
101                     addFile();
102                     break;
103                 case 2:
104                     deleteFile();
105                     break;
106                 case 3:
107                     searchFile();
108                     break;
109                 case 4:
110                     mainMenu();
111                     exit = true;
112                     break;
113                 default:
114                     System.out.println("Invalid Input. You must enter 1, 2, 3 or 4.");
115                     break;
116             }
117
118             if (exit) {
119                 break;
120             }
121
122         }
123
124
125     }
126
127     private static void mainMenu() {
128         System.out.println("You have chosen to return to the main menu");
129     }
130
131     private static void searchFile() throws IOException {
132         Scanner scanner = new Scanner(System.in);
133         String fileName;
134         while (true) {
135             System.out.println("Note: The file must have the extension of doc, pdf, csv, xls, md, txt or
     iml.\n" +
136                     "Please enter the name of the file to be found: ");
137             fileName = scanner.nextLine();
138             String strPattern = "^[a-zA-Z0-9_]+\\.(doc|pdf|csv|xls|md|txt|iml)$";
139             if (!fileName.matches(strPattern)) {
140                 System.out.println("\nInvalid file name entered. Try again\n");
141                 continue;
142             } else {
143                 break;
144             }
145         }
146
147
148         String currentWorkingDir = System.getProperty("user.dir");
149         Set<String> files = listFiles(currentWorkingDir);
150         boolean notFound = true;
151         for (String file : files) {
```

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152              if (file.equalsIgnoreCase(fileName)) {
153                  notFound = false;
154                  System.out.println(fileName + " is located in the current directory.\n");
155                  break;
156              }
157          }
158
159          if (notFound) {
160              System.out.println("File not found. " + fileName + " is not located in the current directory.\n");
161          }
162
163      }
164
165      private static void deleteFile() {
166
167          Scanner scanner = new Scanner(System.in);
168          while (true) {
169              System.out.println("Note: The file must have the extension of doc, pdf, csv, xls, md, txt or iml.\n" +
170                      "Please enter the name of the file to be deleted: ");
171              String fileName = scanner.nextLine();
172              String strPattern = "^[a-zA-Z0-9]+\\.(doc|pdf|csv|xls|md|txt|iml)$";
173              if (!fileName.matches(strPattern)) {
174                  System.out.println("\nInvalid file name entered. Try again\n");
175                  continue;
176              }
177
178              File stockFile = new File(fileName);
179              if (stockFile.delete()) {
180                  System.out.println("The file named " + fileName + " was successfully deleted");
181
182              } else {
183                  System.out.println("Error: file does not exist.");
184              }
185
186              break;
187
188          }
189
190      }
191
192
193
194      private static void addFile() {
195
196          Scanner scanner = new Scanner(System.in);
197          while (true) {
198              System.out.print("Note: The file added must have the extension of doc, pdf, csv, xls, md, txt or iml. \n" +
199                      "Please enter the name of the file to be added: ");
200              String fileName = scanner.nextLine();
201              String strPattern = "^[a-zA-Z0-9]+\\.(doc|pdf|csv|xls|md|txt|iml)$";
202              if (!fileName.matches(strPattern)) {
203                  System.out.println("\nInvalid file name entered. Try again!\n");
204                  continue;
205              }
206
207              File stockFile = new File(fileName);
208              try {
209                  stockFile.createNewFile();
210                  break;
211              } catch (IOException ioe) {
212                  System.out.println("File exists already. Try again!");
213              }
214
215          }
216
217          System.out.println("The new file is now in the current directory");
218
219      }
220
221      private static Set<String> listFiles(String dir) throws IOException {
222          Set<String> fileList = new HashSet<>();
223          try (DirectoryStream<Path> stream = Files.newDirectoryStream(Paths.get(dir))) {
224              for (Path path : stream) {
```

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225                    if (!Files.isDirectory(path)) {
226                        fileList.add(path.getFileName()
227                                .toString());
228                    }
229                }
230            }
231        return fileList;
232    }
233 }
234
```