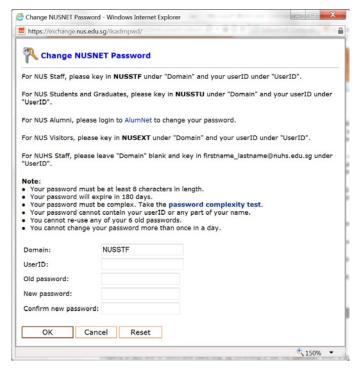
Problem Statement

It is a university policy that all students and staff need to change their NUSNET passwords every half a year through the following graphic user interface (GUI):



In this exercise, you are to check whether a user has entered an acceptable new password. To keep things simple, we just check if the following rules are satisfied:

- The new password must be at least 8 characters in length.
- The new password must be complex: each character in a password can only be either a letter ('a'-'z', 'A'-'Z'), underscore ('_') or a digit (0-9). However, a complex password must contain both upper case and lower-case letters.
- The new password must not contain the UserID.
- The confirmation for the new password must match the new password.
- The new password must not be the same as the old password.

Write a program to read in sequence, domain, UserID, old password and new password (twice), check whether the new password is acceptable or not. It prints out "Password changed successfully!" if so, or "Error: Invalid userID or password!" otherwise.

Note that both UserID and passwords are case sensitive. You do not need to check the validity of old password. You may assume that no input data contains whitespace and each input is at most 15 characters long.

Write on the skeleton file **password.c** given to you. The **main** function is complete and you are to fill in the **isValidPassword** function only. You may write other helper functions if needed.

Check sample runs (next page) for input and output format.

Sample Runs

Six sample runs are shown below with <u>user input</u> highlighted in **bold**.

Domain: NUSSTF
UserID: DCSZHOUL

Old password: WillNotTellU New password: CS1010_12s1

Confirm new password: CS1010_12s1 Password changed successfully!

Domain: NUSSTF
UserID: DCSZHOUL

Old password: **TellMeLah** New password: **DCSzhoul**

Confirm new password: **DCSzhoul** Password changed successfully!

Domain: NUSSTF
UserID: DCSZHOUL

Old password: Oh_MyGod
New password: CS1010_11S2

Confirm new password: CS1010_11S2
Error: Invalid userID or password!

No lower-case letter

Domain: NUSSTU
UserID: a0123456

Old password: A0123456x New password: a0123456X

Confirm new password: a0123456X

Error: Invalid userID or password!

Contains userID

Domain: NUSSTU
UserID: a0123456

Old password: YesMadam
New password: Whatever

Confirm new password: WhatEVER

Error: Invalid userID or password!

Confirmation does not match new password

Domain: NUSSTU
UserID: a0123456

Old password: SoCstudent New password: Zhou@comp

Confirm new password: **Zhou@comp**Error: Invalid userID or password!

Contains illegal character '@'