

Faculty of Science

**Course**: CSCI 3230U: Web Application Development

**Assessment:** Final project

**Topic:** HTML, CSS, JavaScript, jQuery, PHP, PDO, MySQL

# Overview

This group project is designed for you to demonstrate the skills that you have learned in this course. The final project that you submit in the last week of classes will be a completed web application. Non-functional requirements, especially those associated with production-readiness, will be considered extremely important when marking this project. You are expected to *work in a group of two* when completing this project, but some exceptions can be made in rare cases. Students will be discouraged from working alone on the project, as this eliminates one of the learning objectives of this assessment.

***Note****: Any projects from individual students will not be accepted, except if special permission has been given by the instructor in advance.*

The project will be run in your own web server/database (e.g. XAMPP) on your UOIT laptop. The entire project will be maintained in Git (e.g. GitHub). Essentially, your submission will consist of access (e.g. credentials) to your Git repository. The instructor will then use this access to download the latest version of your project, along with other information (e.g. commit logs) available through Git.

# Detailed Instructions

#### Choosing a Topic

The project topic is, for the most part, up to you. Therefore, ensure that you choose a project topic that lets you demonstrate those skills. Consideration will be given to projects whose functionality is very different from sample applications and those developed in assignments in this course. When evaluating your project, I will consider this as requiring extra work. Work done often equates to a higher grade.

It is possible that you combine this project with another project in another course, except that what you will submit must be a fully-functional web application and its database in MySQL. If you decide to do this, you do so at your own risk, as timing issues could result in you being behind on your work in this course, due to delays in another course. Finding a group willing to use your project from one course in their own project in another might also be difficult. This will be your responsibility.

It is also fine that you do a project related to industry. If someone you know wants a web application developed, and it lets you demonstrate the skills you’ve learned in this course, then you can use it for your project (even if you plan to sell that web application when you are finished). Please keep in mind that nothing your prospective buyer says or does will affect the due date or expectations that I have for this project. No matter what happens, this project is due when it is due, and I will expect a certain degree of professionalism and production-readiness.

#### Basic Requirements

It is your job to incorporate as many course concepts into your project as possible. I would say that at a minimum, your project should have dynamically-generated HTML, form submission and validation, session tracking, and storing and retrieving data from the database. In addition, you should also pay attention to the non-functional requirements discussed in the lectures (e.g. MVC architecture, security, usability). Both functional (course concepts) and non-functional requirements will be considered in your evaluation.

At least one of your pages should contain significant JavaScript (and/or jQuery) to create an interactive web page, including dynamically modified DOM elements. Consider some of the sites demonstrated during the first week to get an idea of the sort of interactive functionality you will be expected to provide, granted on a smaller scale.

The actual size of the project (in terms of the number of pages) will differ from group to group. Due to great differences in how pages operate, a well-designed website often has more numerous PHP files, each containing less code. Ultimately, the factor being considered is how much work appears to have gone into the project. This does not count learning course concepts. Some people take longer to learn course concepts than others, but this does not mean that you worked harder on the project in terms of evaluation.

#### Evaluation

When evaluating this project, the instructor will attempt to give a metric to the amount of work involved, considering several important factors (design, cleanliness of code, code comments, variable/function naming, security checks, error checking, usability/user-friendliness, accessibility, and performance). This metric will be affected by the size of your group.

As for the look and feel of your application, this will be somewhat important. You will need to ensure that your project is presentable (line up form fields, give a non-default colour scheme, etc.), but you won’t need to wield extreme CSS to do so. If you incorporate concepts outside of this course (e.g. PHP frameworks, Facebook API) the effort will be counted, but with a reduced weight. Ideally, you should focus mostly on concepts from this course.

# How to Submit

To submit this project, please push all your work to your Git repository, and submit access to that into the drop box for this assignment on Blackboard. It is your responsibility to ensure that all necessary files are included. If a file is missing from the repository, you do not get credit for it. Most groups will use GitHub, and thus can merely grant permissions to the instructor’s GitHub account (randyfortier).

# Evaluation

For 15 out of 25 of the allocated project marks, students will be evaluated subjectively. The remainder of the marks will be allocated based on whether or not your web application is functional, and whether or not you have demonstrated all of the major course concepts. Factors that will be taken into consideration include:

* Compliance with correct syntax (HTML, CSS, JavaScript, PHP)
  + Validation will be used during marking
* Usability (enhancing the user experience)
  + e.g. Client-side validation of form input
* Accessibility (making the website more accessible to those with different needs)
  + e.g. Providing alternative text for tables, images, etc.
* Code cleanliness
  + e.g. Proper indentation, element/class naming
* Adherence to best practices for web site design, development
  + e.g. Separation of style from content
* Amount of work done
  + Not including learning the technology

***Note****: Any instances of plagiarism will result in the student(s) receiving a mark of zero for the project, and further disciplinary action will be taken. Plagiarism includes, but is not limited to:*

* *Copying of (any amount of) work from the Internet, without proper citation*
* *Submitting a body of work, cited or not, that is primarily not your own work*
* *Copying of (any amount of) work from another student, past or present, without proper citation*
* *Allowing your own work to be copied by a fellow student*