

# LAB211 Assignment

Type:	Long Assignment
Code:	J1.L.P0002
LOC:	450
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.txt).

## 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 Program.

## Features:

*This system contains the following functions:*

- **Function 1: Create user account - 50 LOC**
  - This function requires inputting a user information include username, first name, last name, password, confirm, phone and email.
  - System checks 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.
  - System can create new user.
  - Application asks user 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.txt.
  - A message “Exist User” should be displayed in the case the userName exists in the user.txt file.
  - Otherwise, message “No User Found!” will display.

- Application asks user to go back the main menu.
- **Function 3: Search user information by name – 50 LOC**
  - This function requires user enter a search string (a part of first name or last name). After searching is succeeded, a list user information will be gotten.
  - If the list user is null, the notification "Have no any user" is shown. Otherwise, the application outputs the list user information order by first name.
  - Application asks user 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" is shown. Otherwise, user can edit of the remaining information. If Information is blank, then system does not change old information
    - System shows the result of the update action (success or fail).
    - Application asks user 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" is shown. Otherwise, user can delete his account.
    - System shows the result of the delete action (success or fail)
    - Application asks user to go back the main menu.
- **Function 5: Save to file - 50 LOC**
  - This function writes list user's information to the file (user.txt).
  - Application asks to go back the main menu.
- **Function 6: Print all list from file – 50 LOC**
  - This function allows to load list user information from the file into Collection
  - List user information is shown order by first name.
  - Application asks user to go back the main menu.
- **Function 7: Create layout – 50 LOC**
  - The program is organized in the form of a function menu.
  - Application supports function asking if the user wants to continue or not.
- **Function 8: Password encryption – 50 LOC (Ext)**

- Encrypt password(SHA256) should be applied before saving to database.
- 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.