Department of Information and Technology
(Tuen Mun)

Higher Diploma in Software Engineering (IT114105)

Module Name	:	Internet & Multimedia Applications Development
Module Code	:	ITP4513
Submission Deadline	:	Phase 1: 4th teaching week of Semester 3 Phase 2: 8th teaching week of Semester 3
Hand in Methods	:	*To be announced by the lecturer*
This Group Project	:	30% of total module marks (*also it is part of EA components)*

The result of EA will not be counted if you do not meet the minimum 70% attendance requirement (if any) governed by the general academic regulations of your programme/course unless approval of the campus principal has been granted.

1. Objectives

In this project, students are asked to:

- build a web application which provide different functions for customer and tenant.
- apply software development skills to develop a website which is user-friendly, interactive, robust and easy to maintain.
- apply the knowledge that you learned in this module to solve the tasks. (e.g. HTML, CSS, JavaScript, PHP and simple SQL commands)

2. A simplified procedure to show how the web application will be used

There are two user roles for the Hong Kong Cube Shop Shopping System:

a. Customer can make orders and manage their orders.
b. Tenant can manage the goods and view the customers' orders.

3. Design for Customer (Interface Design: 15 marks; Function: 35 marks)

Done By

a. Register account into system
Managed to create a new customer account into the system with all necessary information

Required information during registration as below:
1. Customer's Email
2. Customer's First Name
3. Customer's Last Name
4. Phone Number
5. Password

* *customerEmail* should be created as Primary Key

b. Update customer's profile
Managed to view and update customer's information

Customer's information including:
1. First Name
2. Last Name
3. Phone Number
4. Password

**customerEmail* cannot be changed after the creation

c. Make the order
Managed to make order into the system with all necessary information

View goods information
- List of goods shown on site for customer to choose (show the goods when status is "Available")

The goods should include 2 stock statuses:
1. "Available": Show only the available goods.
2. "Unavailable": The goods have been discontinued or not available.

Required information for creating an order
1. Consignment Store ID & Shop ID:
   - The ID of the pick-up shop that is selected by customer.
   - Each order can only belong to one store
2. Goods Name & Quantity:
   - Being able to order more than one good in the same order.
   - Order quantity cannot be greater than the stock quantity in Goods table.
3. Deduct the quantity of goods after customer make an order.

**orderID* should be generate automatically by the system as Primary Key

d. View order records
Managed to view the orders with necessary information

Required information for viewing the orders

1. Order ID
2. Shop Name
3. Shop's address
4. Order Date
5. Goods ID
6. Goods Name
7. Selling Price
8. Quantity
9. Status
10. Total Price

, etc.

The orders should include 3 statuses:

1. "Delivery": The parts are delivering to shop
2. "Awaiting": Goods are ready for pick up
3. "Completed": The goods have been picked up from customer

e. Delete Account
Delete the user account including all the users' order records from database

Required functions:

- Create a **"delete"** button to delete the user account including the users' order records and comments from the database.

4. Design for Tenant (Interface Design: 15 marks; Function: 35 marks)

Done By

a. Login to system
Managed to login into the system with all necessary information.

Required information during login
1. Tenant ID
2. Password

b. Add, view and edit goods' information
Managed to create a page contain the list of goods

Required part information:
1. Goods Number
2. Goods Name
3. Stock Quantity
4. Stock Price
, etc.

* *goodsNumber* should be generate automatically by the system as Primary Key.

Required functions:
- Create a **"edit"** button to make change of stock quantity and stock price
- Tenant can add in new goods /remove the goods (change the stock status from "Available" to "Unavailable")

c. Generate report
Managed to view the order with necessary information.

Required information for report page
1. Order ID
2. Order Date
3. Customer ID
4. Customer Name
5. Shop address
6. goods Number
7. goods Name
8. Quantity
9. Order status
10. Selling price of each goods
11. Total Price
, etc.

Required Function:
- The report needs to be ordered by date in descending order.

d. Delete user order
Assume there is a wrong input in the Goods table of the field "*remainingStock*" from the tenant. And the tenant does not have enough goods to sell to the customer. So that the order needs to be cancelled.

Required functions:
- Delete the selected order record from database

5. Form your project group

Each student needs to form a project group, **the maximum number of students in each group is 2.** Strongly recommend you to form a group to complete this project as you can benefit from sharing skills/codes amongst your members, and you can learn to plan, coordinate, and integrate work done by each member.

Study carefully the given ERD and table structures before you start the implementation.

6. Additional requirements of your project

a. Your web site should only use PHP as the server-side programming language (i.e. not ASP, ASP.NET, JSP, servlet etc.), however, you may use JavaScript and CSS for specific purposes. The database server used must be mySQL (version 5.0 or above).

b. In your PHP code, you must ensure to use the following *parameter values* for the following mySQL database functions :

$conn = *mysqli_connect*($hostname, $username, $password, $database);

set to the values below in a PHP script which is *shared by* the web pages :

$hostname = "**127.0.0.1**";
$database = "**projectDB**";
$username = "**root**";
$password = "";

7. Items to submit (Phase 1) (30% of total project marks)

Submit all UI design using CSS and HTML. Submission deadline will be announced by the lecturer.

8. Items to submit (Phase 2) (70% of total project marks)

a. A ***CD-ROM*** or ***DVD-ROM*** which stores a ***softcopy of all files*** for the whole web site. All files must be stored in non-compressed format (no .zip or .rar files please!)

b. provide a SQL script file ***CreateProjectDB.sql*** to let the lecturer to re-create the database and test data

c. for the SQL script file ***CreateProjectDB.sql***, it must contain *CREATE TABLE* commands to setup the database tables in **projectDB** database. Include necessary *INSERT* statements to add additional sample records you want to provide. The following is a sample SQL script :

```
drop database IF EXISTS projectDB;
create database projectDB character set utf8;
use projectDB;

drop table IF EXISTS Users;

Create table Users (
  userName Varchar(30) NOT NULL,
  userPswd Varchar(10),
 Primary Key (userName)) ENGINE = InnoDB;

INSERT INTO Users (userName, userPswd) VALUES
('admin1', 'secret1'),
('admin2', 'secret2');
```

You must specify the **InnoDB** engine for a database table :
ENGINE = **InnoDB**

Full explanation of different ***mySQL database engines*** :
http://dev.mysql.com/doc/refman/5.0/en/storage-engines.html

d. a ***demonstration*** of your completed web site should be recorded by a *30-day free-trial software Camtasia Studio* 8 (http://discover.techsmith.com/try-camtasia/clkn/https/www.techsmith.com/download/camtasia/).
You should save different parts of your demonstration into different **.mp4** files. In a *Word* document named **video_list.docx**, briefly describe the main content of each demo video file you have created. The video files will facilitate the lecturer to have in-depth evaluation of your web application. Here are some online tutorials for **Camtasia Studio 8** http://www.techsmith.com/tutorial-camtasia-current.html :
Getting Started: 1 - Record Full Screen :
http://www.techsmith.com/tutorial-camtasia-record-full-screen.html
Produce and Share an MP4 Video :
http://www.techsmith.com/tutorial-camtasia-produce-and-share-mp4-video.html

9. Assessment criteria of your project

a. The functions implemented can perform correctly in *general* and *special* situations
b. *Enough detail* of database records and extensive *data validation*
c. Techniques used to promote *code reusability* (e.g. share common PHP/JavaScript/CSS files amongst different web pages) and *standardize the user-interface* of the web pages
d. Coding style (e.g. indentation, meaningful variable names, modularity by user-defined functions etc.) and meaningful *comment* is added to program codes
e. *Creativity* to enhance implemented functions so that they become easy to use, more interactive to the users or can handle some problems in real life situation
f. Screen design and overall *quality of the integration* of different functions in the web site

10. A guideline for web development

It is a step-by-step approach I suggested for inexperienced web developers to develop the web site easily:

- decide what information to be displayed and design a number of web pages in HTML code (not PHP code at this stage) to display the information
- think about the site structure by creating different sub-folders to store files of different purposes (e.g. **images** folder to store image files, **style** folder to store CSS files, **Connections** folder to store files which define the settings for database connection) and design the linkages between the pages. You can easily view the site structure using DW8's site map view
- create HTML web pages (do not add JavaScript so soon) and design the layout with HTML codes and CSS rules. It is a good practice to check your .html files can pass the XHTML validation after completing a .html file
- when using CSS, it is preferred to create *external CSS files* (stylesheets) which can be reused in other web pages, so that other pages can have consistent formatting
- use DW CS6's template features which can help you to create a new page with a standard layout and also it provides common editable regions for web pages created from the same template.
- define frameset(s) and navigation bar or menu to link up different pages
- add JavaScript code to produce more interactive behaviors (such as validate data in the form, highlight a table row with different background color when the mouse moves over a table row). It is preferred to use *external JavaScript file* which will be reused in other web pages
- replace hyperlink text with image / button to beautify the links. Dreamweaver can help you to create nice Flash buttons easily
- finally, it comes to the hardest work, that is to convert some of the HTML codes into PHP codes in order to generate dynamic contents from data extracted from database, cookie and PHP pre-defined arrays ($_POST, $_GET, $_COOKIE, $_SESSION, $_FILES, $_SERVER etc.)

11. Penalty for plagiarism

- Each student needs to submit his/her own work. Plagiarism (抄襲) will be treated seriously.
- All group projects that have been found involved wholly or partly in plagiarism (no matter these projects are from the original authors or from the plagiarists) will score ZERO marks. Furthermore, disciplinary action will be followed.

Late submission will receive ZERO marks