

**Hong Kong Institute of Vocational Education**  
**Higher Diploma in Telecommunications and Networking (IT114103)**  
**Academic Year 2016/17 (Semester Three)**

**Assignment**

Module Title: Web Application Development Frameworks  
Module Code: ITP4922  
Deadline: 17 July, 2017

## ***Mark***

This assignment is part of the EA of this module and contributes 30% of total module marks.

## ***Submission Method and Deadline***

Submission Deadline is on or before 9:30 a.m. Monday, 17 July 2017

Each group of students is required to

1. Hand in a hard copy report to the submission box outside Room C440 at the IT Departmental Office. The front page of your submission should include the programme title and code, module title and code, group number, student identity numbers and student names.
2. Submit the report and web application including all the well-formatted source code, sql file and report to moodle.

## ***Demonstration***

All students are required to demonstrate their assignment at lab session. You will fail this module if you do not present the assignment in the demonstration session.

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## ***Objectives***

In this assignment, you are required to:

- Apply software development skills to develop a web application which is user-friendly, interactive, robust and easy to use and maintain
- Apply the knowledge you learned such as HTML, CSS, PHP, SQL and MVC in this module to solve tasks.
- Develop a web application for the party house reservation system

## ***A simplified scenario and background***

Based on the following scenario and user requirements, you are required to design and development a web application.

### **Background**

- A new party house is now open and provides different venues for rental.
- The party house company has many party room venues renovated with different themes such as England, Spanish or movie style. Each venue equipped with different facilities such as karaoke, board games and card games for usage. Additional equipment is available for rental.
- The venue opening hour are 10:00am to 12:00pm, Mondays to Sundays.
- The minimum time for rental 2 hour. The booking period is hourly based.
- The availability of booking period is two weeks.

## System requirements

- A new system is going to develop a web application for reservation operations and support venue rental operations.
- The system supports three types of users, including public users, registered users, administrators. the type of users determines right to access level of system functionality.

## Public users

- No login is required to access the web application.
- Public users browse the basic information of the company
- Public users can search and check the availability of the venues and price.
- Public users can search and check the availability of the equipment and price.
- Public users can search and check the status of the venues and equipment.

## Registered users

- Users are required to login with password before using the system.
- Only registered users are allowed to reserve the venues
- Registered users can access the user profile including basic user information such as name, login identification, name and password.
- Users are able to see the rental records, including both past events and coming events
- Users can reserve different venue.
- Users can also cancel the booking and administrative fee
- (Assume the payment are made by credit card and no credit operation is required)

## Administrator

- Administrators are required to login with password before using the system.
- Administrators do not have right to any rental venue.
- Administrators can set any accounts to be valid or invalid. When an account is set to be invalid, the invalid account is restricted to access the system.
- Administrators can check and update the rental records.
- Administrators search the rental records.
- Administrators can manage rental venues. The venue information includes place, Capacity, Size, venue Size, location, type and theme. The management operation includes new venue creation, venue information update, venue related equipment assignment, temporary suspend the availability of the venues and etc.
- Administrator can manage equipment for rental. The equipment information include name, rental price, rental status.
- Administrator use the report generation function to check the usage of a venue.

## ***Technical Specification***

You are required to using the PHP and MySQL to design and develop the system for the above background needs.

You MUST apply the following SKILLS for your new system:

- Use PHP and MYSql to dynamically generate HTML page
- Use session checking and login control
- Other skills, CSS, bootstrap

Some parameters used for connecting your database must be:

- hostname: localhost or 127.0.0.1
- database: Partyroom
- username: root
- password: 1234

## ***Assignment Report***

In addition to the web application development, you are required to write up a short report covering the following:

- Assumptions regarding the problem context
- Brief description (1 or 2 pages only) on the characteristics or good design of your application.
- Application design with website layout diagram (e.g. site map)
- Test Plan and Test Cases, including different test scenarios and the required screen dumps
- ER diagram
- Well documented Source Code
- Clear setup guide of your application. It includes the SQL file and related data
- List of tasks for each individual student

## ***Group Assignment***

This is a group assignment. You can form a group with the maximum of **THREE** students. Each student is required to specify his/her part of the individual work in the assignment and the percentage of contribution.

### ***Assessment criteria for your assignment***

- The functions implemented can perform correctly in general and special situations.
- Correct database design, and enough detail of database record and extensive data validation.
- Techniques used to promote code reusability and standardize the user-interface of web pages.
- Coding style (e.g. indentation, meaningful variable names, modularity by user-defined functions etc.) and meaningful comment is added to program codes.
- 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.
- Screen design and overall quality of the integration of different functions in the web application.