Lockedme.com

Project Details: -

➢ This application enables users to explore, create, search and delete file from the directory.
➢ This can be the file manager application for reading and editing.

Developer Details: -

➢ **Name: -** Jigneshkumar Gediya
➢ **Position: - Jr.** Developer
➢ **Role: -** Full Stack JAVA Developer

Sprint Planning: -

Total 3 sprint will be required to complete the application.

❖ **Phase – 1: -** Create user interaction such a way like options for user input to select specific operation
  ➢ **Result**
    ✓ Display Main Menu
      1. View the list of existing files
      2. Manage Files [Menu]
      3. Exit
    ✓ Display Manage Files Menu
      1. Add A File
      2. Delete A File
      3. Search A File
      4. Return To Main Menu
❖ **Phase – 2:** - Create file management operation to handle user input of Manage files menu
  ➢ **Result**
    1. addFile()
    2. deleteFile()
    3. searchFile()
❖ **Phase – 3:** - Create execution method to display existing files in ascending order

Algorithm: -

Main Class (Main.java)

➢ Main class contains method appInfo() to print the application details

userInteraction Class (userInteraction.java)

➢ mainMenu() - Generic features and three operations:
  - Retrieving the file names in an ascending order
  - Business-level operations manageFilesMenu() -
    ▪ Option to add a user specified file to the application
    ▪ Option to delete a user specified file from the application
    ▪ Option to search a user specified file from the application
  - Navigation option to close the current execution context and return to the main context
  - Option to close the application
➢ userConsole()
  - Calls functions mainMenu() and managefilesMenu()
  - Switch control flow to handle the operations based on user's specified input.

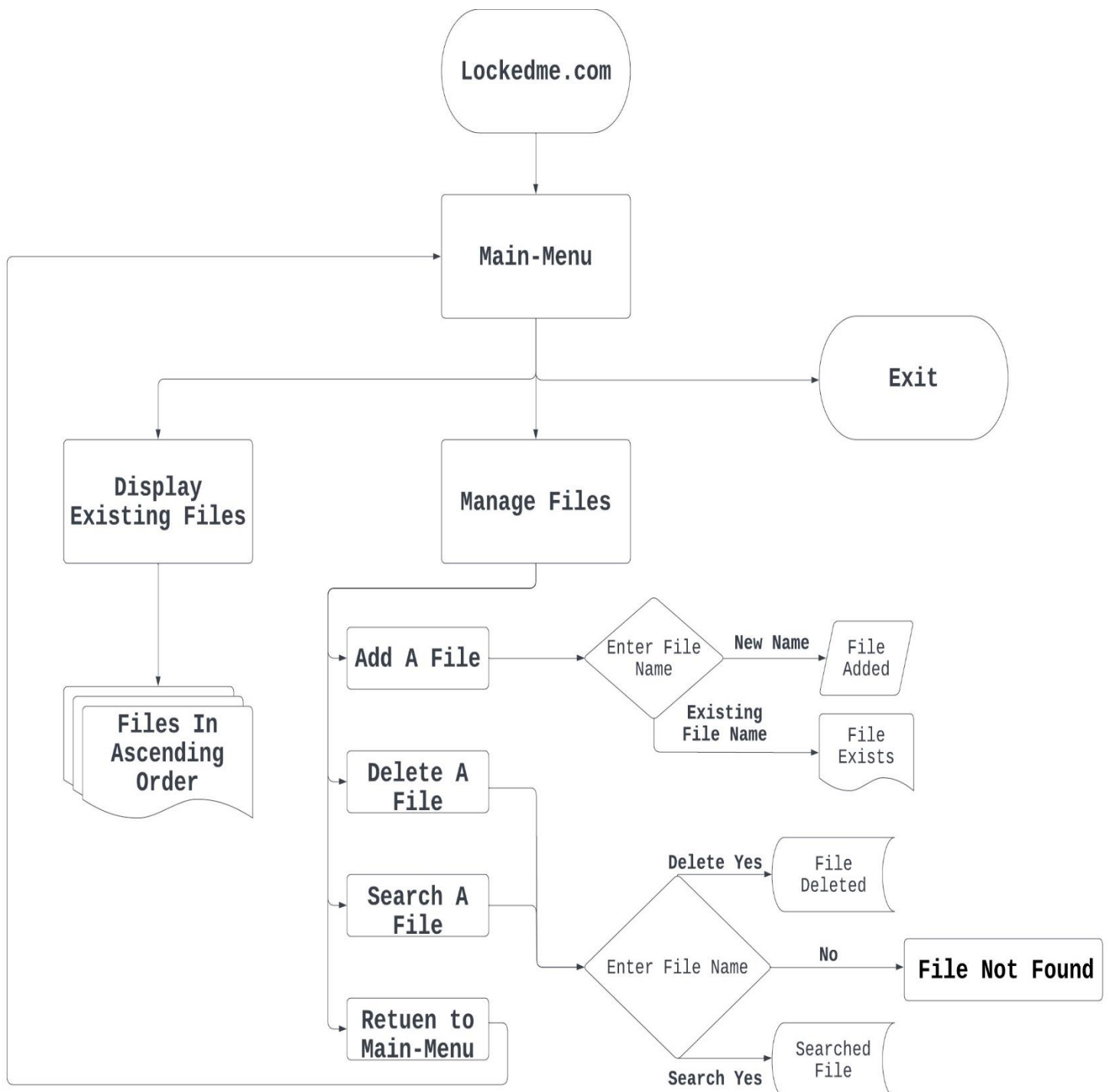## Business Level Operations handler Class (BusinessLevelOperation.java)

➢ addFile() - adds user specified file to fileStorage directory within the application.
  - Uses createNewFile() method from class File.
  - Exception handling used - IOException.
➢ deleteFile() - deletes user specified file to fileStorage directory within the application.
  - Uses delete() method from class File.
➢ searchFile() - search for the existence of user specified file in fileStorage directory within the application.
  - Uses linear search algorithm to compare the user specified file name with elements in the list of files existing in the fileStorage directory.

File viewer class (fileViewer.java)

- ➢ getFilesList()
    - retrieves list of files in the fileStorage directory in the application.
    - use Collections.sort() to sort the files in ascending order.
    - prints the list of files that exists.

Flowchart: -

Core Concepts Used: -

- Scanner class for scanning user specified inputs
- Data Structure - Array, List and Collections
- Control flow - using switch, if-else, do-while methodologies
- Exception handling - FileNotFoundException, IOException
- File Handling - for creating and deleting file
- Linear Search Algorithm
- Encapsulation in OOPS

Links to the GitHub repository: -

https://github.com/JigneshGediya/LockedMe.com

IDE and SDK Specification: -

- **IDE: - Eclipse IDE 2022-12**
- **SDK: -java 18.0.1.1 2022-04-22**

Folder and File Structure: -

- Lockedme.com

  - src

    - com.Lockedme

      - Main.java
      - userInteraction.java
      - filesViewer.java
      - BusinessLevelOperation.java

  - fileStorage [This folder is for file management using Lockedme.com application.]

    - class.txt
    - student.docs
    - school.pdf

Main.java

_____

```java
package com.Lockedme;

import java.io.FileNotFoundException;

public class Main {

    public static void appInfo() {
        System.out.println("_____");
        System.out.println("|                                         |");
        System.out.println("|                                         |");
        System.out.println("|     Application Name: - LockedMe.com     |");
        System.out.println("|     Developed By: - Jignesh Gediya       |");
        System.out.println("|     Version: - 1.0.0.1                   |");
        System.out.println("|                                         |");
        System.out.println("|_____|");
    }

    public static void main(String[] args) {

        // Application information (Name, Developer)
        appInfo();

        //Display Main Menu
        userInteraction userConsole = new userInteraction();

        try {
            userConsole.userConsole();
        } catch (FileNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

userInteraction.java

_____

```java
package com.Lockedme;

import java.io.FileNotFoundException;
import java.util.Scanner;

public class userInteraction {
	// Main-Menu
	public static void mainMenu() {
		System.out.println("_____");
		System.out.println(" Main Menu:");
		System.out.println("\t1. View the list of existing file");
		System.out.println("\t2. File Manager [Add | Delete | Search]");
		System.out.println("\t3. Quit Locked Me");
		System.out.println("_____");
		System.out.println("Enter Your Choice in 1 - 3 to Execute The Operation: -");
	}
	//Manage Files Menu
	public static void manageFilesMenu() {
		System.out.println("_____");
		System.out.println("File Manager Menu:");
		System.out.println("\t1. Add a file");
		System.out.println("\t2. Delete a file");
		System.out.println("\t3. Search for a file");
		System.out.println("\t4. Return to main menu");
		System.out.println("_____");
		System.out.println("Enter Your Choice in 1 - 4 to Execute The Operation: -");
	}
	//Display Main Menu
	public static void userConsole() throws FileNotFoundException{
		Scanner scanInput = new Scanner(System.in);
		int mainMenuChoice;

		do {
			mainMenu();
			mainMenuChoice = scanInput.nextInt();
			BusinessLevelOperation ops = new BusinessLevelOperation();
			switch(mainMenuChoice) {
				case 1:
					filesViewer view = new filesViewer();
		view.getFilesList();
					break;
				case 2:
					int fileMenuChoice;

					do {
```

```java
                        manageFilesMenu();
                        fileMenuChoice = scanInput.nextInt();
                        switch(fileMenuChoice) {
                            case 1:
                                ops.addFile();
                                break;
                            case 2:
                                ops.deleteFile();
                                break;
                            case 3:
                                ops.searchFile();
                                break;
                            case 4:
                                System.out.println("Return To Main Menu");

                                break;
                            default:
                                System.out.println(" Invalid Input! Please Retry Correctly...");
                        }

                    } while(fileMenuChoice != 4);
                    break;
                case 3:
                    System.out.println(" Eixt Application!");
                    break;
                default:
                    System.out.println(" Invalid Input! Please Retry Correctly...");

            }

        }while(mainMenuChoice != 3);
    }
}
```

BusinessLevelOperation.java

```java
package com.Lockedme;

import java.io.File;
import java.io.IOException;
import java.util.Scanner;

public class BusinessLevelOperation {

    private  String userDirectory = System.getProperty("user.dir")+ "\\fileStorage\\";
    public void addFile() {

        System.out.println("Enter File Name Which You Want To Add: -");
        Scanner scan = new Scanner(System.in);
        String fileName = scan.nextLine();
        File fileObject = new File(userDirectory+ fileName);
        try {
            if(fileObject.createNewFile()) {
                System.out.println(fileName + " file is added to the directory");
            }
            else {
                System.out.println("This file is already exists");
            }
        } catch (IOException e) {
            e.printStackTrace();
        }
    }
    public void deleteFile() {
        System.out.println("Enter the file name you wish to delete:");
        Scanner scan=new Scanner(System.in);
        String fileName = scan.nextLine();

        File F= new File(userDirectory + fileName);
        if(F.delete())
            System.out.println(fileName + " is Deleted!");
        else
            System.out.println("File Not Found");
    }
    public void searchFile() {
        Scanner scan= new Scanner(System.in);
        File directory = new File(userDirectory);
        System.out.println("Enter the file name you need to lookup:");
        String fileName=scan.nextLine();
        String[] files=directory.list();
        int flag=0;
        for (String file : files) {
```

```java
            if (file.equals(fileName)) {
                flag=1;
                System.out.println(file + " File found");
            }
        }
        if(flag==0) {
            System.out.println("File not found");
        }
    }
}
```
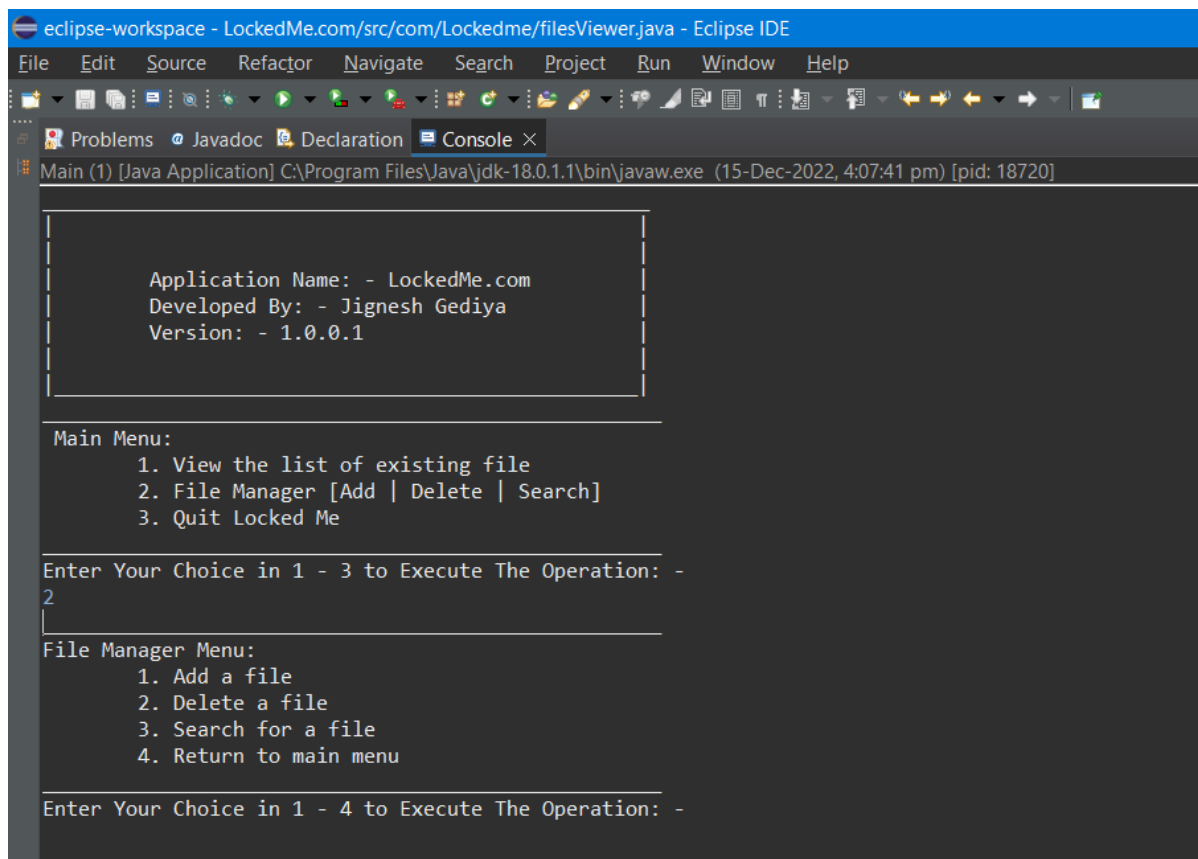
filesViewer.java

_____

```java
package com.Lockedme;

import java.io.File;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;

public class filesViewer {
    private List<String> filesList= new ArrayList<String>();
    private String userDirectory = System.getProperty("user.dir") + "\\fileStorage\\";
    private File[] files = new File(userDirectory).listFiles();

    public void getFilesList() {
        for(File file : files) {
            if(file.isFile()) {
                filesList.add(file.getName());
            }
        }
        Collections.sort(filesList);
        filesList.forEach(System.out::println);

    }
}
```

Output Snapshots: -

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Problems   @ Javadoc   Declaration   Console ×

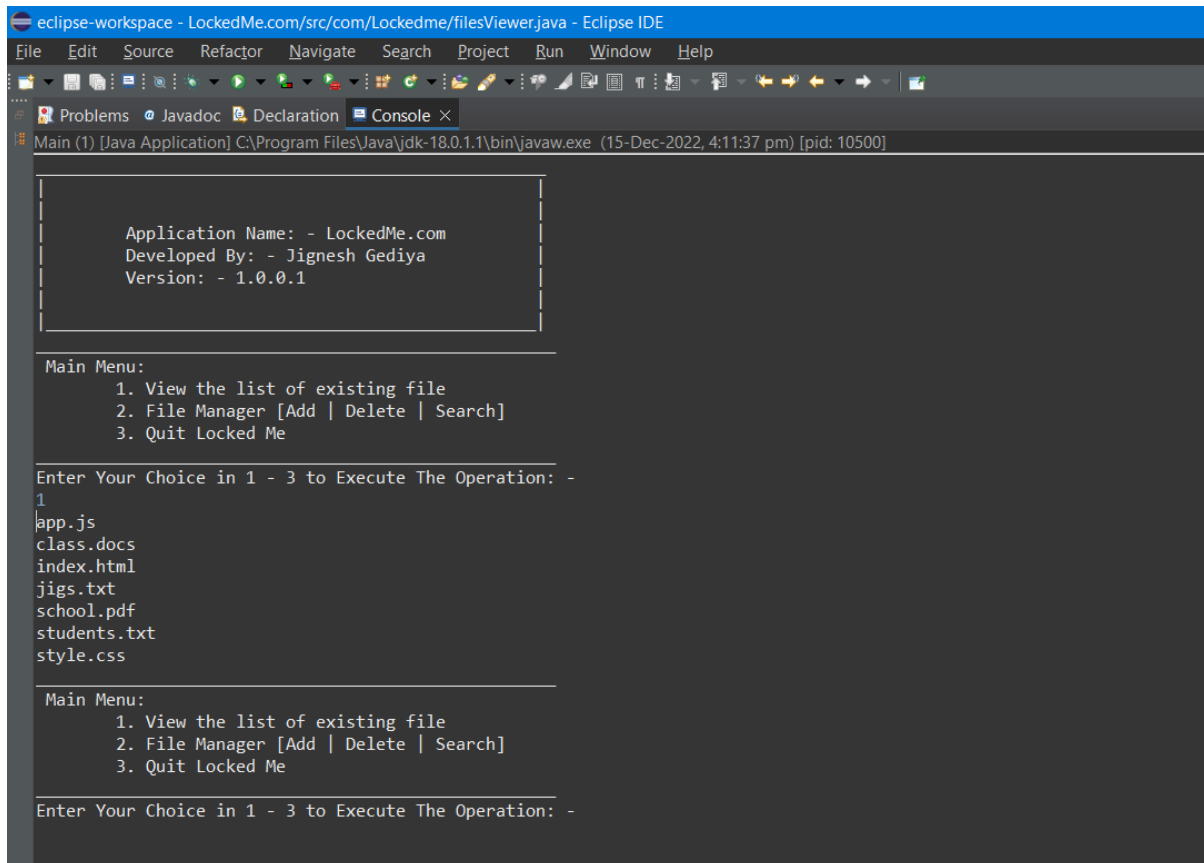Main (1) [Java Application] C:\Program Files\Java\jdk-18.0.1.1\bin\javaw.exe (15-Dec-2022, 4:09:00 pm) [pid: 12788]

```
|                                        |
|                                        |
|        Application Name: - LockedMe.com |
|        Developed By: - Jignesh Gediya   |
|        Version: - 1.0.0.1               |
|                                        |
|                                        |

 Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me

Enter Your Choice in 1 - 3 to Execute The Operation: -
2

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
1
Enter File Name Which You Want To Add: -
school.pdf
school.pdf file is added to the directory

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Problems   @ Javadoc   Declaration   Console ×

Main (1) [Java Application] C:\Program Files\Java\jdk-18.0.1.1\bin\javaw.exe (15-Dec-2022, 4:12:12 pm) [pid: 11168]

```
|                                        |
|                                        |
|        Application Name: - LockedMe.com |
|        Developed By: - Jignesh Gediya   |
|        Version: - 1.0.0.1               |
|                                        |
|                                        |

 Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me

Enter Your Choice in 1 - 3 to Execute The Operation: -
2

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
2
Enter the file name you wish to delete:
students.txt
students.txt is Deleted!

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Problems   Javadoc   Declaration   Console ×

Main (1) [Java Application] C:\Program Files\Java\jdk-18.0.1.1\bin\javaw.exe (15-Dec-2022, 4:12:48 pm) [pid: 3420]

```
|                                              |
|                                              |
|         Application Name: - LockedMe.com     |
|         Developed By: - Jignesh Gediya       |
|         Version: - 1.0.0.1                   |
|                                              |
|                                              |

Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me

Enter Your Choice in 1 - 3 to Execute The Operation: -
2

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
3
Enter the file name you need to lookup:
style.css
style.css File found

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Problems   Javadoc   Declaration   Console ×

Main (1) [Java Application] C:\Program Files\Java\jdk-18.0.1.1\bin\javaw.exe (15-Dec-2022, 4:07:41 pm) [pid: 18720]

```
|                                              |
|                                              |
|         Application Name: - LockedMe.com     |
|         Developed By: - Jignesh Gediya       |
|         Version: - 1.0.0.1                   |
|                                              |
|                                              |

Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me

Enter Your Choice in 1 - 3 to Execute The Operation: -
2

File Manager Menu:
        1. Add a file
        2. Delete a file
        3. Search for a file
        4. Return to main menu

Enter Your Choice in 1 - 4 to Execute The Operation: -
4
Return To Main Menu

Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me

Enter Your Choice in 1 - 3 to Execute The Operation: -
```

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Problems   @ Javadoc   Declaration   Console ✕

<terminated> Main (1) [Java Application] C:\Program Files\Java\jdk-18.0.1.1\bin\javaw.exe (15-Dec-2022, 4:11:59 pm – 4:12:02

```
|                                                    |
|                                                    |
|          Application Name: - LockedMe.com          |
|          Developed By: - Jignesh Gediya            |
|          Version: - 1.0.0.1                        |
|                                                    |
|_____|


Main Menu:
        1. View the list of existing file
        2. File Manager [Add | Delete | Search]
        3. Quit Locked Me
_____
Enter Your Choice in 1 - 3 to Execute The Operation: -
3
| Eixt Application!
```