**COMPANY LOCKER – LockedMe.com**

**Project Details**

**Project Title:** LockeMe.com

**Project Scope:** Develop a prototype of the application that provide users with a user-friendly, efficient, and secure way to manage files in a directory, making it easier to locate and manage files as needed.

**Developer Details**

**Name:** Swaroop S

**Email:** swas@teksystems.com

**Phone:** 8296342910

**Features and functionalities**

* Add a file to the existing directory list
* Delete a user specified file from the existing directory list
* Current file names in ascending order
* Delete a user specified file from the existing directory list
* Search a user specified file from the main directory
* Close the application
* Does not throw an exception if the user specifies an invalid input

**Technology and Tools**

**Eclipse IDE**

Eclipse IDE is an open-source integrated development environment that is widely used for software development. It provides a comprehensive set of tools and features to help developers write, test and debug code.

**GitHub**

GitHub is a web-based platform for version control and collaborative software development. It is widely used by developers and organizations to manage their code repositories, track changes to code, collaborate on code development.

**Java**

Java is a high-level, object-oriented programming language. Java is used in this project due to its key unique features such as, platform independence, garbage collection, robustness, security,

large standard library, object-oriented programming.

**User Interaction**

* The application functionalities can be accessed through terminal or console on your computer
* Start the program and various file operations will be displayed, enter your choice and perform different file operations.
* If the choice is not entered correctly the application would not be terminated.
* Once the file operations are performed, select exit application option to terminate the program.

**Sprints**

**Sprint 1 (Week 1):**

**Goal:** Develop the application structure and implement basic functionality for inserting and deleting files.

**Tasks:**

1. Create the application skeleton using Java.
2. Implement the file insertion to insert new file.
3. Implement the file deletion feature to delete file.

**Deliverables:**

1. Application skeleton code.
2. Functioning insertion and deletion features.

**Sprint 2 (Week 2):**

**Goal**: Implement sorting and searching functionality.

**Tasks**:

1. Implement a sorting algorithm to sort the file.
2. Implement a searching algorithm to search for file.

**Deliverables**:

1. Functioning sorting feature.
2. Functioning searching feature.

**Sprint 3 (Week 3):**

**Goal:** Test the application and make improvements.

**Tasks:**

1. Conduct testing of the application to identify any bugs and issues.
2. Make improvements and refinements to the application based on testing results.

**Deliverables:**

1. Tested and improved application code.
2. Finalized application documentation.

**Concept Implementation in the Project**

* Inheritance: Inherit properties and behaviours from another class.
* Encapsulation: Access modifiers were used to restrict access to certain fields and methods within classes.
* Classes: Classes to represent different entities and concepts within the application.
* Interfaces: Set of abstract methods that could be implemented by different classes.
* Objects: Objects are created from different classes to represent different instances of entities within the application.

**Algorithms and Data Structures**

* ArrayList: Java ArrayList class uses a dynamic array for storing the elements. It is like an array, but there is no size limit. We can add or remove elements anytime. So, it is much more flexible than the traditional array. It is found in the java.util package.
* Comparator: It is an interface used to compare two objects of the same types. It is used to define the custom sorting order for objects in a collection.
* TreeSet: It is a class that implements the set interface using a self-balancing binary search tree. The method contains() is used to check whether the file exits in the set.

**GitHub Repository:**

<https://github.com/keshavswaroop/Servlets_Demo/blob/main/phase1Project/src/phase1Project/code.java>

**Conclusion**

The file application developed in Java successfully provides functionality for inserting, deleting, and searching file. The implementation of inheritance, encapsulation, classes, interfaces, objects in the project helped to improve its structure, scalability and maintainability

The file application is user-friendly, efficient, and provides a valuable tool for managing files. Its unique selling points (USP) include its ability to quickly and easily insert, delete, and search file.