Note: actually tested only on WSL.

Contents

1 General tests

1.1 Vault creation

Step 1: Input vault name that does not exist yet.

New master password prompt triggered → Success

Step 2: Input first master password.

Second master password prompt triggered → Success

Step 3: Input the same master password in the second prompt.

Message that vault has been created triggered → Success

Step 4: ls ~/.passman/vaults

A directory with the input name exists → Success

Step 4: ls ~/.passman/vaults/<vault_name>

Vault.meta, vault.bin, audit.log exist → Success

1.2 Log into an existing vault

Step 1: Input vault name that exists in current user's home directory.

Master password prompt triggered → Success

Step 2: Input correct master password

Entered into the vault → Success

1.3 Idle timer

Condition: entered into an existing vault

Step 1: do not produce any input for 1 minute

Log out prompted and notification printed → Success

1.4 Add a credential

Condition: entered into an existing vault

Step 1: Input "2" as a choice of option

Prompted for label → Success

Step 2: Enter a valid label

Prompted for username → Success

Step 3: Enter a valid username

Prompted for password → Success

Step 4: Enter a valid password

Prompted for notes → Success

Step 5: Enter valid notes (or enter to skip)

Menu print prompted → Success

Step 6: Input "1" as a choice of option

Input label listed → Success

Step 7: Input "5" as a choice of option

Prompted for label → Success

Step 8: Input the label of just added credential

Credential printed with correct values → Success

1.5 Update a credential

Condition: entered into an existing vault, some credential already exists

Step 1: Input "3" as a choice of option

Prompted for label → Success

Step 2: Input valid label that exists

Prompted for old password → Success

Step 3: Input valid old password

Prompted for new password → Success

Step 4: Input valid new password

Menu print prompted → Success

Step 5: Input "5" as a choice of option

Prompted for label → Success

Step 6: Input the label of just updated credential

Credential printed with correct values → Success

1.6 Delete a credential

Condition: entered into an existing vault, some credential already exists

Step 1: Input "4" as a choice of option

Prompted for label → Success

Step 2: Input valid label that exists

Prompted for master password → Success

Step 3: Input valid master password

Menu print prompted → Success

Step 4: Input "1" as a choice of option

Input label is missing → Success

1.7 Reveal a credential

Tested in 1.4 and 1.5 cases.

2 Copy tests

2.1 Copy into clipboard

Condition: entered into an existing vault, some credential already exists

Step 1: Input "5" as a choice of option

Prompted for label → Success

Step 2: Input valid label that exists

Prompted that password copied into clipboard → Success

Step 3: Use "paste" combination

Correct password is pasted → Success

2.2 Timed clear

Condition: entered into an existing vault, some credential already exists, the credential has already been copied to the clipboard

Step 1: Wait for 15 seconds to run out

Step 2: Use "paste" combination

Nothing is pasted in → Success

3 Access tests

3.1 Core directory permissions

Condition: core vault directory exists

```
guest@Diana:~$ ls -la | grep passman
drwx------ 3 guest guest 4096 Nov 29 23:41 .passman
```

3.2 Vaults directory permissions

Condition: vaults directory exists

```
guest@Diana:~$ ls -la .passman/ | grep vaults
drwx------ 5 guest guest 4096 Nov 30 23:42 vaults
```

3.3 Per-vault directory permissions

Condition: at least one vault exists

```
guest@Diana:~$ ls -la .passman/vaults/
total 20
drwx------ 5 guest guest 4096 Nov 30 23:42 .
drwx------ 3 guest guest 4096 Nov 29 23:41 ..
drwx------ 2 guest guest 4096 Nov 30 16:05 gueast
drwx------ 2 guest guest 4096 Nov 30 23:42 guest
drwx------ 2 guest guest 4096 Nov 30 23:43 test
```

3.4 Access violation

```
diana@Diana:~$ sudo cp -a /home/guest/.passman/vaults/guest ~/.passman/vaults/
diana@Diana:~$ ls .passman/vaults/
diana  guest
```

```
diana@Diana:/mnt/c/Users/diana/Documents/secure-password-manager$ ./passman
Select vault name (e.g. 'default'): guest
Open audit log failed.
Internal error: vault file access check failed.
Failed to initialize vault paths.
```

```
diana@Diana:~$ cat .passman/vaults/guest/audit.log
cat: .passman/vaults/guest/audit.log: Permission denied
diana@Diana:~$ cat .passman/vaults/guest/vault.bin
cat: .passman/vaults/guest/vault.bin: Permission denied
diana@Diana:~$ cat .passman/vaults/guest/vault.meta
cat: .passman/vaults/guest/vault.meta: Permission denied
```

Also can be checked by chmod to any other value or chown to any other user on the user's home directory vaults.

4 Encryption-decryption tests

4.1 Metadata

Condition: at least one vault exists

Step 1: cat ~/.passman/vaults/< vault_name>/vault.meta

Ouput not empty → Success

Output contains exactly two non-empty lines → Success

Output is not human-readable → Success

4.2 Vault contents

Condition: at least one vault exists

Step 1: cat ~/.passman/vaults/< vault_name>/vault.bin

Output not empty → Success

Output is not human-readable → Success

5 Error handling and logging tests

5.1 Corrupt vault contents

Condition: at least one vault exists

Step 1: Add characters to ~/.passman/vaults/< vault_name>/vault.bin

Step 2: Start up the password manager

Step 3: Input the <vault_name>

Prompted for master password → Success

Step 4: Input correct master password

Master password check failed → Success

Step 5: cat ~/.passman/vaults/< vault_name>/audit.log

Line "load_vault_decrypted: decrypt failed" found → Success

5.2 Corrupt metadata contents

Condition: at least one vault exists

Step 1: Add characters to ~/.passman/vaults/< vault_name>/vault.meta

Step 2: Start up the password manager

Step 3: Input the <vault_name>

Error message prompted → Success

Step 4: cat ~/.passman/vaults/< vault_name>/audit.log

Line "load_meta: meta decode length mismatch" found → Success

5.3 Regular logging

Adding, updating or deleting a credential (section 1 tests), creating a vault, deleting a vault or starting up the application produces logs → Success

Example: 2025-12-01 00:44:13 | INFO | user=guest | ip=127.0.0.1 | session=87cec554013e1179c0fd8bb3d8703736 | event=add_cred | outcome=success | Credential added: new