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programing lab report

Introduction

這次作業我寫了一個簡單用 hash 進行加密的密碼管理器，主要使用 python

需要額外下載 elara 和 maskpass 兩個套件

執行 password_manager.py 即可

功能介紹:

在初次使用時會要求輸入一個管理者密碼

```
Set Master Password - *********
```

若要更改密碼則取消 password_manager.py 第 18 行的註解

```
18          #db.rem("Masterpassword")
```

之後每次執行程式都需要輸入這個密碼

```
Enter master password for verification: *********
```

密碼管理器有以下四個功能，以下是它們的 demo 照片：

```
Hi! Please select an option you want to continue with:

1. Add a new password
2. View a password
3. Delete a password
4. Update a password
5. Exit

Enter option number: █
```

1.添加密碼:

```
Enter option number: 1
Enter website for which password must be saved: youtube.com
Enter password to be saved: *
Password added succesfully.
```

2.查詢密碼:

```
Enter option number: 2
Websites for which passwords have been saved:
1. youtube.com
Enter website serial no. for which password is to be viewed: 1
Password: 1
```

3.修改密碼(要求管理者權限):

```
Enter option number: 3
Websites for which passwords have been saved:
1. youtube.com
Enter website serial no. for which password is to be updated: 1
Enter master password for verification: *********
Enter new password: ***
Password updated succesful.
```

```
Enter option number: 2
Websites for which passwords have been saved:
1. youtube.com
Enter website serial no. for which password is to be viewed: 1
Password: new
```

4.刪除密碼(要求管理者權限):

```
Enter option number: 4
Websites for which passwords have been saved:
1. youtube.com
Enter website serial no. for which password is to be deleted: 1
Enter master password for verification: *********
Password deletion succesful.
```

```
Enter option number: 2
Websites for which passwords have been saved:
Enter website serial no. for which password is to be viewed: 0
Please enter a valid serial no.
```

Code 講解:

總共有三個檔案，分別是主檔案 password manager.py、負責與讀寫資料庫的 CRUD.py、和負責加密解密的 hasher.py。

在第一次使用這 PM 的時候會要求設定 master password，你輸入的 master password 將做為與儲存密碼一起進行加密解密的鑰匙，而我們的資料庫則是使用 elara 套件，此外輸入密碼時若是明文顯示則是不合常理的，我運用的是 maskpass 來隱藏使用者所輸入的密碼。