

## Project I Option 2

### An Online Learning System Framework

Team project of at most three, two preferred. Solo is fine.

In this project, you will create an online learning system framework (toy version of Canvas) for instructors.

This system will facilitate the creation of online learning materials. This online learning system framework shall support:

1. Module creation (create different learning modules)
2. Topic creation (create topics under each module)
3. Assessment creation (for instructor to create tests, assignments)
4. Instructor can test run the tests created (like in student view).

This web based learning system framework will allow instructors to create any online learning system.

Your system shall have a **login page** that will only allow registered user(in our case, instructors) to login to create an online learning environment for his/her course. Since an online system will be organized using modules, so your system shall facilitate this need and allow instructor user to create modules. For example, if an instructor wants to partition his/her course into three major parts then he/she most likely will create at least three modules. Say, an instructor who teaches Basic Web Development may want to set his/her course into three modules: client side module, server side module, and backend database module. In addition, he/she may want to create assessment module to assignment homework, give tests etc.

For each module, the instructor can create different topics for user learning. For example, the instructor can create one topic for HTML, one topic for CSS, and one topic for JavaScript. For each topic, it may include links to prerequisite requirement(s) to take this topic, online video urls, pdf files, power point slides, web pages, etc. Each topic doesn't have to include all these just mentioned. It all depends on individual instructor to decide. But your system shall provide these options for instructors to do so. The same will apply to other modules when instructions create topics.

For assessment component of your project, you system shall be able to handle multiple choice and fill-in of blanks tests. For example, to facilitate an instructor to create multiple choice assessment, your framework shall contain user friendly interface to allow instructor to assign total points for this assessment, input question and answers, display assessment statistic for student at the end of an online test (e.g., how many questions wrong and how many right etc.).

If you implement extra features, you will receive extra points.

For example,

1. Your system allows instructor to upload a file (you can set the form and format of this file) and **automatically** populate questions and answers so that instructor doesn't have to enter questions or answers one at a time in a test creation interface. This will speed up the creation of an online test. Most likely you need to parse the documents uploaded by the instructor and retrieve the

questions and answers contained in this file and process them and then store these into backend database.

2. Allows instructors to send email to other users, (or even a group of users)
3. Allows user to post questions and allows others to comments or answer these questions.
4. Etc.

## Requirements

- Use XAMPP
- Use PHP as server side script (if you decide to use others, talk to your instructor)
- Use MySQL. Design your own database and table(s).
- Name your web site *yourNamePHP*
- When you connect to MySQL database. Make sure that you use yourFirstNameLastName as the user name in MySQL connect command. For example, if your name is called John Smith then

Your command to connect to MySQL Database would like

```
mysql_connect( "localhost", "johnsmith", "johnsmithpass" )
```

- Export your MySQL database as *johnsmith.sql* so that I can regenerate your database on instructor's computer. (replace *johnsmith* with your name)
- Make sure that you name your database *johnsmithdatabase* . (replace *johnsmith* with your name)
- Remember to add these lines to *johnsmith.sql* in order to create user which is used in mysql connect command (once again, replace johnsmith with your name)

```
-- create user to query product database --
```

```
GRANT SELECT, INSERT, DELETE, UPDATE
```

```
ON johnsmithdatabase.*
```

```
TO johnsmith@localhost
```

```
IDENTIFIED BY 'johnsmithpass';
```

*Once again, replace johnsmith with yourfirstnamelastname*

- Create a write up report (in word or pdf format) which include a cover page with your name, this class information, such as course name, section, instructor, etc. Second page is table of content.
- First chapter is the description of your online learning system.

- Second chapter is your system design (for example, you use MVC to design your system or something else). You can use diagram to illustrate your design if you want to.
- Third chapter is your implementation. It should include the sql file content that you submitted, the source code of all pages. You can simply copy and paste to this report
- Fourth chapter includes your test run results which shall include test run screen shots. As detailed as possible.
- Fifth chapter is discussions and conclusions. Mention about the cool features of your web site. Things for future improve. The limitation of your web site, etc...
- Video link of your demonstration of your system.
- List of extra features that you implemented (in order to receive extra credits)
- You can include a References chapter at the end or as Appendix which may contains links or any information such as conference papers, or journal papers.

#### Submission

- Zip your website which includes all your application files.
- The sql file which can regenerate your database and create a user to connect to your database
- The report in word or pdf format.
- A video link to demonstrate how you design your web site, features of your web site, and how to use it.
- Zip all above to a folder and submit that folder to Canvas.

#### Due

3/28 before midnight

#### Note 1

Make sure your web site can run independently after one download from Canvas. I.e., it shall be portable to others' system that run XAMPP and there is no local file directory dependence on your machine.

#### Note 2

Post your demo on the web and give me the link.

## Submission instructions

### Project document:

1. design document includes design, software architecture, and database schema
2. all source code
3. user manual with test run screenshot
4. An mp4 video YouTube link that explain your project.

You may put 1 and 3 together. First page of the project document is a title page with course title, project title, and all members' names on it. Second page contains project summary and a YouTube link which points to your video demo. Thirds page contains feature successfully implemented and feature not successfully implemented and contribution of each member on this project. Fourth page contains table of content.

Put all source codes to a folder and zip the folder call it *yourname-source-code*.

Put *project document*, *zipped source code folder*, and *Video file* into a folder call it *yourname-project-1*. Zip this folder into *yourname-project-1.zip*. Submit *yourname-project-1.zip* to Canvas.

Submit to Canvas 11/2/2020 before midnight.