COMP 1531 S2 Group Project
Online Survey System
16 September 2017

1. Online Survey System Implementation Guidelines:

1. The online-survey system must be implemented as an **object-oriented** application using SQLite3 as the data-tier. In week 08 of the lectures you were introduced to SQLite3 and given examples of application programming in Python to interact with the database (Refer tutorial 08). In week 09, you will be introduced to SQLAlchemy, an object relational mapping tool which provides a layer of abstraction when interacting with databases, abstracting a lot of the SQL code you are otherwise required to write when dealing with databases. For the group project, you can choose to use "raw" SQL directly in Python or use SQLAlchemy. Both implementations **will be accepted** and marked **equally**.

2. As outlined in the project specification, you will be required to implement a security infrastructure as outlined in the requirements guideline. As security is being covered only in week 10 in lectures, this week (week 09) you will be doing a detailed lab exercise that walks you through the process of implementing a basic authentication using the Flask extension Flask-Login. Tutors will guide you through this exercise to help you become familiar.

3. We expect you to adhere to "some" level of MVC decoupling when building your modules. We will accept if you have some "business" logic embedded within your controller, but we would definitely like to see your view and model components decoupled.

4. A set of test-cases will need to be implemented for the final iteration in week 13. In week 10 of the lectures, we will look at how to write test-cases for flask applications

5. As previously noted, you are free to use any front-end tools such as HTML, CSS or any CSS frameworks (e.g., Material CSS, Bootstrap etc.,) to build the UI for the application. You are also permitted to use existing templates (if you find something suitable) for your application, however you need to **"credit"** the source of the template. If you do not "credit" the source, you will be caught for plagiarism.

6. You are provided with three csv files – enrolment.csv, courses.csv and passwords.csv which can be downloaded from Webcms3 under the Assignments section. Data from these files must be uploaded to the database. The purpose of these files is explained in the requirements guidelines.

2. Iteration 2 – Week 11 Lab Session

Iteration 2 will be a milestone check-point with tutors **only**. No presentation to class is required.

2.1 Iteration 2 – Deliverables

(1) Features are to be implemented

i. Implementation of security with three types of users (student, staff and admin) and display of appropriate dashboard depending upon the role of the user
ii. Use of database as the persistence layer to store all information (survey, questions, responses, credentials etc.)
iii. Implementation of survey work-flow process as outlined in the requirements guidelines

iv. Multiple response types for questions
v. Optional questions **not** required for this iteration
vi. Visualisation of survey results is **not** required for this iteration

(2) Document artifacts

i. An updated list of user-stories along with key acceptance criteria to comply with the revised project specification. Some of these acceptance criteria will need to be transformed into test-cases for iteration 3.
ii. A revised conceptual class diagram with **attributes only**.
iii. A sequence diagram to capture survey workflow process (This could be done as four separate sequence diagrams to show (a) survey creation by admin (b) survey review by staff (c) survey filled out by student (d) survey closure by admin

*(**Note:** If you are currently experiencing difficulties working together as a group, please contact either your tutor or myself to have the conflict resolved immediately. Complaints brought to our notice in the week of the demonstration will **not** be accepted. However, if a complaint is brought to our attention earlier, we will endeavour to resolve the issue and if the "person" continues to fail to contribute (despite our efforts to resolve), this person will be awarded a mark of 0 for the group project iteration 2 component.*

3. Iteration 3 – Week 13 Lab Session

Iteration 3 will be the final demonstration of your completed online survey application. This demonstration will be to the class (similar to your iteration 1 demo).

3.1 Iteration 3 Deliverables

(1) Features are to be implemented

All features (including any changes or additions) made to the end of iteration 2 will need to be demonstrated.

(2) Document artifacts

A final report is to be submitted that includes the following artifacts:

i. An updated list of user-stories along with key acceptance criteria to comply with the revised project specification.
ii. A revised (if any changes needed) conceptual class diagram with **attributes only**.
iii. An entity-relationship (ER) design (The ER design must map to the relational schema of your database)
iv. A log that records the responsibilities allocated to each team member, progress of tasks using a velocity chart (a hand-drawing will suffice, no sophisticated tool needed)
v. A sequence diagram to capture survey workflow process (This could be done as four separate sequence diagrams to show (a) survey creation by admin (b) survey review by staff (c) survey filled out by student (d) survey closure by admin
vi. A front-sheet that lists (1) your group-name (2) your group members (3) Percentage of work contributed by each team member and signed by all group members.

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vii. A set of test-cases written for the key acceptance criteria related to core functionality. We do not require an extensive suite of test-cases for every acceptance criteria outlined in your user-story. We will provide a list of core features for which we would like to see test-cases written in week 10. In week 10 lectures, we will look at examples on how to write these test-cases.

(3) Final Submission

- All working software will need to be submitted by Monday, Week 13, 11:59.
- You will need to demonstrate in your lab session using the code you have submitted to the cse server
- All reports will need to be submitted by Friday, Week 13, 11:59.
- You will be advised on further details on how the report and working software are to be submitted in due course.