COMP1640 (2024/25)	Enterprise Web Software Development	Contribution: 100% of course
Course Leader: **Mr Matthew Prichard**	**Group and Individual coursework**	**Deadline Date:**

This coursework should take an average student who is up-to-date with tutorial work approximately 50 hours

Feedback and grades are normally made available within 15 working days of the coursework deadline

Learning Outcomes:

1 Evaluate the product, team members and the development process in an agile scrum team environment with members from diverse backgrounds.

2 Synthesise and manage a wide range of technologies to meet business, security, and quality requirements.

3 Demonstrate substantial ability to develop creative solutions to problems, and to think independently, analytically and creatively whilst communicating clearly and effectively, in a range of forms, taking account of different audiences.

Coursework Submission Requirements

- An electronic copy of your work for this coursework must be fully uploaded on the Deadline Date using the link on the coursework Moodle page for COMP1640.
- For this coursework you must submit a single PDF document. In general, any text in the document must not be an image (i.e. must not be scanned) and would normally be generated from other documents (e.g. MS Office using "Save As .. PDF").
- There are limits on the file size (see the relevant course Moodle page).
- Make sure that any files you upload are virus-free and not protected by a password or corrupted otherwise they will be treated as null submissions.
- You must NOT submit a paper copy of this coursework.
- All coursework must be submitted as above. Under no circumstances can they be accepted by academic staff.

Scenario

This is a group coursework. You will be assigned to a group.

You need to adopt agile scrum working practices and document your meetings appropriately. Ideally you will need:

- A database designer,

- An information architect,

- A programmer or 2 or 3,

- A web designer,

- and a tester,

as well as a scrum master and product owner, but more than one person can be in any technical role. No one is to take the role of project manager, but there could be a technical team leader. Your tutor will take the role of client and any questions for the client must come through your team's product owner.

You will get an individual grade (40%) based on your report. There is also a group grade (60%), weighted by your contribution to the team effort (from 0% to 100%).

Specification

You are required to build a web-based secure role-based system for eTutoring in a large university. Full details of the system will be given in lectures.

The system must meet the following criteria:

- All students must have a personal tutor.

- Any authorised member of staff can allocate or reallocate personal tutors to students. The student and the personal tutors will get notification emails when this happens.

- Bulk allocation of students to their personal tutor (eg 10 at a time) needs to be implemented.

- All students and their tutors are to use the eTutor system for messaging, arranging and recording meetings (both real and virtual), uploading documents and commenting on them, and for blogging.

- Email between students and their personal tutors is to be used only for notification of events recorded in the backend database. No other content is to be sent via email.

- Student and staff data is accessed from the university MIS system. The maintenance of this is outside the scope of this project.

- Each student will have their own personal dashboard summarising their interaction with their personal tutor.

- Each personal tutor will have a dashboard of their personal tutees that can be sorted and filtered appropriately

- Authorised staff will have access to the dashboards of other staff, and to individual dashboards for students.

- The interface must be suitable for all devices (eg mobile phones, tablets, desktops)

Assumptions

You must clearly state any assumptions you make.

Reports

A number of reports need to be made available. For example

- Statistics

  o Number of messages in last 7 days

  o Average number of messages for each personal tutor

- Exception reports

  o Students without a personal tutor.

  o Students with no interaction for 7 days and 28 days.

Tasks

1. Work as a team using agile scrum methods to develop and test a secure web-based system to meet the above specification.

2. Create a screencast recording (including screen and sound) demonstrating the key functionalities of the system.

3. Present the finished product to a non-technical audience to try to persuade them to purchase your system.

4. Document the system to an appropriate standard creating a group report based around the 6 group components listed below.

5. Provide an individual report using a weighted scoring model with commentary, including an evaluation of the design process you followed and your reflection on the finished product, and on the contributions of your team members.

Deliverables

1. A **PDF Group Report based on a Group Repository** containing all the artefacts produced by the team (eg ERD, minutes, test log, product backlog) with a menu allowing easy access to its content. The repository must be secure, but accessible by your tutors. **The Scrum Master is responsible to ensure this gets uploaded by the due date. It is not essential that all members upload a copy of the group report, but it must be clear which students are in which group.**

2. An **Individual PDF Report**
   The report must give the **URL** of the Group Repository, the Screencast and the website and any **usernames or passwords** needed to access it. The **individual component of the marking will be based on your report,** so ensure this has evidence that your system meets the specified requirements. **The text in your individual report must be entirely your own words.**

3. A **Presentation** and Screencast
   You must be present as part of the team that presents the finished product to your tutor and should contribute to the screencast. The **presentation** should be pitched at a non-technical audience to try to persuade them to purchase the product; the **screencast** should demonstrate the functionality of the system.

Assessment Breakdown

Group Component (60%)

This will be assessed based on a group report and a group repository created by the group on a secure shared area accessible to your tutors. Passwords and URL must be provided in individual reports. Must be suitably structured with a menu. Suggested location: GitHUB, Google Docs, SharePoint 365, own website, DropBox or another repository.

Database   10%
Expect: Security, appropriate data types and validation, clear ERD, referential integrity implemented, enables roles to be implemented.

Site design   10%
Expect: Responsive design, clear information architecture for both mobile and desktop, aesthetically pleasing, good usability, meets accessibility criteria.

Functionality   10%
Expect: Role based security, submission of reports, email notification, summary and exception reports, UML diagrams, code snippets

Testing   10%
Expect: Test plan, test log, sufficient data to fully test, evidence of testing finding errors, test items linked to user stories in the product backlog.

Agile methods followed   10%
Expect: Burn down charts, minutes of meetings, user stories, sprints, product backlogs.

Screencast and Presentation   10%
Expect: Professional standard of presentation promoting the product, with contributions **by**

all the team members, Screencast demonstrating all the main features of the product. Screencast can be narrated by one person.

Weighting factor for each student (scale 0 to 10)

To be used in conjunction with the weighted scoring model shown in the lecture. This will only really factor in the final group grade if a student has a 0-6 throughout. Staff have the final say over the grades, not other students These scores are to be used as a general indicator of engagement and to help students learn to evaluate others objectively.

Commitment	Weight
Fully committed	10
Committed	8
Contributed substantially	6
Contributed partially	4
Minimal contribution	2
No contribution	0

Individual Component (40%)

N.B.: No shared content in the report, i.e. must be entirely in your own words. Must include title page with a list of team members and roles, URL and password of group repository, site and screencast.

Evaluation of product and process   10%
Expect: Appropriate screen shots and commentary, with cross references to group documents, evaluative comments on the product and on the agile process and design method used to build it.

Evaluation of team   10%
Expect: A weighted scoring model of the entire team (including yourself) with own choice of criteria and weighting, supported by commentary on each individual member. Model is expected to produce a range of scores for the individual members.

Self-evaluation   10%
Expect: Honest description of own contribution, and reflection on own performance and any lessons learnt

Quality of documentation   10%
Expect: NO SHARED CONTENT, professional standard, header page, page numbers, table of contents, headings, cropped images, figure captions, no spelling or grammatical errors.

Indicative Grading Criteria

>=70%
Well designed system to fully meet the requirements
Professional standard of report, with appropriate documentation
High level of individual commitment
High level of evaluative commentary

60-69%
Well designed system to meet most of the requirements
Professional standard of report
High level of individual commitment
Limited evaluative commentary

50-59%
Well designed system to meet most of the requirements
Acceptable standard of report
Good level of individual commitment
Limited evaluative commentary

40-49%
Acceptable system to meet most of the requirements
Acceptable standard of report
Acceptable level of individual commitment
Limited evaluative commentary

<40%
Poorly designed system
Few requirements met
Poor standard of report
Limited individual commitment
No evaluative commentary