Tutorial 5: Pause and Challenge

For this tutorial we are going to pause and consolidate our knowledge and skills up to this point through the creation of basic console-driven application.

This will form the basis of an application you will develop in Tutorials 6-10.

Using the knowledge and skills you have accrued over the last four weeks. Create an application with the following requirements:
- Applications loads with a menu providing the user with two options
    - Login
    - Register
- Login menu enables the user to login with the username and password. The username and password can be either be stored in the function OR stored in a 2 dimensional list of lists (ask me to demo)
- Registration should enable a staff member to register and store the following information
    - Username
        - This should be generated with the first initial of the person first name, surname and a random 3-digit number e.g jsmith123
    - Password

        -Must contain a letter
        -Must contain a number
        -Must contain an uppercase letter
        -Must contain a lowercase letter
        -Must be between 8 and 15 characters
        -Must contain one of the following special characters ['@','#','?','£']
        -Should not contain the word "password"
    - First name
    - Surname
    - Gender (should only allow "male", "female" etc)
    - Position (should only allow "manager" OR "admin")
    - Date started
- Once logged in the user is taken to a Main Menu with the following options:
    - 1. Customer Management
    - 2. Stock Management
    - 3. Staff Management
    - 4. Logout
- Each of these menus should then provide the following functions

- Customer Management
    - 1.Add a customer
    - 2.Delete a customer
    - 3.Edit a customer
    - 4.View list of customer
    - 5.Return to main menu
- Stock Management
    - 1.Add an item of Stock
    - 2.Delete an item of Stock
    - 3.Edit an item of Stock
    - 4.View stock list
    - 5.Return to main menu
- Staff Management
    - 1.Add a member of staff
    - 2.Delete a member of staff
    - 3.Edit a member of staff details
    - 4.View staff roster
    - 5.Return to main menu
- Implement each of the functions ensuring that the program only accepts appropriate data for each of the records e.g. gender is male or female, title, must be from a list which includes Mr, Mrs, Miss etc, first name less than 25 characters and doesn't contain a number
- Each customer should have
    - Customer id
    - Title
    - First Name
    - Surname
    - Gender
    - Age
- Each item of Stock should have
    - Stock ID
    - Description
    - Qty in stock
    - Price
- Each member of staff should have an
    - Username
    - Password
    - First name

- Surname
- Gender
- Position
- Date started