**Virtual Key Application**

**Project Name : Virtual Key**

**Developer Name : Suneel**

**GitHub repository link :** https://github.com/suneelpamujula035/java\_training.git

**Language :** Java

**Concepts :** Files, Collection API, Exceptions, Java 8 features, Data structures (Searching and Sorting techniques)

**Project Structure Description :**

* This application created with **Maven Project**. After clone and importing project from GitHub right click on project🡪Run As 🡪 Java Application or we can directly run from main method present in App.java class.
* After running the application it will display the Application name, Developer Details and Main Menu options.

1. Show Files

2. Show Sub Menu

1. Add File

2. Delete File

3. Search File

4. Return to Main Menu

3.Exit

* Scanner class takes the values from key board.
* When we enter 1 it will display all files present in the application in Ascending order.
* When we enter 2 it will redirect to Sub Menu dash board and displays the Sub Menu options.
* Enter 1 to add file. First it will check the file name is empty or not. If it is empty it display error message “File name can’t be null”. After it will check file exists or not with that name. If file not exists then file will be created. If file already there then it will show File already existed.
* Enter 2 to delete file. First it will check the file name is empty or not. If it is empty it display error message “File name can’t be null”. After it will check file exists or not with that name. If file not exists then file will be display “File not found”. If file is available then it will delete the file.
* Enter 3 to search file. First it will check the file name is empty or not. If it is empty it display error message “File name can’t be null”. After it will check file exists or not with that name. If file not exists then file will be display “File not found”. If file is available then it will show message “File found” with file name.
* Enter 4 to return Main Menu.
* When we enter number more than 4 it will display message “Please enter correct number”.
* When we enter other than numbers like characters or special symbols it will display message “Please enter numbers only”.
* When we enter 3 it will display message “Thanks for using our application”.
* All files will be added in “.src/main/directory” location.

**🡪Application Developed in 2 sprints. First I prioritized tasks based on the requirements.**

**Sprint 1 :**

* In 1st sprint I analyzed the requirements.
* Based on that I prioritize the requirements and gave story points to the tasks.
* Then I designed the application and prepared some documents belongs to the application.
* Then started coding.
* Created Maven project and created basic structure of the application.

**Sprint 2 :**

* In 2nd sprint I implemented the features one by one by priority.
* Application developed in loosely coupling and if we want to add more features we can happily add we did not get Exceptions.
* After I implemented Searching and Sorting techniques to the applications.
* Exception handling also implanted for the application.
* After that I used some Collection API and Java 8 features to optimize the code.
* After that I tested application with Actual and Expected outputs.

**Flow Chart :**

2

Print Statement

while

Default

Exit Application Break

Files in Ascending Order

Case 3

Case 2

Case 1

Switch(Option)

do

MainMenu dashboard

Developer dashboard

Start

true

true

1

false

true

false

true

false

true

End

Print Statement

while

Case 2

Case 1

Switch(SubSwitch)

do

2

mainMenu break

Case 3

Case 4

true

true

false

searchFile() break

Default

deleteFile()

break

addFile()

break

true

false

true

true

true

false

false

End

3

4

5

2

1

showFiles()

If file exists()

false

Path Is wrong

true

Store in list

Sort List

For loop

Print File Names

3

addFile()

Try Block

If file exists()

error

true

false

Print file Present

false

true

Create New File

Catch Exception

4

deleteFile()

Try Block

If file exists()

error

true

false

Delete File

false

true

File Doesn’t exist

Catch Exception

5

searchFile()

Try Block

If file exists()

error

true

false

File Found

false

true

File Doesn’t exist

Catch Exception