

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output

### Functional Test Cases

This section captures the following for the LockedMe.com virtual keys repository application prototype:

- Outlines 19 functional test case scenarios
- Documents the expected result of the test case
- Captures the test case outcome (pass/fail)
- Records the test case input
- Provides a snapshot of the program console output
- Provides the directory structure before and after snapshots (where applicable)

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Functional Test Cases – “Good” Path

Test Case Scenario: Launch Program – Use Test Mode

**Expected Result:** User launches the application and indicates that the User wants to the application in Test Mode (i.e. using C:\test)

**Test Outcome:** Pass

**Test Case Input:** y

**Test Case Output:**

#### Program Console

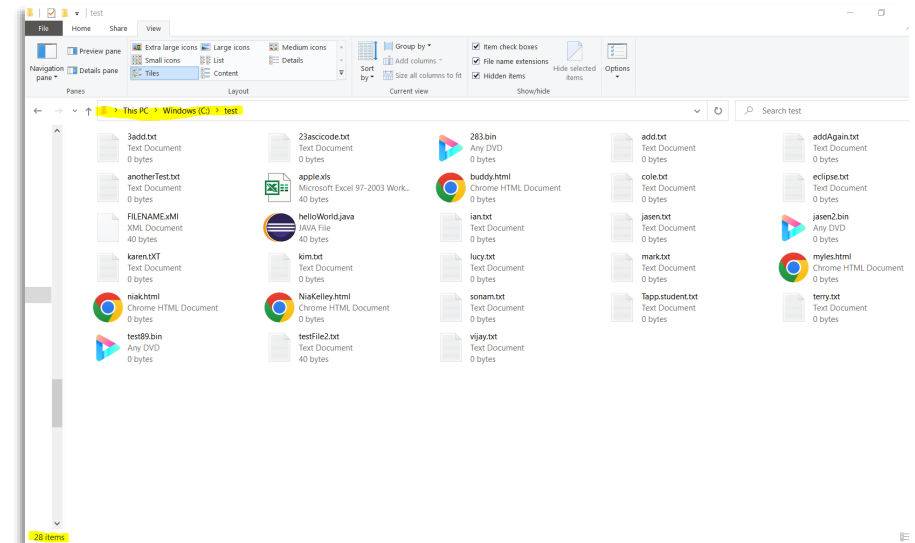
```
Console x
VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Jul 3, 2022, 1:27:12 PM) [pid: 32608]
[Console output redirected to file:C:\Users\niake\eclipse\java-2022-03\eclipse\output.virtualKeyConsole.07032022.txt]

*****

Welcome to the Virtual Keys Repository of LockedMe.com
Version: 1.0 PROTOTYPE
Client: Lockers Pvt. Ltd
Full Stack Developer Name: Nia Kelley Jester
*****

Do you want to run in TEST mode (using C:\test) - y or n?
y
You specified the following target directory: C:\test
*****
*                MAIN MENU                *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
```

Before



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: List Files

**Expected Result:** User opts to “display the current file names in Ascending order” from the Main Menu

**Test Outcome:** Pass

**Test Case Input:** 1

**Test Case Output:**

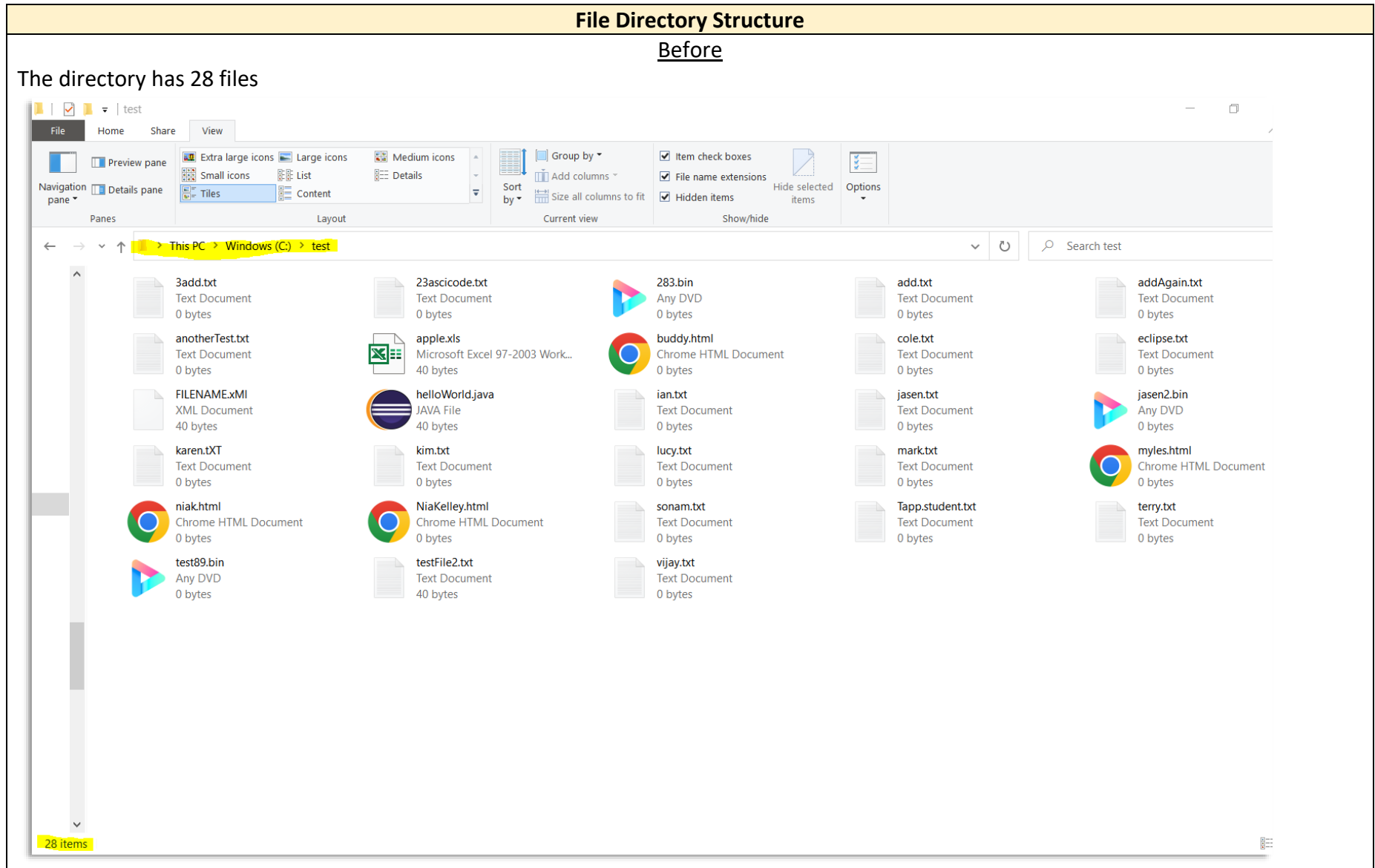
#### Program Console

```
VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Jul 3, 2022, 1:27:12 PM) [pid: 32608]
*          MAIN MENU          *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
1
Selected main menu option: 1
Retrieve files from C:\test
23ascicode.txt
283.bin
3add.txt
add.txt
addAgain.txt
anotherTest.txt
apple.xls
buddy.html
cole.txt
eclipse.txt
FILENAME.xml
helloWorld.java
ian.txt
jasen.txt
jasen2.bin
karen.txt
kim.txt
lucy.txt
mark.txt
myles.html
niak.html
NiaKelley.html
sonam.txt
Tapp.student.txt
terry.txt
test89.bin
testFile2.txt
vijay.txt
There are 28 files in the directory.
Enter 'c' to continue, 'x' to quit:
```

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

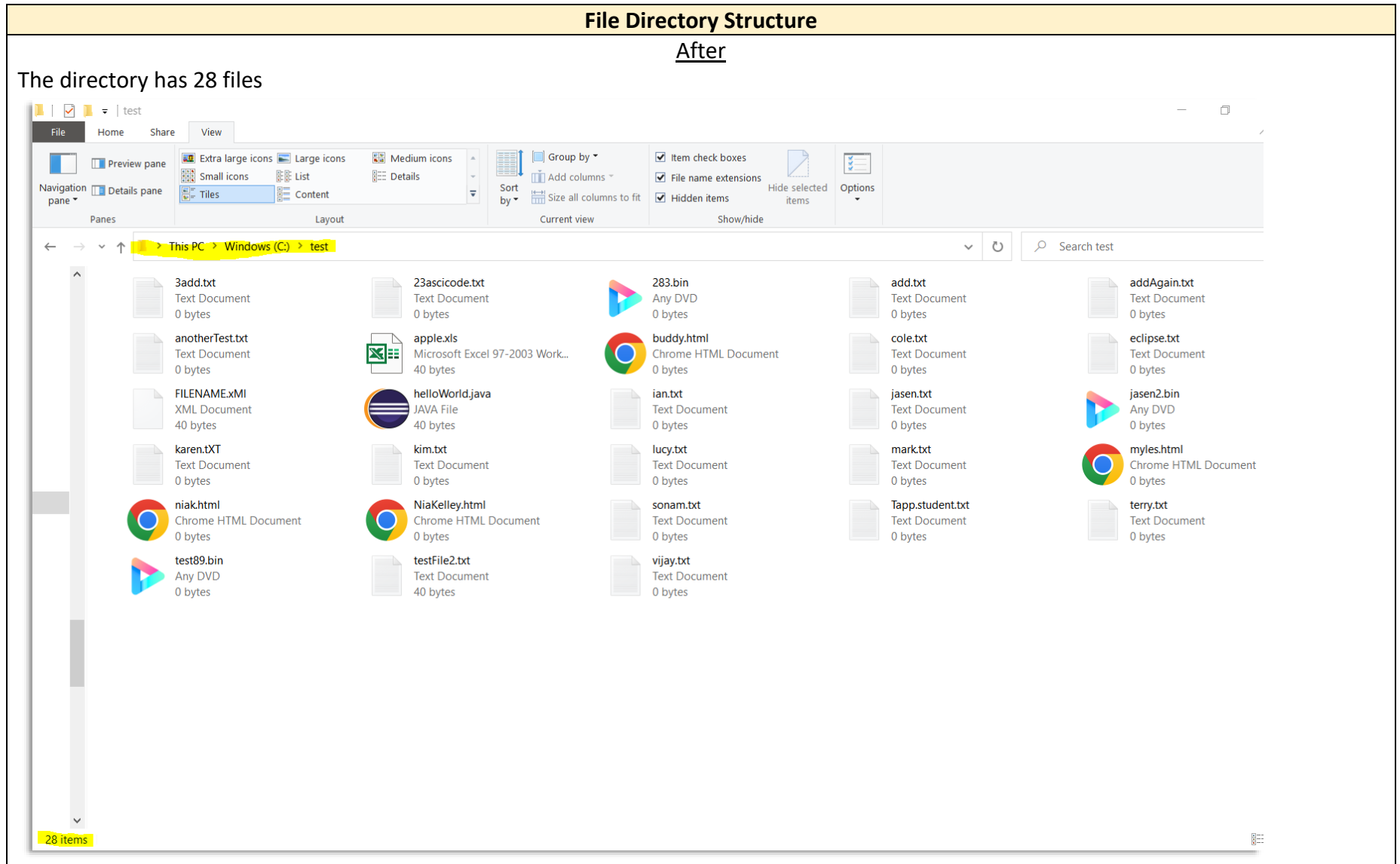
### Test Case Output



# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Continue Program after List Files

**Expected Result:** User opts to continue the program after the list files operation. The program will accept "C" or "c" to continue the program.

**Test Outcome:** Pass

**Test Case Input:** c

**Test Case Output:**

Program Console
<pre>testFile2.txt vijay.txt There are 28 files in the directory. Enter 'c' to continue, 'x' to quit: c ***** *                               * *           MAIN MENU           * *                               * ***** 1. Display the current file names in ASCENDING order 2. Open Business Level Operations Menu 3. Close the application ***** Choose your option...</pre>

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Open Business Level Options Menu

**Expected Result:** User opts to open the Business Level Options Sub-Menu.

**Test Outcome:** Pass

**Test Case Input:** 2

**Test Case Output:**

#### Program Console

```
*****
*                               *
*               MAIN MENU       *
*                               *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
2 ←
Selected main menu option: 2
.....
.   Business Level Options Sub-Menu   .
.....
1. Add new file
2. Delete File (case sensitive)
3. Search for File (case sensitive)
4. Go back to main menu
.....
Choose your option...
```

**File Directory Structure:** No need to display for this test



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Add New File




**Expected Result:** User wants to add a new file to the directory. The User will input the desired file name for addition, and the application will create the file in the directory. Per the requirement, the application ignores case sensitivity for this feature.

**Test Outcome:** Pass

#### Test Case Input:

- 1
- raj.student.txt

#### Test Case Output:

Program Console	
	<pre>..... .      Business Level Options Sub-Menu      . ..... 1. Add new file 2. Delete File (case sensitive) 3. Search for File (case sensitive) 4. Go back to main menu ..... Choose your option... 1  Specify the file name to ADD to C:\test: raj.student.txt  File created successfully!  ..... .      Business Level Options Sub-Menu      . ..... 1. Add new file 2. Delete File (case sensitive) 3. Search for File (case sensitive) 4. Go back to main menu ..... Choose your option...</pre>

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output

File Directory Structure

Before

The directory has 28 files

File

Home

Share

View

Navigation pane

Details pane

Extra large icons

Large icons

Medium icons

Small icons

List

Details

Tiles

Content

Sort by

Group by

Add columns

Size all columns to fit

Item check boxes

File name extensions

Hidden items

Hide selected items

Options

This PC > Windows (C:) > test

Search test

3add.txt  
Text Document  
0 bytes

anotherTest.txt  
Text Document  
0 bytes

FILENAME.xml  
XML Document  
40 bytes

karen.txt  
Text Document  
0 bytes

niak.html  
Chrome HTML Document  
0 bytes

test89.bin  
Any DVD  
0 bytes

23ascicode.txt  
Text Document  
0 bytes

apple.xls  
Microsoft Excel 97-2003 Work...  
40 bytes

helloWorld.java  
JAVA File  
40 bytes

kim.txt  
Text Document  
0 bytes

NiaKelley.html  
Chrome HTML Document  
0 bytes

testFile2.txt  
Text Document  
40 bytes

283.bin  
Any DVD  
0 bytes

buddy.html  
Chrome HTML Document  
0 bytes

ian.txt  
Text Document  
0 bytes

lucy.txt  
Text Document  
0 bytes

sonam.txt  
Text Document  
0 bytes

vijay.txt  
Text Document  
0 bytes

add.txt  
Text Document  
0 bytes

cole.txt  
Text Document  
0 bytes

jasen.txt  
Text Document  
0 bytes

mark.txt  
Text Document  
0 bytes

Tapp.student.txt  
Text Document  
0 bytes

addAgain.txt  
Text Document  
0 bytes

eclipse.txt  
Text Document  
0 bytes

jasen2.bin  
Any DVD  
0 bytes

myles.html  
Chrome HTML Document  
0 bytes

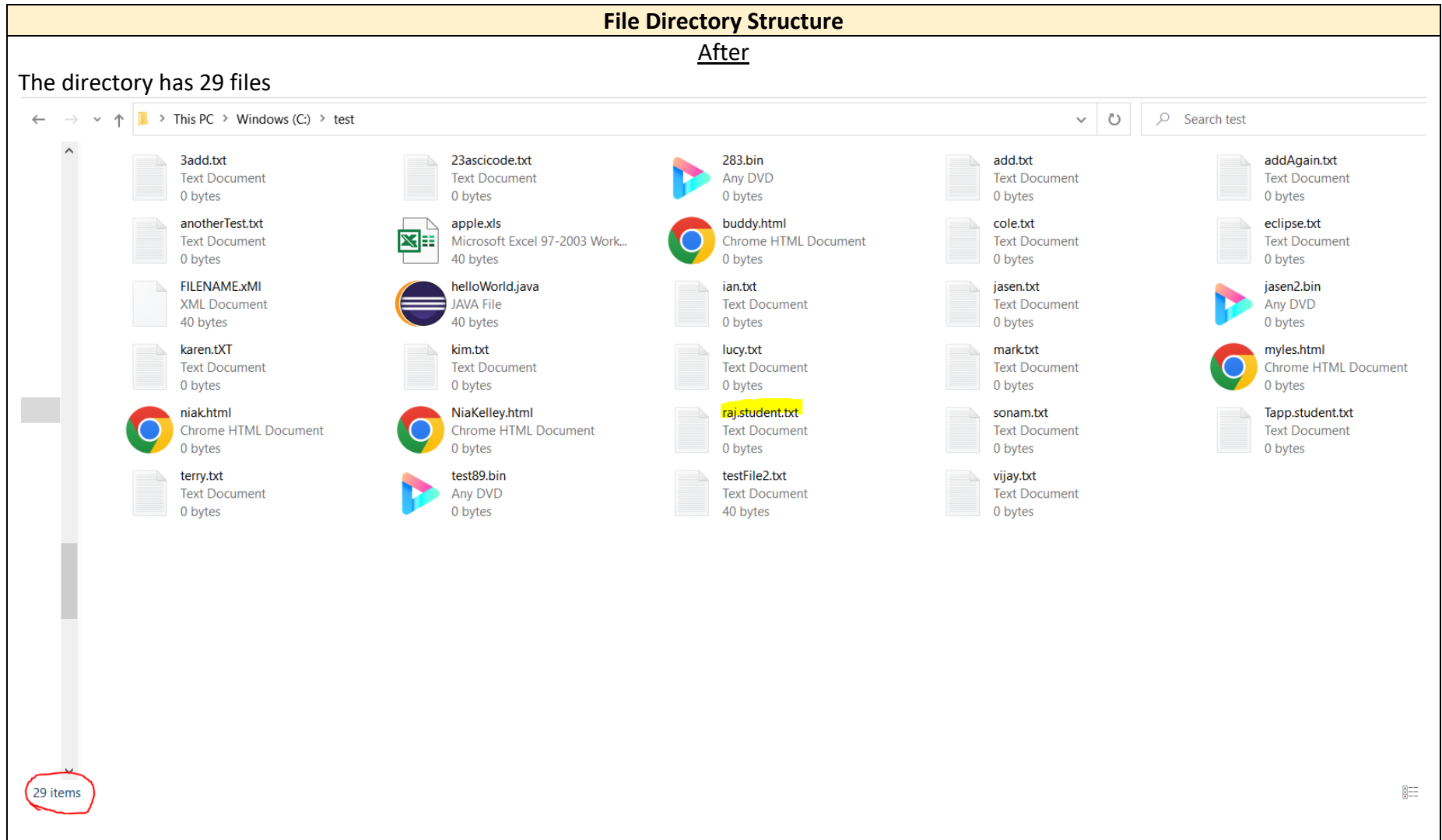
terry.txt  
Text Document  
0 bytes

28 items

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Delete File – File Found – Proceed with Deletion

**Expected Result:** User inputs a file name for deletion. The application conducts a case sensitive search to determine if the file name already exists. If the file name already exists, the appicate will display a message and will not delete the file. If the file name does not exist, the application asks the User to confirm the deletion. Upon indicating “Y” or “y”, the application will delete the file from the directory, and displays a confirmation message on the console.

**Test Outcome:** Pass

#### Test Case Input:

- 2
- raj.student.txt
- y

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Output:

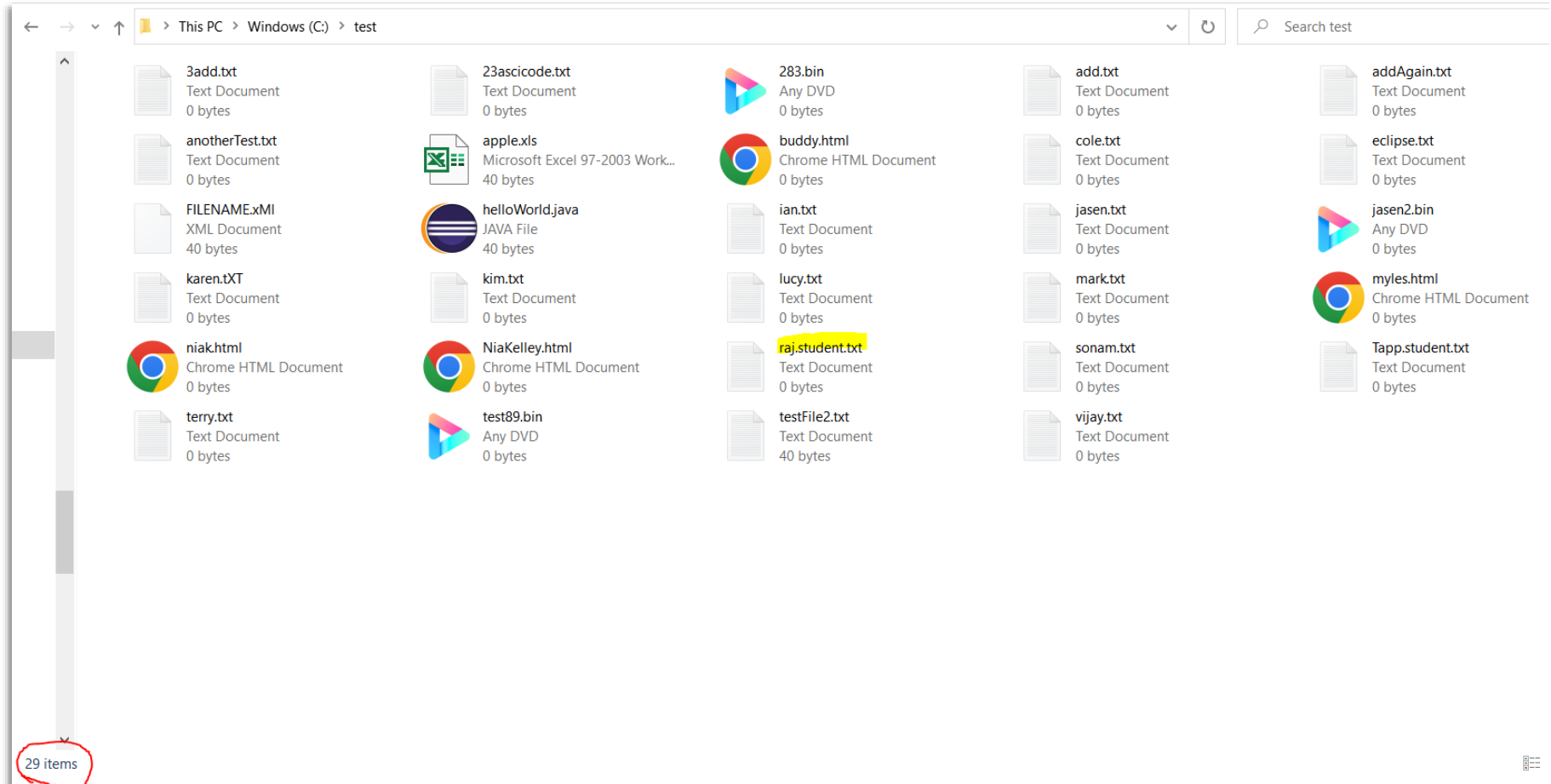
##### Program Console

```
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
2         
Specify the file name to DELETE from C:\test:  
raj.student.txt         
The file exists already...  
Do you really want to delete - y or n?  
y         
File deleted Successfully         
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...
```

## File Directory Structure

Before

The directory has 29 files



# End-of-Phase Project

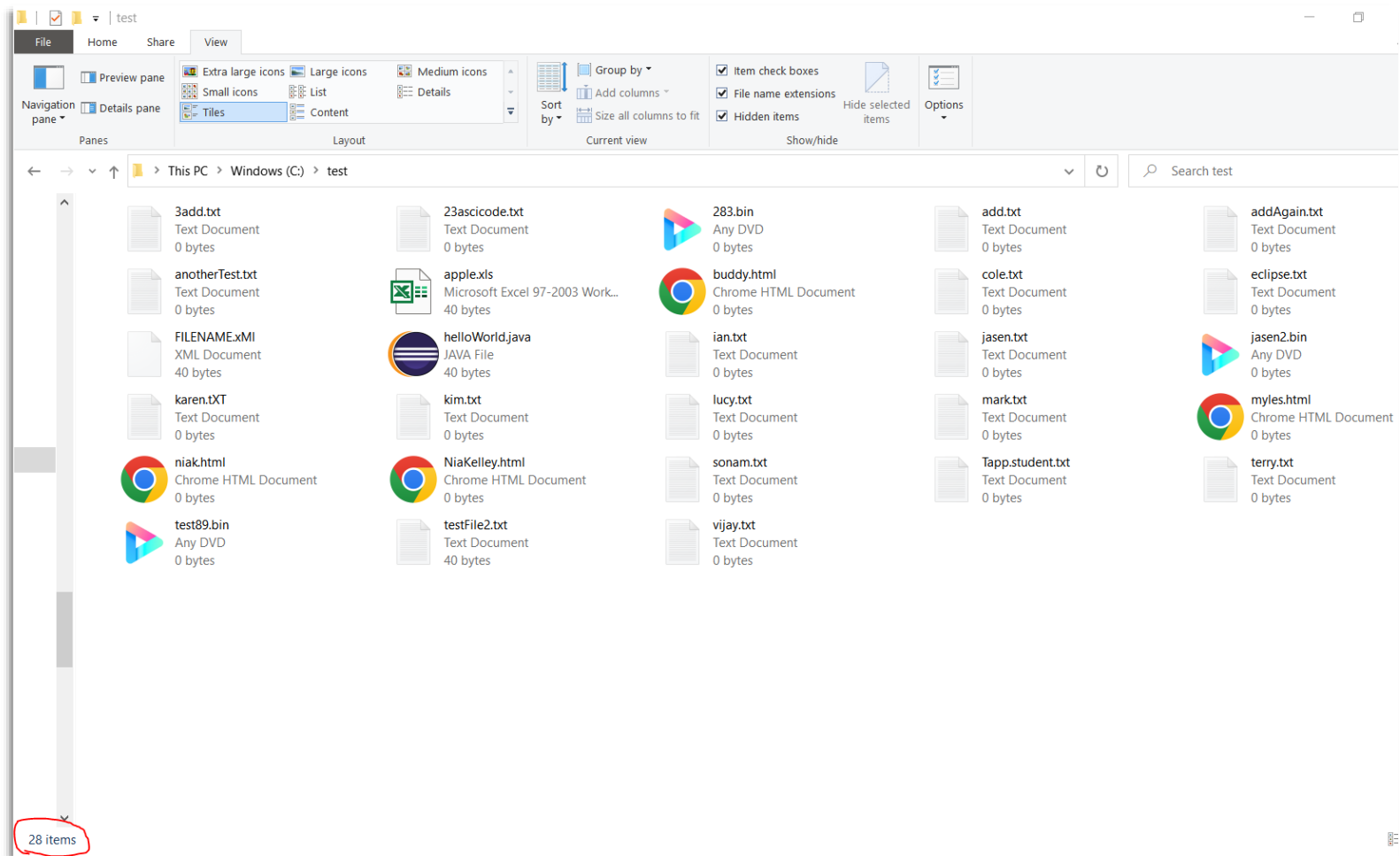
## Virtual Keys Repository Prototype Application

### Test Case Output

#### File Directory Structure

After

The directory has 28 files



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Delete File – File Found – Do not proceed with Deletion

**Expected Result:** User inputs a file name for deletion. The application conducts a case sensitive search to determine if the file name already exists. If the file name already exists, the appicate will display a message and will not delete the file. If the file name does not exist, the application asks the User to confirm the deletion. The application asks the User to confirm the deletion. Upon indicating “N” or “n”, the application does not delete the file from the directory and displays an appropriate message on the console.

**Outcome:** Pass

#### Test Case Input:

- 2
- mark.txt
- n

#### Test Case Output:

Program Console



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

```
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
2 _____  
Specify the file name to DELETE from C:\test:  
mark.txt _____  
The file exists already...  
Do you really want to delete - y or n?  
n _____  
Not deleting the file per your request...
```

#### File Directory Structure

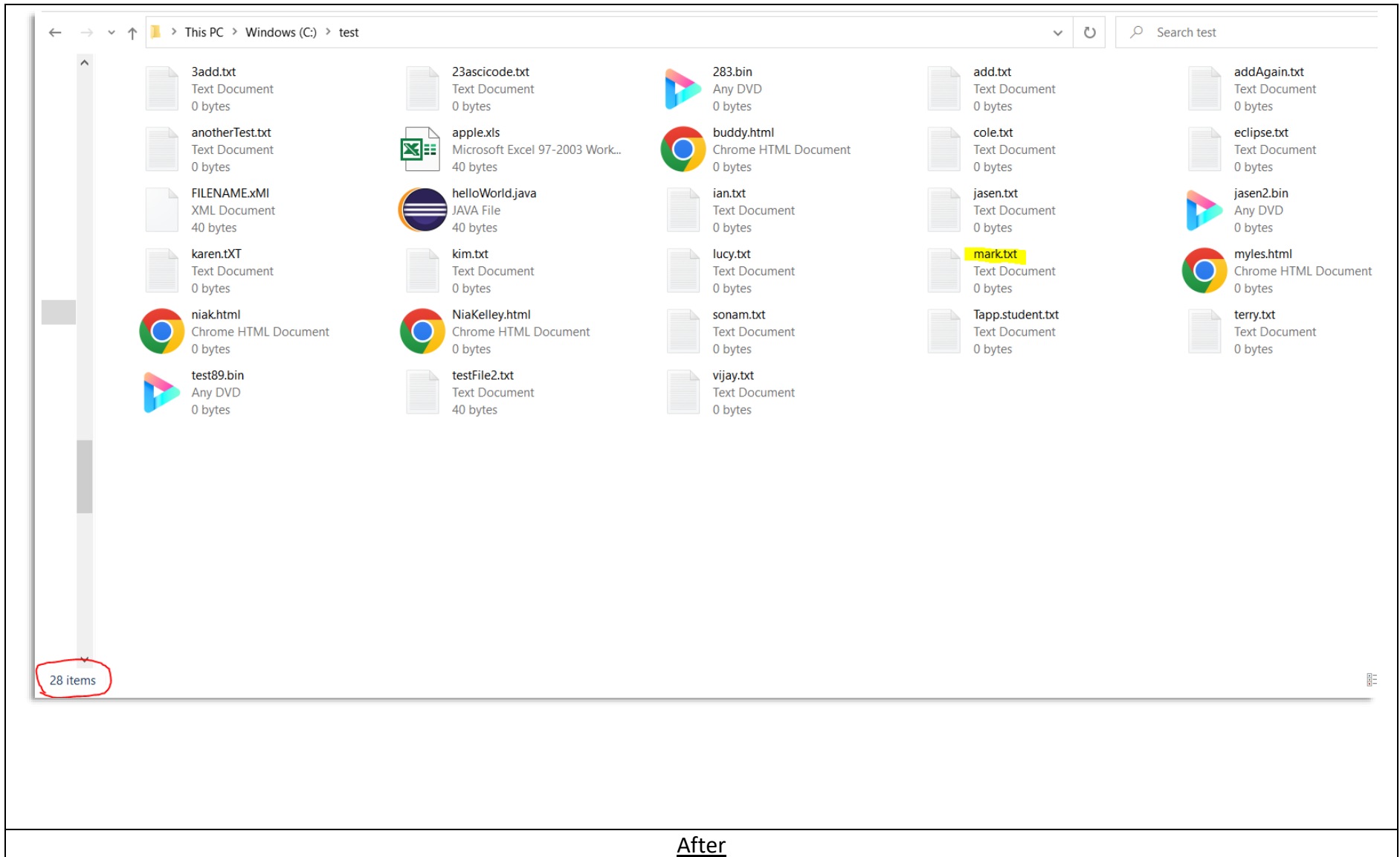
##### Before

The directory has 28 files

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

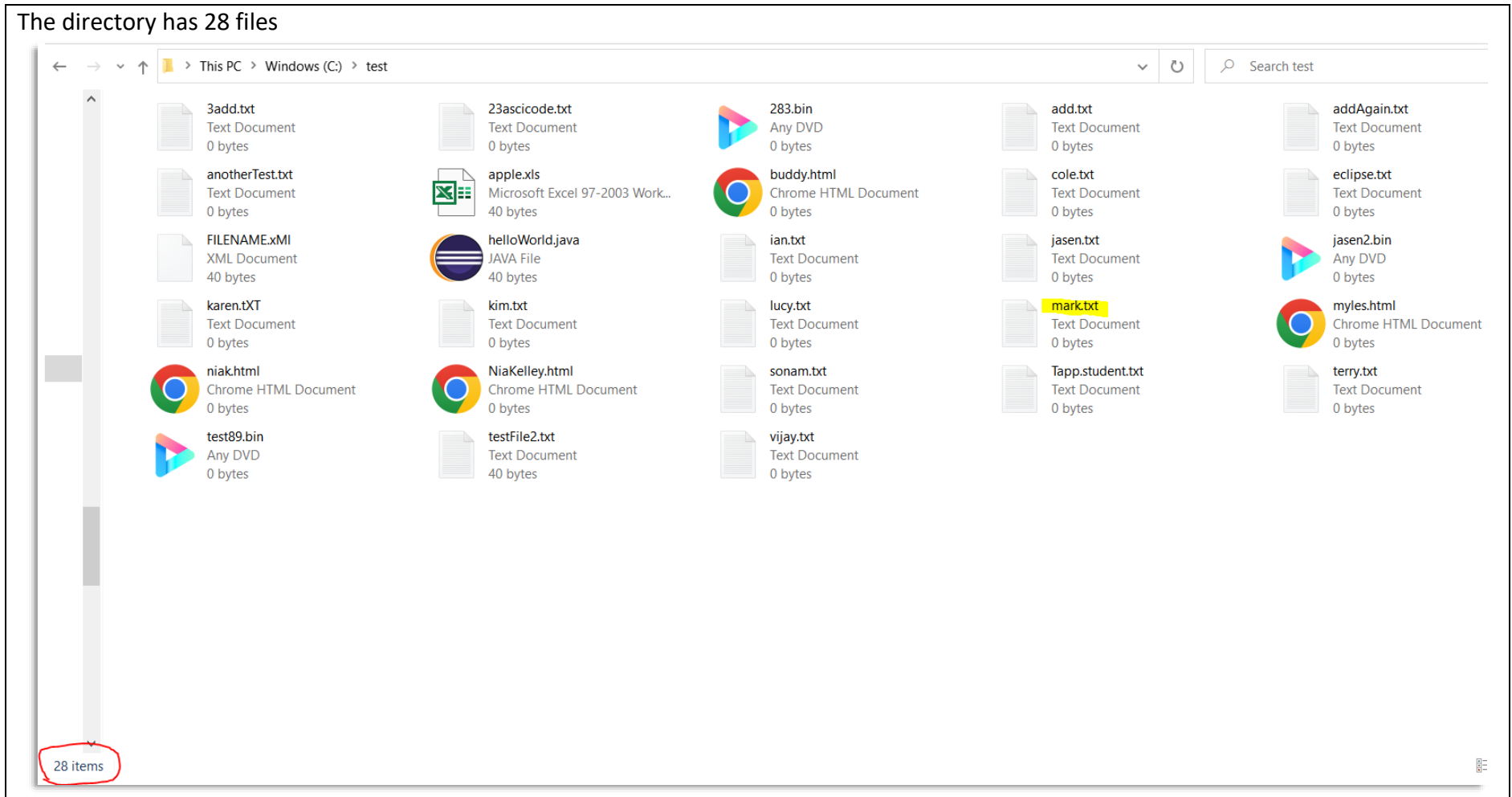
### Test Case Output



# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Search for File

**Expected Result:** The User is prompted for a file name to search for. The application will conduct a case sensitive search on the directory, and a resultant message will be displayed on the console.

**Outcome:** Pass

#### Test Case Input:

- 3
- apple.xls

#### Test Case Output:

##### Program Console

```
.....  
      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensisitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
3         
Specify the file name to SEARCH from C:\test:  
apple.xls         
Searching for file: apple.xls         
apple.xls already exists in C:\test       
```

# End-of-Phase Project

## Virtual Keys Repository Prototype Application

### Test Case Output

File Directory Structure

Before

The directory has 28 files

< > v ↑

> This PC > Windows (C:) > test

↻

🔍 Search test

3add.txt  
Text Document  
0 bytes

anotherTest.txt  
Text Document  
0 bytes

FILENAME.xml  
XML Document  
40 bytes

karen.txt  
Text Document  
0 bytes

niak.html  
Chrome HTML Document  
0 bytes

test89.bin  
Any DVD  
0 bytes

23asciicode.txt  
Text Document  
0 bytes

apple.xls  
Microsoft Excel 97-2003 Work...  
40 bytes

helloWorld.java  
JAVA File  
40 bytes

kim.txt  
Text Document  
0 bytes

NiaKelley.html  
Chrome HTML Document  
0 bytes

testFile2.txt  
Text Document  
40 bytes

283.bin  
Any DVD  
0 bytes

buddy.html  
Chrome HTML Document  
0 bytes

ian.txt  
Text Document  
0 bytes

lucy.txt  
Text Document  
0 bytes

sonam.txt  
Text Document  
0 bytes

vijay.txt  
Text Document  
0 bytes

add.txt  
Text Document  
0 bytes

cole.txt  
Text Document  
0 bytes

jasen.txt  
Text Document  
0 bytes

mark.txt  
Text Document  
0 bytes

Tapp.student.txt  
Text Document  
0 bytes

addAgain.txt  
Text Document  
0 bytes

eclipse.txt  
Text Document  
0 bytes

jasen2.bin  
Any DVD  
0 bytes

myles.html  
Chrome HTML Document  
0 bytes

terry.txt  
Text Document  
0 bytes

28 items

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# End-of-Phase Project

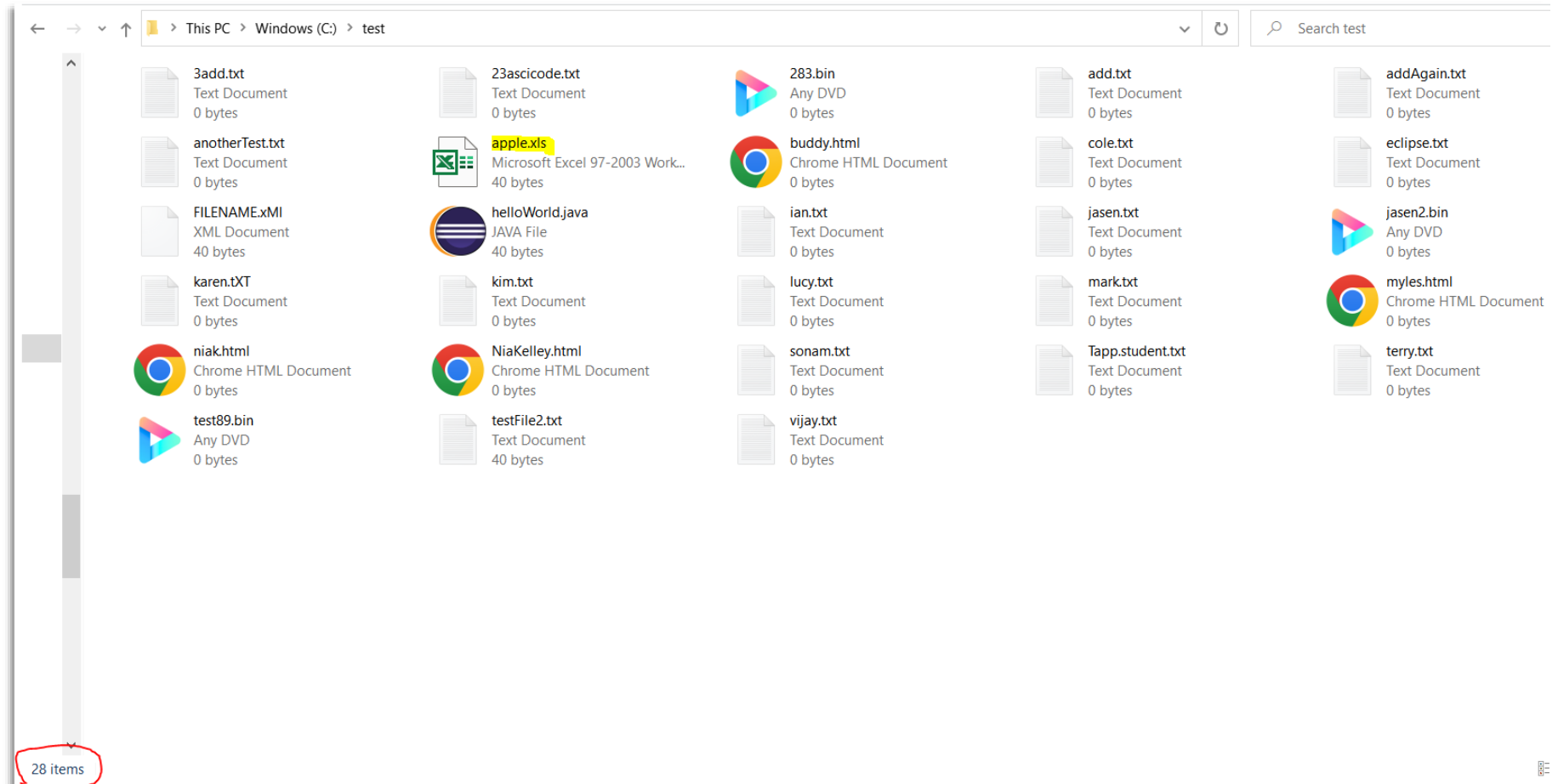
## Virtual Keys Repository Prototype Application

### Test Case Output

#### File Directory Structure

#### After

The directory has 28 files



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Search for File

**Expected Result:** The User is prompted for a file name to search for. The application will conduct a case sensitive search on the directory, and a resultant message will be displayed on the console.

**Outcome:** Pass

#### Test Case Input:

- 3
- APpLe.XlS

#### Test Case Output:

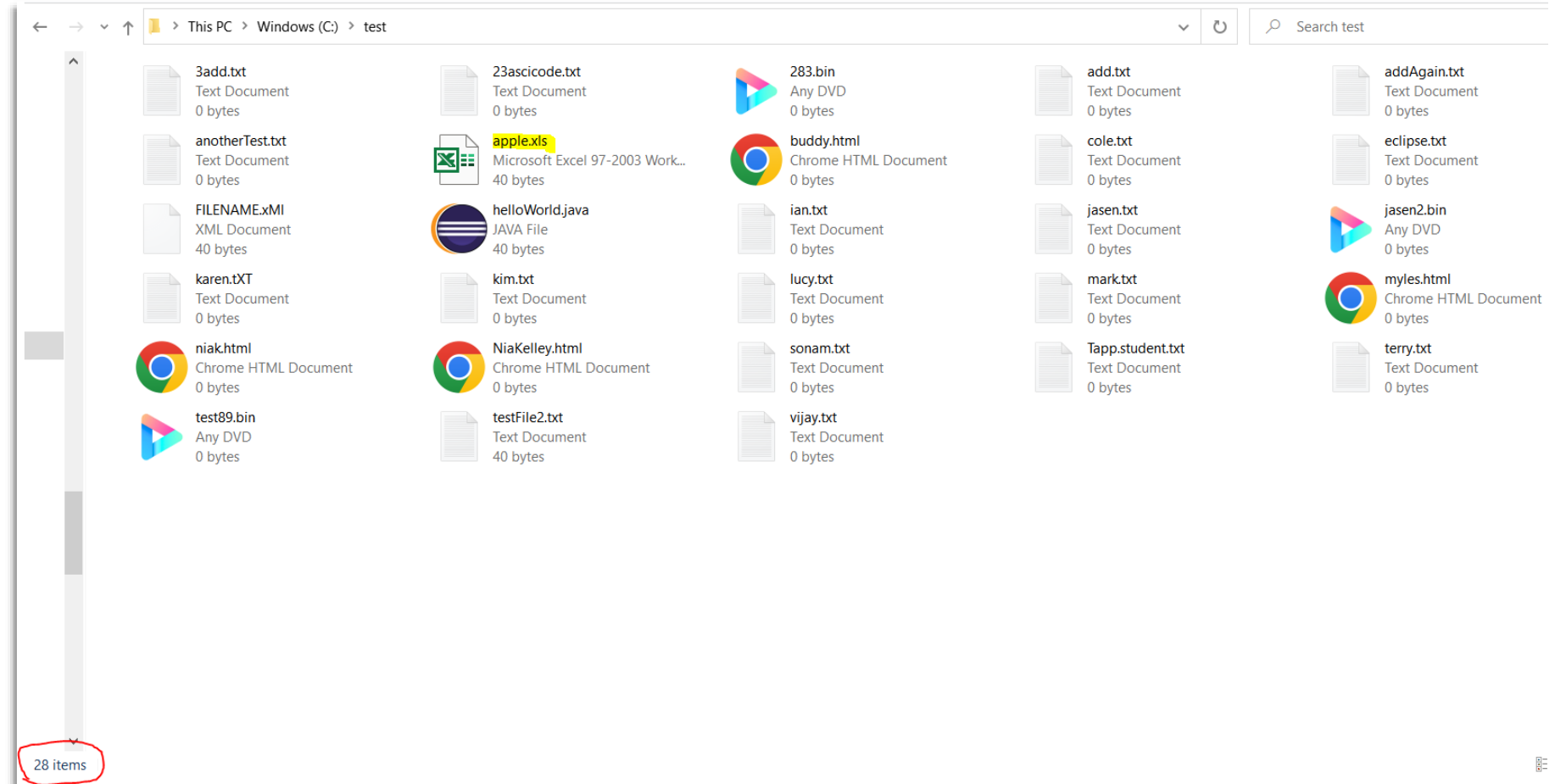
##### Program Console

```
.....  
      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
3  
Specify the file name to SEARCH from C:\test:  
APpLe.XlS  
Searching for file: APpLe.XlS  
APpLe.XlS DOES NOT exist in C:\test...
```

## File Directory Structure

Before

The directory has 28 files





# End-of-Phase Project

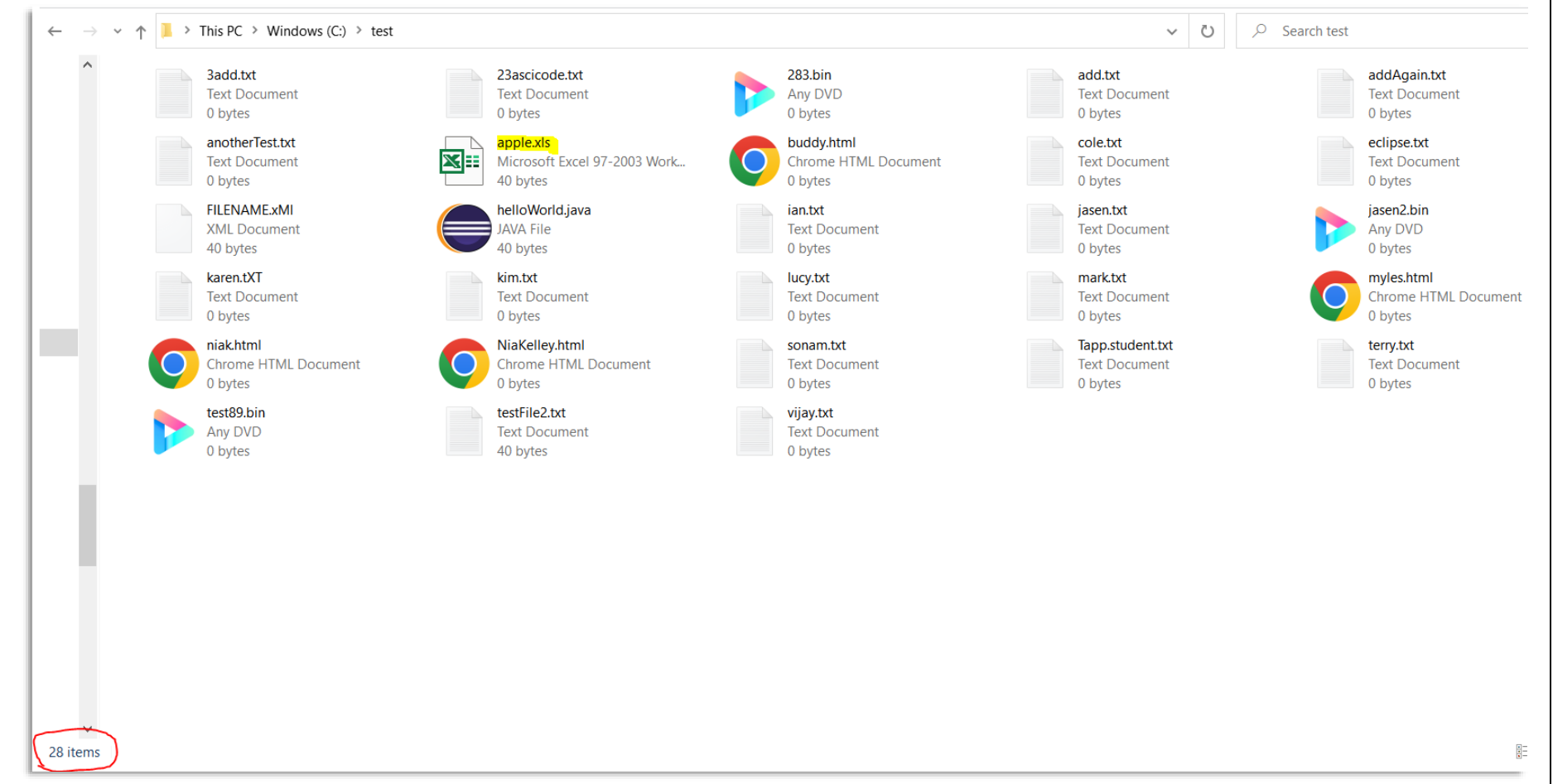
## Virtual Keys Repository Prototype Application

### Test Case Output

#### File Directory Structure

After

The directory has 28 files



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Go Back to Main Menu from Business Level Options Sub-Menu

**Expected Result:** From the Business Level Options (sub-menu), the User can select “4 – go back to main menu” to return to the Main Menu.

**Outcome:** Pass

**Test Case Input:** 4

**Test Case Output:**

#### Program Console

```
.....
.      Business Level Options Sub-Menu      .
.....
1. Add new file
2. Delete File (case sensitive)
3. Search for File (case sensitive)
4. Go back to main menu
.....
Choose your option...
4
You specified the following target directory: C:\test
*****
*                               *
*          MAIN MENU            *
*                               *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Exit Program from Main Menu

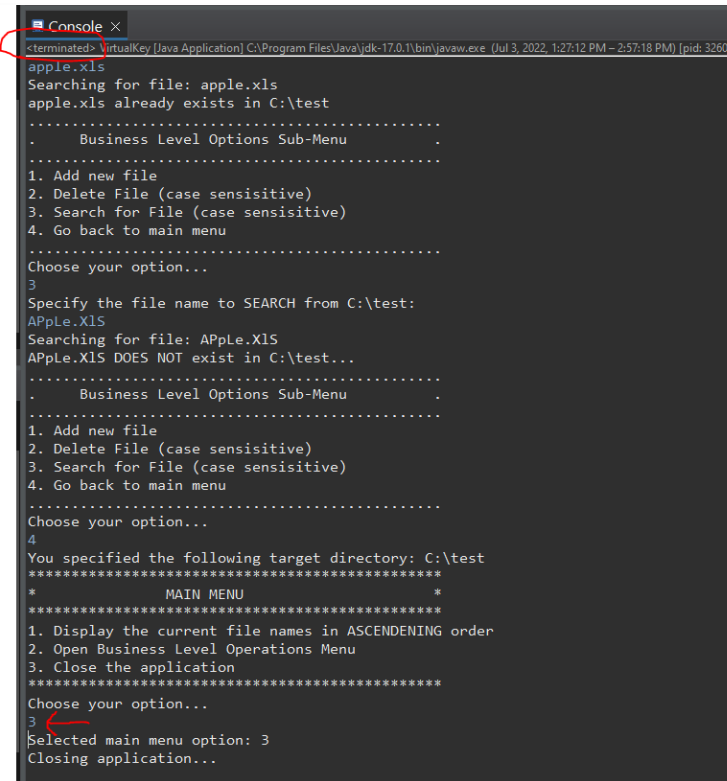
**Expected Result:** The User can use option “3 – Close the application” to gracefully terminate the application.

**Outcome:** Pass

**Test Case Input:** 3

**Test Case Output:**

#### Program Console



```
<terminated> VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.11\bin\javaw.exe (Jul 3, 2022, 1:27:12 PM - 2:57:18 PM) [pid: 32608]
apple.xls
Searching for file: apple.xls
apple.xls already exists in C:\test
.....
.      Business Level Options Sub-Menu      .
.....
1. Add new file
2. Delete File (case sensitive)
3. Search for File (case sensitive)
4. Go back to main menu
.....
Choose your option...
3
Specify the file name to SEARCH from C:\test:
APpLe.XlS
Searching for file: APpLe.XlS
APpLe.XlS DOES NOT exist in C:\test...
.....
.      Business Level Options Sub-Menu      .
.....
1. Add new file
2. Delete File (case sensitive)
3. Search for File (case sensitive)
4. Go back to main menu
.....
Choose your option...
4
You specified the following target directory: C:\test
*****
*              MAIN MENU              *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
3
Selected main menu option: 3
Closing application...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Launch Program – User-Specified Directory

**Expected Result:** When the application launches, the User can specify a directory to use for the application (i.e., not running in Test mode). The User can enter “N” or “n” when asked if you want to run the application in Test mode. the application will ask the User to enter a directory for the application. The application will display a message on the console specifying the target directory being used.

**Outcome:** Pass

#### Test Case Input:

- n
- C:\test

#### Test Case Output:

##### Program Console

```
VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Jul 3, 2022, 2:59:49 PM) [pid: 30496]
[Console output redirected to file:C:\Users\niake\eclipse\java-2022-03\eclipse\output.virtualKeyConsole.07032022.txt]

*****

Welcome to the Virtual Keys Repository of LockedMe.com
Version: 1.0 PROTOTYPE
Client: Lockers Pvt. Ltd
Full Stack Developer Name: Nia Kelley Jester
*****

Do you want to run in TEST mode (using C:\test) - y or n?
n
Enter the target directory for LockedMe.com to use...
C:\test
You specified the following target directory: C:\test
*****
*                MAIN MENU                *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Functional Test Cases - Exception Handling

Test Case Scenario: Launch Program – User-Specified Directory – Non-valid Input

**Expected Result:** When the application launches, the User can specify a directory to use for the application (i.e., not running in Test mode). The User enters an invalid question, and the application will terminate.

**Outcome:** Pass - Handled exception as designed

**Test Case Input:** p

**Test Case Output:**

Program Console

```
Console x
<terminated> VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Jul 3, 2022, 3:02:35 PM – 3:02:47 PM) [pid: 14964]
[Console output redirected to file:C:\Users\niake\eclipse\java-2022-03\eclipse\output.virtualKeyConsole.07032022.txt]

*****

Welcome to the Virtual Keys Repository of LockedMe.com
Version: 1.0 PROTOTYPE
Client: Lockers Pvt. Ltd
Full Stack Developer Name: Nia Kelley Jester
*****

Do you want to run in TEST mode (using C:\test) - y or n?
p
Invalid directory...
Terminating Application
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Non-valid Main Menu option

**Expected Result:** User enters an invalid data for the Main Menu option. The program will indicate that the User entered invalid data and gives the User the option to continue with program execution. The User will be presented with the option to continue or quit the application. The program will accept "C" or "c" to continue the program or "X" or "x" to terminate the application. If the User enters "C" or "c", the application will display the main menu.

**Outcome:** Pass - Handled exception as designed

#### Test Case Input:

- T
- C

#### Test Case Output:

Program Console

```
VirtualKey [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Jul 3, 2022, 3:04:10 PM) [pid: 36348]
[Console output redirected to file:C:\Users\niake\workspace\java-2022-03\eclipse\output.virtualKeyConsole.07032022.txt]

*****
Welcome to the Virtual Keys Repository of LockedMe.com
Version: 1.0 PROTOTYPE
Client: Lockers Pvt. Ltd
Full Stack Developer Name: Nia Kelley Jester
*****

Do you want to run in TEST mode (using C:\test) - y or n?
y
You specified the following target directory: C:\test
*****
*                               *
*          MAIN MENU           *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
T
Selected main menu option: 0
Please enter a valid option..
Enter 'c' to continue, 'x' to quit:
c
*****
*                               *
*          MAIN MENU           *
*****
1. Display the current file names in ASCENDING order
2. Open Business Level Operations Menu
3. Close the application
*****
Choose your option...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Non-valid Main Menu option

**Expected Result:** User enters an invalid data for the Main Menu option. The program will indicate that the User entered invalid data and gives the User the option to continue with program execution. The User will be presented with the option to continue or quit the application. The program will accept "C" or "c" to continue the program or "X" or "x" to terminate the application. If the User enters "C" or "c", the application will display the main menu.

**Outcome:** Pass - Handled exception as designed

#### Test Case Input:

- 978
- C

#### Test Case Output:

Program Console
<pre>***** *                               * *           MAIN MENU           * *                               * ***** 1. Display the current file names in ASCENDING order 2. Open Business Level Operations Menu 3. Close the application ***** Choose your option... 978 Selected main menu option: 978 Please enter a valid option.. Enter 'c' to continue, 'x' to quit: C ***** *                               * *           MAIN MENU           * *                               * ***** 1. Display the current file names in ASCENDING order 2. Open Business Level Operations Menu 3. Close the application ***** Choose your option...</pre>

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

#### Test Case Scenario: Non-valid Main Menu option

**Expected Result:** User enters an invalid data for the Main Menu option. The program will indicate that the User entered invalid data and gives the User the option to continue with program execution. The User will be presented with the option to continue or quit the application. The program will accept "C" or "c" to continue the program or "X" or "x" to terminate the application. If the User enters "C" or "c", the application will display the main menu.

**Outcome:** Pass - Handled exception as designed

#### Test Case Input:

- 3!
- c

#### Test Case Output:

Program Console
<pre>***** *                               * *      MAIN MENU                * *                               * ***** 1. Display the current file names in ASCENDING order 2. Open Business Level Operations Menu 3. Close the application ***** Choose your option... 3! Selected main menu option: 0 Please enter a valid option.. Enter 'c' to continue, 'x' to quit: c ***** *                               * *      MAIN MENU                * *                               * ***** 1. Display the current file names in ASCENDING order 2. Open Business Level Operations Menu 3. Close the application ***** Choose your option...</pre>

**File Directory Structure:** No need to display for this test



## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Non-valid Business Options Sub-Menu option

**Expected Result:** User enters an invalid data for the Business Level Options sub-menu. The program will indicate that the User entered invalid data, displays an error message, displays the menu again, and gives the User another opportunity to make a selection.

**Outcome:** Pass - Handled exception as designed

**Test Case Input:** P

**Test Case Output:**

#### Program Console

```
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
P  
You entered invalid input! Try again..  
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Non-valid Business Options Sub-Menu option

**Expected Result:** User enters an invalid data for the Business Level Options sub-menu. The program will indicate that the User entered invalid data, displays an error message, displays the menu again, and gives the User another opportunity to make a selection.

**Outcome:** Pass - Handled exception as designed

**Test Case Input:** 99

**Test Case Output:**

#### Program Console

```
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
99  
Please enter a valid option...  
.....  
.      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...
```

**File Directory Structure:** No need to display for this test

## End-of-Phase Project

### Virtual Keys Repository Prototype Application

#### Test Case Output

Test Case Scenario: Non-valid Business Options Sub-Menu option



**Expected Result:** User enters an invalid data for the Business Level Options sub-menu. The program will indicate that the User entered invalid data, displays an error message, displays the menu again, and gives the User another opportunity to make a selection.

**Outcome:** Pass - Handled exception as designed

**Test Case Input:** 3!

**Test Case Output:**

#### Program Console

```
.....  
      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...  
3!   
You entered invalid input! Try again..   
.....  
      Business Level Options Sub-Menu      .  
.....  
1. Add new file  
2. Delete File (case sensitive)  
3. Search for File (case sensitive)  
4. Go back to main menu  
.....  
Choose your option...
```

**File Directory Structure:** No need to display for this test