# Design Document for Virtual Key Management Product

Client Name: Lockers Pvt Limited.

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# Problem Statement

To develop a prototype application for Lockers Pvt Limited which will be presented to the relevant stakeholders for the budget approval.

# Product Requirement:

The application shall be able to do the following. It should show a main menu with options to:

1. Retrieve the files names in ascending order
2. Business Level Operations
3. Close the application

The Business Level Operation shall have the following functionalities:

* 1. Option to add a user specified file
  2. Option to delete a user specified file
  3. Option to search a. user specified file
  4. Option to Navigate to Main menu

# Sprints planned

## Sprint 1: Documentation Phase

Duration: 1 Week

Target: To prepare the design document and capture all the requirements

## Sprint 2: Coding Phase

Duration: 1 Week

Target: Write the application code covering all the application requirements

## Sprint 3: Testing Phase

Duration: 1 Week

Target: Testing and bug fixing.

# User Interactions

The application will open a menu based interactive screen for various user inputs.

# Programming Language Used:

Java

# Java Concepts Used

## OOPS Concepts

Implements of classes and methods across the package

* Created a class for Business Level Operations
* Main class for application Menu
* File list class to get files

## Control Statements

* If-Else statements
* Switch case
* Do-while Loops – To maintain the menu of the application.
* File Handling – To get list of files, create files, delete files

## Java Packages

* Java.io.package
* Java.util.package

## Java Classes

* Scanner class – To take input from user for various operations.
* Array class – To sort the list of files.
* List class

## Exception handling

Exception handling using try – catch blocks:

* + NumberFormatException – To handle invalid user inputs.

## File Handling

Used to perform operations on file

* Create a file
* Delete a file-
* Search a file
* List the files

# Algorithm:

Start:

Show Main menu:

1: Get Filenames from the directory in sorted manner

2: Business level operations

3: Close the application

User inputs:

Input as 1: Show the file names.

* + - If no files present – “Directory empty”

Input as 2: Show Business Menu as below

1: To create new a file in <dirName>

2: To delete a file from directory <dirName>

3: To search a file in the directory <dirName>

4: Return to Main Menu

In business menu,

Input as 1:

Ask for file name to create

If file exists, inform user else create file

Input as 2:

Ask for file name to delete

If file does not exist, inform user, else delete file

Input as 3:

Ask for file name to search

If file is found inform and vice versa

Input as 4: Return to Main menu

Input as 3: Close the application

End

# GitHub: