Virtual Key for Your Repositories

Document contains:

- Project and developer details
- Sprints planned and the tasks achieved in them
- Algorithms and flowcharts of the application
- Core concepts used in the project
- Links to the GitHub repository to verify the project completion
- Unique Selling Points of the Application
- Conclusions

Project and developer details

Project objective:

As a Full Stack Developer, complete the features of the application by planning the development in terms of sprints and then push the source code to the GitHub repository. As this is a prototyped application, the user interaction will be via a command line.

The flow and features of the application:

Plan more than two sprints to complete the application

Document the flow of the application and prepare a flow chart

List the core concepts and algorithms being used to complete this application

Code to display the welcome screen. It should display:

Application name and the developer details

The details of the user interface such as options displaying the user interaction information

Features to accept the user input to select one of the options listed

The first option should return the current file names in ascending order. The root directory can be either empty or contain few files or folders in it

The second option should return the details of the user interface such as options displaying the following:

Add a file to the existing directory list

You can ignore the case sensitivity of the file names

Delete a user specified file from the existing directory list

You can add the case sensitivity on the file name in order to ensure that the right file is deleted from the directory list

Return a message if FNF (File not found)

Search a user specified file from the main directory

You can add the case sensitivity on the file name to retrieve the correct file

Display the result upon successful operation

Display the result upon unsuccessful operation

Option to navigate back to the main context

There should be a third option to close the application

Implement the appropriate concepts such as exceptions, collections, and sorting techniques for source code optimization and increased performance

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Sprints planned and the tasks achieved in them

There are three sprints for this project

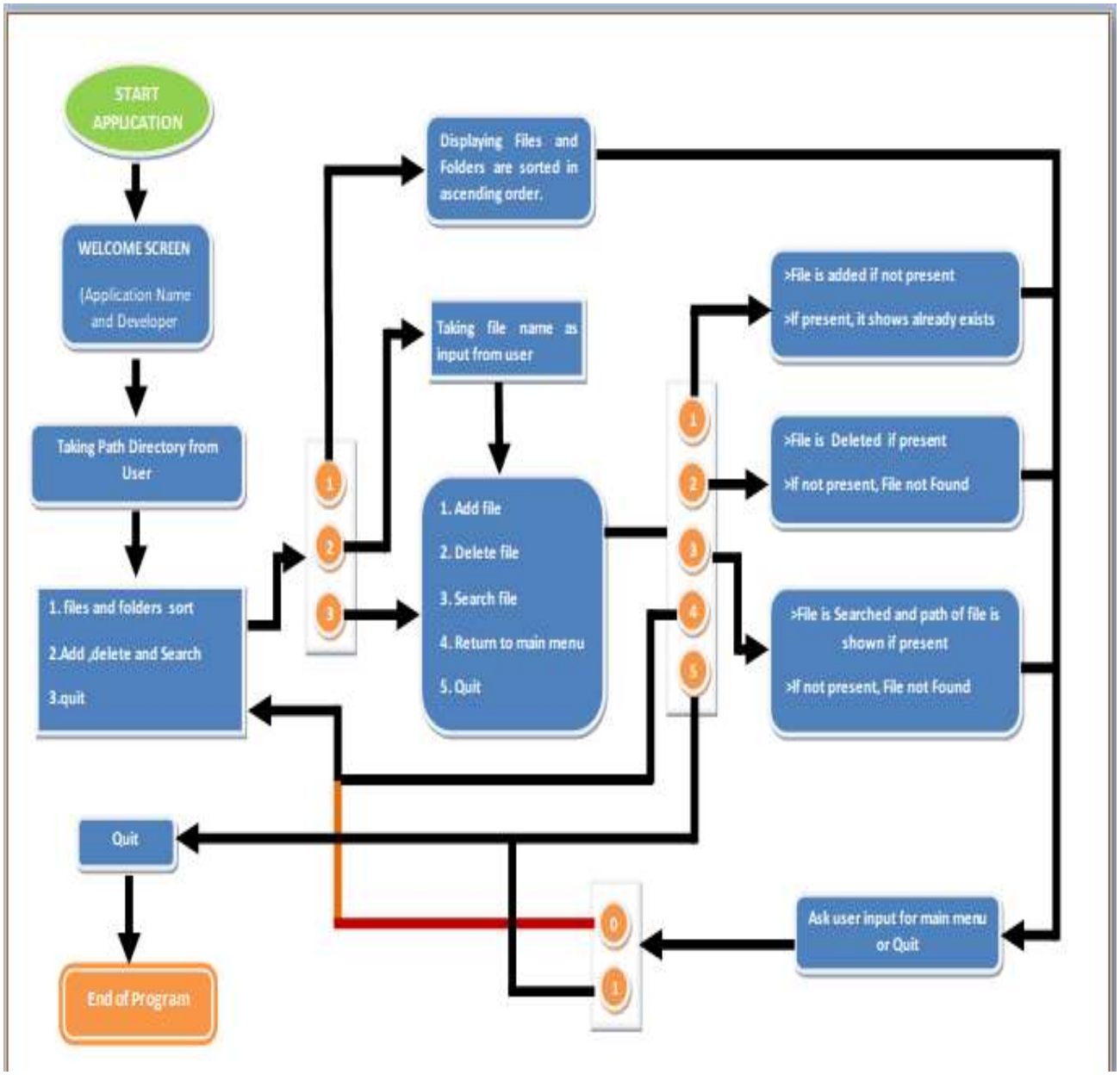
Sprint-1: Studied the Features of application and prepared the flow chart and Git Repository.

Sprint-2: Written java program for welcome screen and All options, solving errors and exceptions.

Sprint-3: Final testing of program using different inputs and pushing it to GitHub.

Algorithms and flowcharts of the application

Flow chart:



1. Created a project in eclipse VirtualKeyRepo

2. Created a package virtualKeyRepo

3. First created a class MainMethods.java ,It is abstract classs which contains all methods and static variables which are being used in all methods of project.

Code1:

```
Package virtualKeyRepo;


public abstract class MainMethods {

	static String path;

	static int option;

	static String fname;

	static int i;

	public abstract void intro();

	public abstract void intro1();

	public abstract void menu();

	public abstract void sort();

	public abstract void subMenu();

	public abstract void subAdd();

	public abstract void subDelete();

	public abstract void subSearch();

	public abstract void backADS();

	public abstract void backRun();

	public abstract void backSubMenu();

	public abstract void backMenu();


}
```

4. created a new class DisplayMenu which extends MainMethods here all methods are implemented by me.

Code2:

```
package virtualKeyRepo;


import java.io.File;

import java.io.IOException;

import java.util.Scanner;


//display of welcome screen and first menu

public class DisplayMenu extends MainMethods {


	public void intro() {

		String outlineBorder="------------------------------------------------------------------
----------------------------";

		String appName="VIRTUAL KEY FOR YOUR REPOSIITORIES";

		String devName="-ppk";

		System.out.println();

		System.out.println(outlineBorder);

		System.out.println();

		System.out.println("
**********************************************************************");

		System.out.println("	|		"+appName+"		|");

		System.out.println("	*                                                *");

		System.out.println("	|                        "+devName+"                        |");

		System.out.println();

		System.out.println("
**********************************************************************");

		System.out.println();

	}
```

```
	public void intro1() {


		Scanner sc =new Scanner(System.in);

		System.out.println();

		System.out.println("   Info:-");

		System.out.println("   Here you can Sort, Add, Delete and Search opreration of
fIles in your given path Directory.");

		System.out.println();

		System.out.print("   Give the Path of Directory:- ");

		DisplayMenu.path=sc.next();

		System.out.println();

	}


	public void menu() {

		Scanner sc =new Scanner(System.in);

		System.out.println();

		System.out.println("   >>>>>>>>>>>>>>>>>>>>>");

		System.out.println();

		System.out.println("   File operations are : \n     1. Sort Files in Asscending
Order\n     2. Add, Delete, Sreach a FILe\n     3. Quit");

		System.out.println();

		backMenu();


		switch(DisplayMenu.option) {

		case 1:

			sort();

			backADS();
```

```
                break;
        case 2:
                subMenu();
                break;
        case 3:
                System.out.print("   ***Exited Sucessfully*** ");
                i=1;
                break;
        }
}

public void sort() {
        File obj =new File(DisplayMenu.path); //giving a directory
        String [] file= obj.list();
        //Arrays.sort(file);
        //we are creating list array using list() method
        System.out.println();
        System.out.println("   The files and folders in "+DisplayMenu.path+" are >");
        System.out.println();
        for (String x:file) {     //Accessing list from each.
                System.out.println("     "+x);
        }
}

public void subMenu() {
        Scanner sc =new Scanner(System.in);
        System.out.println();
```

```
System.out.print("   Enter File Name for which you  want do operations in existing Directory,\n   (" +DisplayMenu.path+" ) :- ");

DisplayMenu.fname=sc.nextLine();

System.out.println();

System.out.println("   >>>>>>>>>>>>>>>>>>>>>");

System.out.println();

System.out.println("     1. Add file\n     2. Delete file\n     3. Search file\n     4. Return to Main Menu\n     5. Quit\n");

System.out.println();

backSubMenu();


switch(DisplayMenu.option) {

case 1:

        subAdd();

        backADS();

        break;

case 2:

        subDelete();

        backADS();

        break;

case 3:

        subSearch();

        backADS();

        break;

case 4:

        menu();

        break;
```

```
        case 5:
                System.out.print("   ***Exited Sucessfully*** ");
                i=1;
                break;

        }

}


public void subAdd() {
        File obj =new File(DisplayMenu.path+"//"+DisplayMenu.fname);
        try {
                if(obj.createNewFile()) {
                        System.out.println("   File is Added");
                }
                else {
                        System.out.println("   File already exists");
                }
        } catch (IOException e) {
                e.printStackTrace();
        }

}


public void subDelete() {
```

```
            File obj =new File(DisplayMenu.path+"//"+DisplayMenu.fname);
            if(obj.delete()) {
                System.out.println("   File is deleted");
            }
            else {
                System.out.println("   File not found");
            }
        }


        public void subSearch() {
            File obj =new File(DisplayMenu.path+"//"+DisplayMenu.fname); //giving a
directory
            boolean sreach =obj.isFile();  //true since file exists
            if(sreach==true) {
                System.out.println("     "+obj.getAbsolutePath());
            }else {
                System.out.println("   File not Found");
            }
        }


public void backADS() {
        int j=0;

        while(j==0) {
            System.out.println();
```

```
            System.out.print("   Enter 0 for main menu or  1 to exit? ");
            Scanner sc=new Scanner(System.in);
            try {
                int k=sc.nextInt();
                if(k==0) {
                    menu();
                    j+=1;
                }
                if (k==1) {
                    j+=1;
                    System.out.print("   ***Exited Sucessfully*** ");
                    DisplayMenu.i=1;
                    }
                if(k!=0 &&k!=1) {
                    System.out.println("    wrong input");
                }

            } catch (Exception e) {
                System.out.println();
                System.out.println("   Please check input ");
                System.out.println();
            }
        }

}

public void backRun() {
```

```
int j=0;


while(j==0) {
        System.out.println();
        System.out.print("   Enter 0 for main menu or  1 to exit? ");
        Scanner sc=new Scanner(System.in);
        try {
                int k=sc.nextInt();
                if(k==0) {
                        intro1();
                        j+=1;
                }
                if (k==1) {
                        j+=1;
                        System.out.print("   ***Exited Sucessfully*** ");
                        DisplayMenu.i=1;
                }
                if(k!=0 &&k!=1) {
                        System.out.println("    wrong input");
                }
        } catch (Exception e) {
                System.out.println();
                System.out.println("   Please check input ");
                System.out.println();
        }

}
```

```
}
public void backMenu() {
	int j=0;

	while(j==0) {
		System.out.println();
		System.out.print("     Select one of the option (1/2/3):- ");
		Scanner sc=new Scanner(System.in);
		try {
			DisplayMenu.option=sc.nextInt();

	if(DisplayMenu.option==1||DisplayMenu.option==2||DisplayMenu.option==3) {
				j+=1;
			}
			else {
				System.out.println("   wrong input");
			}
		} catch (Exception e) {
			System.out.println();
			System.out.println("   Please check input ");
			System.out.println();
		}
	}

}

public void backSubMenu() {
```

```
        int j=0;


        while(j==0) {
                System.out.println();
                System.out.print("     Select one of the option (1/2/3/4/5):- ");
                Scanner sc=new Scanner(System.in);
                try {
                        DisplayMenu.option=sc.nextInt();

        if(DisplayMenu.option==1||DisplayMenu.option==2||DisplayMenu.option==3||Displa
yMenu.option==4||DisplayMenu.option==5) {
                                j+=1;
                        }
                        else {
                                System.out.println("   wrong input");
                        }
                } catch (Exception e) {
                        System.out.println();
                        System.out.println("   Please check input ");
                        System.out.println();
                }
        }


}
}
```

5. Every method is implemented according to the need in the project let see at output

intro();

Here it is the welcome screen showing project name and developer name.

```
!un [Java Application] C:\Users\BALA\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20

----------------------------------------------------------------------------------------

        ****************************************************************
        |              VIRTUAL KEY FOR YOUR REPOSIITORIES              |
        *                                                              *
        |                               -ppk                           |
        ****************************************************************
```

intro1();

Here it is taking input from the user for path of directory for operations given., if path exists move further else ask for exit or continue if continue again asks the path.

```
Info:-
Here you can Sort, Add, Delete and Search opreration of fIles in your given path Directory.

Give the Path of Directory:-
```

menu();

You can give options according to give below and this methods calls most methods.

```
Give the Path of Directory:- E:\\codes\

>>>>>>>>>>>>>>>>>>>>

File operations are :
  1. Sort Files in Asscending Order
  2. Add, Delete, Sreach a FILe
  3. Quit

  Select one of the option (1/2/3):-
```

sort();

Shows files and folders in ascending order.

```
  Select one of the option (1/2/3):- 1

The files and folders in E:\\codes\ are >

  ASTM
  BOQ
  BS
  fidic
  irc codes
  is codes
  M.S.  4
  MORT&H FIFTH REVISION (SCAN COPY)Orange Book  April 2013 (1).pdf
  MORTH
  MS 2
  nhai manual
  PQC REPAIRS METHODLOGY.docx
  PQC REPAIRS METHODLOGY.zip
  QAP NH-9 Vijayawada-Machilipatnam (final)
  Question Bank.xlsx
  test.txt

Enter 0 for main menu or  1 to exit?
```


subMenu();

If the option is 2 from menu, it goes to another menu as shown below before we should have to give the file name for the further operations.

```
  Question Bank.xlsx
  test.txt

Enter 0 for main menu or  1 to exit? 0

>>>>>>>>>>>>>>>>>>>

File operations are :
  1. Sort Files in Asscending Order
  2. Add, Delete, Sreach a FILe
  3. Quit


  Select one of the option (1/2/3):- 2

Enter File Name for which you  want do operations in existing Directory,
(E:\\codes\ ) :- test.txt

>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):-
```

subAdd();

```
Enter File Name for which you  want do operations in existing Directory,
(E:\\codes\ ) :- test.txt

>>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):- 1
File already exists
```

```
  Select one of the option (1/2/3):- 2

Enter File Name for which you  want do operations in existing Directory,
(E:\\codes\ ) :- test2.txt

>>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):- 1
File is Added

Enter 0 for main menu or  1 to exit?
```

subDelete();

```
  Select one of the option (1/2/3):- 2

Enter File Name for which you  want do operations in existing Directory,
(E:\\codes\ ) :- test2.txt

>>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):- 2
File is deleted

Enter 0 for main menu or  1 to exit?
```

```
Enter File Name for which you  want do operations in existing Directory,
(E:\\codes\ ) :- test2.txt

>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):- 2
File not found

Enter 0 for main menu or  1 to exit?
```


subSearch();

```
  Select one of the option (1/2/3):- 2

Enter File Name for which you  want do operations in existing Directory,
(E://codes ) :- test.txt

>>>>>>>>>>>>>>>>>>>

  1. Add file
  2. Delete file
  3. Search file
  4. Return to Main Menu
  5. Quit


  Select one of the option (1/2/3/4/5):- 3
  E:\codes\test.txt

Enter 0 for main menu or  1 to exit?
```


back__();

This methods are being used for not getting stop if any exception in case of wrong input and ask for further check and give right input.

5. Created another class Run.java this class contain main method where intro(), intro1() and menu() method is being called.

Code3:

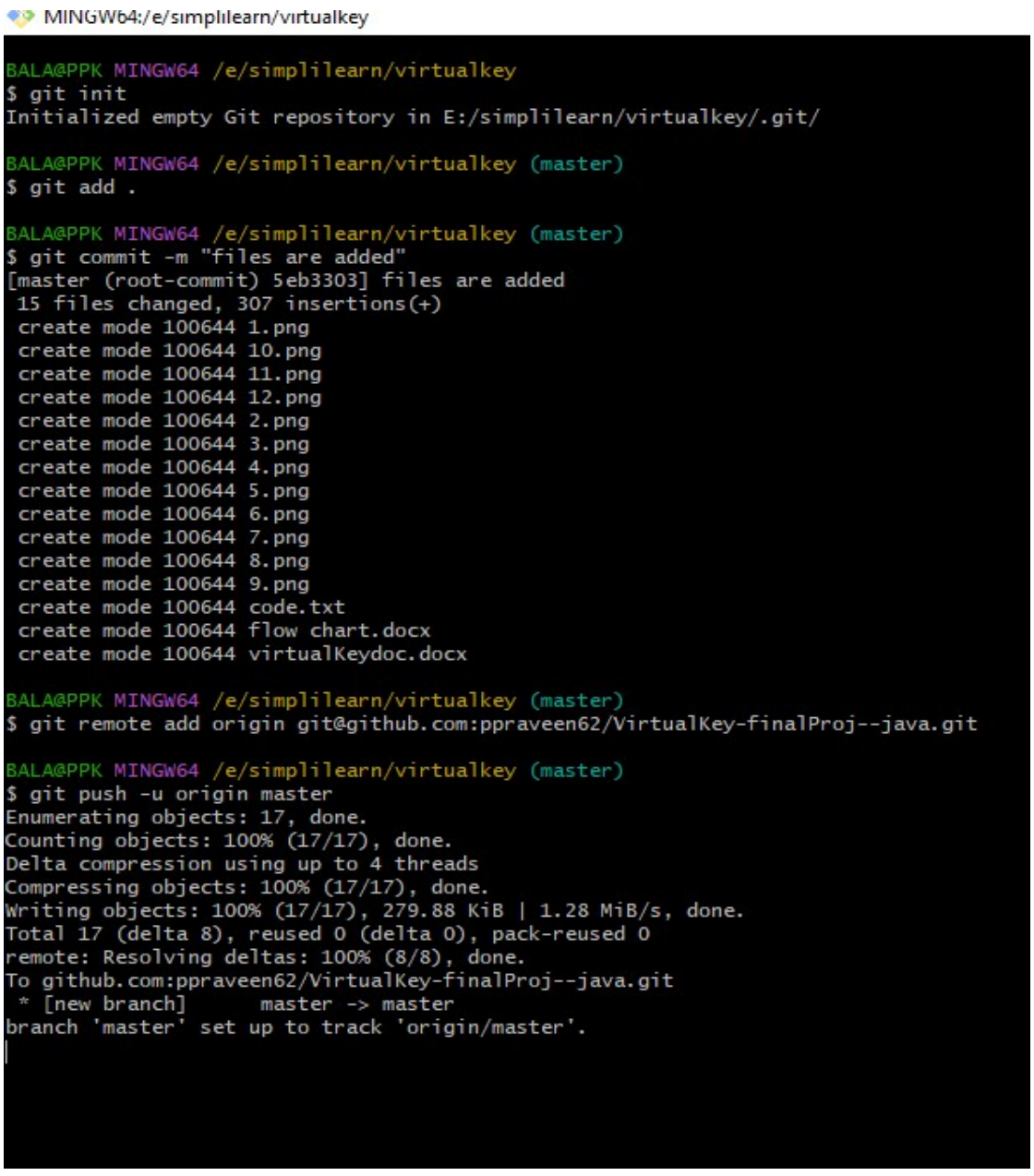
```
package virtualKeyRepo;


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


public class Run {


	public static void main(String[] args) {
		// TODO Auto-generated method stub
		DisplayMenu obj=new DisplayMenu();
		obj.intro();
		obj.intro1();
		DisplayMenu.i=0;
		while(DisplayMenu.i==0) {
			File ob=new File(DisplayMenu.path); //giving a directory
			boolean search =ob.isDirectory();
			if (search==true) {
				obj.menu();
				DisplayMenu.i+=1;
			}
			else {
				System.out.println("   Path not Exists ");
				obj.backRun();
				}
		}
	}
```

}

Output

[Click here]

Pushing to GitHub



Core concepts used in the project

File handling, Abstract, exceptions, collections, and sorting techniques.

Links to the GitHub repository to verify the project completion

https://github.com/ppraveen62/VirtualKey-finalProj--java

Unique Selling Points of the Application

The application keeps running until you exit even if wrong input it asks to give right input.

It was simple and easy to use.

The application takes the folder path and then file name for making it easier.

Navigation from one menu to other is possible.

Conclusion:

The Application is prepared according to the provided flow and features of the application and everything followed according to the instructions.