

Introduction

This module takes students through the process of designing a building a web application using HTML, CSS, Bootstrap, PHP and MySQL.

There is no final exam in this module, but there are many deliverables throughout the semester. This document describes them and gives a marking scheme for each. It is very important that you read and understand this introduction at the start of the semester.

Much of the module is concerned with providing feedback, both to the staff who will be delivering the module (in terms of your progress) but also to your classmates. The more you participate in these activities, the better it is for everyone.

The final deliverable will be a fully functional website using the technologies noted above. You will be given a project brief in the first week but are free to put your own individual stamp on the project. The only constraint is that it implements the core functionality described in the project brief.

Overview

The module has deliverables and deadlines outlined in Table 1. These will be described in detail below. Note that not all deliverables attract a grade; these are covered by participation, and failure to submit something to these will attract a penalty.

There are three distinct parts to the module. These are *Background*, *Design* and *Implementation*. In *Background*, we will cover the technologies required for the project in classes.

Once the groups are assigned, we will then move to the Design part of the project, followed by Implementation. During the Design and Implementation phases each group will maintain a Wiki on Moodle, and three staff members will be available throughout the summer to answer technical questions either through the forums or by e-mail.

If you would like to arrange a special face-to-face session (whether for a group or an individual), contact Conor and we will usually be able to arrange it with a few days' notice.

Table 1: List of deliverables for the module. You do not have to submit any group preferences for May 25; if you don't, you will be assigned randomly to a group.

No.	Due	Name	Grade	Submission Type
D1	May 25	D1: Group preferences (if desired)		E-mail
n/a	May 30	Mid term exam	20	In lecture
D2	June 24	D2: Design Document	20	Moodle
D3	July 1	D3: Database implementation	5	Moodle
D4	July 15	D4: Prototype	5	Moodle
D5	July 22	D5: Software Test Report	5	Moodle
D6	Aug 5	D6: Final Product	40	On-line/ Moodle
n/a	n/a	Documentation	5	Moodle

Submissions

Some of the deliverables are individual assignments, while others are group assignments. It is **very important** that you understand the format of the submissions, as not handing up the individuals ones can lead to you not receiving credit for a submission.

Moodle and Supporting Web Site

The class will be supported on Moodle and by an online portal for managing the groups and distributing examples. You can log into the website using your ID number. Your initial password is your ID number – please change it as soon as possible. You will need to be able to access this throughout the semester.

If you don't appear to have a login for the class portal, contact Conor as soon as possible, as this means that you are not on the class list and will not be assigned to a group.

Submissions

There are two different kinds of submissions: *Individual* and *Group*. Name your deliverables as follows:

DX_IDnumber

where IDnumber is your ID number.

Note! If you ever submit something as deliverable X rather than a specific number, then you have made a mistake.

For group assignments, one group member should upload the deliverable. Name your deliverable:

DY_GroupX.

As with the individual assignments, there should **never** be an X or Y, etc. in the name. You must always put in the correct numbers.

It is not one person's responsibility to submit the work. If something is submitted late, the entire group is held responsible, so be proactive if you think that something is going to be late.

D1: Group preferences – Due May 25th.

You can either choose your own group of four people or to be assigned to a random group. If you prefer to choose your own group, one member of the group should send a mail to Conor by 5PM on May 25th with the following subject line:

[CS4065] Group ID1 ID2 ID3 ID4

Where each of ID1, ID2, etc. are the ID numbers of the people in the group. In the body of the mail, give the name of each person. Make sure you copy everyone in the list!

If you choose to be assigned to a random group, you don't have to do anything, and anyone who doesn't choose a group by May 25th will automatically be entered into a random draw for groups. Those who choose to do this will get a 2% extra credit bonus to reflect the fact that random groups can be more difficult to manage.

You can also submit an *Excuse List*, with a list of up to three people that you would prefer not to work with. We will do our best to respect this, but in any case, your mail will be kept completely confidential.

D2: Design Document – June 24th.

The design document should contain a full design for your website. Examples will be distributed during the lectures, but your document should contain the following sections:

1. Introduction
2. High level functionality
3. Web page mock ups
4. Database tables
5. Process list

The following grading scheme will be used.

Table 2 Marking scheme for D2: Design Document.

Section	Marks
Introduction	5%
High level functionality	10%
Web page mock ups	25%
Database tables	10%
Process list	50%

D3: Database implementation – July 1st.

Each group will need to create a database on a MySQL server provided by the teaching team. A sample database and code will be distributed in labs that can be used, but marks will only be given to groups that create their own database. You will also need to upload a document to Moodle detailing each table, showing the fields and their types.

The following grading *rubric* will be used for the game treatment. **Note:** a rubric differs from a grading scheme in that it describes what characterizes a deliverable of a particular mark, rather than identifying each individual mark, as you may be more familiar with. In general, the more your group adds to the standard database, the better the grade.

You do **not** need to populate the database at this stage.

Table 3 Grading rubric for D3: Database Implementation.

Grade	Description
90-100	Group has a very different database to that distributed in labs; all tables normalized and well formed with Primary Keys, etc; document very well written
80-90	Group has a very different database to that distributed in labs; most tables normalized and well formed with Primary Keys, etc; document reasonably written
70-80	Group has added extra data to the lab database; all tables normalized and well formed with Primary Keys, etc; document very well written
60-70	Group has added some extra data to the lab database; most tables normalized and well formed with Primary Keys, etc; document reasonably well written
50-60	Group used the lab database; all tables normalized and well formed with Primary Keys, etc; document very well written
40-50	Group used the lab database; most tables normalized and well formed with Primary Keys, etc; document reasonably well written
0-40	Group used the lab database; issues with implementation of tables; document poorly written

D4: Prototype – July 15th.

We will do a quick run through the existing functionality of each. Note that this is expected to be a work in progress, so we do **not** expect the website to be finished, but certain functionality should exist. Each group should upload a one page document to Moodle detailing what functionality has been implemented.

The following rubric will be used.

Table 4 Grading rubric for D4: Prototype

Grade	Description
90-100	Back end has register and search functionality; web site is basic but operational
80-90	Back end has register and search functionality; web site is text only or non-functional
70-80	Users can register but search isn't fully operational; website is basic but operational
60-70	Users can register but search isn't fully operational; website is text only or non-functional
50-60	No back end functionality; some pages working
0-50	No back end functionality; few pages created

D5: Software test review – July 22nd.

At the beginning the week commencing July 16th, groups will be paired off for testing purposes. The intention here is to do a dry run with another group to run through the same process that will be used to grade the final project.

This is an **individual** assignment. Each member of the player group will be required to fill out a questionnaire based on their experience. Grades will be given out on the basis of helpful the feedback is.

You can download a copy of the form from Moodle.

Important note! Several people, each of whom will fill out a version of this report, will test your final project. You are very strongly advised to be familiar with it before going into the software test.

Table 5 Rubric for D5: Software Test Review.

Mark	Characteristics
10	Addresses all questions; good, thoughtful answers with strong details
9	Addresses all questions; good, detailed answers
8	Addresses all questions; good answers, but some need further development
7	Addresses most questions; further development needed for many answers
6	Addresses most questions; most answers need further development
5	Addresses half or fewer questions; some answers need further development
4	Addresses half or fewer questions; many answers need further development
3	Addresses half or fewer questions; most answers need further development

2	Addresses half or fewer questions; all answers need further development
1	Does not address the assignment.

D6: Final Product – August 5th.

The final version of the project will be due on August 5th. Each group will need to submit a report to Moodle as described below.

The following grading scheme will be used.

Table 6 Marking scheme for D6: Final Version.

Section	Marks
Report	20%
Usability	20%
Registration	10%
Profiles	10%
Browse	10%
Search	15%
Auto-suggest	5%
Administration	10%
Extras	Up 10% extra credit

Documentation

Documentation of progress counts for 5% of your final grade. It will be calculated based on participation in your group's Wiki. A set of wiki pages will be created for each group that everyone is expected to add to over the course of the module; as a rough guide, an update on progress on at least one item is expected per person every two weeks.

Also, starting with **Deliverable 2** (due June 24th), a written report must be submitted through the class online portal.

Group members will take turns at being responsible for this report. The report contains a brief description of the work done that week along with a breakdown of the share of the work. The quality of the report written will contribute to your participation grade; for example, a one liner will get a zero, while a comprehensive two paragraphs will get full marks.

Group Marking

All group projects suffer from the credit assignment problem. That is, how to fairly reflect the work each member put into the project. The proportion of work each person did will be an average of all the reports handed in, with the final one counting for three times as much.

Thus, the average contribution that each person makes can be calculated by:

$$(D2 + D3 + D4 + D6*2)/5$$

where DX refers to Deliverable X. In the case where everyone did 25% (assuming four people per group) of the work all the time, everyone will get the same mark. However, where someone did more, they will get a higher proportion of the total marks.

At the end of the semester, the total marks will be calculated on a per-group basis, and then modified on an individual basis so that anyone who did less than 25% gets less, while anyone who did more gets a higher mark.

Retrospective Marking

There can be **no** retrospective marking. That is, once the proportions are handed up and agreed to, they cannot be changed. If you believe you have a problem with your group it is crucial that you report it immediately.

You can see some examples in the notes from the first lecture, which are available for download on the website.

Vacations

Given that the module will run over the summer, it is possible that people will take vacations and not be able to contribute to group work and Wiki updates during this time. This is acceptable as long as you inform the group in advance and put this on your group Wiki page.

Late submissions

Submissions will be accepted late with a 10% penalty per day, to a maximum of five days late.

Incorrectly tagged submissions that are otherwise on time will also have a 10% penalty.

For group submissions, **all** group members will receive the penalty, so please don't be passive about submission of work.

