

# Cardiff School of Computer Science and Informatics

## Coursework Assessment Pro-forma

Module Code: CM6312

Module Title: Adopting Technology

Lecturer: Wei Zhou, Fernando Loizides

Assessment Title: Requirements, Prototyping and Evaluation

Assessment Number: 1 of 1

Date Set: **October 2<sup>nd</sup> 2023**

Submission Date and Time: by **14<sup>th</sup> December** at 9:30am

Feedback return date: **11<sup>th</sup> January 2024 (20 working days after submission date)**

If you have been granted an extension for Extenuating Circumstances, then the submission deadline and return date will be later than that stated above. You will be advised of your revised submission deadline when/if your extension is approved.

If you defer an Autumn or Spring semester assessment, you may fail a module and have to resit the failed or deferred components.

If you have been granted a deferral for Extenuating Circumstances, then you will be assessed in the next scheduled assessment period in which assessment for this module is carried out.

If you have deferred an Autumn or Spring assessment and are eligible to undertake summer resits, you will complete the deferred assessment in the summer resit period.

If you are required to repeat the year or have deferred an assessment in the resit period, you will complete the assessment in the next academic year.

As a general rule, students can only resit 60 failed credits in the summer assessment period (see section 3.4 of the [academic regulations](#)). Those with more than 60 failed credits (and no more than 100 credits for undergraduate programmes and 105 credits for postgraduate programmes) will be required to repeat the year. There are some exceptions to this rule and they are applied on a case-by-case basis at the exam board.

NOTE: The summer resit period is short and support from staff will be minimal. Therefore, if the number of assessments is high, this can be an intense period of work.

This assignment is worth **100%** of the total marks available for this module. If coursework is submitted late (and where there are no extenuating circumstances):

- 1 If the assessment is submitted no later than 24 hours after the deadline, the mark for the assessment will be capped at the minimum pass mark;
- 2 If the assessment is submitted more than 24 hours after the deadline, a mark of 0 will be given for the assessment.

Extensions to the coursework submission date can **only** be requested using the [Extenuating Circumstances procedure](#). Only students with **approved** extenuating

circumstances may use the extenuating circumstances submission deadline. Any coursework submitted after the initial submission deadline without \*approved\* extenuating circumstances will be treated as late.

More information on the extenuating circumstances procedure and academic regulations can be found on the Student Intranet:

<https://intranet.cardiff.ac.uk/students/study/exams-and-assessment/extenuating-circumstances>

<https://intranet.cardiff.ac.uk/students/study/your-rights-and-responsibilities/academic-regulations>

By submitting this assignment you are accepting the terms of the following declaration:

**I hereby declare that my submission (or my contribution to it in the case of group submissions) is all my own work, that it has not previously been submitted for assessment and that I have not knowingly allowed it to be copied by another student. I declare that I have not made unauthorised use of AI chatbots or tools to complete this work, except where permitted. I understand that deceiving or attempting to deceive examiners by passing off the work of another writer, as one's own is plagiarism. I also understand that plagiarising another's work or knowingly allowing another student to plagiarise from my work is against the University regulations and that doing so will result in loss of marks and possible disciplinary proceedings<sup>1</sup>.**

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<sup>1</sup> <https://intranet.cardiff.ac.uk/students/study/exams-and-assessment/academic-integrity/cheating-and-academic-misconduct>

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## Assignment

You will be given a topic and description of the software you will be creating in class. The report should be no more than 4000 words in total.

## Report and expected contents

The report should be separated into the following parts.

### Stakeholder Identification and Requirements (included in week 5 presentation)

#### Stakeholders (5%)

Firstly, identify all the stakeholders with a description. Justify briefly why you chose these stakeholders.

#### Persona of one stakeholder (10%)

Choose **one** of your main stakeholders and bring them out in a persona.

#### Functional requirements (5%)

Once these stakeholders are identified you need to identify functional requirements. Be thorough. Requirements are vital to be identified early on as these will then act as the threshold of whether you have successfully been able to create a solution that solves the initial problem for the client. Therefore, once you identify the requirements, understand and mark which are the ones that will be needed for a minimum viable product (MVP) to occur. Label these with a unique identifier to be used later. Use appropriate methods to obtain these.

#### Non-functional requirements (5%)

Thoroughly identify the non-functional requirements and justify why these are needed. Label each with a unique identifier. Mark those which will be needed for a minimum viable product (MVP) to be reached. Use appropriate methods to obtain these.

#### Data requirements (5%)

Thoroughly identify the data requirements for the project. Justify why these data requirements are needed and go into detail about what is needed and from where you will collate this information. Label these with a unique identifier to be used later. Mark which are the ones that will be needed for a minimum viable product (MVP) to occur. Use appropriate methods to obtain these.

### Prototyping (included in week 5 presentation)

#### Medium Fidelity Prototype (30%)

You will then create a clickable, interactive prototype. This prototype will require full interaction in terms of all the individual requirements and how they are implemented. All features should be functional. This is not to say if the database is supposed to have 300 clients you will need to create working profiles for each one of them, but a profile for one of them needs to be clearly shown to work with all the features. You need to show why each component is there (use requirements to map them to the features) and, if there are more than the requirements-based components, to justify correctly why you added the components. Describe the User Experience (UX) principles in detail on the decision you made to integrate good usability in the interface. You need to include the MVP as well as the non-MVP features.

You will present your “Prototyping” section in a presentation on the week 4.

## Evaluation (Included in final presentation)

Evaluation (40%)

- 1) Present your ethics certificate and your ethics application (**Do NOT actually apply for it, only include it in the coursework**) as well as your consent form here (both the ethics application form and the certificate link can be found at <https://www.cs.cf.ac.uk/ethics/>). You can choose to use the consent form found at that URL or create your own.
- 2) Create a questionnaire that captures any qualitative or quantitative information needed to test your prototype. Be thorough but do not put in questions that offer little or no value to the study. Justify why you created each question and what it will show you exactly. Also, choose an appropriate data collection mode for each of the questions and justify why this is the best way to elicit data using your questionnaire.
- 3) A holistic heuristic evaluation of the prototype from the module Commercial Languages and Frameworks should be done. There needs to be both a usability **as well as accessibility** evaluation based on all the principles we have learned. Use standardised heuristics or justify why you adapted the ones you found. Remember that you need references here. Explain where (if at all) the prototype fails and suggest evidence-based changes to improve the interaction.

## References

In your report you will need to reference sources such as which heuristics you used and which design guidelines you have used. Each part of the coursework will require references to the material used, such as techniques and justifications. Make sure these are cited correctly and referenced ([https://xerte.cardiff.ac.uk/play\\_4069#harvard](https://xerte.cardiff.ac.uk/play_4069#harvard)). Use the university suggested reference system (see library tutorial that took place during induction for how to do this if you are unsure – it can be found on Learning Central). Remember to not simply use websites but also scientific articles and other sources. The grades for the references will be included in the analogous section.

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## Learning Outcomes Assessed

All the Learning Outcomes are Assessed in this coursework:

1. Identify stakeholders and elicit their requirements for product development.
  2. Employ specialised techniques to turn requirements to medium or high fidelity prototypes.
  3. Use qualitative and quantitative (statistical) evaluation methodologies with user-testing.
  4. Discuss and employ accessibility principles and methodologies.
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## Criteria for assessment

Credit will be awarded against the following criteria.

<b>Requirements Marking Criteria</b>	
70%+	Provides excellent explanations of all the requirements elicitation. Gives clear and convincing reasons for selecting the chosen requirements. The requirements are correctly identified and in the right requirements type. All the requirements are identified Identifies and justifies all the stakeholders with clear reasoning as to why each is selected Persona is correctly identified and contains all the important sections correctly Excellent coverage of references to appropriate related work and literature
60-69%	Almost all the requirements are identified Provides almost all of explanations of all the requirements elicitation. Gives clear and convincing reasons for selecting the chosen requirements. The requirements are correctly identified and almost all are in the right requirements type. Identifies and justifies all the stakeholders with clear reasoning as to why each is selected Persona is correctly identified and contains all the important sections correctly (minor mistakes) Good references to appropriate related work and literature
50-59%	Provides most explanations of all the requirements elicitation. Gives clear and convincing reasons for selecting the chosen requirements. The requirements are correctly identified, and most are in the right requirements type. Identifies and justifies all the stakeholders with clear reasoning as to why each is selected. Persona is correctly identified and contains all the important sections correctly (some mistakes) Adequate but not thorough references to appropriate related work and literature

40--49%	Does not provide adequate explanations of all the requirements elicitation. Gives clear and convincing reasons for selecting the chosen requirements. The requirements are correctly identified and in the right requirements type. All the requirements are identified
0-39%	Elements of: <ul style="list-style-type: none"> <li>- Inadequate case brought forward to justify reasoning.</li> <li>- Large amounts of incorrect material</li> <li>- Missing material</li> </ul>

<b>Prototyping Marking Criteria</b>	
70%+	Provides excellent justification of choices of functionality within the rapid prototypes. Excellent medium fidelity prototype used with effective interaction. Thorough justification of the choices in the design principles used to create the prototype correctly. Thorough justification of the interaction behaviours chosen. Fully clickable and complete digital prototype wireframe with all the requirements justified and included. No excess requirements that are unjustified. Excellent coverage of references to appropriate related work and literature
60-69%	Provides good justification of choices of functionality within the rapid prototype. Good medium fidelity prototype used with mostly effective and working interaction. Contains most of the justification of the choices in the design principles used to create the prototype correctly. Good justification of the interaction behaviours chosen. Fully clickable and complete digital prototype wireframe with most of requirements justified and included. Some excess requirements that are unjustified Good references to appropriate related work and literature
50-59%	Provides good justification of choices of functionality within the rapid prototype. Good medium fidelity prototype used with mostly effective and working interaction. Contains most of the justification of the choices in the design principles used to create the prototype correctly.
	Adequate justification of most of the interaction behaviours chosen. Mostly clickable and mostly complete digital prototype wireframe with most of requirements justified and included. Contains excess requirements that are unjustified. Adequate but not thorough references to appropriate related work and literature

40-49%	<p>Provides inadequate justification of choices of functionality within the rapid prototype.</p> <p>Missing medium fidelity prototype with or substantial interaction ineffective or missing.</p> <p>Contains most of the justification of the choices in the design principles used to create the prototype correctly.</p> <p>Inadequate justification of most of the interaction behaviours chosen.</p> <p>Non-complete digital prototype wireframe with substantial requirements missing.</p> <p>Contains excess requirements that are unjustified.</p> <p>Inadequate references</p>
0-39%	<p>Elements of:</p> <ul style="list-style-type: none"> <li>- Inadequate case brought forward to justify reasoning.</li> <li>- Large amounts of incorrect material</li> <li>- Missing material</li> </ul>

<b>Evaluation Marking Criteria</b>	
70%+	<p>Excellent questionnaire design, with thorough coverage of the material needed in the questions and all the questions are correctly chosen to give the appropriate answering response.</p> <p>Ethical consent form completed thoroughly, application contains all the sections correctly and the ethics certificate is completed.</p> <p>.</p> <p>Suitable heuristic evaluation and exhaustive evaluation of the system done correctly.</p> <p>Excellent coverage of references to appropriate related work and literature</p>
60-69%	<p>Good questionnaire design, with almost all the coverage of the material needed in the questions or almost all the questions are correctly chosen to give the appropriate answering response.</p> <p>Ethical consent form completed thoroughly, application contains all the sections mostly correct and the ethics certificate is completed.</p> <p>Suitable heuristic evaluation and a good coverage although not completely exhaustive evaluation of the system done correctly.</p> <p>Good references to appropriate related work and literature</p>



50-59%	<p>Good questionnaire design, with most of the coverage of the material needed in the questions or most of the questions correctly chosen to give the appropriate answering response.</p> <p>Ethical consent form mostly completed, application contains most of the sections mostly correct and the ethics certificate is completed.</p> <p>Suitable heuristic evaluation and adequate coverage of the evaluation of the system done correctly.</p> <p>Adequate but not thorough references to appropriate related work and literature</p>
40-49%	<p>Inadequate questionnaire design, or lack of coverage of the material needed in the questions or several mistakes in the questions correctly being chosen to give the appropriate answering response.</p> <p>Ethical consent form not completed, or application contains substantial missing sections or the ethics certificate is not completed.</p> <p>Unsuitable heuristic evaluation or inadequate coverage of the evaluation of the system Inadequate references</p>
0-39%	<p>Elements of:</p> <ul style="list-style-type: none"> <li>- Inadequate case brought forward to justify reasoning.</li> <li>- Large amounts of incorrect material</li> <li>- Missing material</li> </ul>

A reminder of the level of degree corresponding to each mark for undergraduate students:

1st (70-100%)

2.1 (60-69%)

2.2 (50-59%)

3rd (40-49)

Fail (0-39%)

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### Feedback and suggestion for future learning

Feedback on your coursework will address the above criteria. Feedback and marks will be returned online digitally and will be useful to understanding the weaknesses and strengths of your coursework which will then feed into strengthening your Large Team Project. The feedback will be given within 4 weeks of the assessment deadline. Feedback from this assignment will be useful for the large team project, where the techniques you learn will have to be applied.

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## Submission Instructions

Prior to handing in make sure all documentation has been collected – You need to submit two PDFs. The first is the cover sheet. The second is the presentation (PPT) of the requirements and persona and including a link to the interactive prototype. The second is your report. DO NOT submit any zip files of any software you make as this will not be checked. Any raw data like questionnaires should be in the appendix, and any working prototypes should be linked via hyperlink within your report (and remember to make sure that I have access to it when I click it without having to sign up for anything). This is a team report but each student will also be creating their individual contributions. You will be given templates (which the lecturer will go over with you in class) for the report. You will present parts 1 and 2 of the report in week 5 and the evaluation section in week 12. If a student applies and has ECs granted, they will produce an individual report with a 2-week extension based on their own work.

Description		Type	Name
Report	<b>Compulsory</b>	One PDF (.pdf) or Word file (.doc or .docx)	[student number].pdf/doc/docx
		One or more Python source files (.py)	No restriction
Cover Sheet	<b>Compulsory</b>	One PDF (.pdf) file	[student number].pdf

Any deviation from the submission instructions above (including the number and types of files submitted) may result in **a mark of zero for the assessment or question part OR a reduction in marks for that assessment**

Staff reserve the right to invite students to a meeting to discuss coursework submissions

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## Support for assessment

The lectures will have adequate time for the lecturer to give one to one time with each team every week and give feedback and answer questions the team may have.