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| COMP1640 (2023/24) | 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. | | |

Plagiarism is presenting somebody else's work as your own. It includes: copying information directly from the Web or books without referencing the material; submitting joint coursework as an individual effort; copying another student's coursework; stealing coursework from another student and submitting it as your own work. Suspected plagiarism will be investigated and if found to have occurred will be dealt with according to the procedures set down by the University.

All material copied or amended from any source (e.g. internet, books) must be referenced correctly according to the reference style you are using.

Your work will be submitted for plagiarism checking. Any attempt to bypass our plagiarism detection systems will be treated as a severe Assessment Offence.

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 collecting student contributions for an annual university magazine in a large university.

The system must meet the following criteria:

- The University has a **Marketing Manager** to oversee the process.
- All Faculties have a **Marketing Coordinator** who is responsible for managing the process for their Faculty.
- All **students** have the opportunity to submit one or more articles as Word documents to the magazine.
- All students can also upload high quality images, e.g. photographs.
- All new contributions are disabled after a closure date for new entries, but updates can continue to be done until a final closure date.
- All students must agree to Terms and Conditions before they can submit.
- Once a contribution is submitted the system emails a notification to the Faculty's Marketing Coordinator, who must make a comment within 14 days.
- A Marketing Coordinator can only access contributions by students in their Faculty.

Commented [TN1]: Does this apply for images as well

- Each Marketing Coordinator needs to be able to **interact with the students in their Faculty in order to edit** the contributions and to select those for publication.
- The University Marketing Manager can view all the **selected contributions** but cannot edit any. They need to be able to download all the selected contributions after the final closure date in a ZIP file for transfer out of the system.
- An **administrator** maintains any system data, e.g. closure dates for each academic year.
- A **guest** account for each Faculty can be used to view the **selected reports**.
- Statistical analysis (e.g. number of contributions per Faculty) needs to be **available**.
- The interface must be suitable for all devices (eg mobile phones, tablets, **desktops**).

Commented [TN2]: Can they edit or ask students to edit?

Commented [TN3]: Does this mean all contributions or just some contribs and who will select this

Commented [TN4]: What report? And is it selected or all and who will select this

Commented [TN5]: Available to which roles

Commented [TN6]: Other questions:
Can students hold the role of a staff simultaneously
Does Faculty equals to major or is it a different type

Assumptions

You must clearly state any assumptions you make.

Reports

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

- Statistics
 - Number of contributions within each Faculty for each academic year.
 - Percentage of contributions by each Faculty for any academic year.
 - Number of contributors within each Faculty for each academic year.
- Exception reports
 - Contributions without a comment.
 - Contributions without a comment after 14 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%

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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.



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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.

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Indicative Grading Criteria

$\geq 70\%$

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