

LAB211 Assignment

Type:	Long Assignment
Code:	J1.L.P0002
LOC:	500
Slot(s):	N/A

Title

User Management – Read and Write File.

Background

A construction company needs a user information management program. With basic requirements such as register an account, display user information, update information, User information is stored in a text file (user.dat).

Program Specifications

Build a user management program. With the following basic functions:

1. Create user account.
 2. Check exists user.
 3. Search user information by name.
 4. Update user:
 - 4.1. Update user.
 - 4.2. Delete user.
 5. Save account to file.
 6. Print list user from file.
- Others- Quit.

Features:

This system contains the following functions:

- **Function 1: Create user account - 100 LOC**
 - Require to input a user information include username, first name, last name, password, confirm, phone and email.
 - Check the valid data with the following conditions:
 - Username must be at least five characters and no spaces.
 - Username is not allowed to duplicate in the database.
 - Password must be at least six characters and no spaces.
 - Confirm password must equal password.
 - Phone number must contain 10 numbers.
 - Email must follow standard email format.
 - Create new user.
 - Ask to go back the main menu.
- **Function 2: Check exist user– 50 LOC**
 - The system will check the username that stored in the file user.dat.
 - A message “Exist User” should be displayed in the case the userName exists in the user.dat file.
 - Otherwise, message “No User Found!” will display.

- Ask to go back the main menu.
- **Function 3: Search user information by name – 50 LOC**
 - Require enter a search string (a part of first name or last name), return a list user information contain search string.
 - If the list user is null, the notification "Have no any user", else print the list user information order by first name.
 - Ask to go back the main menu.
- **Function 4: Update user**
 - **Function 4.1: Update user information- 50 LOC**
 - Login is required.
 - If it does not exist, the notification "Username does not exist". Otherwise, user can edit of the remaining information. If Information is blank, then not change old information
 - Show the result of the update: success or fail.
 - Ask to go back to the main menu.
 - **Function 4.2: Delete user information – 50 LOC**
 - Login is required.
 - If it does not exist, the notification "Username does not exist". Otherwise, user can delete his account.
 - Show the result of the delete: success or fail
 - Ask to go back the main menu.
- **Function 5: Save to file - 50 LOC**
 - Write list user's information to the file (user.dat).
 - Ask to go back the main menu.
- **Function 6: Print all list from file – 50 LOC**
 - Loading list user information from the file into Collection
 - Displaying list user information order by first name.
 - Ask to go back the main menu.
- **Function 7: Create layout – 50 LOC**
 - The program is organized in the form of a function menu.
 - Support function asking if the user wants to continue or not.
- **Function 8: Password encryption – 50 LOC(Ext)**
 - Encrypt password(SHA256) before saving to file.

- The above specifications are only basic information; you must perform a requirements analysis step and build the application according to real requirements.
- The lecturer will explain the requirement only once on the first slot of the assignment.