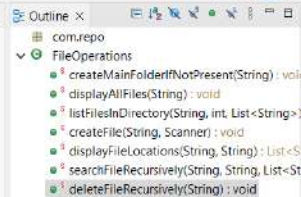


```

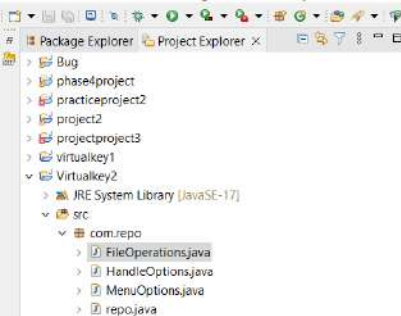
1 package com.repo;
2
3 import java.io.File;
4
5 public class FileOperations {
6
7     public static void createMainFolderIfNotPresent(String folderName) {
8         File file = new File(folderName);
9
10        // If file doesn't exist, create the main folder
11        if (!file.exists()) {
12            file.mkdirs();
13        }
14    }
15
16    public static void displayAllFiles(String path) {
17        FileOperations.createMainFolderIfNotPresent("main");
18        // All required files and folders inside "main" folder relative to current
19        // folder
20        System.out.println("Displaying all files.\n");
21
22        // listFilesInDirectory displays files along with folder structure
23        List<String> filesListNames = FileOperations.listFilesInDirectory(path, 0, new ArrayList<String>());
24
25        System.out.println("Displaying all files in ascending order.\n");
26        Collections.sort(filesListNames);
27
28        filesListNames.stream().forEach(System.out::println);
29    }
30
31    public static List<String> listFilesInDirectory(String path, int indentationCount, List<String> filesList) {
32        File dir = new File(path);
33        File[] files = dir.listFiles();
34        List<File> fileList = Arrays.asList(files);
35
36        Collections.sort(fileList);
37
38        if (files != null && files.length > 0) {
39            for (File file : fileList) {
40
41                System.out.print("  .repeat(indentationCount * 2));
42
43                if (file.isDirectory()) {
44                    System.out.println("-- " + file.getName());
45                }
46            }
47        }
48    }
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```



The screenshot shows the Eclipse IDE interface. The Package Explorer on the left displays the project structure: com.repo, FileOperations.java, HandleOptions.java, MenuOptions.java, and repo.java. The Project Explorer on the right shows the Outline view with methods: createMainFolderIfNotPresent(String), displayAllFiles(String), listFilesInDirectory(String, int, List<String>), createFile(String, Scanner), displayFileLocations(String, String), searchFileRecursively(String, String, List<String>), and deleteFileRecursively(String). The main editor displays the code for FileOperations.java, which includes methods for listing files, creating files, and displaying file locations.

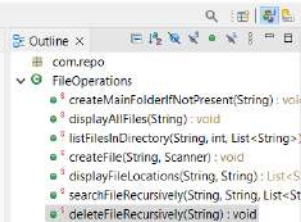
```
59     listFilesInDirectory(file.getAbsolutePath(), indentationCount + 1, fileListNames);
60     } else {
61         System.out.println("-- " + file.getName());
62         fileListNames.add(file.getName());
63     }
64 }
65 } else {
66     System.out.print(" ".repeat(indentationCount * 2));
67     System.out.println("-- Empty Directory");
68 }
69 System.out.println();
70 return fileListNames;
71 }
72
73 public static void createFile(String fileToAdd, Scanner sc) {
74     FileOperations.createMainFolderIfNotPresent("main");
75     Path pathToFile = Paths.get("./main/" + fileToAdd);
76     try {
77         Files.createDirectories(pathToFile.getParent());
78         Files.createFile(pathToFile);
79         System.out.println(fileToAdd + " created successfully");
80
81         System.out.println("Would you like to add some content to the file? (Y/N)");
82         String choice = sc.next().toLowerCase();
83
84         sc.nextLine();
85         if (choice.equals("y")) {
86             System.out.println("\nInput content and press enter\n");
87             String content = sc.nextLine();
88             Files.write(pathToFile, content.getBytes());
89             System.out.println("\nContent written to file " + fileToAdd);
90             System.out.println("Content can be read");
91         }
92     } catch (IOException e) {
93         System.out.println("Failed to create file " + fileToAdd);
94         System.out.println(e.getClass().getName());
95     }
96 }
97
98 public static List<String> displayFileLocations(String fileName, String path) {
99     List<String> fileListNames = new ArrayList<>();
100     FileOperations.searchFileRecursively(path, fileName, fileListNames);
101 }
```

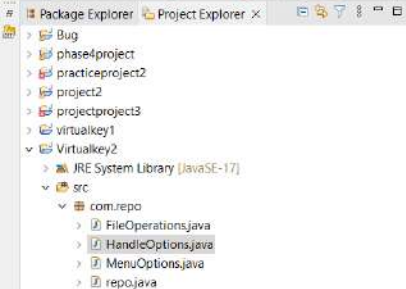


```

123     for (File file : fileListNames) {
124
125         if (file.getName().startsWith(fileName)) {
126             fileListNames.add(file.getAbsolutePath());
127         }
128     }
129     // Need to search in directories separately to ensure all files of required
130     // fileName are searched
131     if (file.isDirectory()) {
132         searchFileRecursively(file.getAbsolutePath(), fileName, fileListNames);
133     }
134 }
135 }
136 }
137
138 public static void deleteFileRecursively(String path) {
139
140     File currFile = new File(path);
141     File[] files = currFile.listFiles();
142
143     if (files != null && files.length > 0) {
144         for (File file : files) {
145
146             String fileName = file.getName() + " at " + file.getParent();
147             if (file.isDirectory()) {
148                 deleteFileRecursively(file.getAbsolutePath());
149             }
150
151             if (file.delete()) {
152                 System.out.println(fileName + " deleted successfully");
153             } else {
154                 System.out.println("Failed to delete " + fileName);
155             }
156         }
157     }
158
159     String currFileName = currFile.getName() + " at " + currFile.getParent();
160     if (currFile.delete()) {
161         System.out.println(currFileName + " deleted successfully");
162     } else {
163         System.out.println("Failed to delete " + currFileName);
164     }
165 }
166 }

```



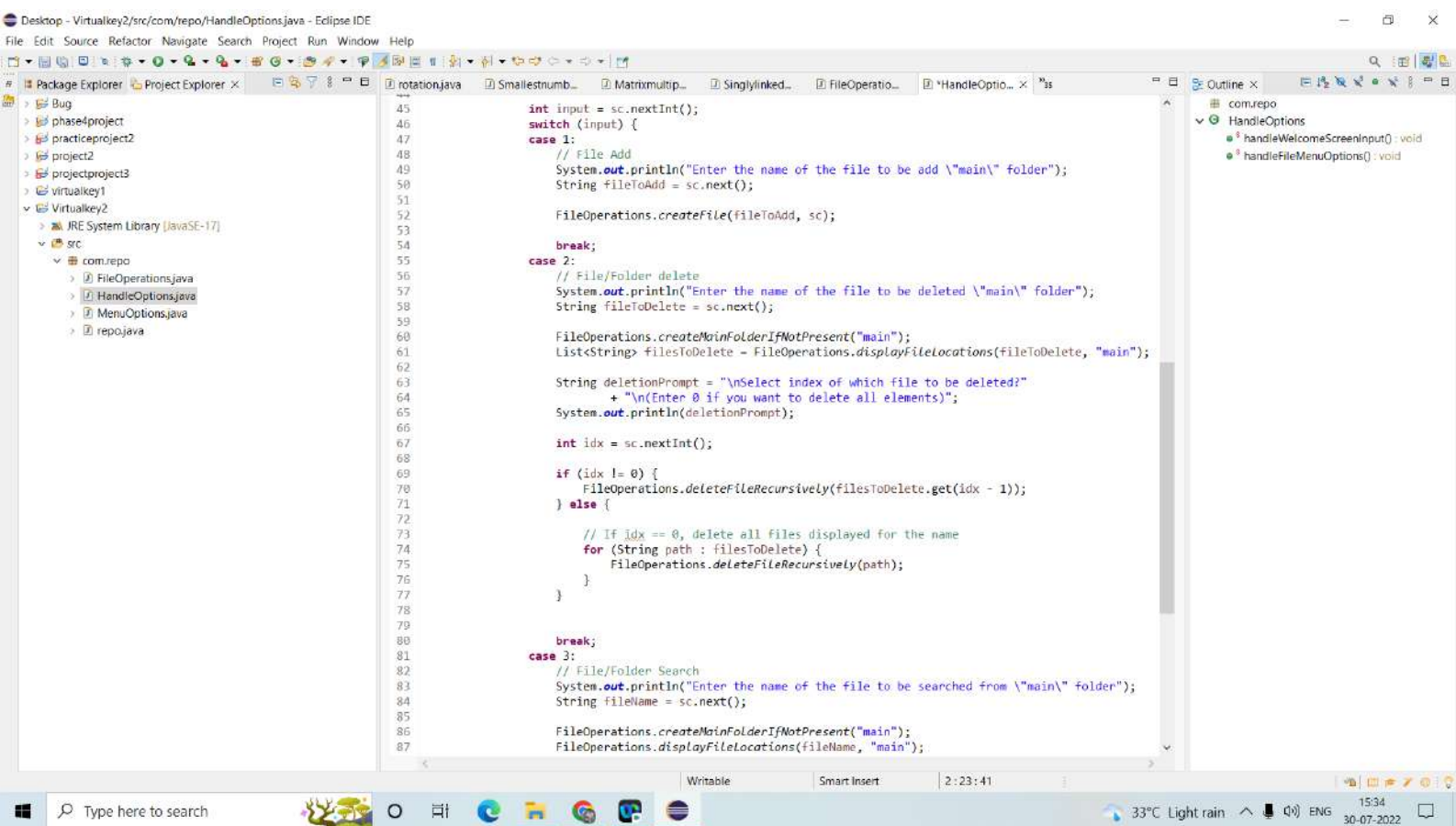


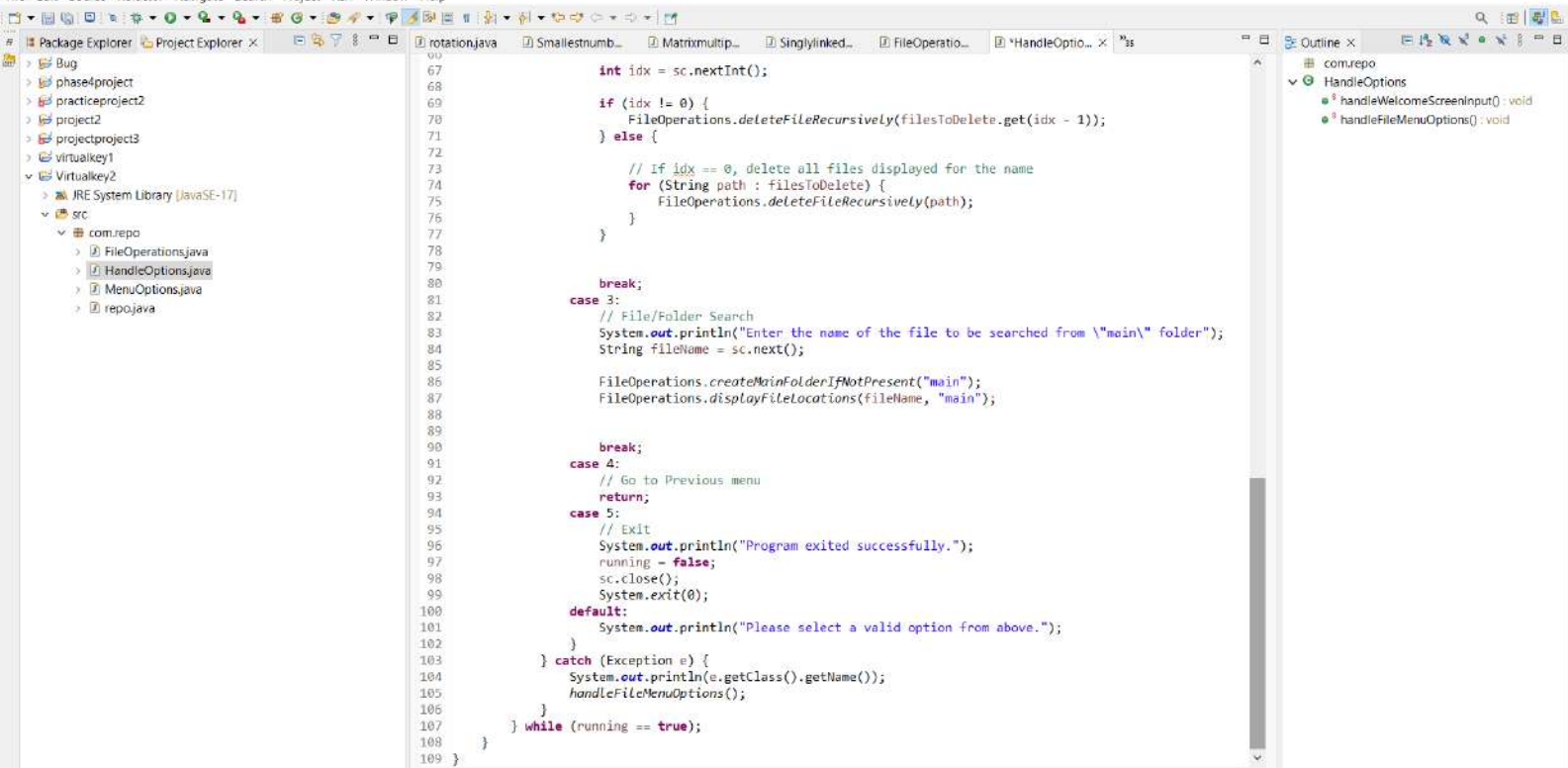
```

1 package com.repo;
2 import java.util.List;
3 import java.util.Scanner;
4
5 public class HandleOptions {
6     public static void handleWelcomeScreenInput() {
7         boolean running = true;
8         Scanner sc = new Scanner(System.in);
9         do {
10             try {
11                 MenuOptions.displayMenu();
12                 int input = sc.nextInt();
13
14                 switch (input) {
15                     case 1:
16                         FileOperations.displayAllFiles("main");
17                         break;
18                     case 2:
19                         HandleOptions.handleFileMenuOptions();
20                         break;
21                     case 3:
22                         System.out.println("Program exited successfully.");
23                         running = false;
24                         sc.close();
25                         System.exit(0);
26                         break;
27                     default:
28                         System.out.println("Please select a valid option from above.");
29                 }
30             } catch (Exception e) {
31                 System.out.println(e.getClass().getName());
32                 handleWelcomeScreenInput();
33             }
34         } while (running == true);
35     }
36
37     public static void handleFileMenuOptions() {
38         boolean running = true;
39         Scanner sc = new Scanner(System.in);
40         do {
41             try {
42                 MenuOptions.displayFileMenuOptions();
43                 FileOperations.createMainFolderIfNotPresent("main");
44             }

```







```
67         int idx = sc.nextInt();
68
69         if (idx != 0) {
70             FileOperations.deleteFileRecursively(filesToDelete.get(idx - 1));
71         } else {
72
73             // If idx == 0, delete all files displayed for the name
74             for (String path : filesToDelete) {
75                 FileOperations.deleteFileRecursively(path);
76             }
77
78             break;
79
80         case 3:
81             // File/Folder Search
82             System.out.println("Enter the name of the file to be searched from \"main\" folder");
83             String fileName = sc.next();
84
85             FileOperations.createMainFolderIfNotPresent("main");
86             FileOperations.displayFileLocations(fileName, "main");
87
88             break;
89
90         case 4:
91             // Go to Previous menu
92             return;
93
94         case 5:
95             // Exit
96             System.out.println("Program exited successfully.");
97             running = false;
98             sc.close();
99             System.exit(0);
100
101         default:
102             System.out.println("Please select a valid option from above.");
103     }
104     catch (Exception e) {
105         System.out.println(e.getClass().getName());
106         handleFileMenuOptions();
107     }
108 } while (running == true);
109 }
```

Package Explorer:

- Bug
- phase4project
- practiceproject2
- project2
- projectproject3
- virtualkey1
- Virtualkey2
 - JRE System Library [JavaSE-17]
 - src
 - com.repo
 - FileOperations.java
 - HandleOptions.java
 - MenuOptions.java
 - repo.java

Outline:

- com.repo
 - HandleOptions
 - handleWelcomeScreenInput() : void
 - handleFileMenuOptions() : void



Package Explorer Project Explorer

- Bug
- phase4project
- practiceproject2
- project2
- projectproject3
- virtualkey1
- Virtualkey2
 - JRE System Library [JavaSE-17]
 - src
 - com.repo
 - FileOperations.java
 - HandleOptions.java
 - MenuOptions.java**
 - repo.java

```

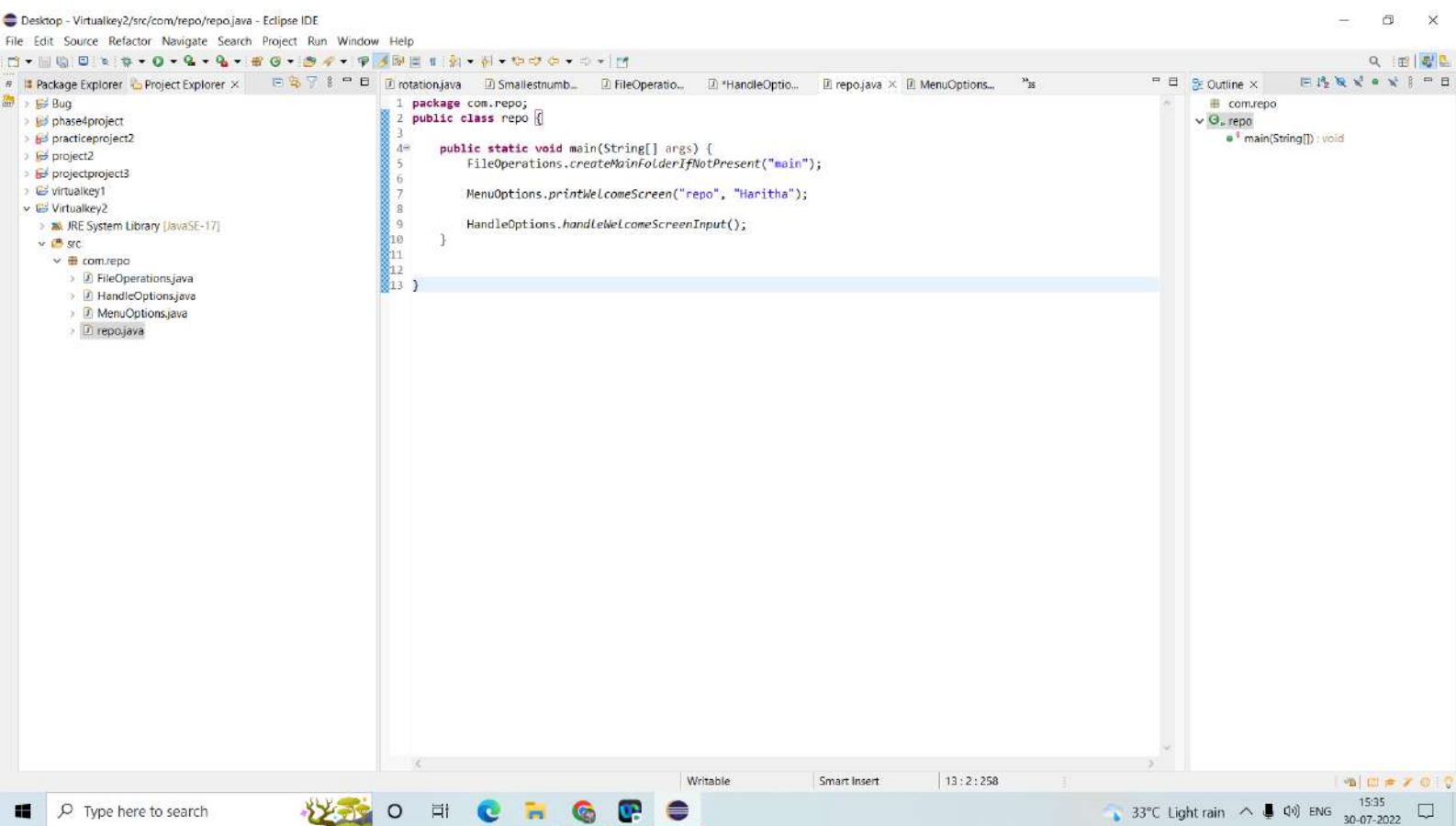
1 package com.repo;
2
3 public class MenuOptions {
4
5     public static void printWelcomeScreen(String appName, String developerName) {
6         String companyDetails = String.format("*****\n"
7             + "*** Welcome to %s.com. \n" + "*** This application was developed by %s.\n"
8             + "*****\n", appName, developerName);
9         String appFunction = "You can use this application to :-\n"
10            + "* Retrieve all file names in the \"main\" folder\n"
11            + "* Search, add, or delete files in \"main\" folder\n"
12            + "\n***Please be careful to ensure the correct filename is provided for searching or deleting
13
14         System.out.println(companyDetails);
15         System.out.println(appFunction);
16     }
17
18     public static void displayMenu() {
19         String menu = "\n***** Select any option number from below and press Enter *****\n\n"
20            + "1) Retrieve all files inside \"main\" folder\n" + "2) Display menu for File operations\n"
21            + "3) Exit program\n";
22         System.out.println(menu);
23     }
24
25     public static void displayFileMenuOptions() {
26         String fileMenu = "\n***** Select any option number from below and press Enter *****\n\n"
27            + "1) Add a file to \"main\" folder\n" + "2) Delete a file from \"main\" folder\n"
28            + "3) Search for a file from \"main\" folder\n" + "4) Show Previous Menu\n" + "5) Exit program\n";
29
30         System.out.println(fileMenu);
31     }
32 }
33
34

```

Outline

- com.repo
 - MenuOptions**
 - printWelcomeScreen(String, String) : void
 - displayMenu() : void
 - displayFileMenuOptions() : void

Writable Smart Insert 34:2:1454



Desktop - Virtualkey2/src/com/repo/repo.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer Project Explorer

com.repo

- FileOperations.java
- HandleOptions.java
- MenuOptions.java
- repo.java

rotation.java Smallestnumb... FileOperatio... HandleOptio... repo.java MenuOptions... .js

Outline

- com.repo
- main/Screen1

Console

```
repo [Java Application] C:\Users\Haritha\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.3.v20220515-1416\jre\bin\javaw.exe (30-Jul-2022, 3:35:26 pm) [pid: 1556]

*****

You can use this application to :-
• Retrieve all file names in the "main" folder
• Search, add, or delete files in "main" folder.

**Please be careful to ensure the correct filename is provided for searching or deleting files.**

***** Select any option number from below and press Enter *****

1) Retrieve all files inside "main" folder
2) Display menu for File operations
3) Exit program

1
Displaying all files.

|-- add
|-- sub
|-- sum

Displaying all files in ascending order.

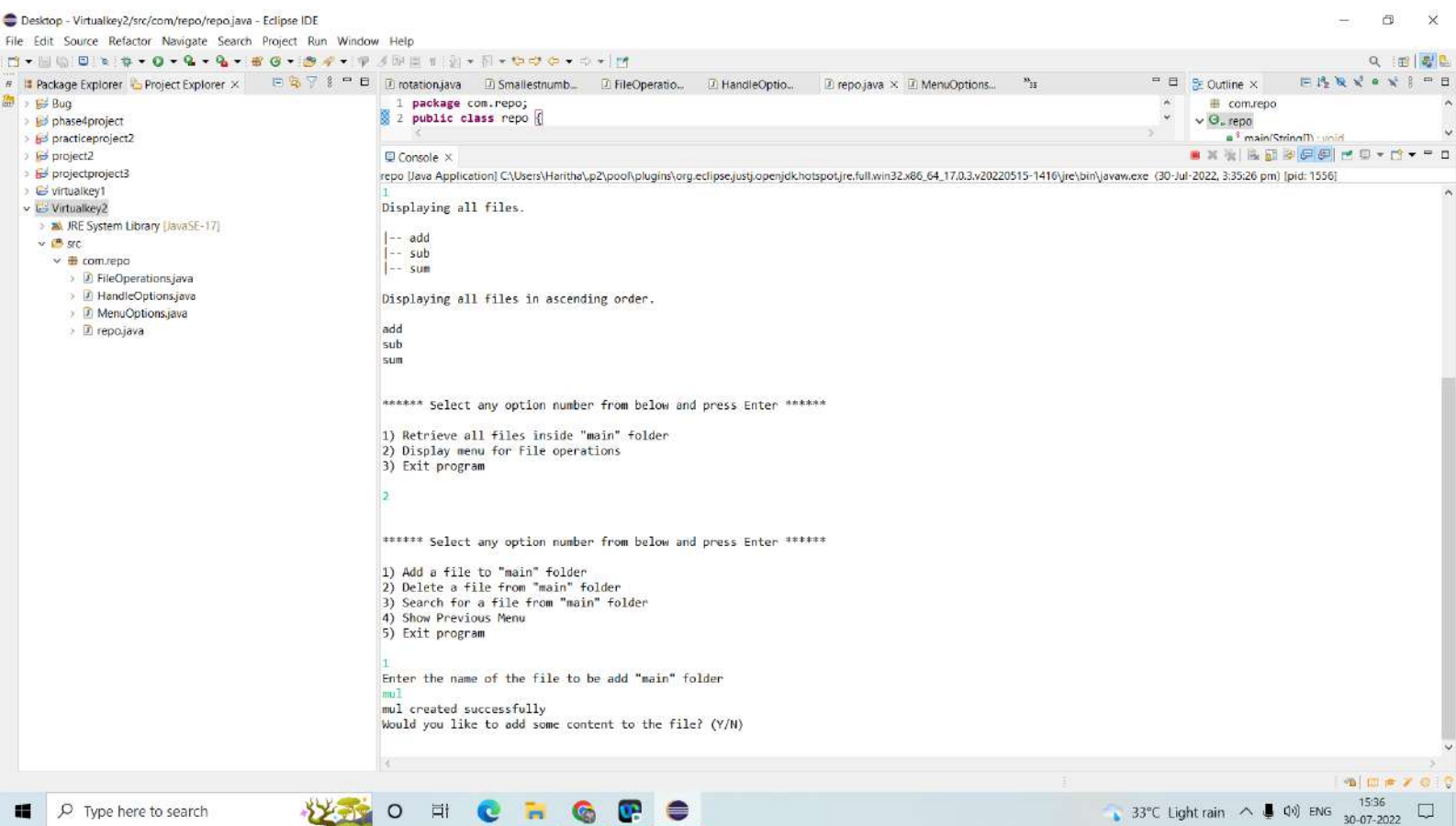
add
sub
sum

***** Select any option number from below and press Enter *****

1) Retrieve all files inside "main" folder
2) Display menu for File operations
3) Exit program
```

Type here to search

33°C Light rain 15:35 30-07-2022



Desktop - Virtualkey2/src/com/repo/repo.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer Project Explorer

com.repo

- FileOperations.java
- HandleOptions.java
- MenuOptions.java
- repo.java

rotation.java Smallestnumb... FileOperatio... HandleOptio... repo.java MenuOptions...

```
1 package com.repo;
2 public class repo {
```

Console x

repo [Java Application] C:\Users\Haritha\p2\poo\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.3.v20220515-1416\jre\bin\javaw.exe (30-Jul-2022, 3:35:26 pm) [pid: 1556]

```
4) Show Previous Menu
5) Exit program

1
Enter the name of the file to be add "main" folder
mul
mul created successfully
Would you like to add some content to the file? (Y/N)
2

***** Select any option number from below and press Enter *****

1) Add a file to "main" folder
2) Delete a file from "main" folder
3) Search for a file from "main" folder
4) Show Previous Menu
5) Exit program

3
Enter the name of the file to be searched from "main" folder
sub

Found file at below location(s):
1: C:\Users\Haritha\OneDrive\Desktop\Virtualkey2\main\sub

***** Select any option number from below and press Enter *****

1) Add a file to "main" folder
2) Delete a file from "main" folder
3) Search for a file from "main" folder
4) Show Previous Menu
5) Exit program
```

Type here to search

33°C Light rain 15:36 30-07-2022 ENG

