Semester 1, 2018
Assignment 2
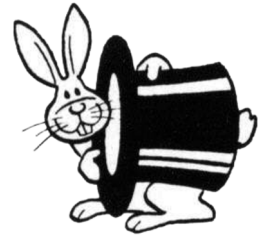
Web Magic Inventory System

Due:	**20.05.2018 (11: 59 pm)**
Face2Face Demo:	**21.05.2018 – 25.05.2018**
Assignment Type:	**Individually or in a group of 2**
Total Marks:	**40 marks (20%)**

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Note: Assignment 2 is extended upon Assignment 1, **however this time products will have price value associated with them**.

2.1 Aim

You are now looking at expanding into online operations and will create a website with similar features as the console application from assignment 1. You decide to create an **MVC ASP.NET Core** project with **EF** using **.NET Core 2.0** with **Visual Studio 2017 (*older versions are not allowed*)** for your business.

MANDATORY requirements of the application:

1. The code must be object-oriented, i.e. have more than one class.
2. Do not write bloated class or classes (i.e. a class with a lot of functionality).
3. All user input must be validated (**you will be penalised for inputs that are not validated**)
4. Robust exception handling must be implemented
5. Code must be commented and neatly formatted
6. Do not leave any commented and unused code in the final submission, **you will lose marks for any messy section or unused code snippet**
7. The user interface of the website should be clean, professional and user-friendly
8. If you use any code from lecture and tutorial archives or ONLINE references, it must be duly acknowledged
9. Use of older Web Forms and/or plain ADO.NET will fetch zero marks.
10. Follow some common C# coding conventions:
    http://msdn.microsoft.com/en-us/library/ff926074.aspx

2.2 Database

Data will be stored in the provided Azure SQL Server database. **You can implement CODE FIRST approach and use the Model and seeding code from Exercise 2 from Tutorial/lab sheet 7**. However, this code is missing the "price" field- be sure to modify it.

2.3 Scenario & Business Requirements

You can read these from assignment 1 specifications.

2.4 Tasks

a) Login & Logout

An anonymous user can only access the login page. The website will be used by the following 3 types of users:

- Owner,
- Franchise Holder and
- Customer.

Implement social media login for all these users. As such Registration feature is not required.

A logout feature will also be required which will logout the current user and return them to the login page.

b) Owner

Once logged in as an owner it should be possible to:

1. Display owner's inventory.
2. Display stock requests.
3. Process a stock request - a stock request that can't be satisfied should again be rejected (but not deleted from the database).
4. Set owner inventory item stock - user can enter the amount to set the stock level.

c) Franchise Holder

A franchise holder account is associated with only one store and this is known ahead of time before logging in.

Once logged in as a franchise holder it should be possible to:

1. Display store's inventory.
2. Create a new stock request - user can enter the quantity for the stock request.
3. Create stock request for a new inventory item - user can enter the quantity for the stock request.

d) Customer

A customer account can access **all** the store's inventories.

Once logged in as a customer it should be possible to:
1. Display stores.
2. Display a store's inventory and allow filtering of the products by name.
3. Add a product to the shopping cart - the shopping cart should support having multiple different products of varying quantity and products from different stores.
4. Shopping cart - display the products added to the cart and allow removing items from the cart. With at least one product in the cart the customer can checkout.
5. Checkout - review the products being purchased and enter credit card details. The credit card details only need to be validated and don't have to be saved to the database. **You may use a 3rd party solution for credit card processing**
6. Order confirmation showing a receipt of what was bought, including the newly generated Order ID.
7. Order history - display orders made by the customer. The data processing for this should be implemented using **AngularJS**.

2.5 NOTE concerning the user interface:

As you can see we have not provided you with any screenshots of templates for the web pages. You are to use your own discretion and come up with a layout and template for these pages.

You can use the default template shipped with Visual Studio project

OR

Download and use free web templates, bootstrap templates from web with due acknowledgement.

You will be marked down for unprofessional and ungainly user interfaces.

2.6 Marking Guide

1. Login, Sign-up & Logout   5.0 marks

    a. Login   (2.0)
    b. Sign-up   (2.0)
    c. Logout   (1.0)

2. Owner   7.0 marks

    a. Display owner's inventory   (1.0)
    b. Display stock requests   (2.0)
    c. Process stock request   (2.0)
    d. Set owner inventory item stock   (2.0)

3. Franchise Holder   5.0 marks

    a. Display store's inventory   (1.0)
    b. Create a new stock request   (2.0)
    c. Create stock request for a new inventory item   (2.0)

4. Customer   13.0 marks

    a. Display stores   (1.0)
    b. Display store's inventory   (1.0)
    c. Filter products by name   (1.0)
    d. Add product to cart   (2.0)
    e. Support multiple different products &
        products from different stores in the cart   (1.0)
    f. Shopping cart   (1.0)
    g. Checkout and order confirmation   (1.0)
    h. Order history (implemented with AngularJS)   (5.0)

5. Code Quality   10.0 marks

    a. Validation*   (0.5)
    b. Exception handling**   (2.0)
    c. Code commenting   (0.5)
    d. C# coding conventions   (0.5)
    e. Ability to explain the code and choices made   (0.5)
    f. Encapsulation   (1.0)
    g. Cohesion   (1.0)
    h. Coupling   (1.0)
    i. Code repetition   (1.0)
    j. Useability   (2.0)

2.7 Submission Instructions

You must submit a *single* zipped archive that contains ONLY the following:

- Your Model files
- Your Controller files
- Your View files

Nothing else needs to be submitted.

2.8 Late Submissions and Extension:

Late submissions are handled as per usual RMIT regulations - 10% deduction (4 marks) per day. You are only allowed to have 5 late days maximum. After that you will get a ZERO.

Please email shekhar.kalra@rmit.edu.au for extension-related queries.

2.9 Mandatory face to face demo

You and your group member must attend a face to face demonstration between May 21, 2018 and May 25, 2018

No submission == No Demo == NO Marks

2.10 Finally

Put some pride and effort in your work towards this assignment. You can always take a good implementation for this assignment as a part of your portfolio to the prospective employers. An assignment like this prepares you to be **work ready**.