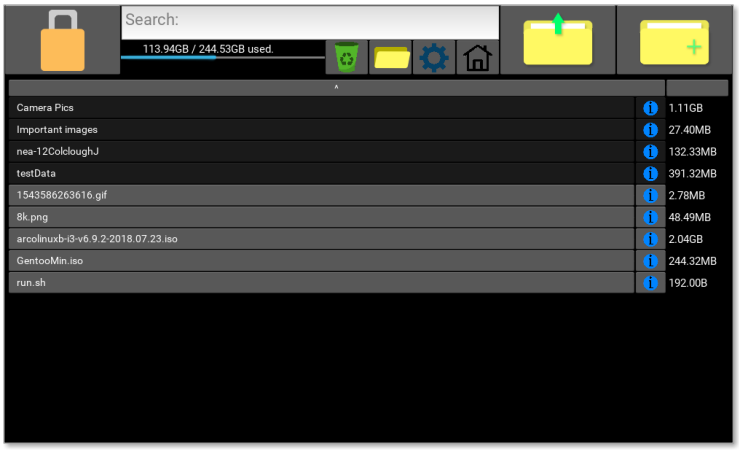
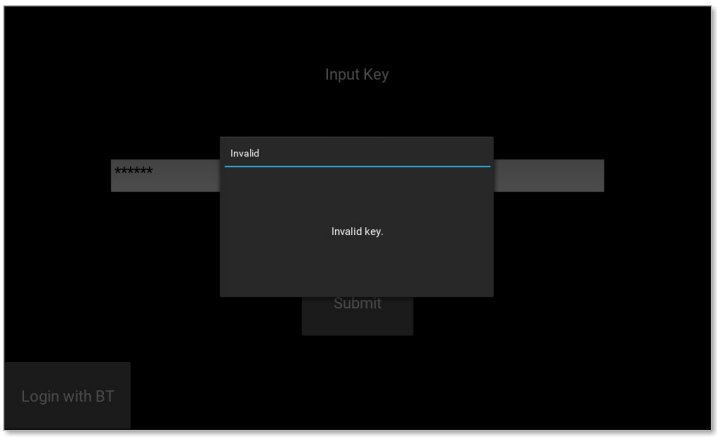
Test Number	1
Relevant Objective	1.g
Description	Input various data into the key input of the regular login screen. The valid key I will use will be 1234.
Purpose	To ensure that the login screen is both secure and works as intended.
Test Data	T: [1]: 1234 [2]: 222333 [3]: 2001 E: [4]: My name is jeff [5]: 12345678901234567 [6]: 1a2b3c4ddeed [7]: abcdefghijklmnopq B: [8]: 9999999999999999 [9]: 0000000000000000 [10]: 00000000000000000 [11]: (nothing)
Expected Outcome	[1]: Should be accepted as the correct key and main screen should open. [2]: Program should tell the user that the key is invalid, as it is not the key I set (1234). [3]: Program should tell the user that the key is invalid, as it is not the key I set (1234). [4]: Program should tell the user that the key is invalid, as it contains characters. [5]: Program should tell the user that the key is invalid, as it is longer than 16 in length. [6]: Program should tell the user that the key is invalid, as it contains characters. [7]: Program should tell the user that the key is invalid, as it is longer then 16 in length. [8]: Program should tell the user that the key is invalid, as it is not the key I set (1234) ([8] is 16 in length). [9]: Program should tell the user that the key is invalid, as it is not the key I set (1234) ([9] is 16 in length). [10]: Program should tell the user that the key is invalid, as it is longer than 16 in length. [11]: Program should tell the user that the key is invalid, as the key has to at least be 1 in length.
Actual Outcome	[All]: Pass

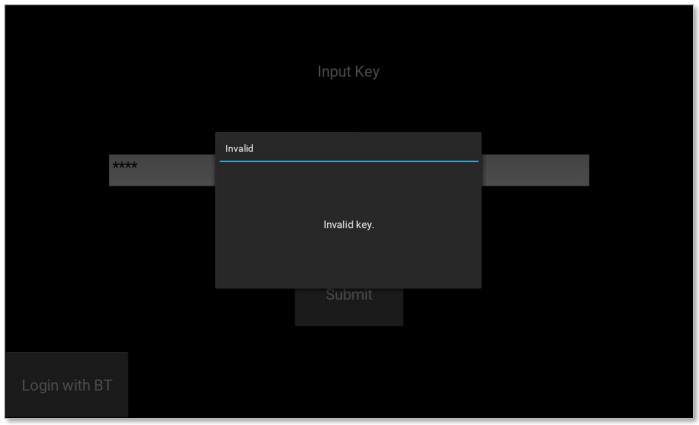
Evidence:

[1]: Opened

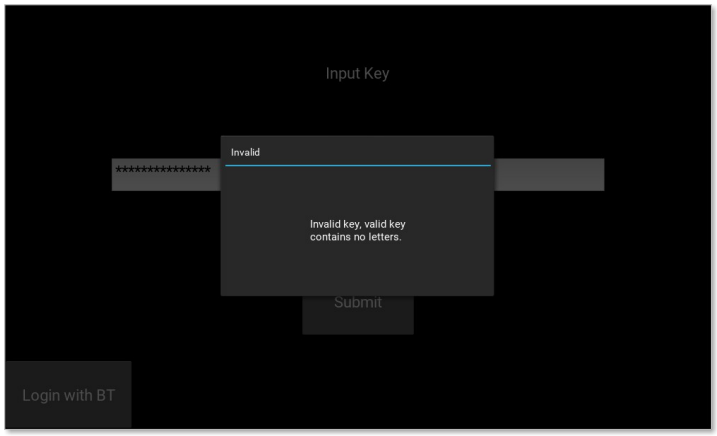


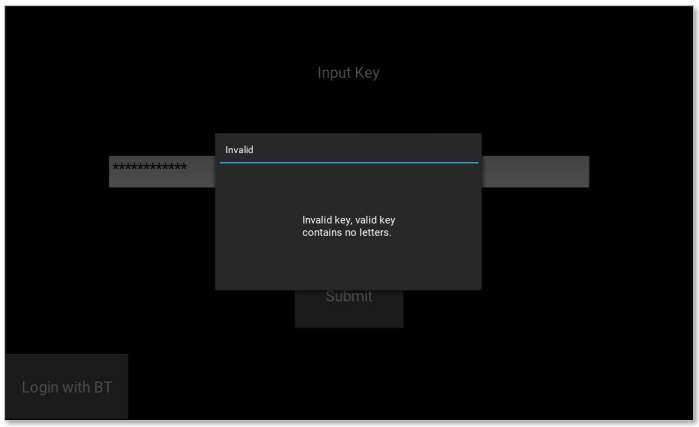
[2, 3]: Invalid



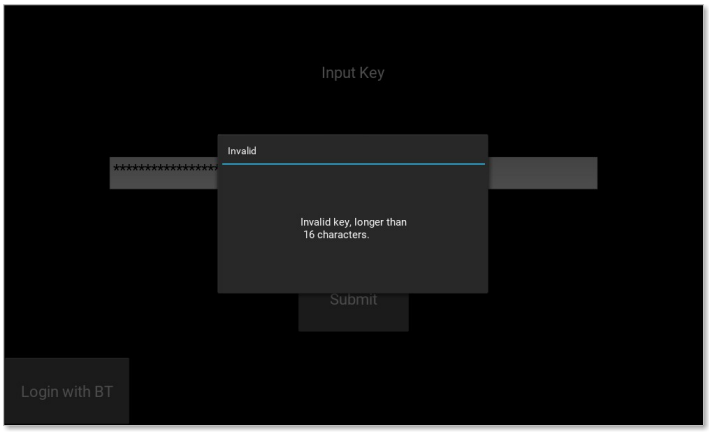


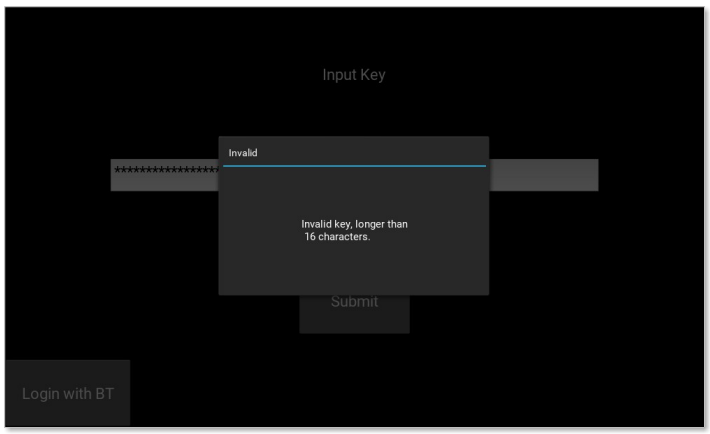
[4, 6]: No characters:

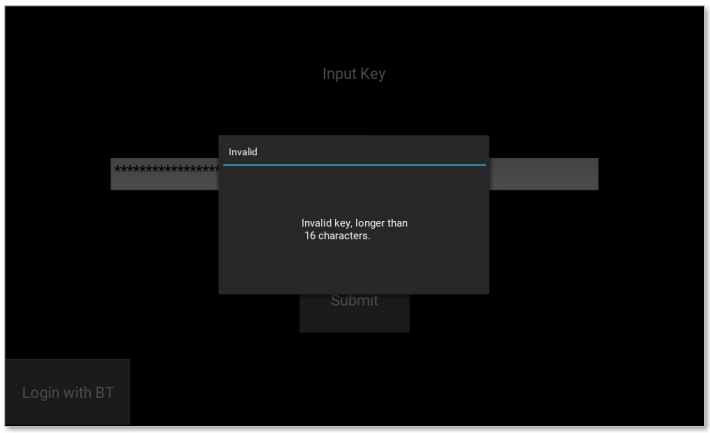




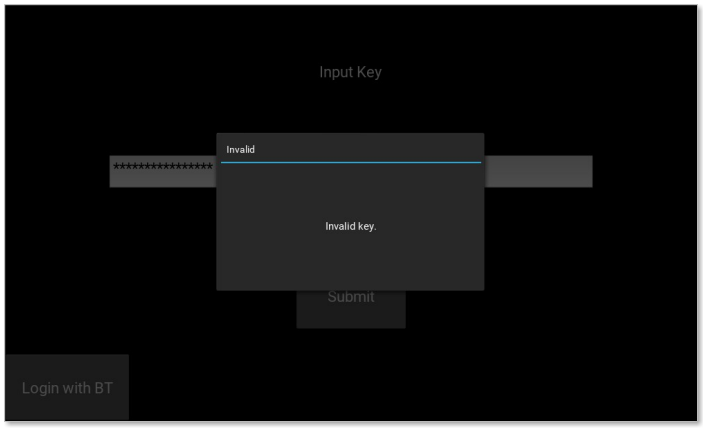
[5, 7, 10]: Input too long:

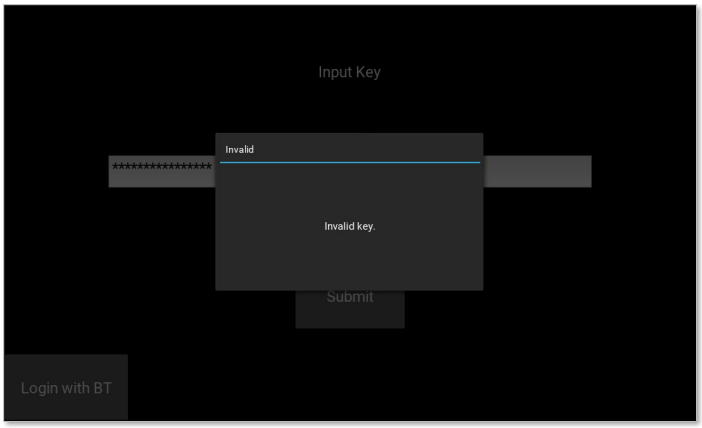




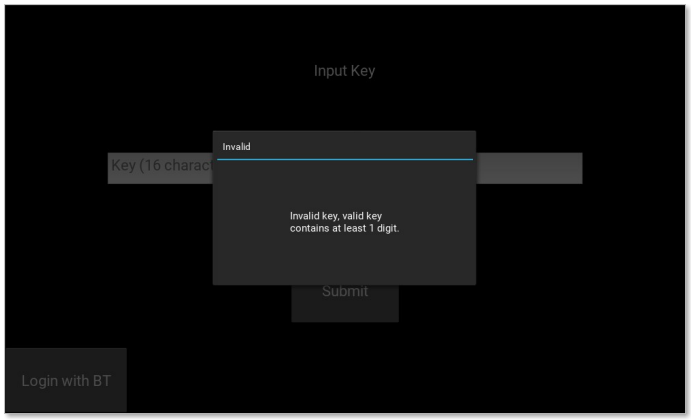


[8, 9]: Invalid key





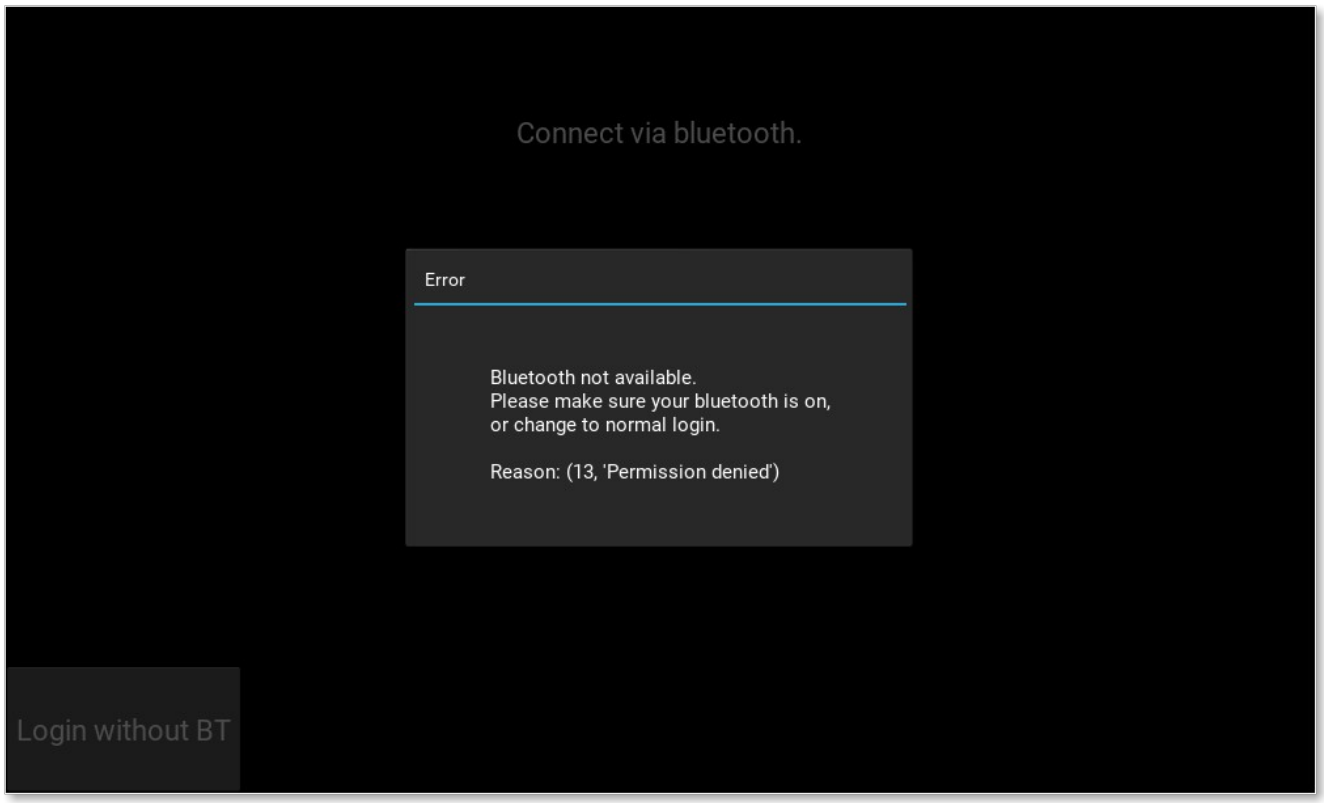
[11]: Invalid key, has to be at least 1 in length.



Test Number	2
Relevant Objective	1.L
Description	Switch login screen to Bluetooth login screen from regular login screen with Bluetooth disabled.
Purpose	To check that it will warn the user that Bluetooth is not available.

Test Data	Only one available input: (T) Click “Login with BT” button.
Expected Outcome	A popup should appear telling the user that Bluetooth is not available, and why (for the user to debug their Bluetooth problem).
Actual Outcome	Pass

Evidence:



Test Number	3
Relevant Objective	2.b
Description	Connect to PC from mobile device.
Purpose	To check that the mobile device can actually connect, and if not displays the appropriate message.
Test Data	T: [1]: Click “josh-pc” to connect to my PC. E: [2]: Click “josh-pc” when the program is not running on the PC. [3]: Click “josh-laptop” when the program is running on the PC. B: [4]: Click “josh-pc” when the program is running on both my laptop and the PC. [5]: Click “josh-laptop” in the same situation as [4].
Expected Outcome	[1]: Connects successfully and changes screen to the pad screen. [2]: Should not connect and asks user to retry. [3]: Should not connect and asks user to retry. [4]: Should connect to “josh-pc” successfully and change screen on the PC. [5]: Should connect to “josh-laptop” successfully and change screen on the PC.

Actual Outcome	[All]: Pass

Evidence:

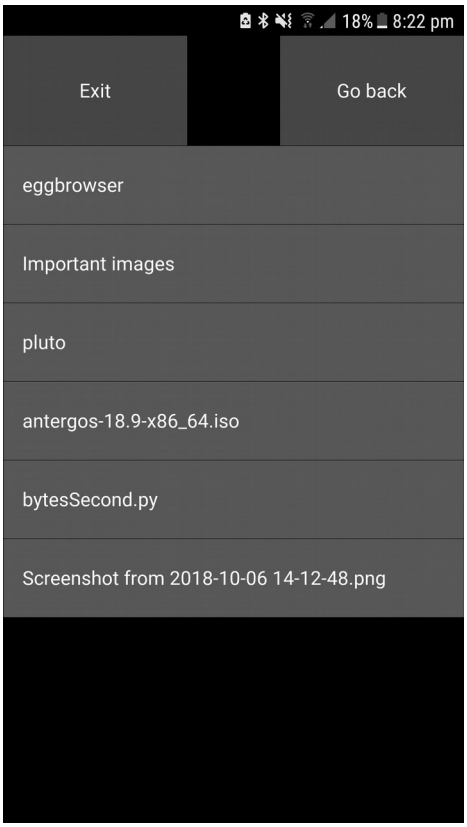
Test Number	4
Relevant Objective	1.g.ii, 2.b, 2.d
Description	Enter the key from the mobile app.
Purpose	Test that the key is either accepted, or declined by the server.
Test Data	(The app doesn't let you enter more than 16 numbers.) T: [1]: 1234 (The set key) [2]: 12340 [3]: 2001 B: [4]: 9876543210123456 [5]: 7389123612645815 [6]: 0000000000000000 [7]: (nothing)
Expected Outcome	[1]: PC program should log in and change screen to main screen. [2-7]: App should say that the key is invalid.
Actual Outcome	[All]: Pass

Evidence:

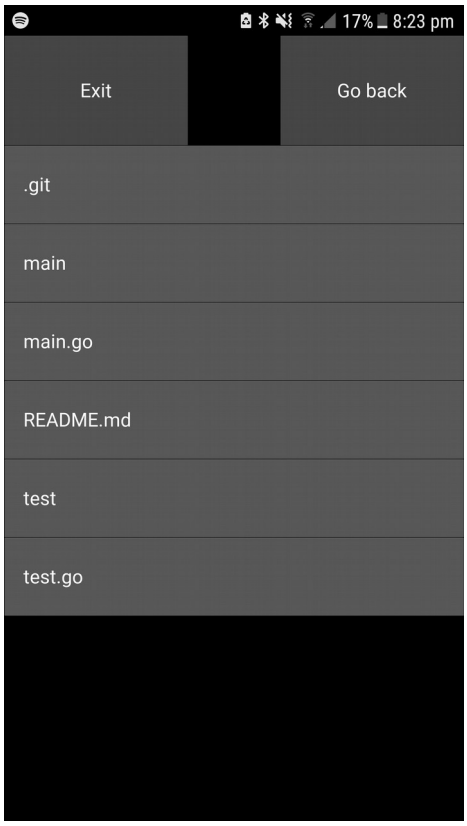
Test Number	5
Relevant Objective	2.f
Description	Browse files + download files within the mobile app.
Purpose	To test that the user can browse the files in the Vault and also download.
Test Data	T: [1]: Click to open the file browser. [2]: Click a folder. [3]: Click a file. [4]: Click to go back up one directory. [5]: Exit the file browser.
Expected Outcome	[1]: File browser should open. [2]: The file browser should navigate to that folder. [3]: The file should download to the users downloads folder. A popup should open on the PC showing the current status of the transfer, and once complete, the file should be found in the users "Download" folder. [4]: The file browser should display the contents of the folder above the current folder. [5]: Should return to main screen.
Actual Outcome	[All]: Pass

Evidence:

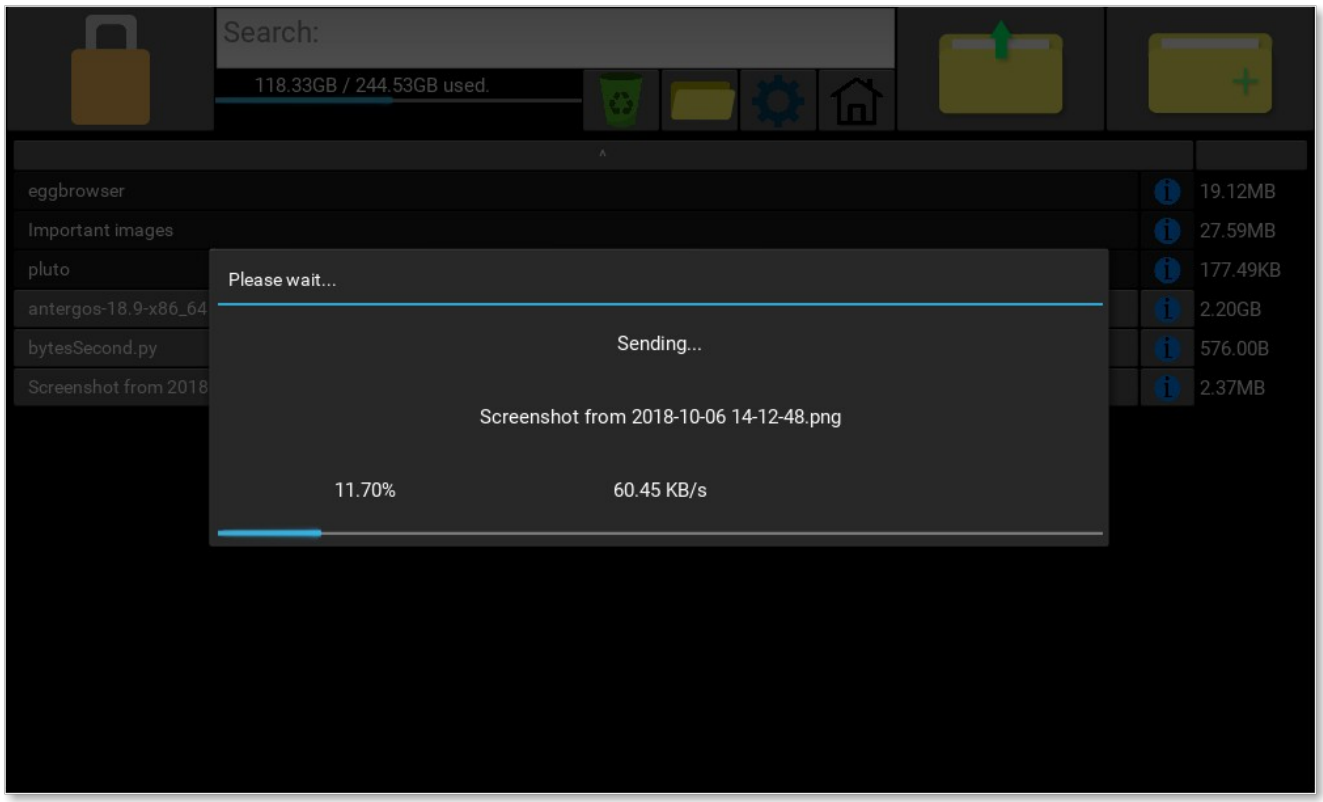
[1] Opening the file browser:



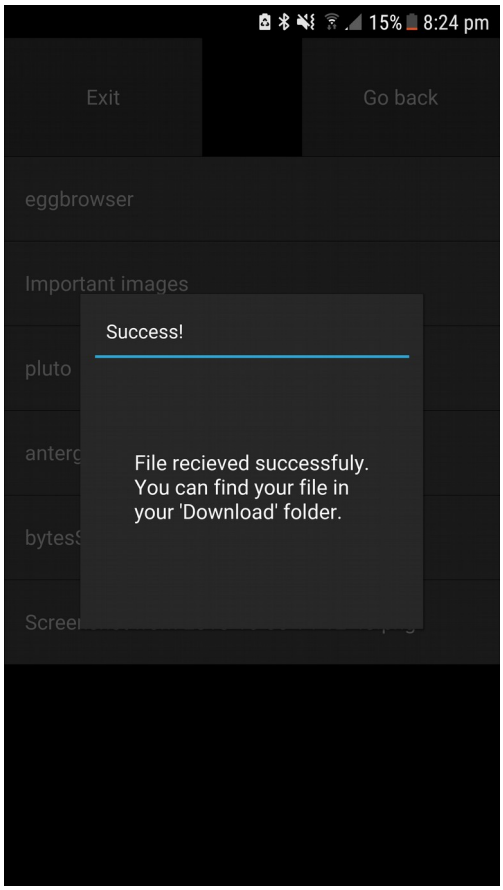
[2] Opening a folder:



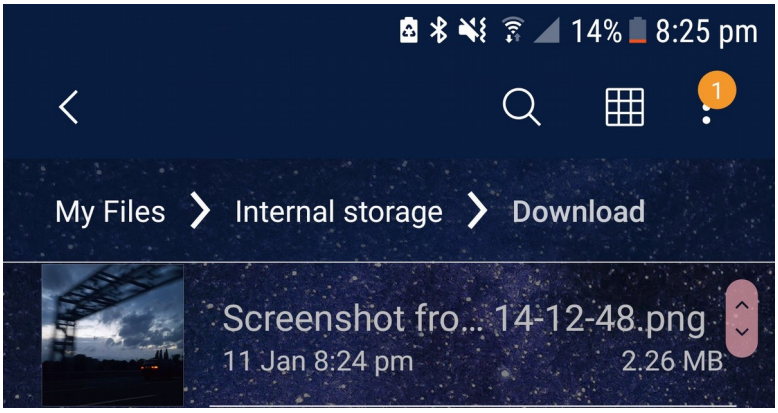
[3] Clicking a file (“Screenshot from 2018-10-06 14-12-48”):
View on PC program:



When done on phone:



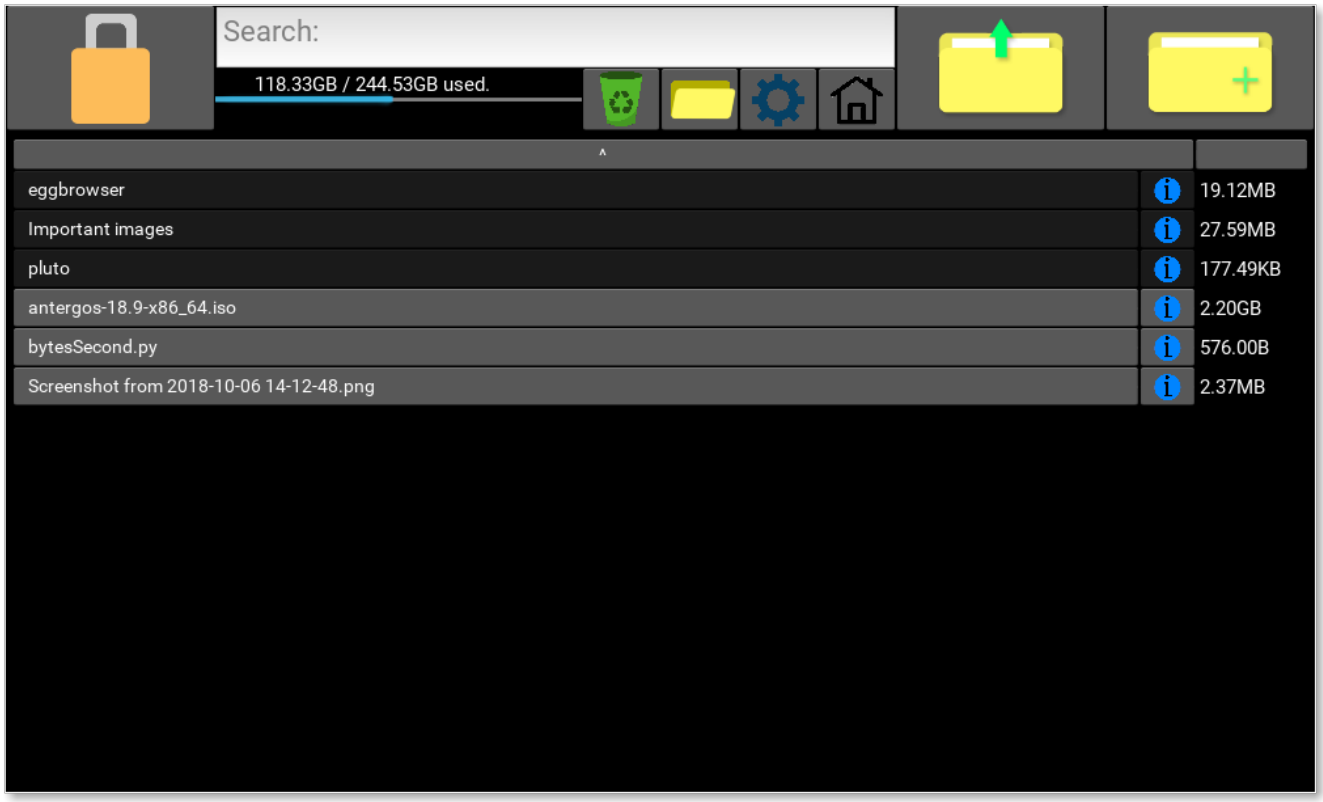
Download folder:



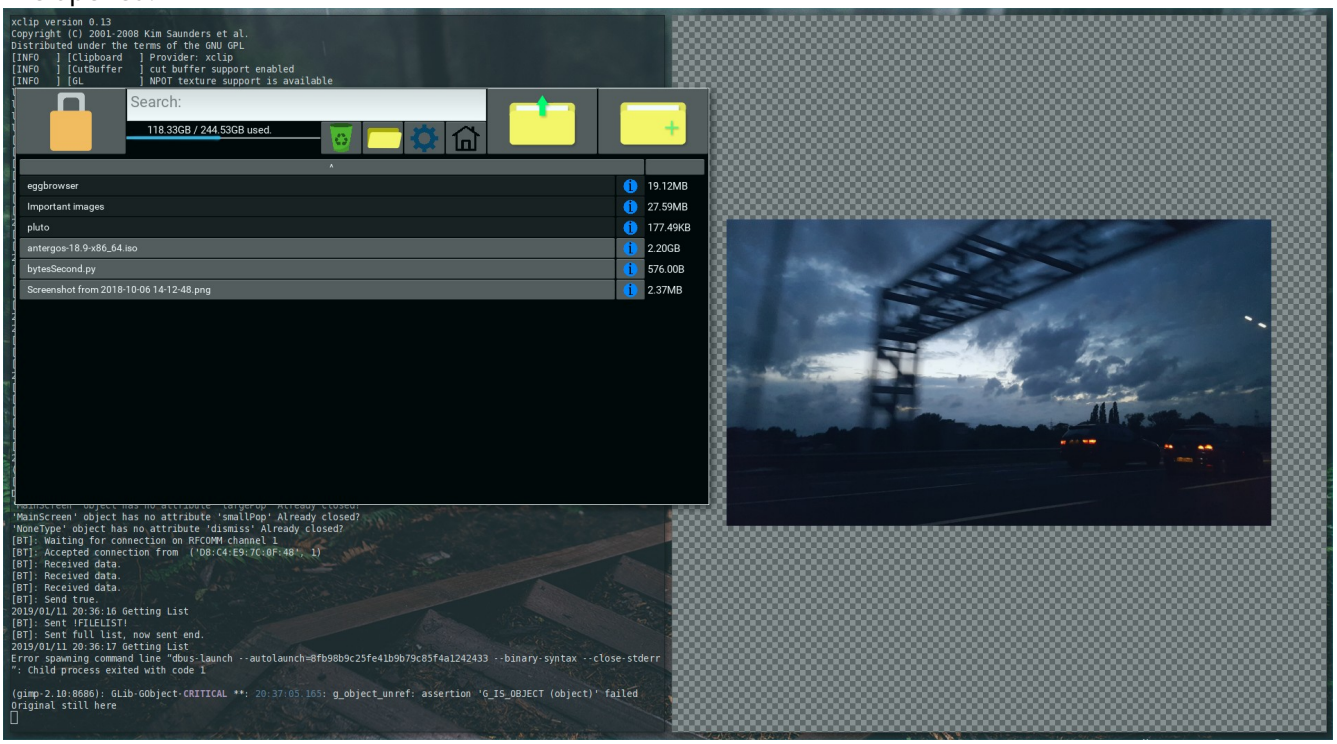
Test Number	6
Relevant Objective	3.c
Description	Disconnect from the Bluetooth server. (Close the mobile app)
Purpose	To check that temporary files are deleted and that the program is locked once connection is lost to the mobile device.
Test Data	`T: [1]: Log into the program using the mobile device, open a file, close the file and disconnect from the program.`
Expected Outcome	`[1]: The temporary files should be deleted and the program should be locked.`
Actual Outcome	`[All]: Pass`

Evidence:

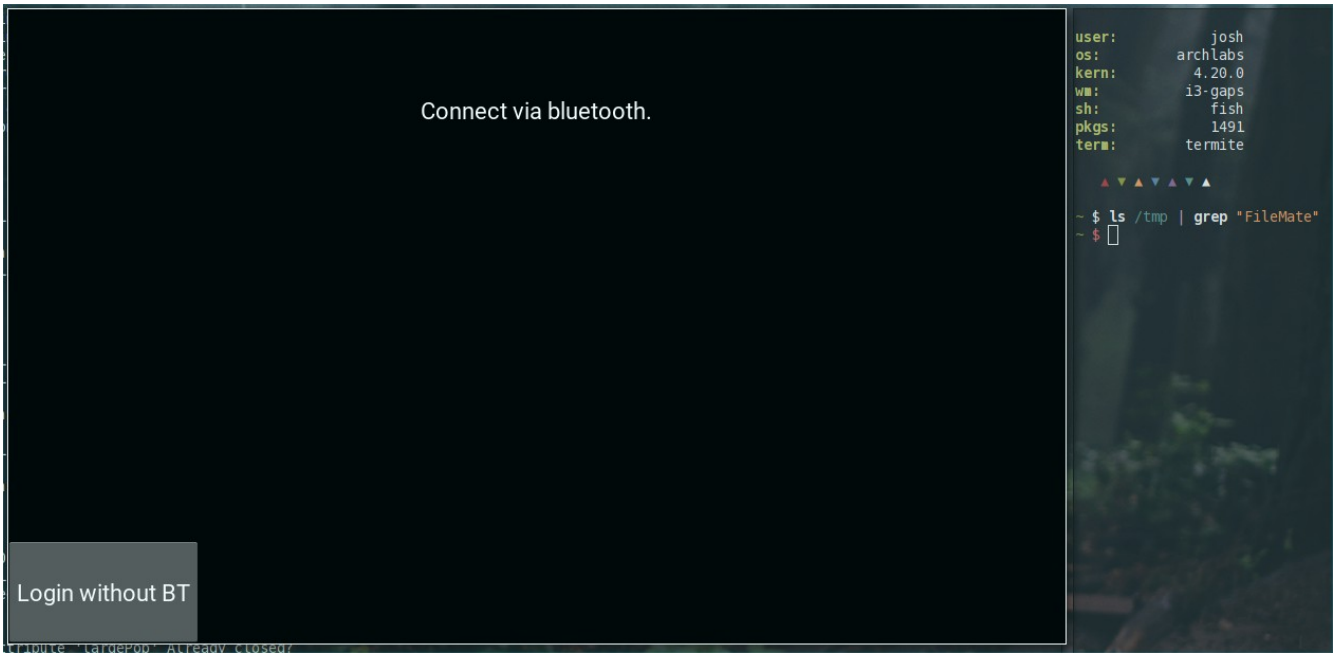
Vault unlocked using app:



File opened:



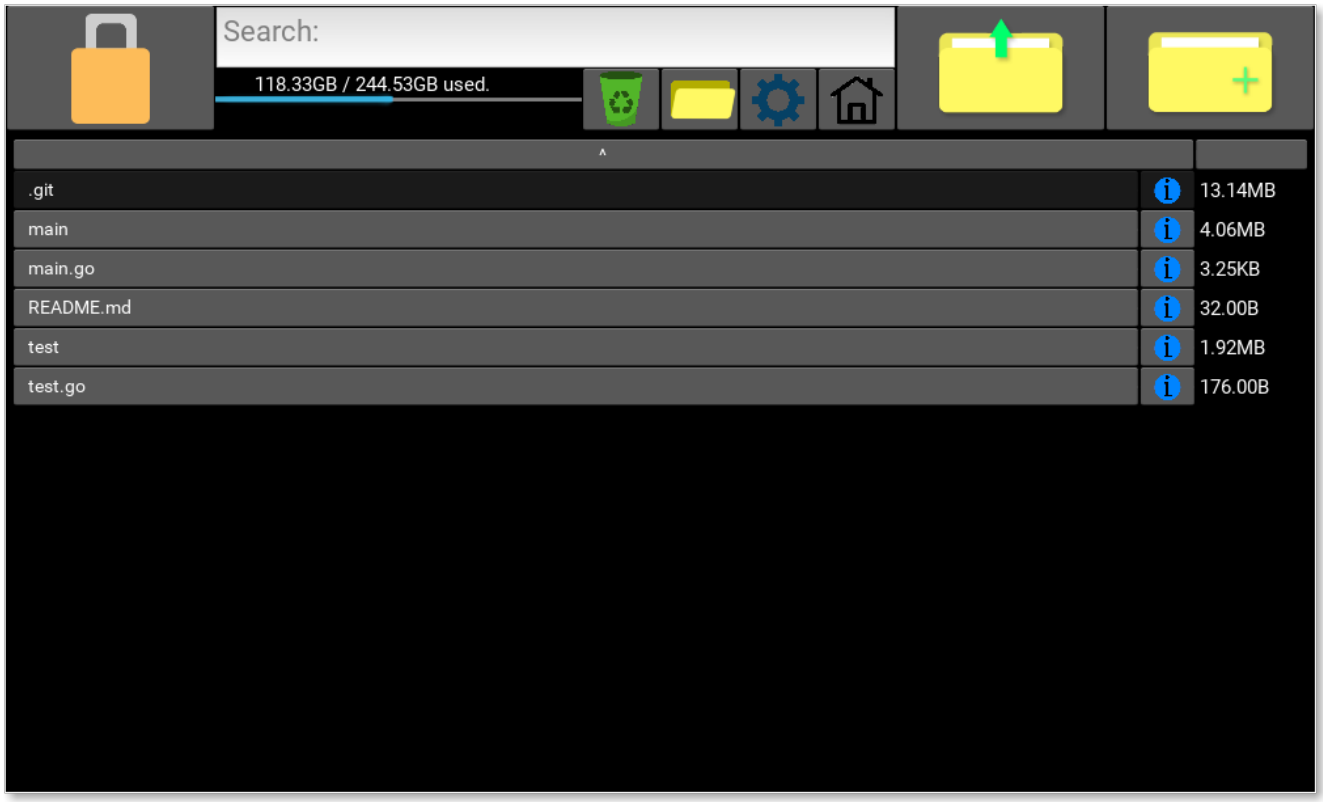
Disconnected from vault, and list /tmp directory to make sure temporary files have been deleted:



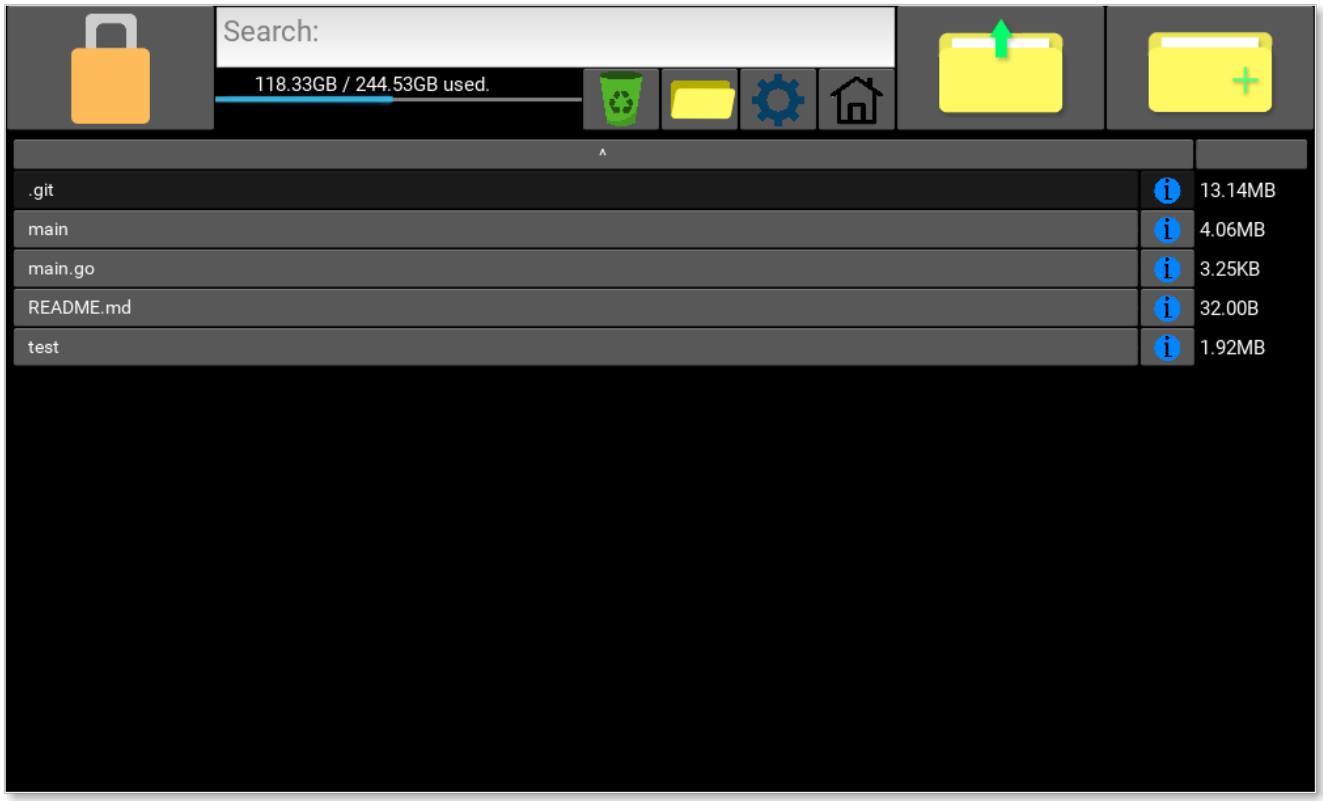
Test Number	7
Relevant Objective	3.e
Description	Delete a file, open the recycling folder and recover it.
Purpose	To check that when a file is deleted and recovered to the correct location.
Test Data	Delete a file in the Vault, go into the recycling folder, click the file, exit the recycling folder and see if it has been recovered.
Expected Outcome	The file should be in the recycling folder when the file has been deleted, and should return to the Vault where it was deleted from once you recover it.
Actual Outcome	The file is recovered to the root folder of the Vault, instead of the place it was deleted from.

Evidence:

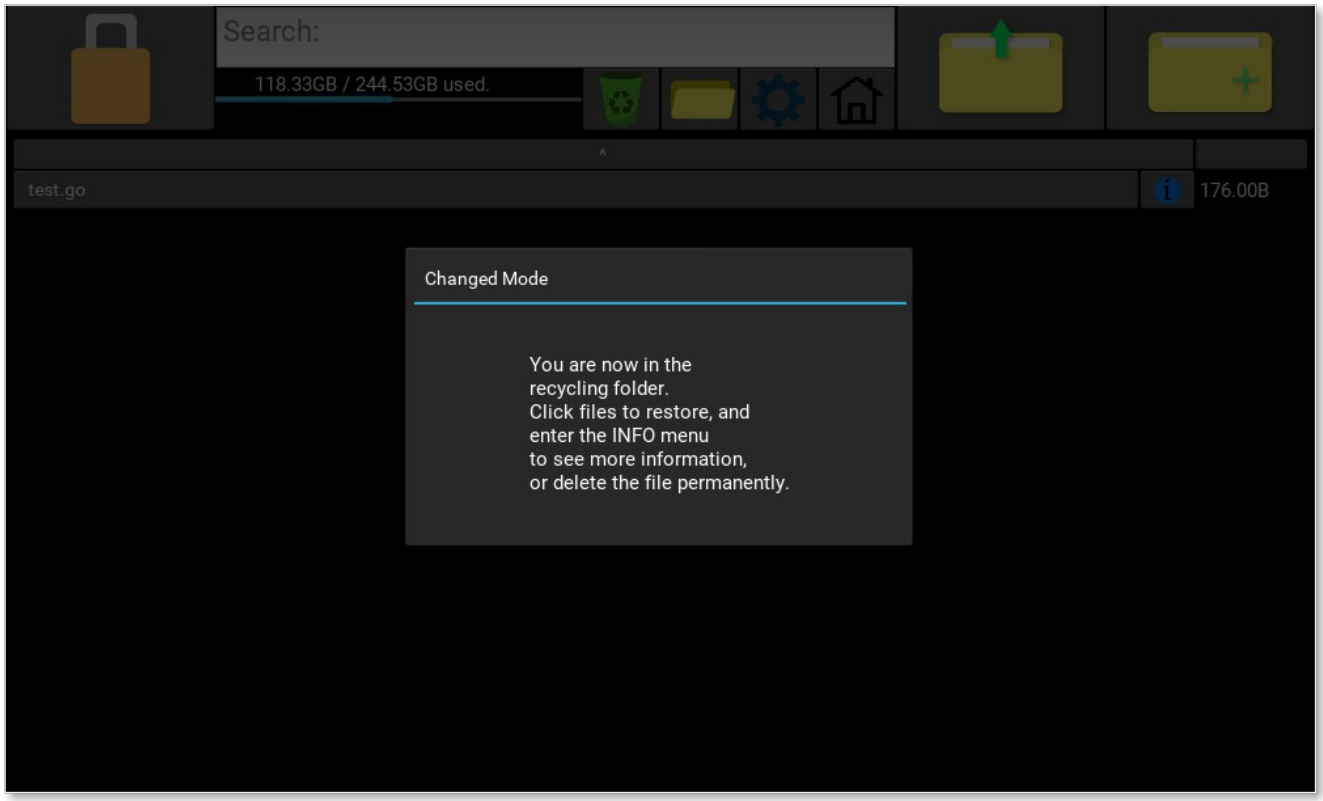
Files in Vault/eggbrowser/:



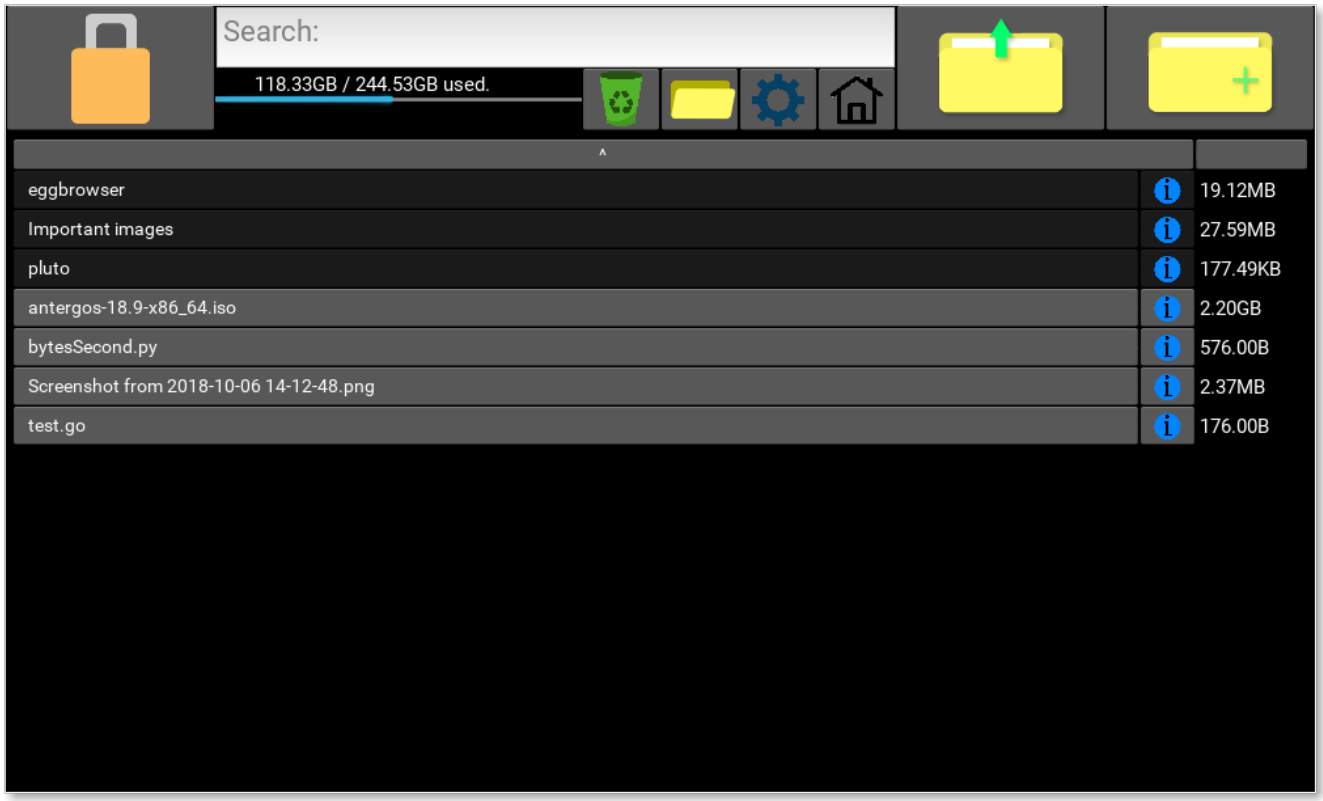
Delete test.go:



Go to recycling folder:



Recover test.go, and return to the root directory of the vault:

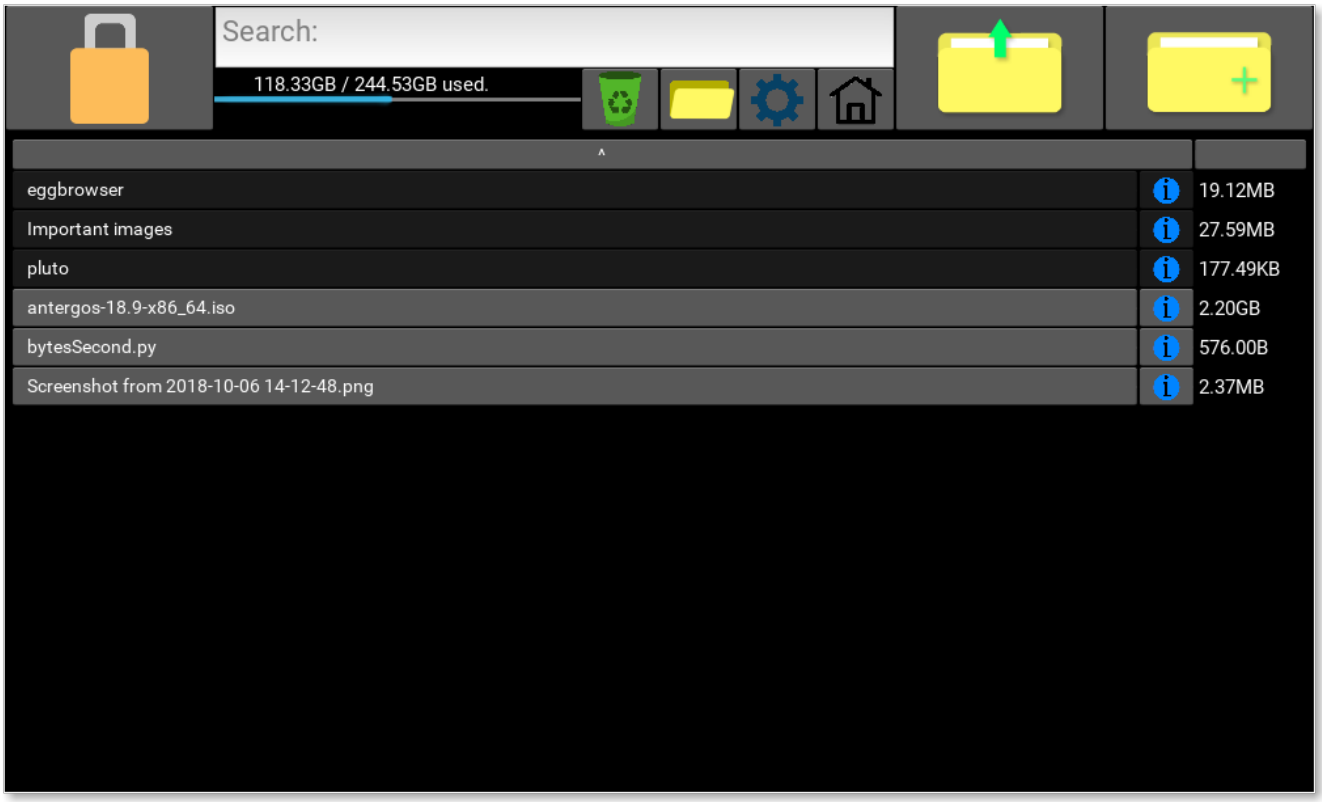


Test Number	8
Relevant Objective	1.m
Description	Click the home button to return to the root directory of the Vault..
Purpose	Check that the home button functions as required.
Test Data	`T: [1]: Click the home button while in the root directory.` `[2]: Click the home button while in another folder.`
Expected Outcome	`[1]: Buttons in the file browser should remain the same.` `[2]: The contents of the home folder should be loaded into the file browser.`
Actual Outcome	`[All]: Pass`

Evidence:

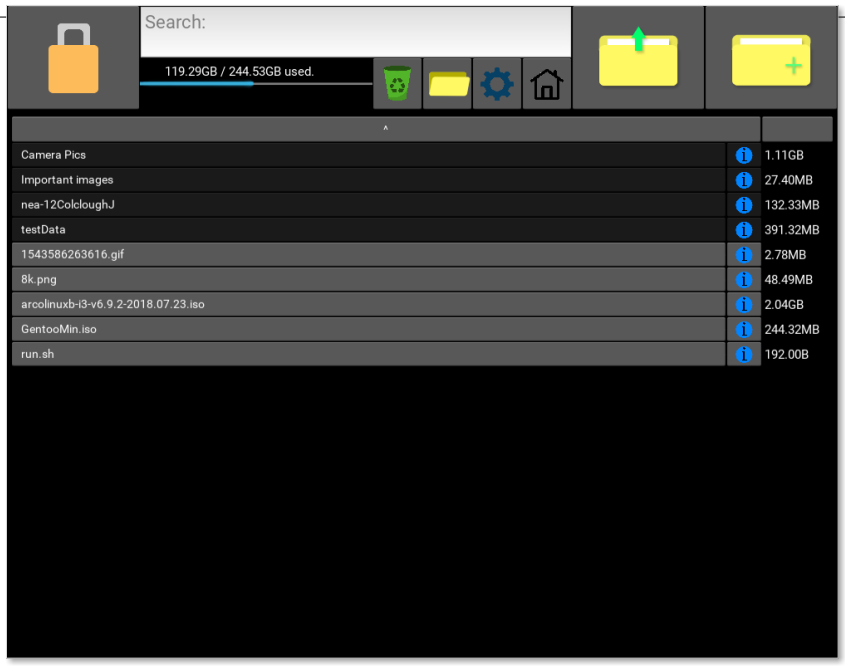
In a folder:

Pressed home button:



Test Number	9
Relevant Objective	1.k
Description	Re-size the window.
Purpose	Check that the GUI remains intact when you resize the window.
Test Data	`T: Resize the window.`
Expected Outcome	`Widgets on the screen should resize to fit the new window size.`
Actual Outcome	`Pass`

Evidence:



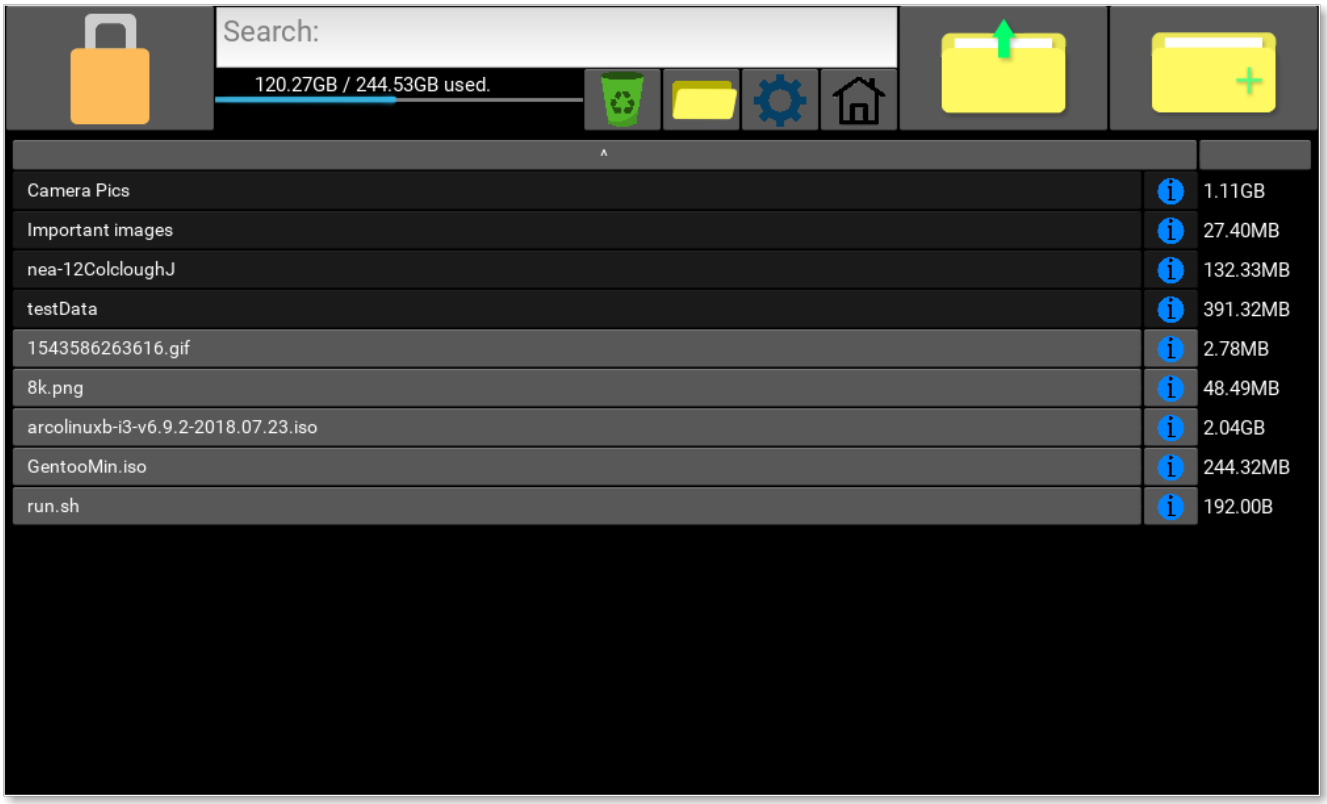
Test Number	10
Relevant Objective	1.o
Description	Change the direction of the sorts.
Purpose	To check that the sorts work.

Test Data	`[1]: Sort by name ascending (folders separated by files).`
	`[2]: Sort by name descending (folders separated by files).`
	`[3]: Sort by size ascending.`
	`[4]: Sort by size descending.`

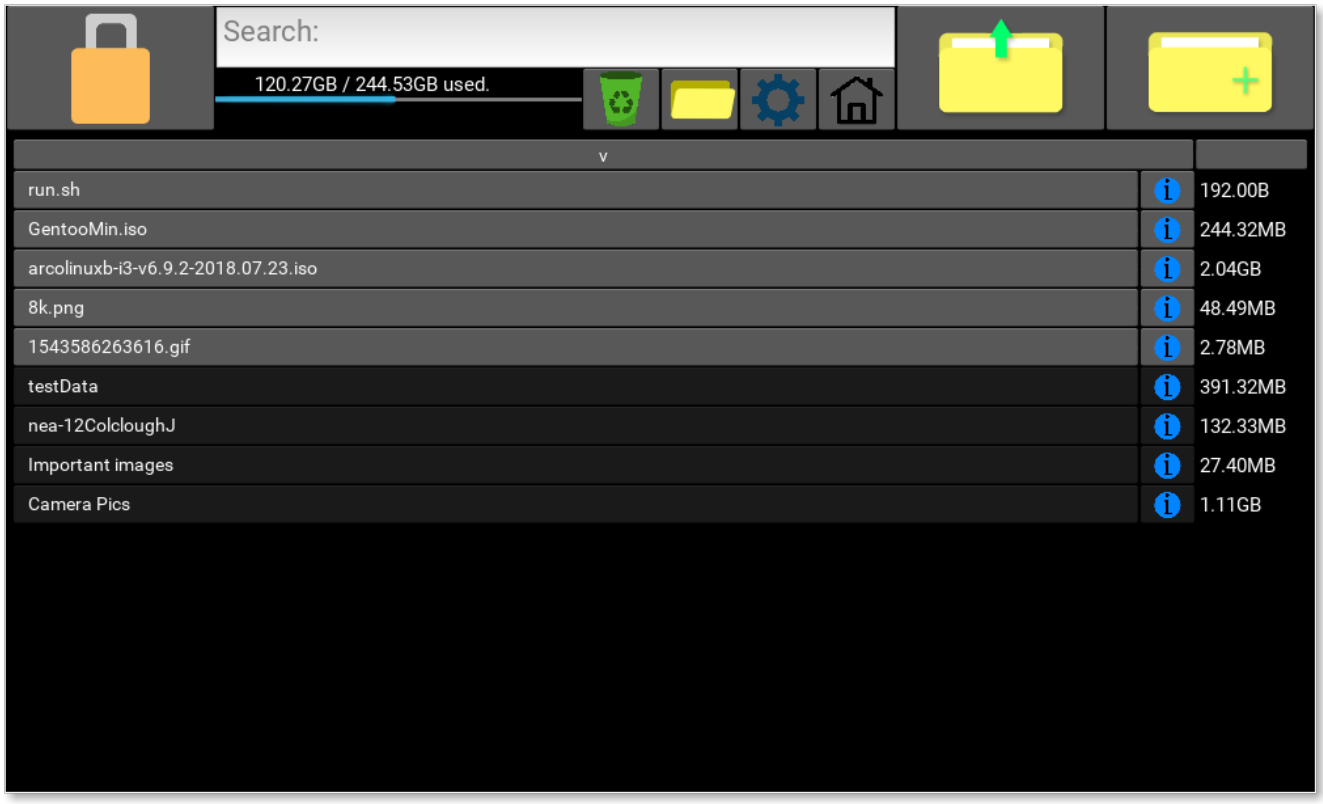
Expected Outcome	`[All]: Should sort correctly.`
Actual Outcome	`[All]: Pass`

Evidence:

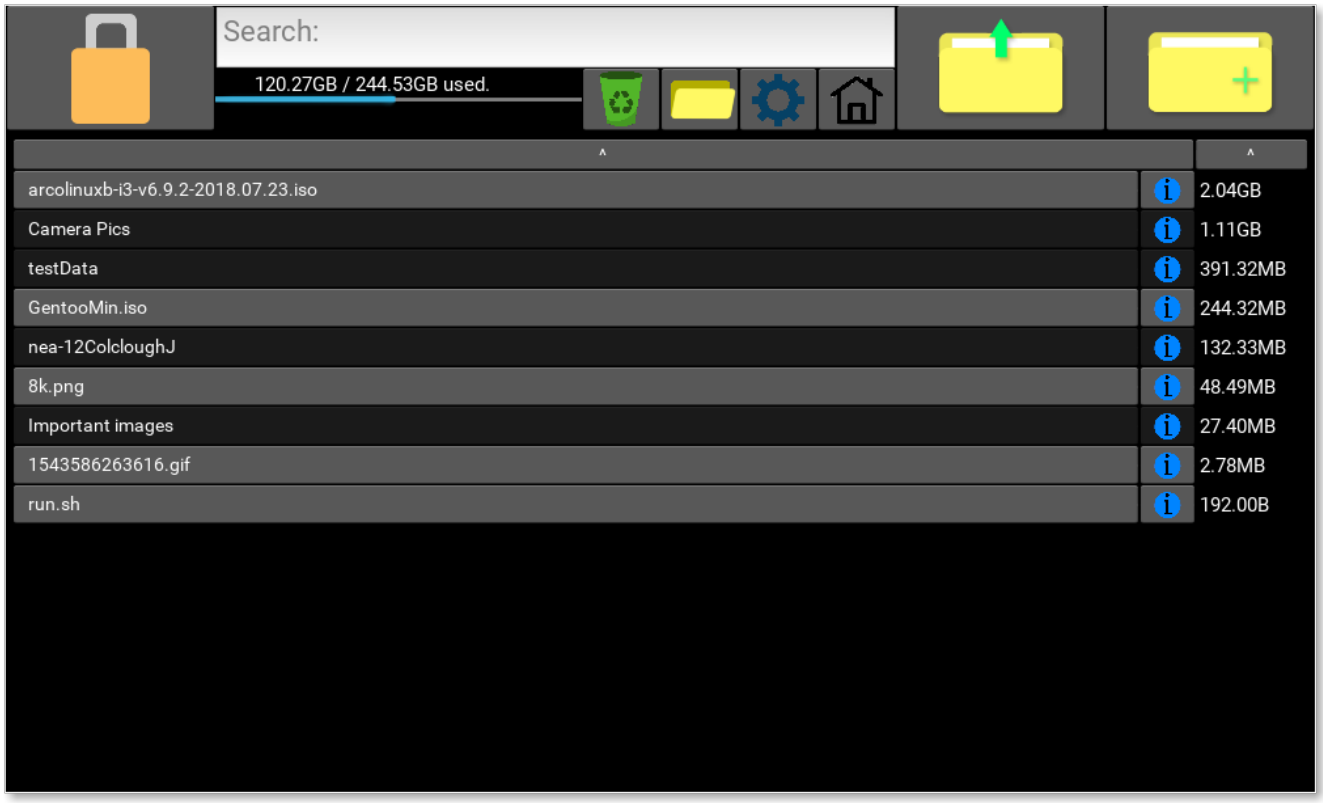
[1]:



[2]:


Search:
120.27GB / 244.53GB used.
v
run.sh
192.00B
GentooMin.iso
244.32MB
arcolinuxb-i3-v6.9.2-2018.07.23.iso
2.04GB
8k.png
48.49MB
1543586263616.gif
2.78MB
testData
391.32MB
nea-12ColcloughJ
132.33MB
Important images
27.40MB
Camera Pics
1.11GB

[3]:

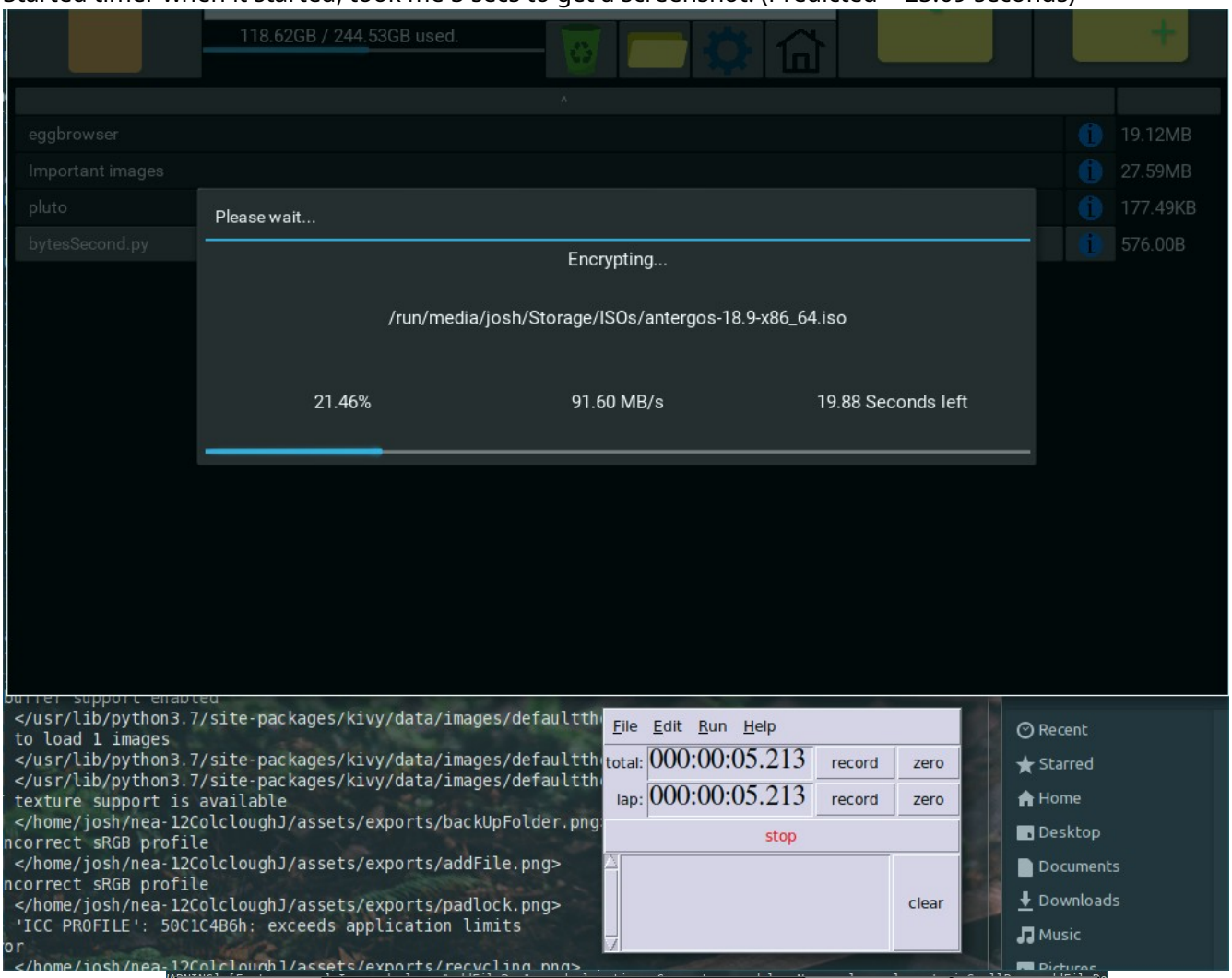

Search:
120.27GB / 244.53GB used.
^
^
arcolinuxb-i3-v6.9.2-2018.07.23.iso
2.04GB
Camera Pics
1.11GB
testData
391.32MB
GentooMin.iso
244.32MB
nea-12ColcloughJ
132.33MB
8k.png
48.49MB
Important images
27.40MB
1543586263616.gif
2.78MB
run.sh
192.00B

[4]:

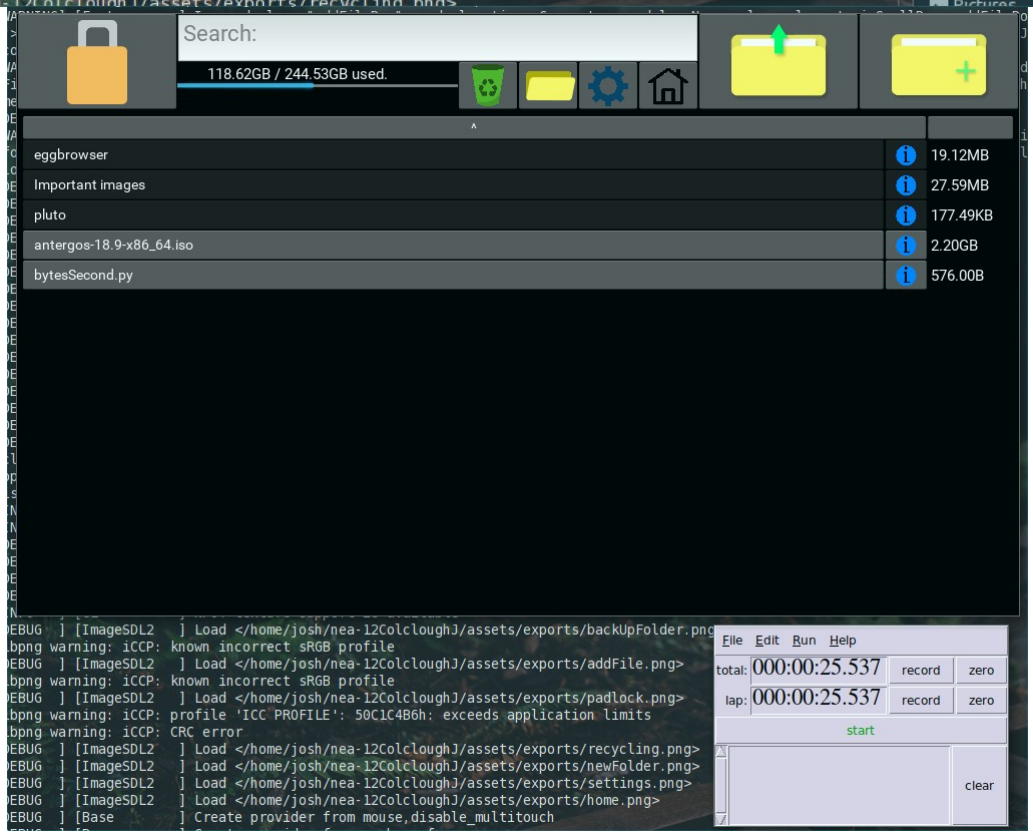
Test Number	11
Relevant Objective	1.n.iii
Description	Time how long it takes to decrypt a large file (2.04GB) compared to the prediction made by the popup that opens (encDecPop) displaying the predictions.
Purpose	Make sure the time prediction is accurate (otherwise it is pretty infuriating for the user).
Test Data	`Decrypt a 2.2 GB file (2,203,779,072) and time it. Get the first available time prediction.`
Expected Outcome	`The difference between the time actually taken and the prediction should be +-2 seconds.`
Actual Outcome	`Pass: Predicted 25.09 seconds (19.88+5.21), took 25.537 seconds.`

Evidence:

Started timer when it started, took me 5 secs to get a screenshot. (Predicted = 25.09 seconds)



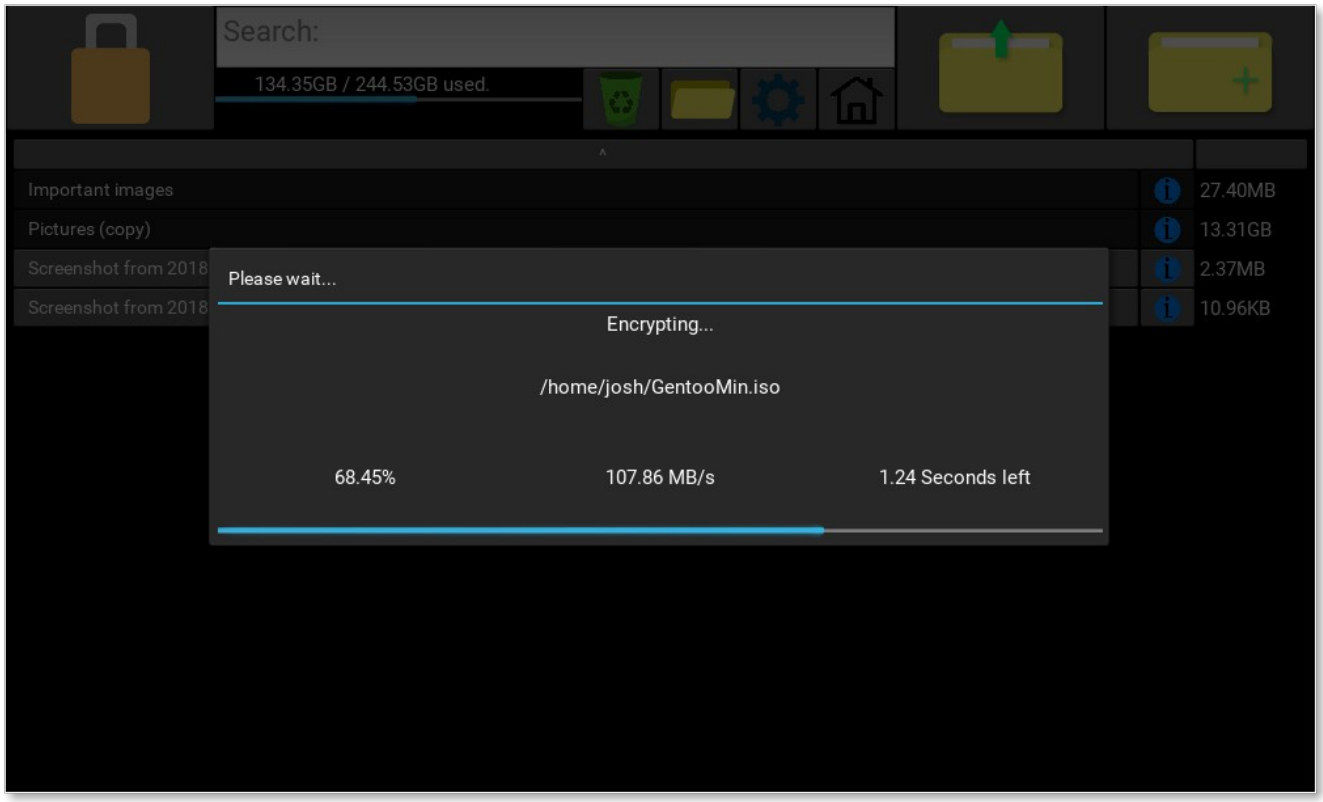
Finished:



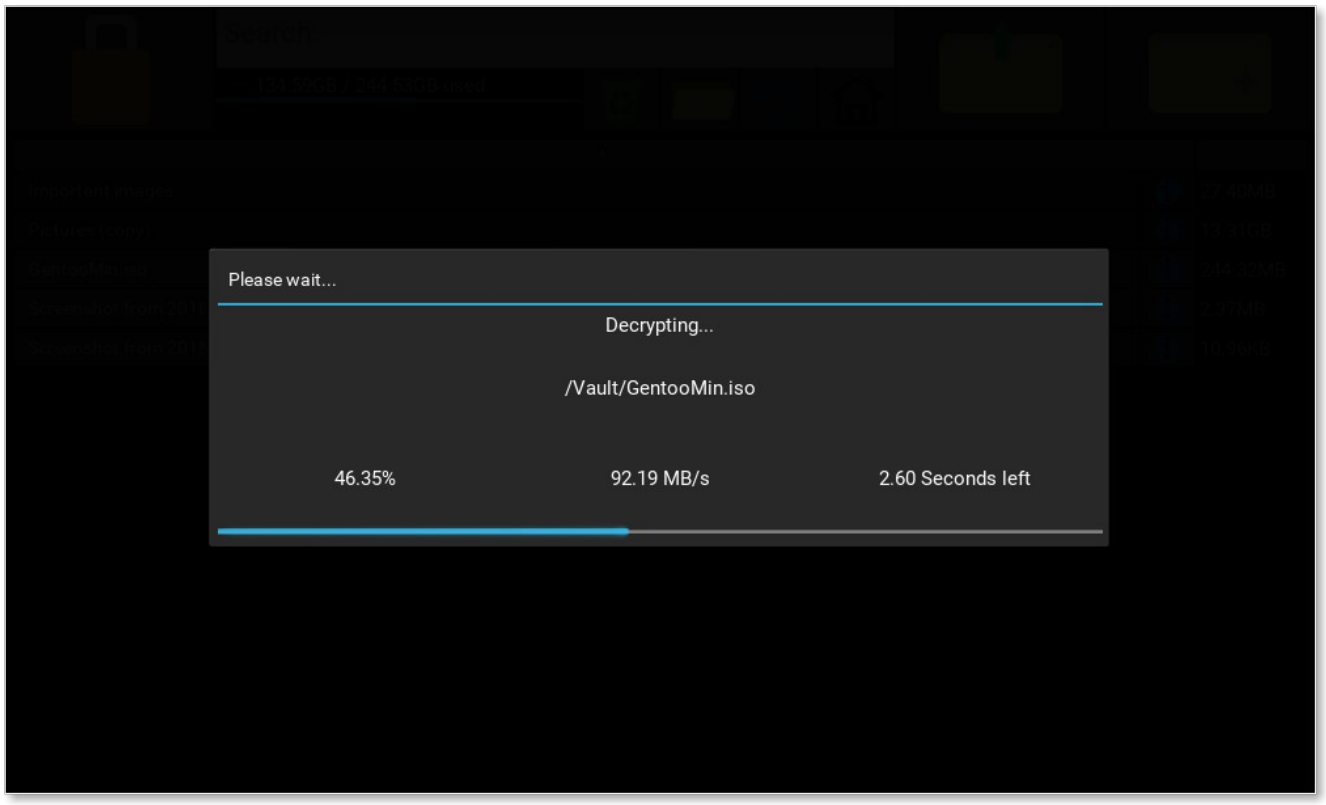
Test Number	12
Relevant Objective	1.n.ii
Description	Compare the speed of encryption/decryption with the Go benchmark function.
Purpose	To check that the speed is found to be accurate.
Test Data	[1]: Encrypt a 244.3 MB file using the PC program. [2]: Encrypt a 244.3 MB file using Go benchmark. [3]: Decrypt a 244.3 MB file using the PC program. [4]: Decrypt a 244.3 MB file using Go benchmark.
Expected Outcome	[All]: Speeds should be similar (within +-5 MB/s).
Actual Outcome	(Done on different computer to in unit tests) [1]: 107.86 MB/s 2269321613 ns/op [2]: 107.66 MB/s [3]: 95.56 MB/s 2556627030 ns/op [4]: 92.19 MB/s

Evidence:

[1, 2]:

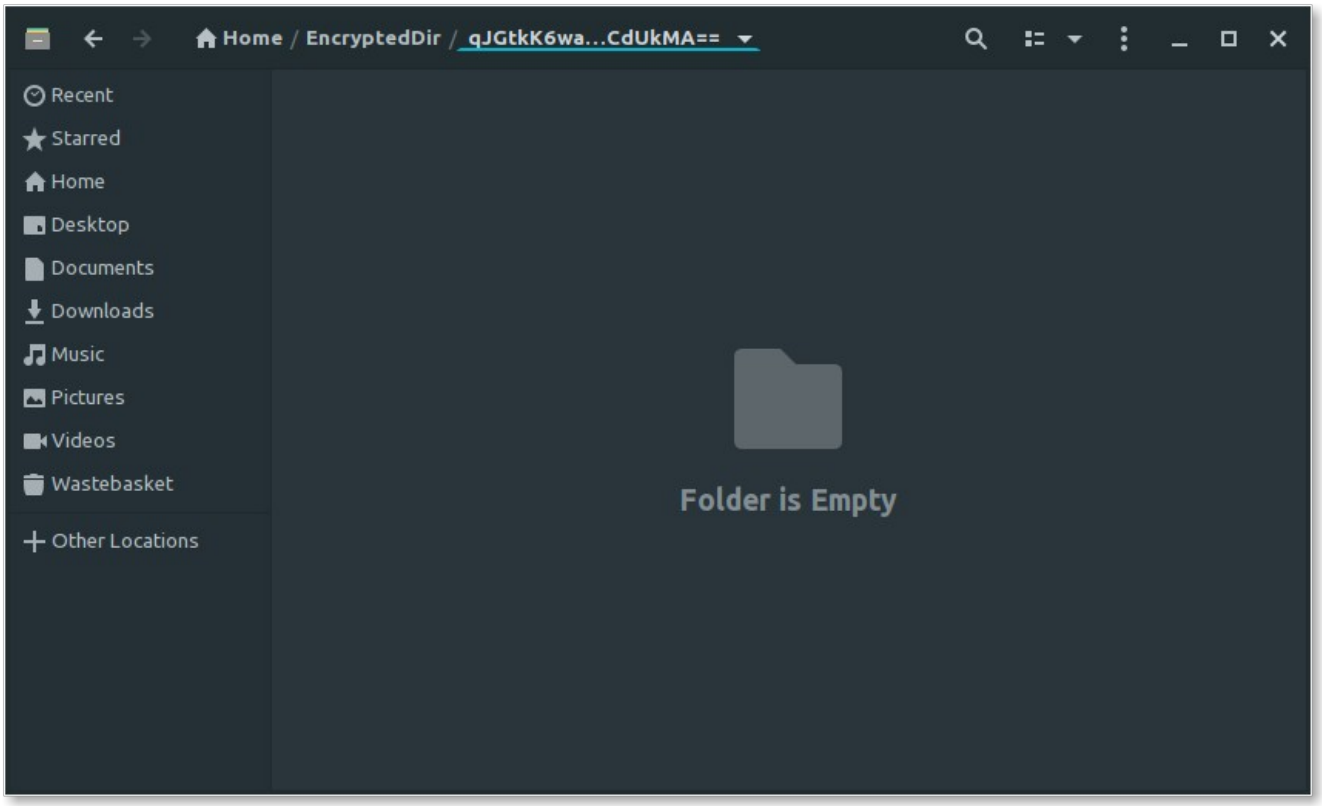


[3, 4] (darker background due to multiple popups):



Test Number	13
Relevant Objective	3.e
Description	Delete a file into the recycling bin, and then delete it permanently and check it has been deleted.
Purpose	Check that it works.
Test Data	`Permanently delete the file called “TqAoUIWq1yvmQBgyAIS8PQ==” in encrypted form, “test12_3.png” in decrypted form.`
Expected Outcome	`The file should not be available anywhere.`
Actual Outcome	`Pass`

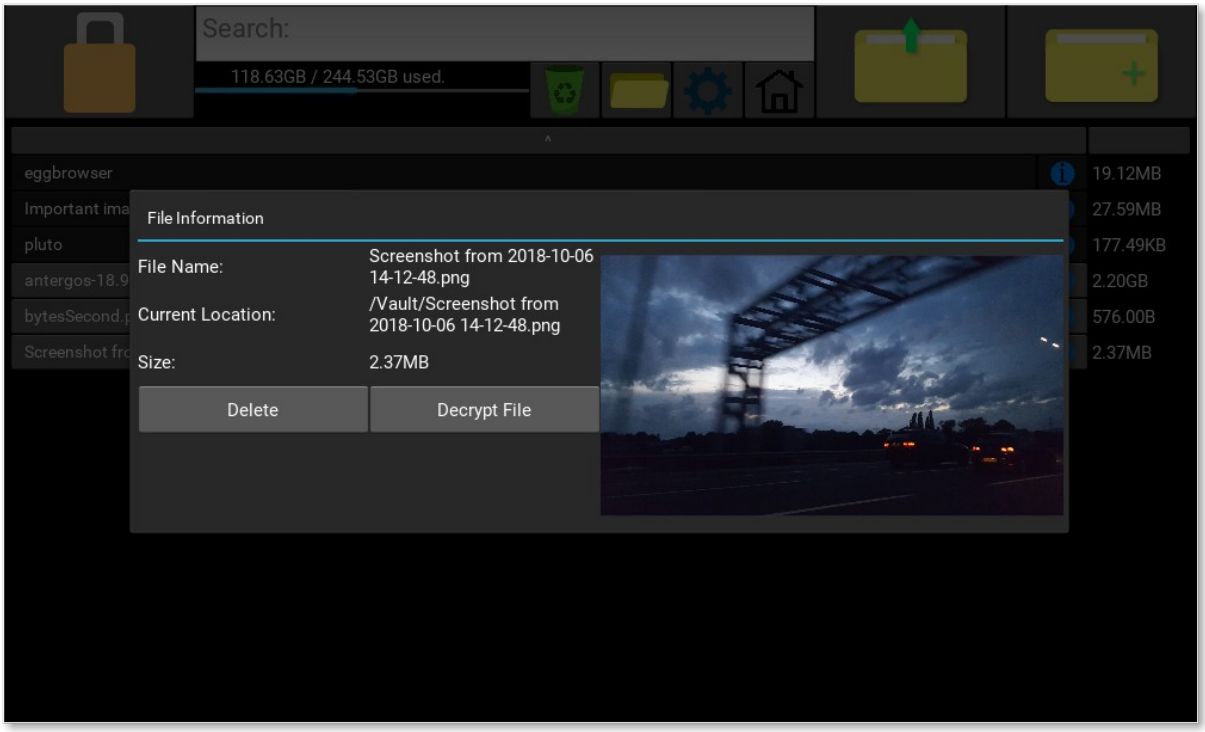
Evidence (checking recycling bin in vault):



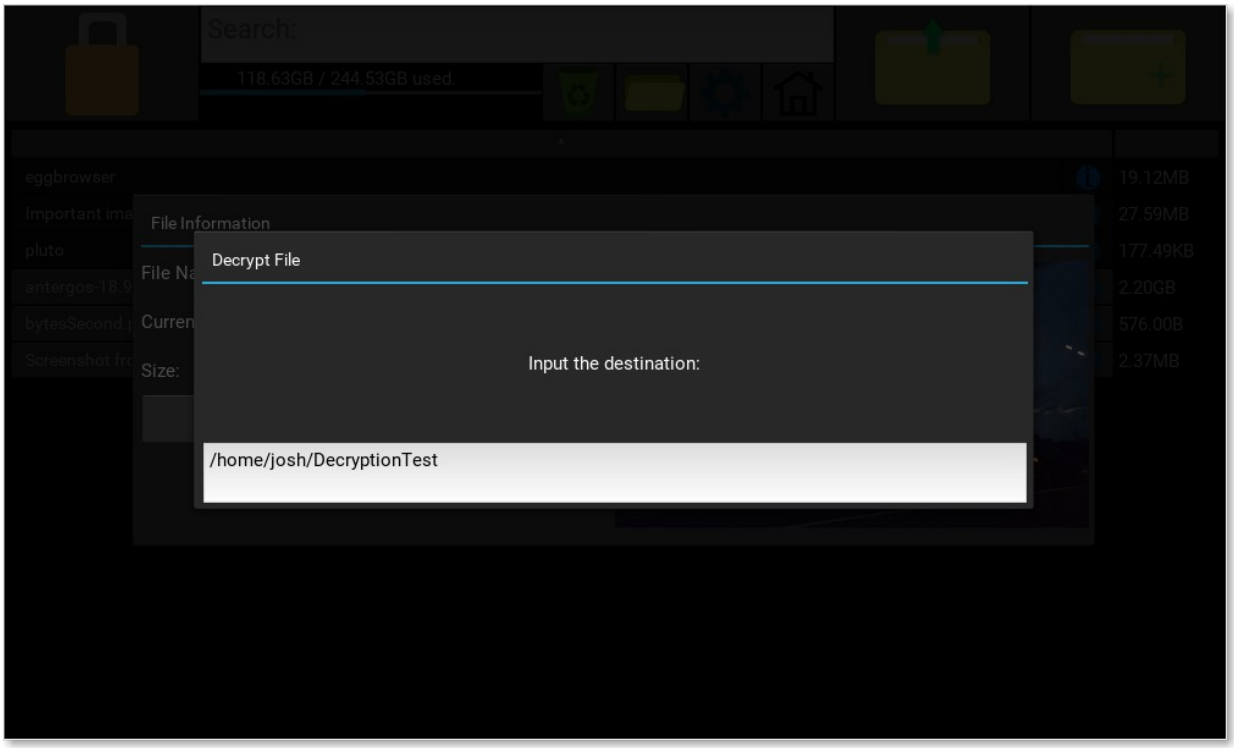
Test Number	14
Relevant Objective	3.i
Description	Decrypt a file to a location outside of the vault.
Purpose	To check it works normally.
Expected Outcome	`File should be decrypted successfully.`
Actual Outcome	Pass

Evidence:

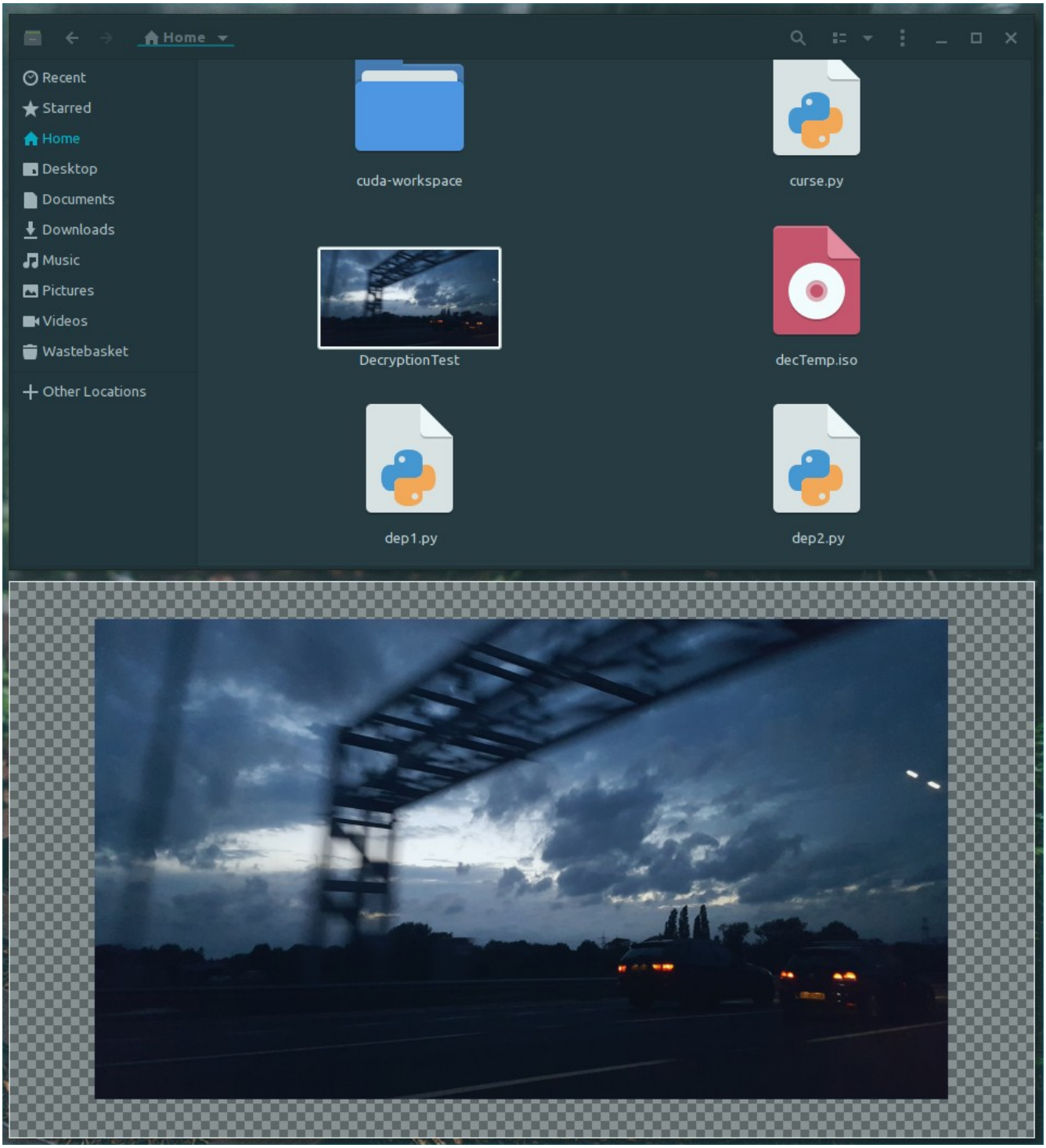
Before:


Search:
118.63GB / 244.53GB used.
eggbrowser
Important ima
pluto
antergos-18.9
bytesSecond.
Screenshot fro
19.12MB
27.59MB
177.49KB
2.20GB
576.00B
2.37MB
File Information
File Name:
Screenshot from 2018-10-06 14-12-48.png
Current Location:
/Vault/Screenshot from 2018-10-06 14-12-48.png
Size:
2.37MB
Delete
Decrypt File

Input:


Search:
118.63GB / 244.53GB used.
File Information
Decrypt File
Input the destination:
/home/josh/DecryptionTest

After:



Top tile is file manager in /home/josh/, bottom is the open decrypted image.

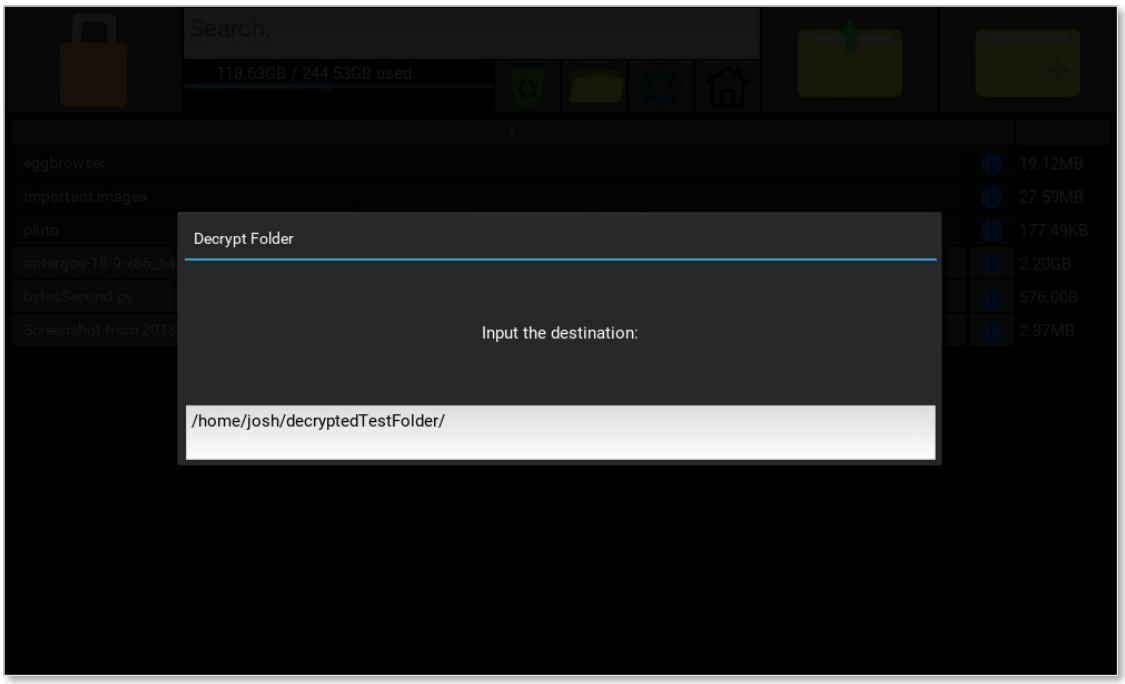
Test Number	15
Relevant Objective	3.i
Description	Decrypt a folder to a location outside of the vault.

Purpose	To check it works normally.
Expected Outcome	`Folder should be decrypted successfully, with all files and folders in the correct place.`
Actual Outcome	`Pass`

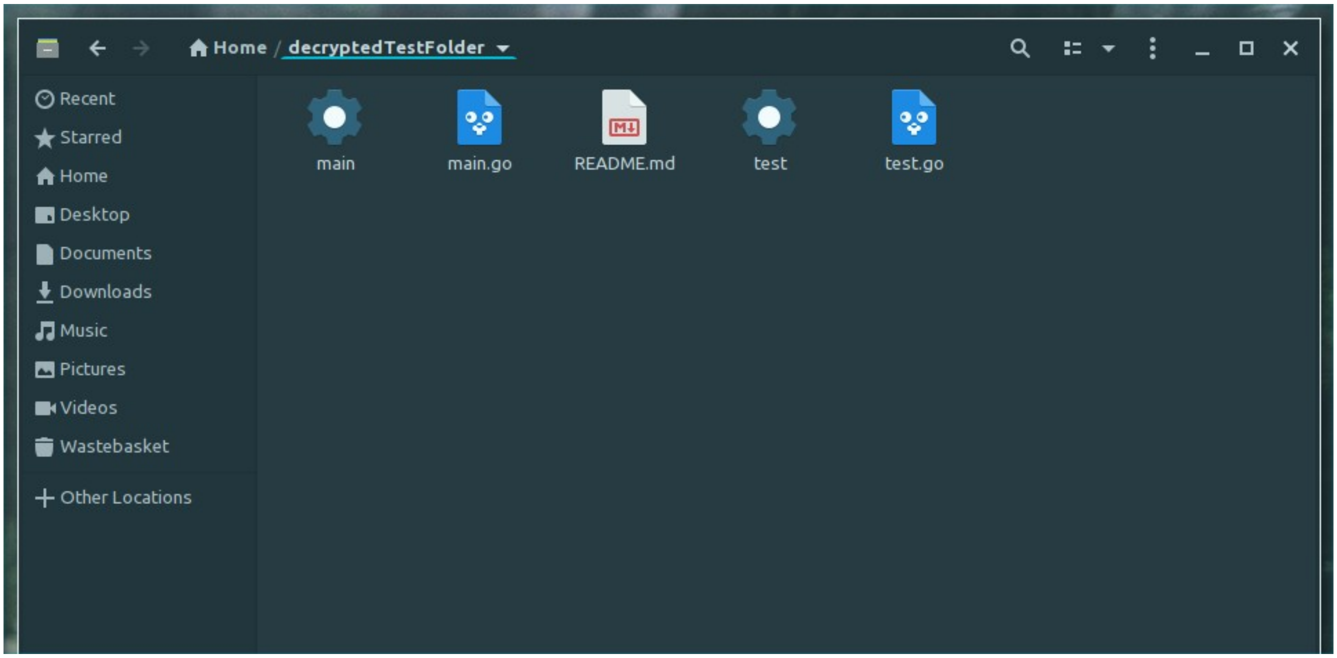
Evidence:

Before:

Input:



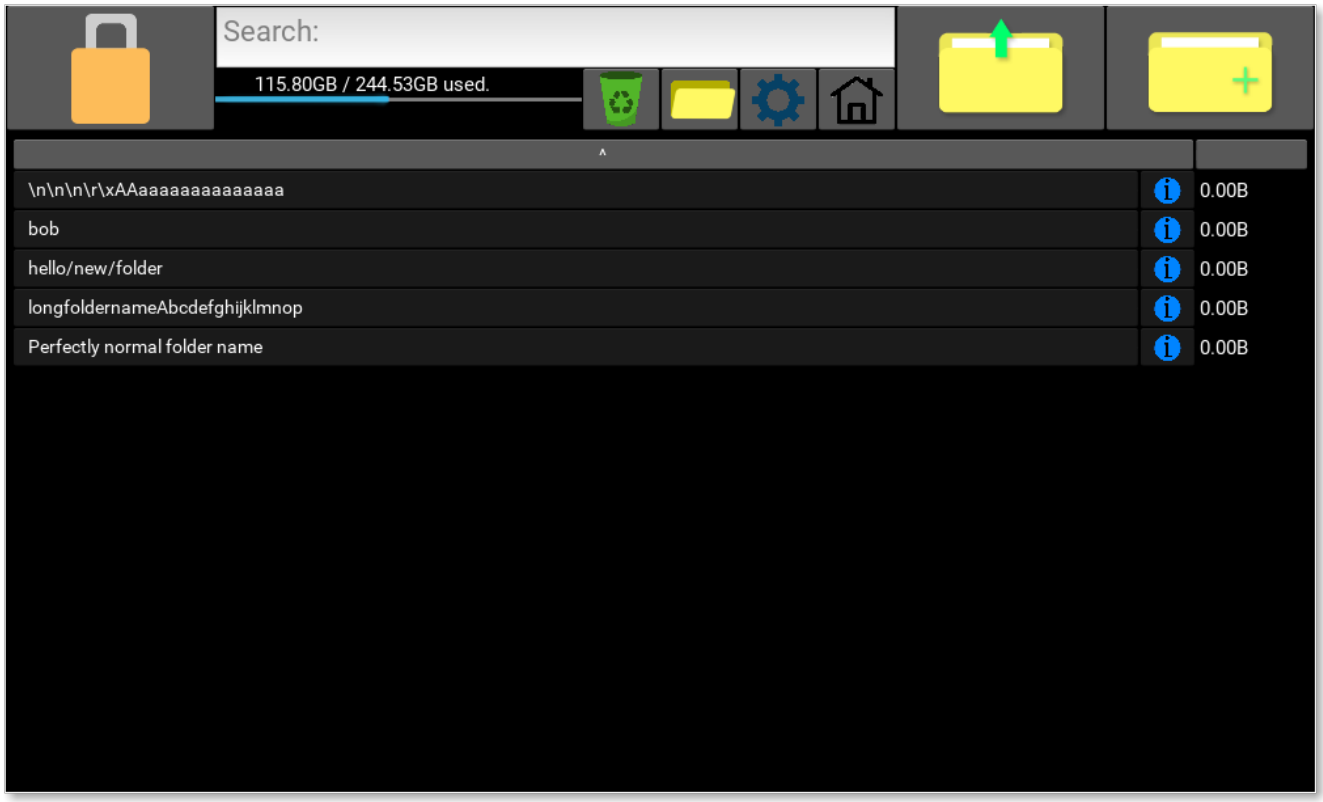
After:



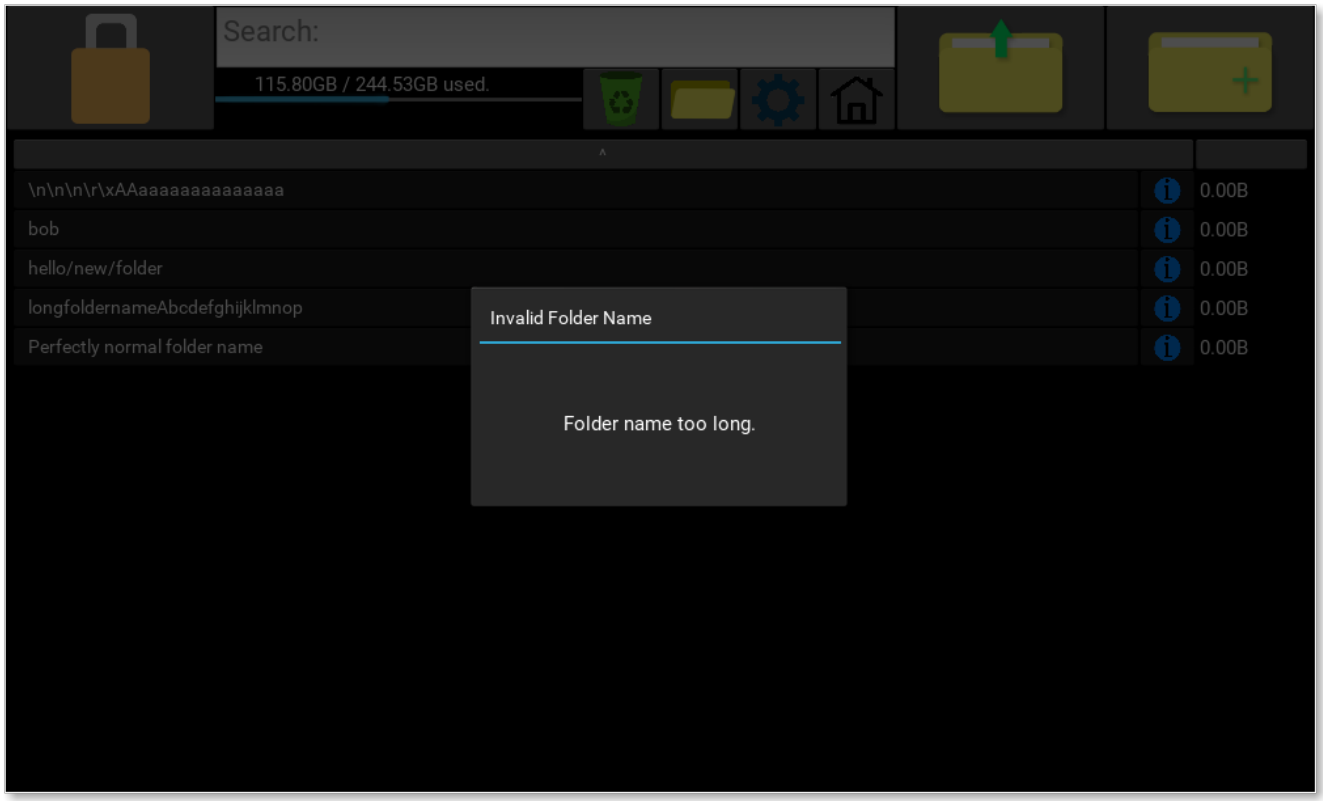
Test Number	16
Relevant Objective	1.f
Description	Create a new folder inside the vault.
Purpose	Make sure that it can be created.
Test Data	T: [1]: “bob” [2]: “longfoldernameAbcdefghijklmnop” [3]: “Perfectly normal folder name” (Possibly Erroneous) E: [4]: “\n\n\n\r\xAAaaaaaaaaaaaaaa” [5]: “FOLDER NAME THAT IS WAY TOO LONG aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa aaaaaaaaaaaaaaaaaaaaaa” [6]: “hello/new/folder”
Expected Outcome	[1-4, 6]: Folder should be created with no issues. [5]: A popup should show telling the user that the file name is too long.
Actual Outcome	[All]: Pass

Evidence:

File names 1-4 and 6:



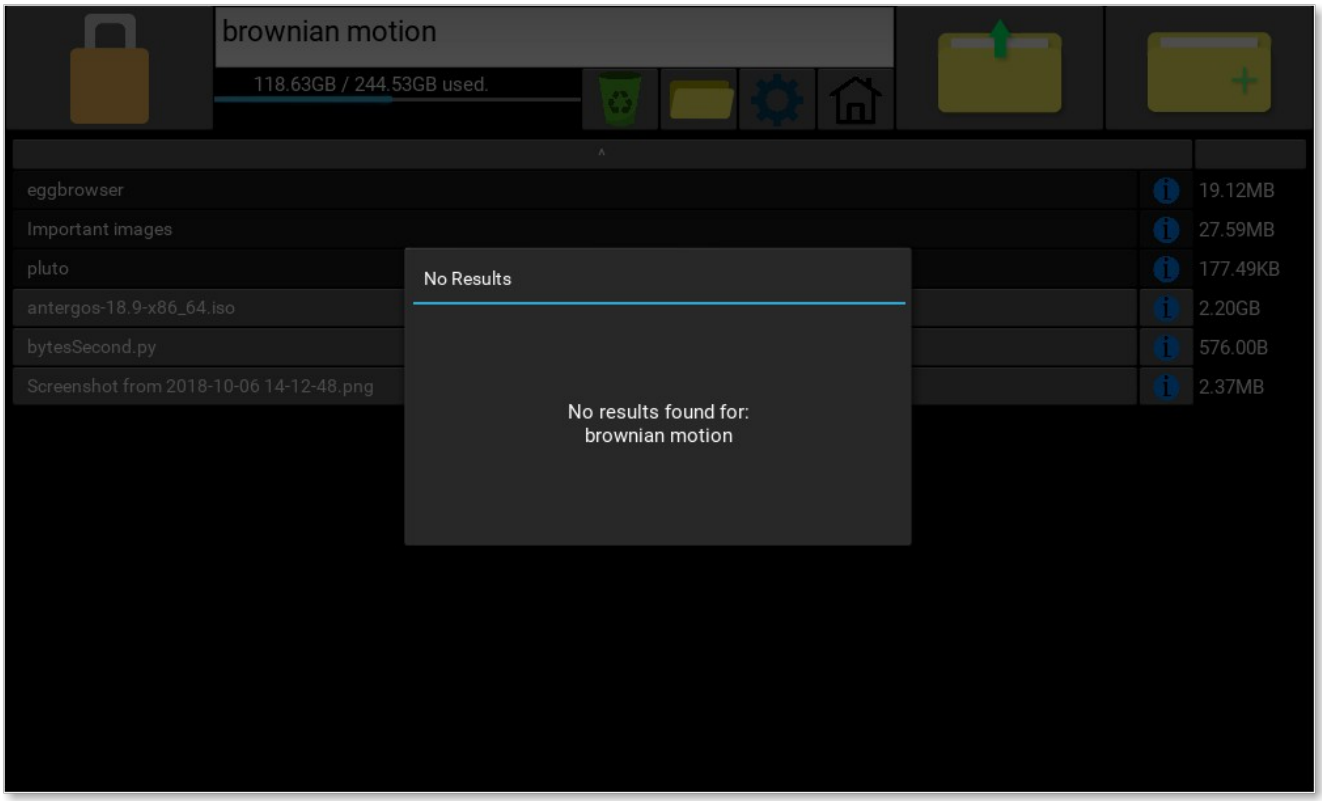
File name 5:



Test Number	17
Relevant Objective	1.r
Description	Attempt to go up one directory while in the root directory of the Vault.
Purpose	Check that the user is confined to the vault, so the program does not try to decrypt file names that are not encrypted.
Expected Outcome	`The displayed files should remain the same when I click to go up.`
Actual Outcome	`Pass`

Test Number	18
Relevant Objective	1.q
Description	Search for an item that is not in the vault.
Purpose	Check that the user is warned when the item is not found.
Test Data	`“brownian motion” - search term (it is not in the vault).`
Expected Outcome	`A popup should open warning the user that the file could not be found.`
Actual Outcome	`Pass`

Evidence:



Test Number	19
Relevant Objective	1.q
Description	Search for an item that is in the vault.
Purpose	To check that the item is found.
Test Data	A lot of files (534 files). Some of them contain the string “processing”, so I will search for the folder “processing-3.4”, which there is only 1 of.
Expected Outcome	Should only show the folder “processing-3.4”
Actual Outcome	Pass

Evidence:

Test Number	20
Relevant Objective	3.g
Description	Open a file then lock the program with the file open.
Purpose	Check that the file is removed regardless of if it is open.
Expected Outcome	File should be removed and should not be in /tmp/FileMate/file.
Actual Outcome	Pass

Evidence:

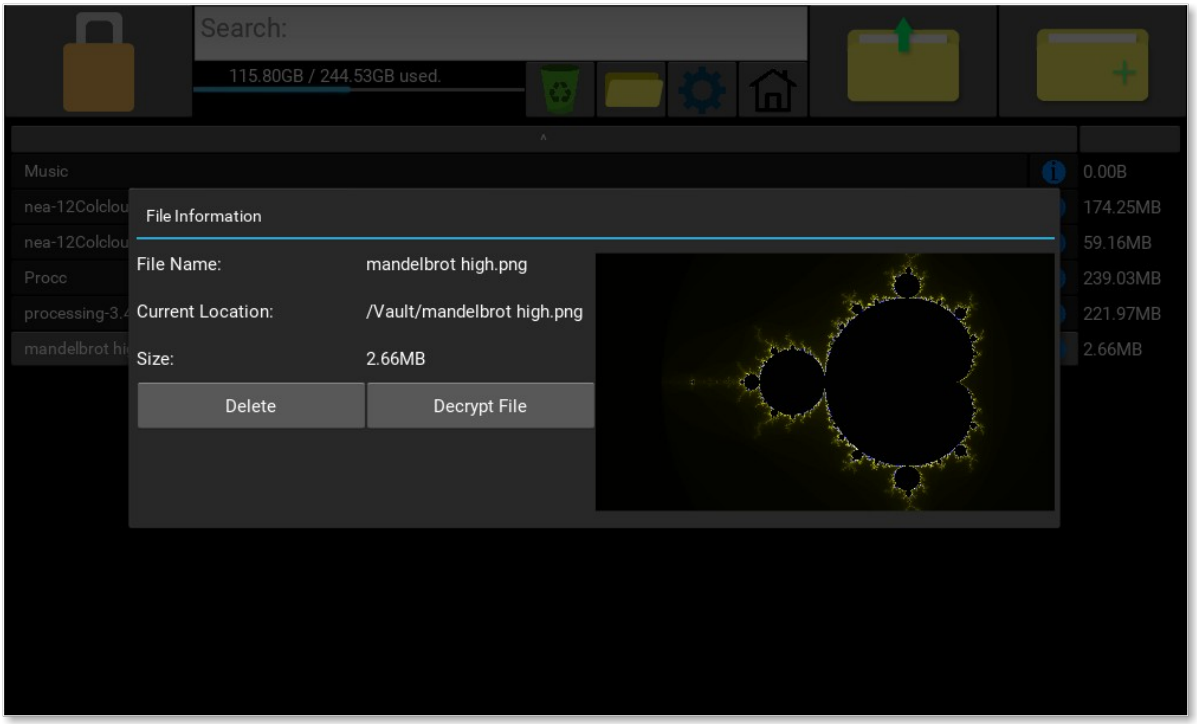
```
~ $ cd /tmp
/tmp $ # File has been opened
/tmp $ ls | grep "FileMate"
FileMate
/tmp $ ls FileMate
test12_3.png
/tmp $ # Vault has been locked
/tmp $ ls | grep "FileMate"
/tmp $
```

Changed directory to /tmp, which is the temporary folder on my PC. Then I opened the file in the program, then list the files in /tmp, filtering the output for “FileMate” (which is what I ended up calling the program).
Then I listed the contents of /tmp/FileMate/, to view the temporary FileMate files.
Then I locked the app, and checked again for the FileMate folder, and it had been deleted.

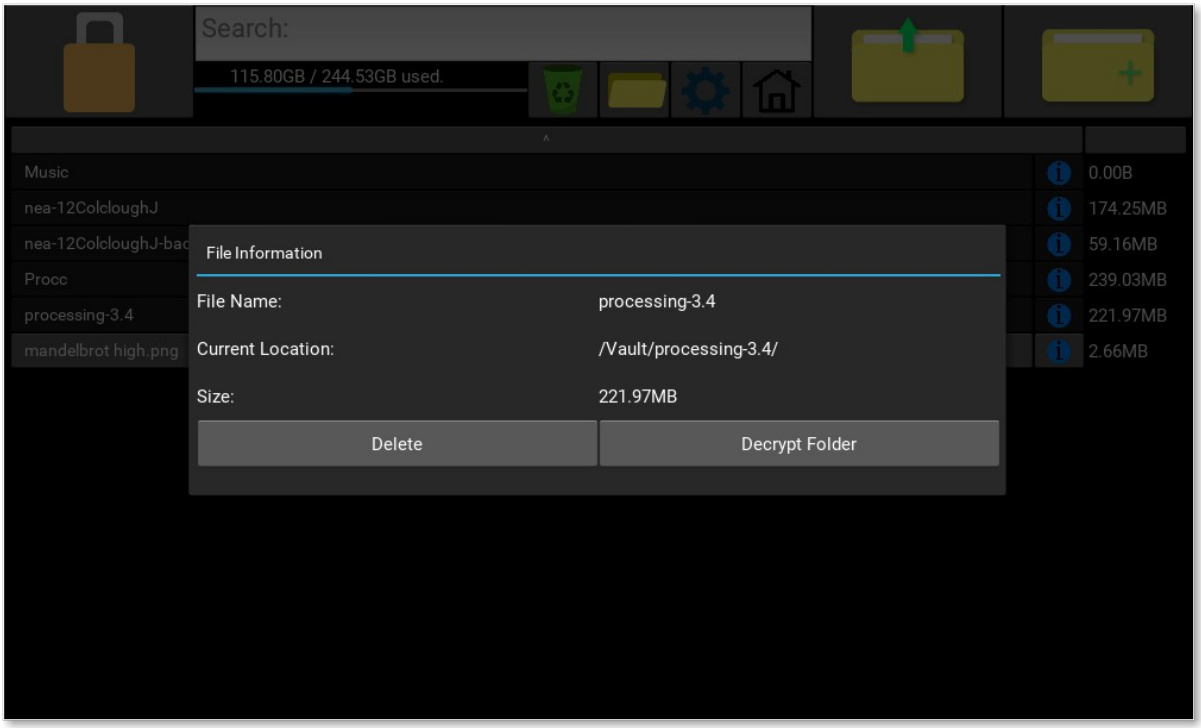
Test Number	21
Relevant Objective	1.j
Description	View more information on an image, then view more information on a file that is not an image.
Purpose	Check that a preview of the image is shown, and if the file is not an image then a preview is not shown.
Expected Outcome	The preview should be shown for the image, but not shown for the regular file.
Actual Outcome	Pass

Evidence:

With an image:

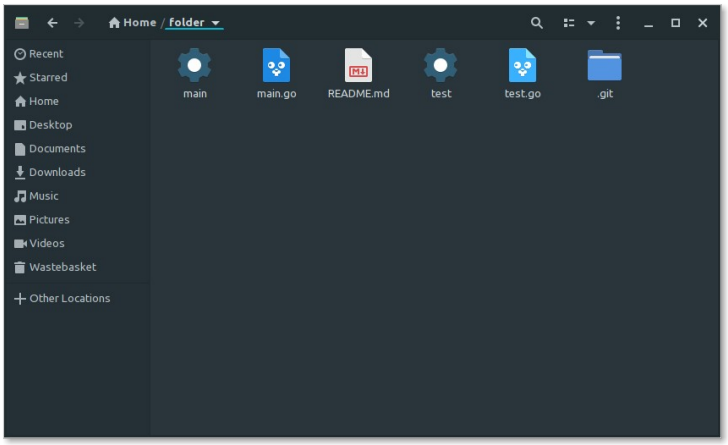


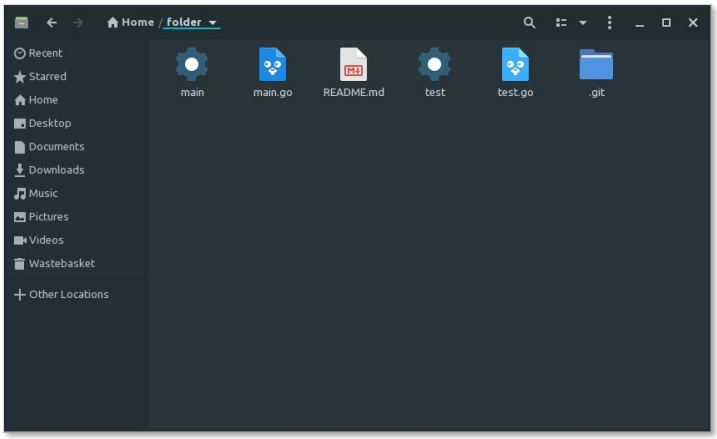
With a folder:



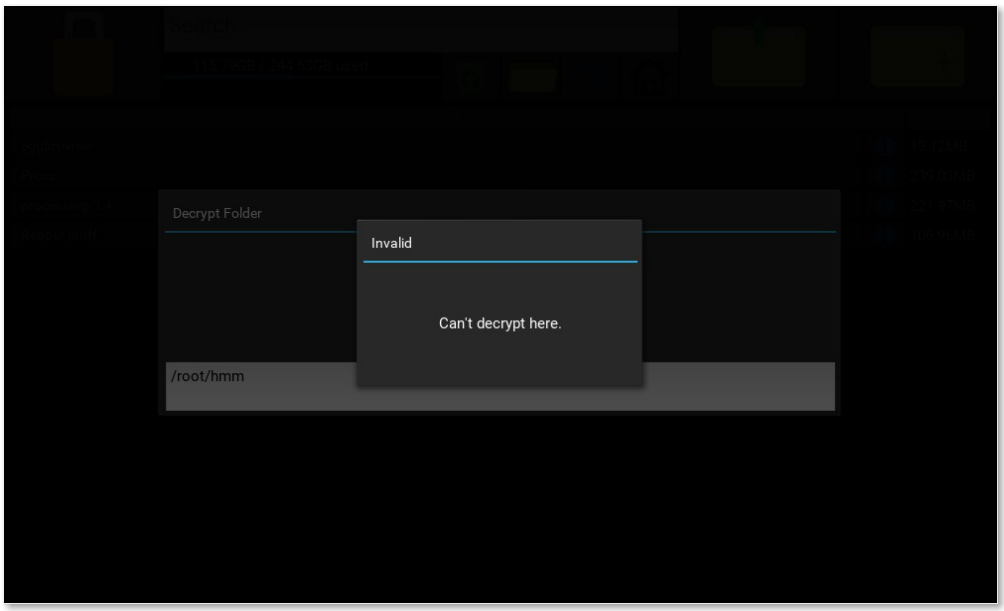
Test Number	22
Relevant Objective	1.d, 3.i
Description	Decrypt folder to different locations.
Purpose	Make sure that the user can't break the input.
Test Data	T : [1]: "/home/josh/folder/" [2]: "/home/josh/folder" [3]: "/home/josh/aaaaaaaaaaaaaaaaaaaaaaaaa/" (Potentially Erroneous) E: [4]: "/root/hmm" (Erroneous if user does not have permission) [5]: "home/josh/folder/" [6]: "/home/josh/////////////////////////////////////folder/" B: [7]: "/home/josh/\n\n\n" [8]: "/home/josh/aaa/a/a/aa/"
Expected Outcome	[1-3]: Should decrypt no problem. [4]: Popup should warn user that it cannot be decrypted here. [5]: Same as [4] [6]: Same as [4] and [5] [7]: May work fine. [8]: Should make the file path correctly then decrypt files to aaa/a/a/aa/.
Actual Outcome	[All]: Pass

Evidence:
[1-3]:

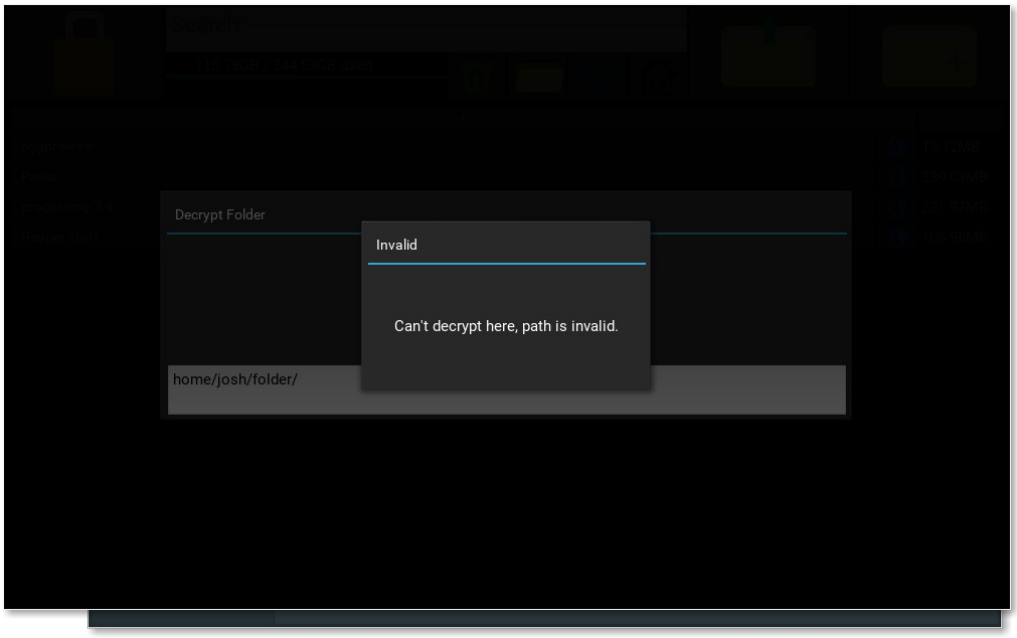




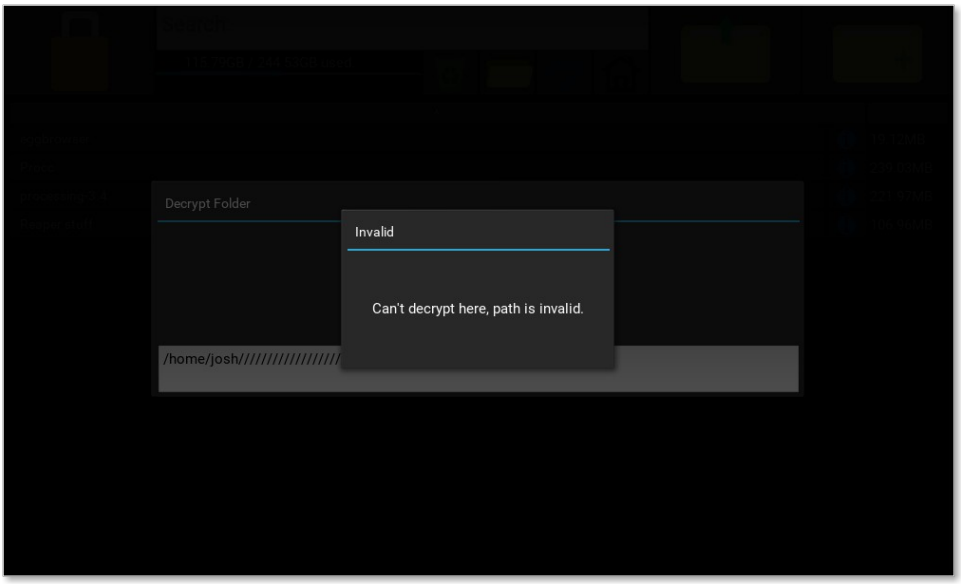
[4]:



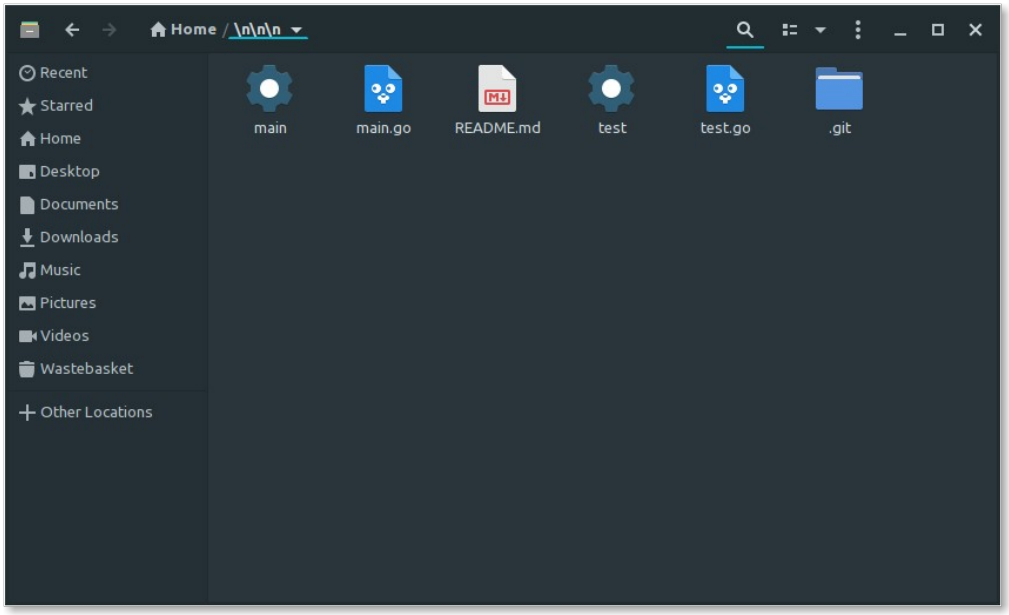
[5]:



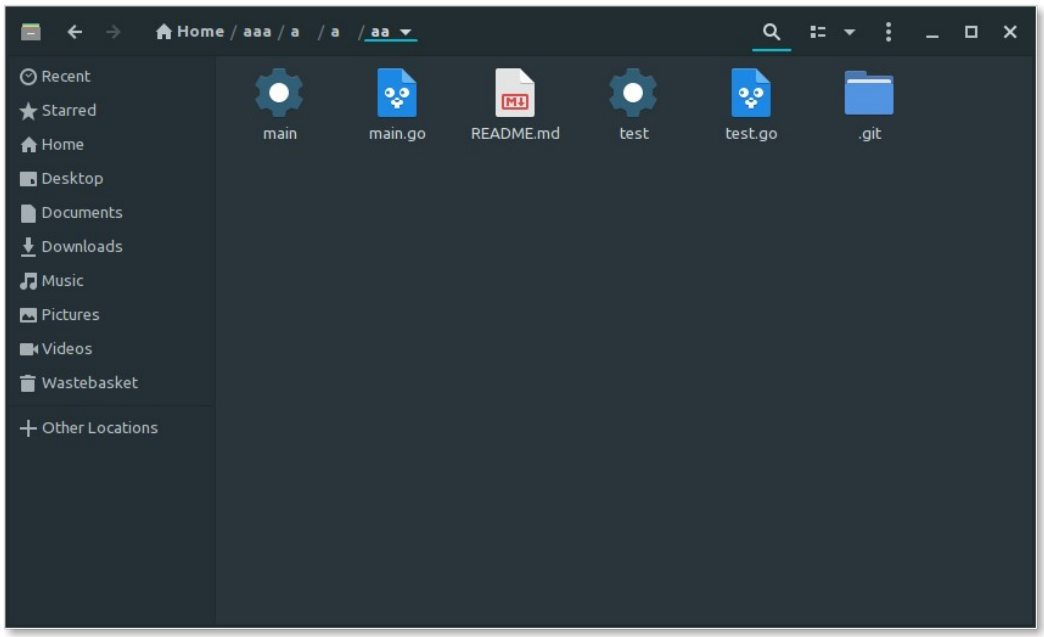
[6]:


Decrypt Folder
Invalid
Can't decrypt here, path is invalid.
/home/josh/

[7]:

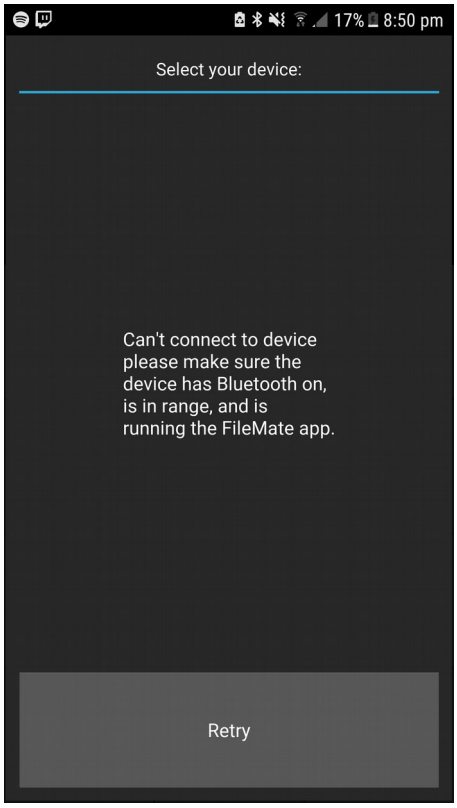

Home / \n\n\n
Recent
Starred
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Wastebasket
Other Locations
main
main.go
README.md
test
test.go
.git

[8]:


Home / aaa / a / a / aa
Recent
Starred
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Wastebasket
Other Locations
main
main.go
README.md
test
test.go
.git

Test Number	23
Relevant Objective	2.e
Description	On the mobile app, click to connect to a device that is not running the PC app.
Purpose	To check the user is warned that the program can't connect to the device.
Expected Outcome	A popup should be shown on the mobile telling the user that the app could not connect to the device.
Actual Outcome	Pass

Evidence:

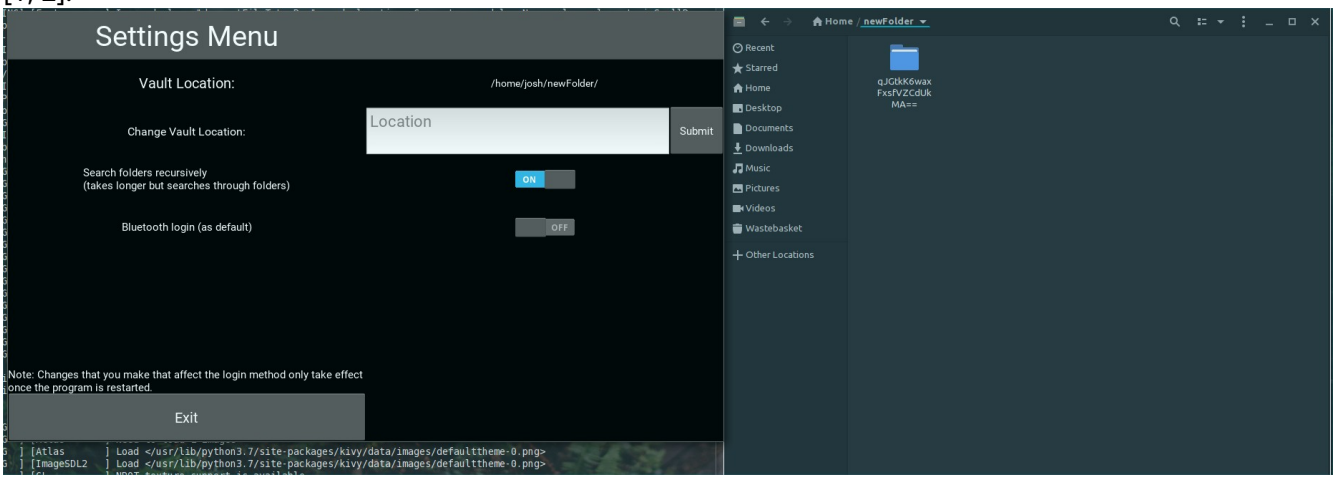


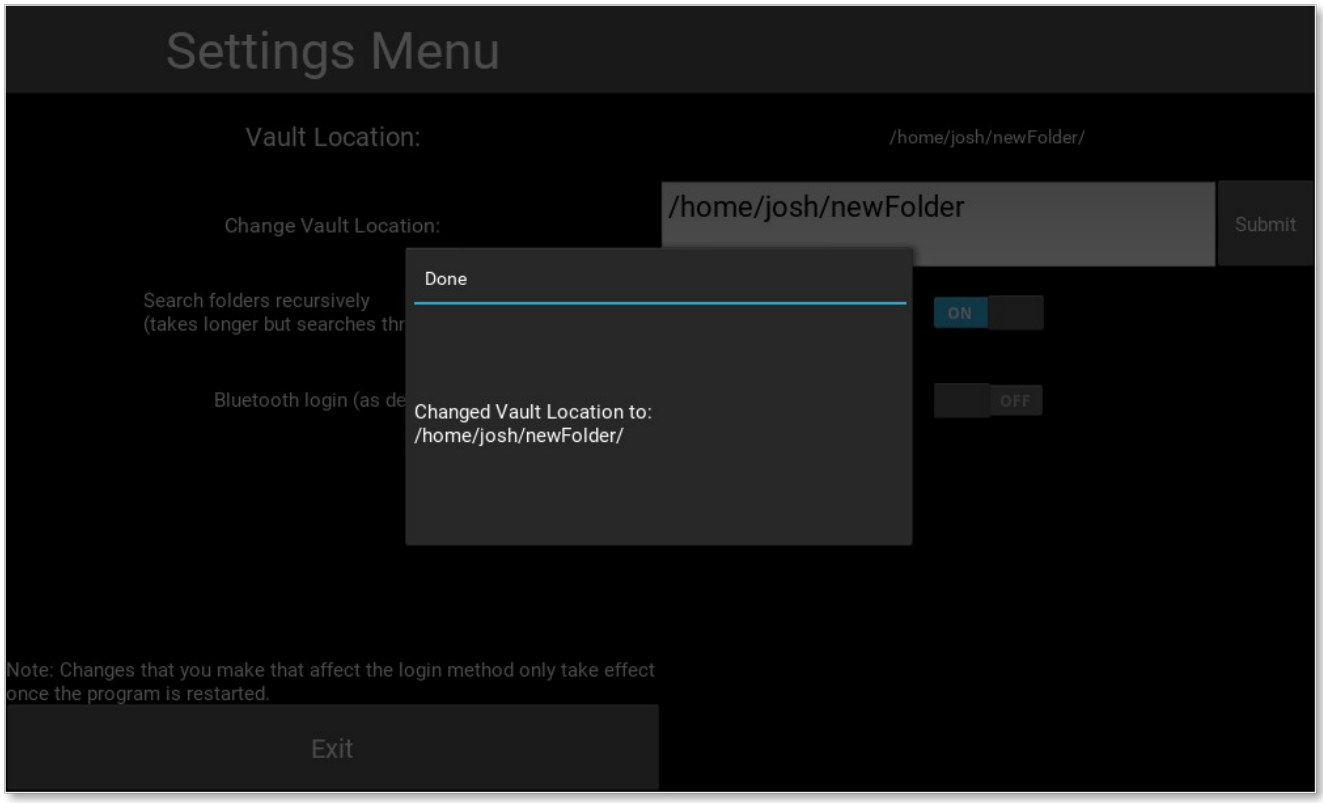
Test Number	24
Relevant Objective	3.a
Description	Change the vault location (using the Settings screen).
Purpose	Make sure the user can easily change vault location.
Test Data	From "/home/josh/EncryptedDir/" to: T: [1]: "/home/josh/newFolder/" [2]: "/home/josh/newFolder" [3]: "newFolder" [4]: "newFolder/subFolder/" [5]: "newFolder/subFolder" B: [6]: "/home/josh/folderWithEncFiles/"

	E: [7]: “/home/josh/folderWithEncFilesDifferentKey/”, log in with the different key, then change vault to “/home/josh/EncryptedDir/”.
Expected Outcome	[1-2]: Should create folder. [3-5]: Should create folder relative to the input. [6]: Has the same key as the original location, so should work just fine. [7]: Hopefuly handles it ok.
Actual Outcome	[1-6]: Pass [7]: Tried to decrypt file names, but showed gibberish.

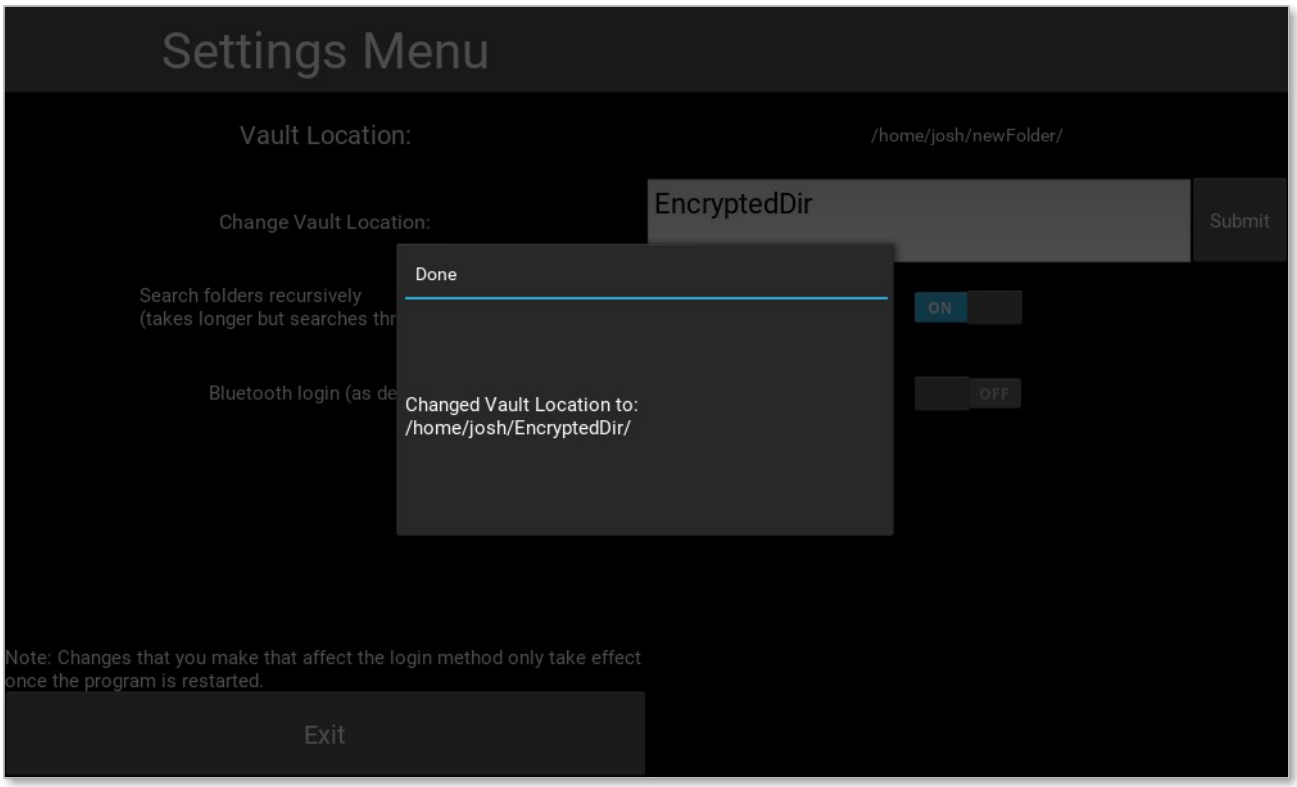
Evidence:

[1, 2]:

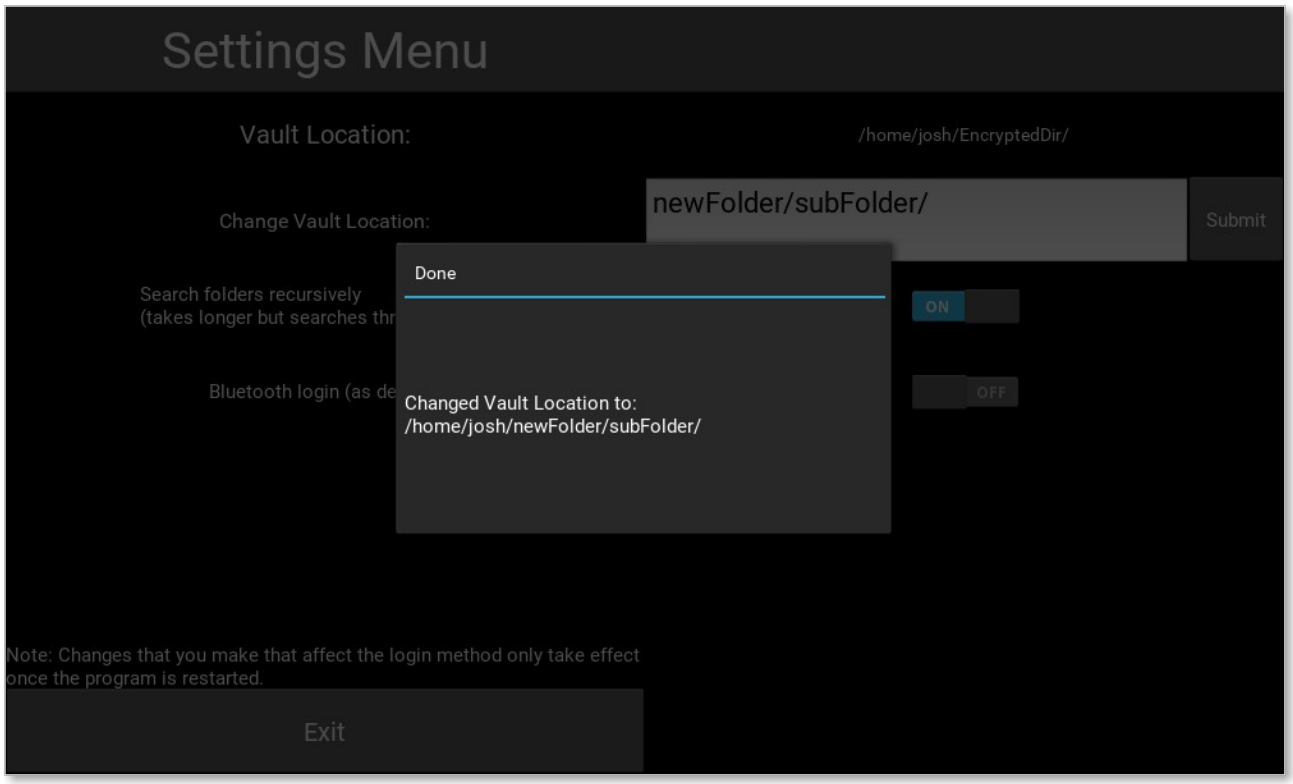




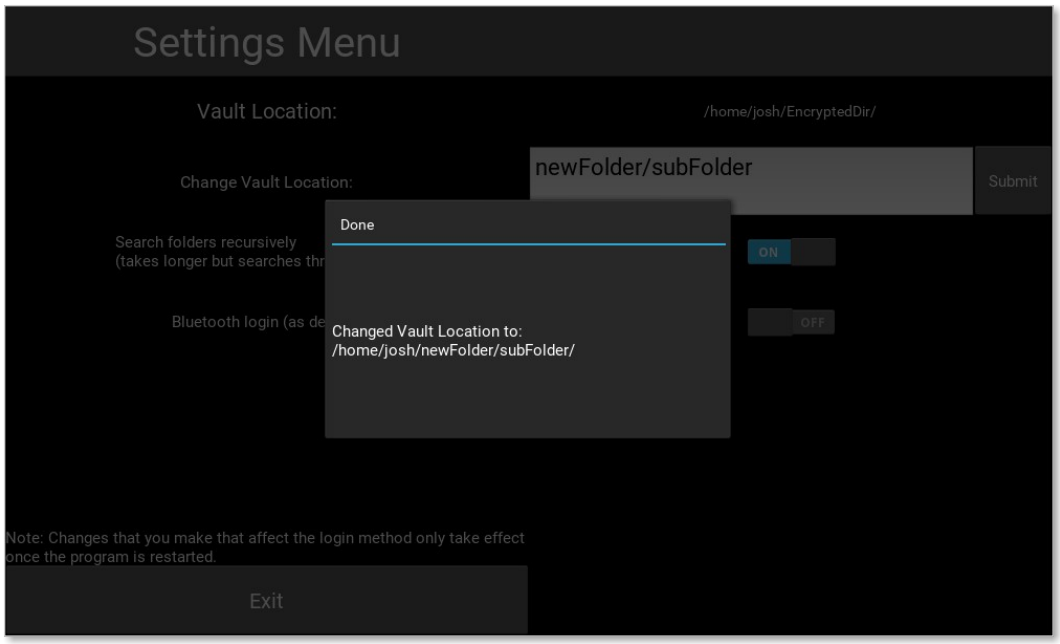
[3]:


Settings Menu
Vault Location:
/home/josh/newFolder/
Change Vault Location:
EncryptedDir
Submit
Done
Search folders recursively
(takes longer but searches thr
ON
Bluetooth login (as de
OFF
Changed Vault Location to:
/home/josh/EncryptedDir/
Note: Changes that you make that affect the login method only take effect
once the program is restarted.
Exit

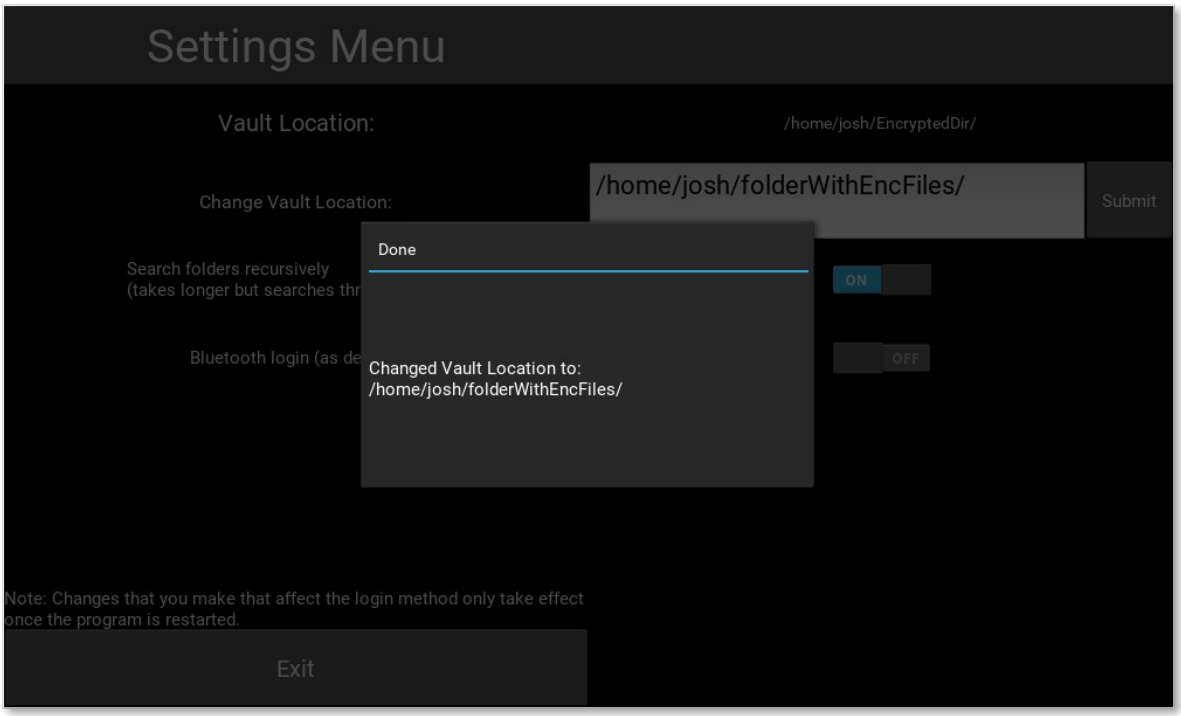
[4]:


Settings Menu
Vault Location:
/home/josh/EncryptedDir/
Change Vault Location:
newFolder/subFolder/
Submit
Done
Search folders recursively
(takes longer but searches thr
ON
Bluetooth login (as de
OFF
Changed Vault Location to:
/home/josh/newFolder/subFolder/
Note: Changes that you make that affect the login method only take effect
once the program is restarted.
Exit

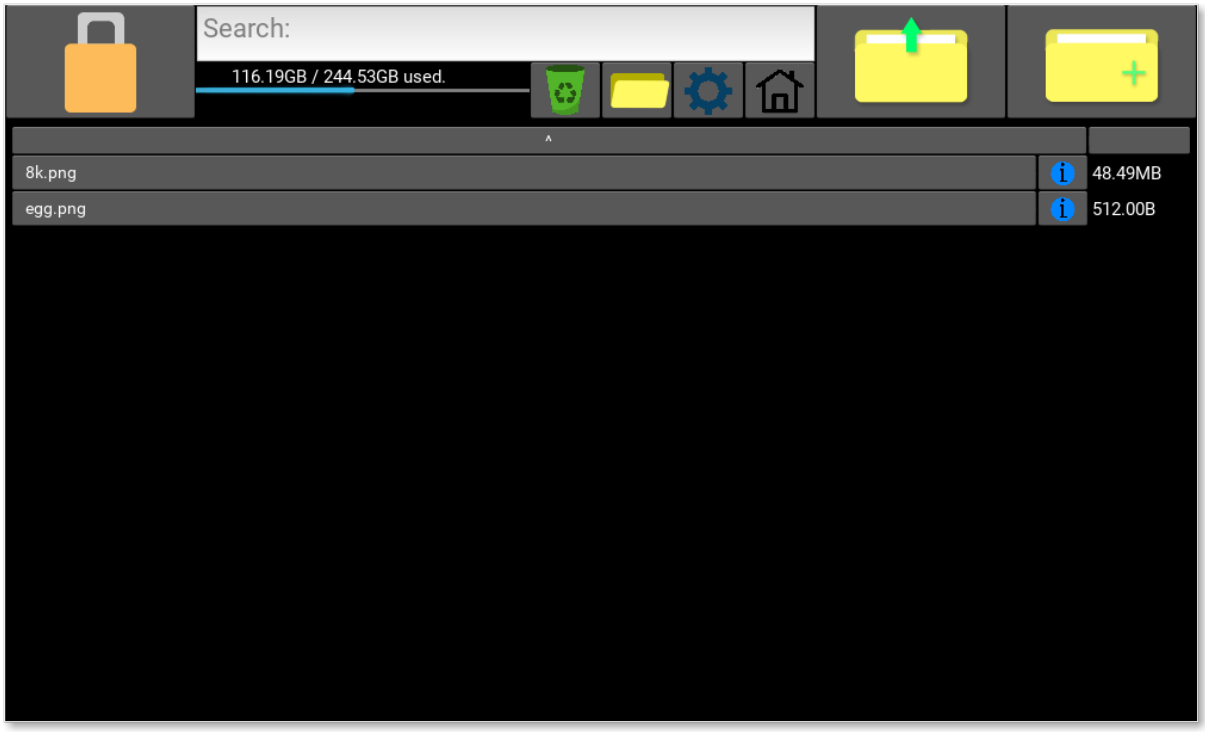
[5]:



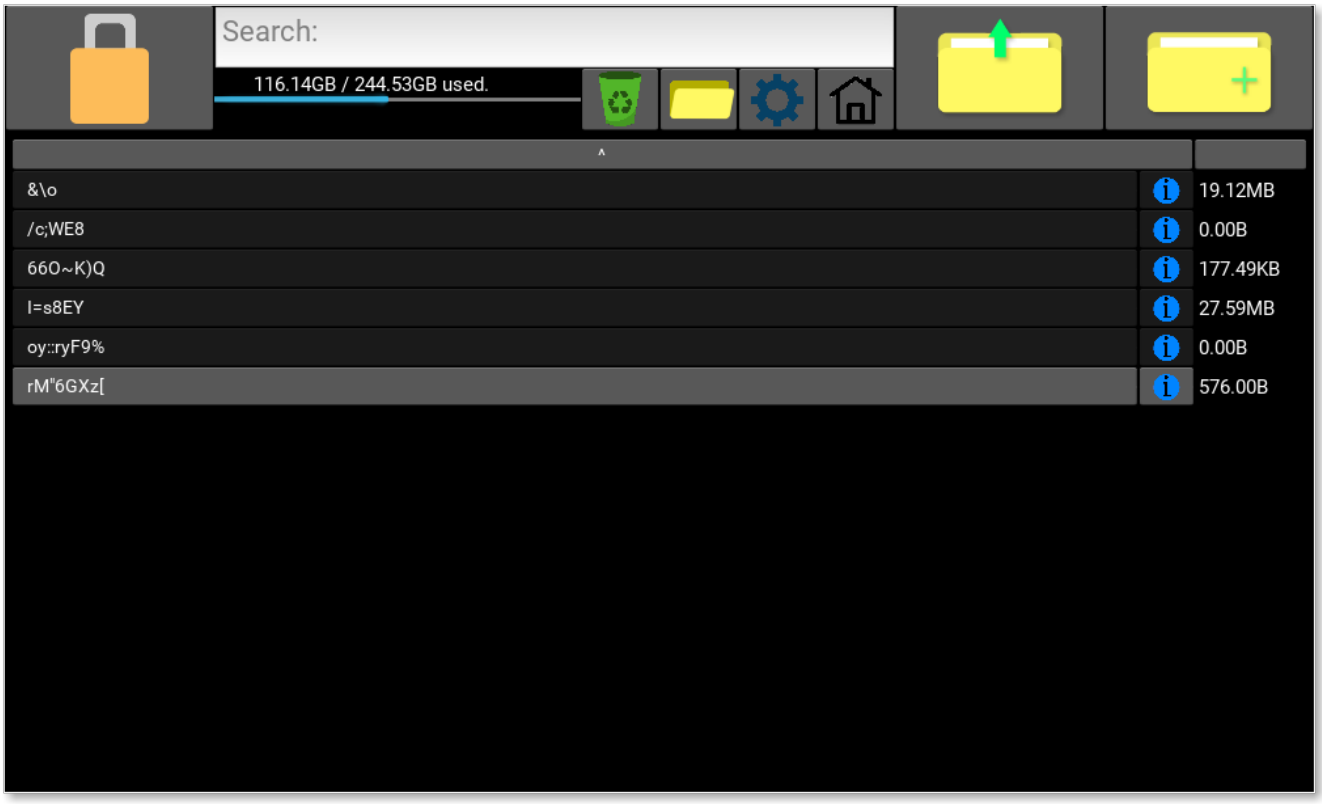
[6 (in 2 parts)]:
Change vault to /home/josh/folderWithEncFiles/



View vault:



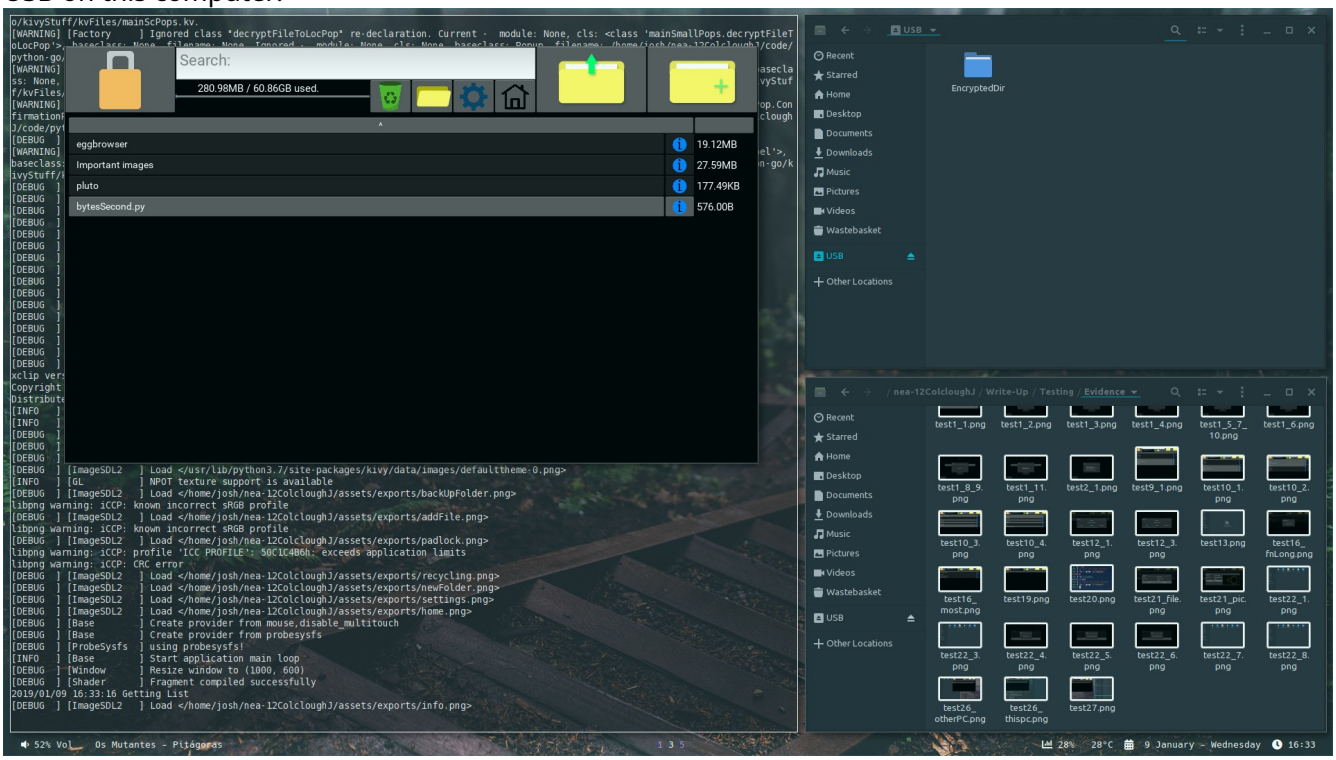
[7]: (The one that broke)



Test Number	25
Relevant Objective	3.a
Description	Move a vault onto a USB stick, and access it on another computer.
Purpose	To make sure that use case is possible.
Expected Outcome	`The user should be able to access all files in the vault using my program, if they enter the key correctly and if the vault location is set correctly in the configuration files.`
Actual Outcome	Pass

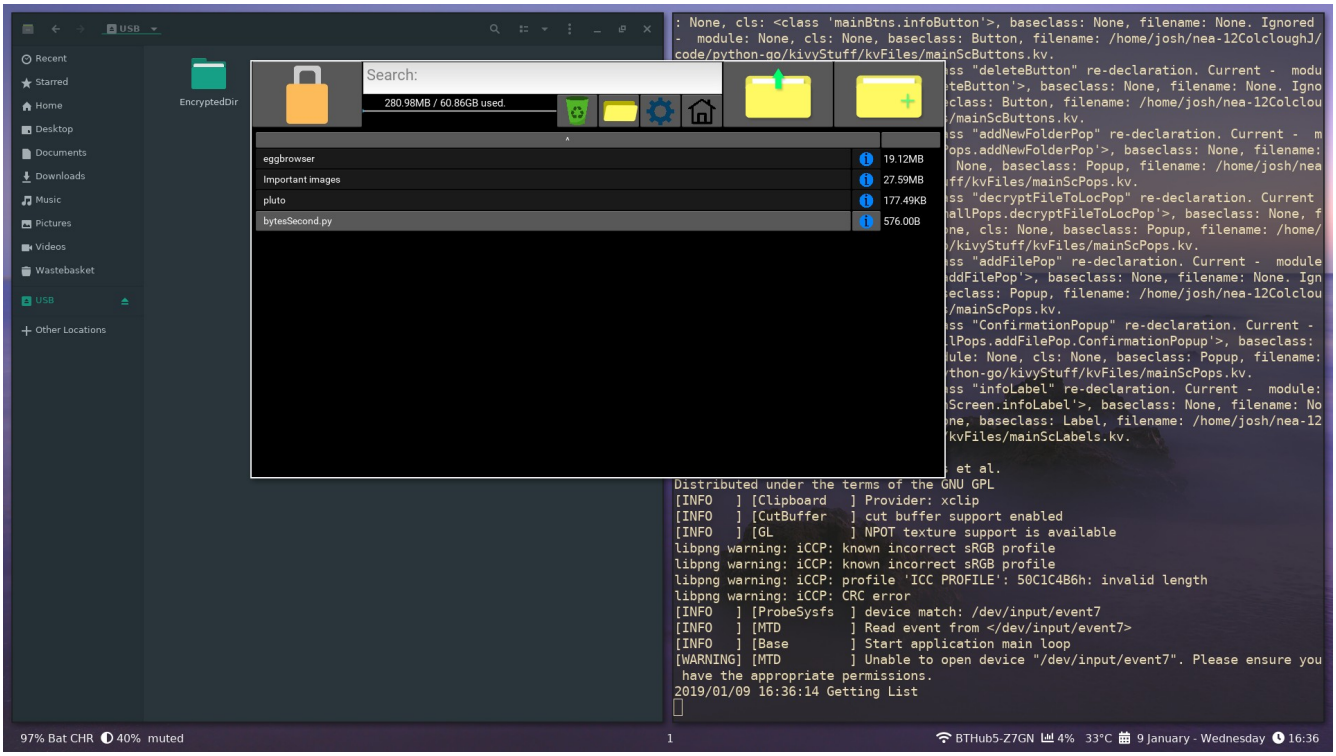
Evidence:

USB on this computer:



Left is the program, top right is the contents of the USB (= EncryptedDir).

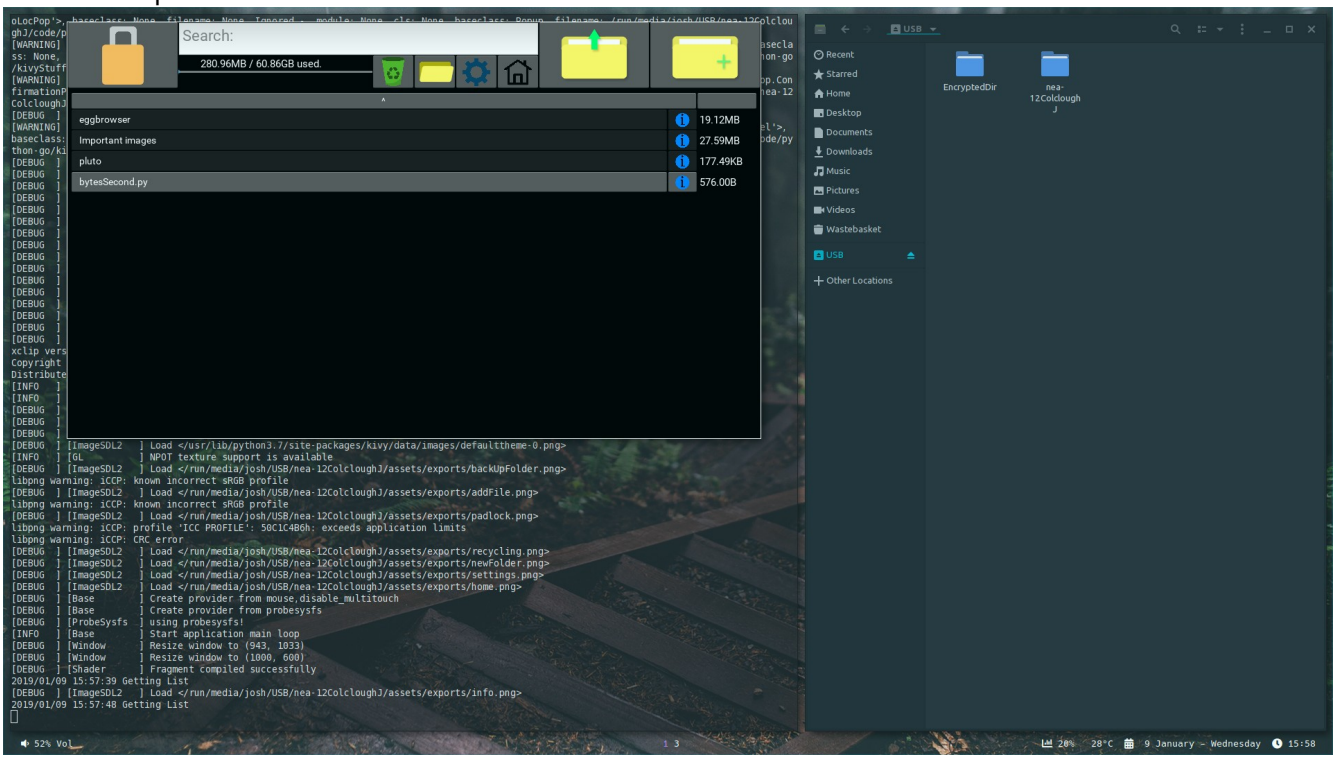
USB on another computer:



Test Number	26
Relevant Objective	3.a
Description	Move the vault AND the program onto a USB stick, and run the program from the USB stick on multiple computers.
Purpose	Check that the use case is possible, and working on different machines is smooth.
Expected Outcome	The user should be able to access all files in the vault using my program, if they enter the key correctly and if the vault location is set correctly in the configuration files, using a relative vault location.
Actual Outcome	Pass

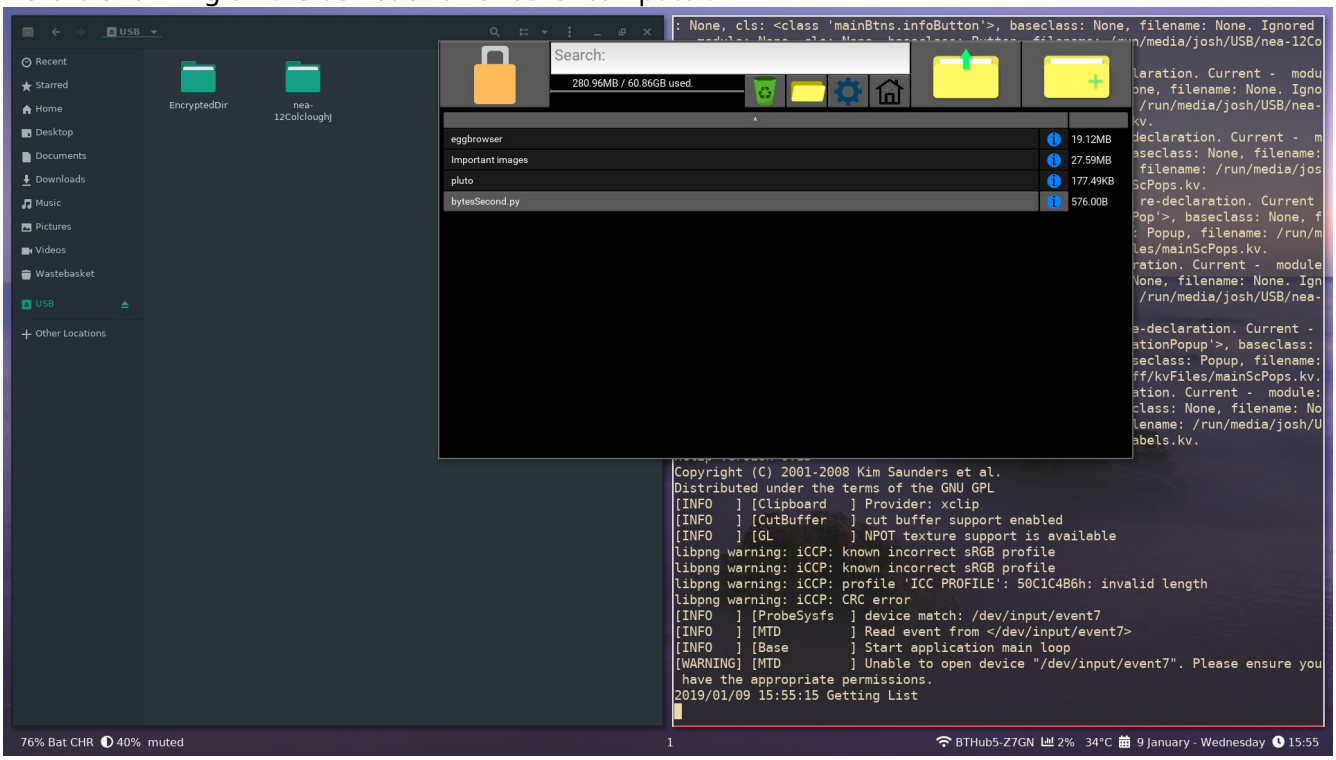
Evidence:

On this computer:



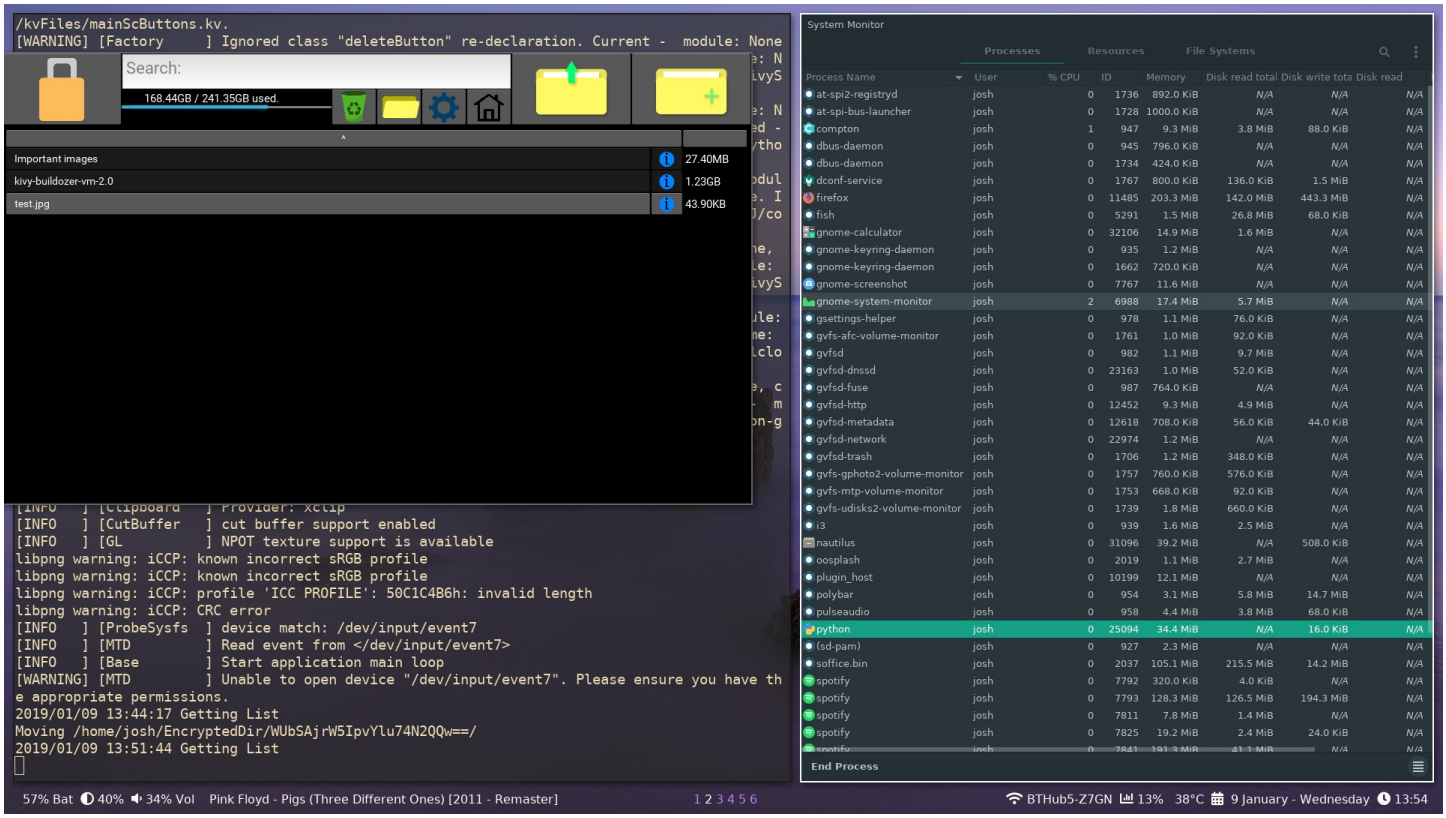
Right tile shows contents of USB stick, left is the program running showing the contents of USB/EncryptedDir.

Here it is running off the USB stick on another computer:



Test Number	27
Relevant Objective	1.h.i
Description	Check my program is not using too much CPU time when idle (<5%), and not too much memory (<100 MiB).
Purpose	To make sure that my program is not using up CPU time when it is really doesn't need to be doing anything, and that it is not too memory hungry.
Expected Outcome	`Should be below 5% CPU usage and 100 MiB of memory, as it isn't a huge program.`
Actual Outcome	`Pass- 0% CPU usage and 34.4 MiB memory usage.` `The memory usage is still a bit high (comparable to my file manager at 35 Mib), and I believe this is due to the loading of images for the info button on files, when it could probably be loaded once instead of once for every button.`

Evidence:



Here I have my program sitting idle, with a task manager open (the `python` task is highlighted).