

Class and Home Work

Submission date: must be submitted till **12/05/2020, 23:50**

Submission program type: the whole project, the title of the file is the names of the partners.

Submission: in singles or in pairs.

Task:

A **password manager** is a software application that helps a user store and organize passwords. Password managers usually store passwords encrypted, requiring the user to create a **master password**; a single, ideally very strong password which grants the user access to their entire password database.

Your program must create YOUR OWN password manager, so you do the following:

1. **Create** master username and password to enter the password manager.
2. Ex.: *To sign-in please enter username and password:*
Username: _____
Password: _____
3. The length of ALL the passwords is 8.
4. The password manager should store the names of the sites, username and password:
Ex.: Amazon: username: _____, password: _____
Ebay: username: _____, password: _____
...
Please store passwords for at least 10 sites!
5. Once a user wants to store a password for a specific site, the password manager will suggest the user randomly generated STRONG password.
Reminder: a strong password contains a small letter, a capital letter, a number and a punctuation mark.
The user still has the possibility to store his/her own strong password. In case, the user chooses to store his/her own password, the password must be checked for being strong and is not stored till it is (that is, the user will suggest as many passwords as (s)he suggests a strong one.
6. The password manager and the user MUST have the possibility to generate as many passwords as they want (but they all must be checked of being strong ones!),
7. **For each password (generated or chosen) perform SHA encryption.**
8. **The sites, usernames and passwords can all be stored in a database encrypted using SHA-1 or SHA-256 only!**
9. **Simulate the entrance to a specific site by entering username and (real!) password. The Password Manager should print "Signed in" message, if a user entered the right username and password, and "Error! Wrong username or password!" message otherwise!**

All the questions can be asked via email: alohnkoiz@ac.sce.ac.il. Please state that you are from TCB.

Good luck 😊