

ITUX5.210 UX AND UI FUNDAMENTALS

Weighting: 70% of final grade

ASSESSMENT SUMMARY:

Task	Due Date	Marks
Theory Test	End of semester	100 marks total (Course weighting = 30%)
Report	8:15am 17 th April 2023	25 marks (Course weighting = 30%)
Project	8:15am 12 th June 2023	55 marks (Course weighting = 40%)

The School of Computing has a policy of no late assignments. However, an assignment handed in up to 24 hours late will be marked. A deduction of 20% of the total marks available will be made. Any assignments received more than 24 hours late will not be marked but can be used as evidence of completing terms.

ASSESSMENT OVERVIEW:

- This is an individual and a group assessment split into two parts.
- You are to attempt all parts. All work submitted must be original and entirely your own work, except where you use ideas, quotations, tables, diagrams, code or any other material from other writers. In such cases you must acknowledge the source using the APA referencing style.
- Unless you have prior approval from your lecturer, no part of the work submitted may be used as part of any assessed work for any other academic course.
- All work submitted must be word-processed and the presentation of a professional standard.
- Assignments are to be uploaded through **EIT Online**.
- A minimum of 40% achieved is required for each section (Test, Report, Project) to successfully complete and pass the course.
- An overall mark of 50% is required to pass the course.
- For the report and project submission, be sure to include a cover page that has the full name and student ID for each team member. Also indicate throughout your work who contributed to which segment of work.

ASSIGNMENT OVERVIEW:

The assignment is intended to assess your grasp of user interaction, user experience and interface design techniques in the development of an effective user interface. In this assignment, you will be developing and designing a concept for a mobile device (tablet or phone app), as well as an associated web-based system (used to fully manage the app).

The objective is to create a mobile app for easy perusal of movies (titles, age restriction, release date, actors/actresses etc.) as stored in your local NAS repository. A fictitious mechanism may be used for the connection to your movie repository, either in the cloud or perhaps a local NAS on your home wifi network. The movie, once selected may then be streamed and controlled from the app on your mobile device (volume, fast forward, play/pause, Etc.) to your TV that is also on the wifi network.

Note you are welcome to use your imagination where this assessment is concerned, as we will not be writing code or producing an actual working product. The design is restricted to paper prototyping and low fidelity design. We will be using software called [Balsamiq](#) to assist with wireframes and low fidelity design, and it is expected that the student will deliver solutions of the fidelity typically seen in Balsamiq examples.

There are two key parts to this assignment:

1. The investigation and initial design specification and concept of the project.
2. The development of a low-fidelity paper prototype, including user testing of your concept for overall usability and effectiveness.

Our project covers the early conceptual phase of the app. So, it will be our job to develop the concept of this app. In particular, our project will explore the scope of this app including what functionality would be needed for this app and how it should look and work. The assignment will be strongly underpinned by adopting appropriate UX techniques guided by user driven requirements/ testing and evaluation.

ASSIGNMENT DELIVERABLES:

Group work forms part of the assessment, and you will need to join a group of 2 – 3 members. UX design is highly collaborative and therefore working in a team is essential. Students are welcome to select their own groups; however, the lecturer is happy to assist in the allocation of any students who have yet to join a work group. Depending on the group work at hand, group members may either be assigned individual tasks to work on within the assessment, or work jointly on a single task outcome.

The assignment consists of two parts as follows:

1. Report

1. Individual work component
2. Group work component
3. All sections that cover the development of the initial concept and prototype
4. Regular lab sessions will be provided for collaboration (group) work
5. Refer to top of this document for due date
6. Group marks will be aggregated/attributed according to individual work submitted
7. For each group member, submit identical copies of your group work as part of your report. Clearly identify which parts are group work and which parts are individual work.
8. Submit one professional, word-processed document that contains all information. Use diagrams and/or marked up photos to clearly illustrate information provided in your report. HTA diagrams in particular should be well drawn, preferably using suitable drawing tools such as draw.io or Microsoft Word (Shapes).

2. Project

1. Individual work component
2. Group work component
3. To be worked on throughout the term.
4. Each part or milestone for the project will be marked out of 100%
5. Regular lab sessions will be provided for collaboration (group) work
6. Refer to top of this document for due date
7. Group marks will be aggregated/attributed according to individual work submitted
8. For each group member, submit identical copies of your group work as part of your project documentation. Clearly identify which parts are group work and which parts are individual work.
9. Submit one professional, word-processed document that contains all information. Use diagrams and/or marked up photos to clearly illustrate information provided in your report.

The first stage of the report is to determine the initial concept and design of the system. The second stage of the project relies on an initial paper prototype to have been developed by the (alternative) group project you intend to evaluate. This can therefore only be conducted once the classes projects have been developed to a relatively advanced stage. The report will include (for both the web-based and watch app):

- **Group:** Overview of proposed system - Describe what you propose to develop (concept statement)
- **Group (min 3 of each per individual):** System requirements - Functional and Non-functional requirements
- **Group:** Evaluate how well the (web-based and watch app) app supports privacy and security of data
- **Group:** Utilize the [Parallel Design method](#) to design good workflow for a particular set of (total four) tasks:
 - a. Select two significant tasks for the smart watch, and two significant tasks for the main (desktop) application
 - b. Document which tasks you have selected, as well as design criteria.
(IE clearly specify what it is you are designing, but no HTA's at this stage!)
 - c. Discuss and create a list (5 – 8 items) of evaluative criteria and tests that will be used to assess each individuals' proposed solution.

Note: This list need not be extensive at level 5, but should be sufficient to demonstrate a (broadly speaking) mechanism for evaluation of the task at hand.
- **Individual:** Continuing with the **Parallel Design Method**, develop your proposed design concepts:
 - a. Design the HTA for each concept. Produce professional flow diagrams for each. can be included as part of your groups (report) submission.
 - b. Utilize the techniques you learned from paper prototyping to demonstrate the workflow as depicted in your HTA's.

Note: Screenshots and photos of your individual work (HTA's and paper prototypes) should be submitted as part of your group (report) submission. Remember to include written documentation as well, detailing your thinking about why you chose to do what you did, and what you chose not to do/include as well (and why).
- **Group:** The final stage of **Parallel Design** will be conducted on campus in [week 5](#). It is anticipated that you do not spend too much time on this design, rather rely on feedback from your peers to improve your design. Based on feedback your design will then be recreated into a moderately hi-fidelity prototype in part two of this assignment.

PART ONE: REPORT (Continued...)

- **Individual:** Evaluation of similar systems (Evaluate the project of **another group**).

The evaluation should be conducted collaboratively (IE you and the other group). As the designs are low fidelity paper prototypes at this stage, focus on layout, workflow, functionality, security, ease of use etc. as these are the important characteristics at this stage of the design. Be sure to document not just your findings, but also the likely changes/decisions made by the other group based on your input.

- a. Undertake a **cognitive walkthrough** and identify issues with the design
- b. Carry out a **heuristic analysis**
- c. Based on your evaluation write the problems down with a severity rating as in Nielsen's Severity Ratings for Usability Problems (<http://www.useit.com/papers/heuristic/severityrating.html>)

Provide a brief reason for your severity rating.

Note: The students mark is not impacted in any way by any perceived negative outcomes from the user heuristic analysis (EG a functional requirement could be better met by ...). Rather the purpose here is to demonstrate your ability to conduct a successful user evaluation and identify said problems (if any).

Based on the results of your groups parallel / low-fidelity design you will need to customize and develop (as an individual) a final low-fidelity/wireframe prototype of your website and watch app with some higher fidelity characteristics. You only need to make one version of each. The prototype must be completed and brought to class in [Week 13/14](#) where you will be conducting a user evaluation of the prototype. Balsamiq shall be used as part of your wireframe prototype development. You shall have any content printed to hardcopy to facilitate roundtable collaboration and user evaluation.

In addition to the prototype, supporting documentation (hereafter referred to as a report, but not to be confused with the report in part one) will contain:

- **Group:** A detailed description of your prototype
 - a. Overall review of your product
 - b. A description of each (high-fidelity prototype) screen.
 - c. How the main application GUI meshes with the mobile/tablet app (consistency, ease of use etc.)
- **Individual:**
 - a. Typography use and explanation
 - b. Colour use and explanation
 - c. Enhanced functionality, optional graphic elements, workflow etc.

NOTE: (A polished or high-fidelity design is not expected as this is beyond the scope of this course)
- **Individual:** at least three (non-group member) students conduct a user evaluation of your final design.
 - a. Document both initial findings as well as final outcomes and decisions made based on said findings.

Note: The students mark is not impacted in any way by any perceived negative outcomes from the user evaluation (EG the text size is too small on this button). Rather the purpose here is to demonstrate your ability to conduct a successful user evaluation and identify said problems (if any).
- **Group:** Critically evaluate at least three other student (non-group member) designs.
 - a. Document both initial findings as well as final outcomes and decisions made based on said findings.
- **Individual:** Critically evaluate at least three other student (non-group member) designs (continued...)
 - a. Consider user experience. What are two aspects of the design that would lead to a positive user experience, and two attributes of the design that could ideally be improved upon in a final high-fidelity design to realize a more positive user experience.

ITUX5.210 - UX and UI Fundamentals

Marking Schedule

Marks per section:	A (80-100%)	B (65 – 79%)	C (50 – 64%)	D/E (0 – 49%)	Mark
	5	4	3	2-0	
Overall report	Report is suitable as a portfolio of work. Report shows evidence of synthesis and critical thinking. Report is well formatted. Introduction and Conclusion are well-written. Detailed and in-depth documentation. It outlines all aspects as required. All required parts of the documentation are completed in excellent detail.	Report is suitable as part of employment. Report shows evidence of synthesis and critical thinking. Report is thorough and well-written. Report is well formatted and contains a suitable introduction and conclusion. The documentation is of suitable depth and detail. It outlines all aspects as required. The evaluation is discussed in suitable detail. All required parts of the documentation are completed in good detail.	Report is lacking some depth in some cases or missing minor parts Report shows evidence of synthesis and critical thinking. Report is formatted suitably, with an introduction and conclusion. Report quality is acceptable. The documentation is adequate but of limited depth. It outlines all aspects of the design and evaluation but could be improved. The evaluation is discussed in limited detail. All required parts of the documentation is completed but in limited detail. Poorly written or communicated.	Report is lacking substantial depth in some cases or missing major parts Report does not show evidence of synthesis or critical thinking. Report is poorly written. Missing detail or very limited.	
	5	4	3	2-0	
Part 1: Overview of Concept / Functional requirements (Group)	App/System concept is well explained and significantly detailed to gain a good understanding of the proposed idea. The requirements are detailed and well thought out, detailed and wide ranging.	Concepts is fairly well explained but could be refined. The idea is sound but could be improved with minor changes. The requirements are discussed in adequate detail but some detail or range missing.	Concept is adequate but could be improved. The details provided are limited The requirements are very limited and only cover a small range of potential aspects. A few major parts missing.	Limited in detail and concept is poorly explained. Parts are missing or not explained.	

	5	4	3	2-0	
Part 1: Evaluations (Individual)	The expert evaluation of other similar systems is detailed and provide good insight into how this will inform your own design.	Expert evaluation could be more in-depth and limited discussion is made of how it will influence your own design.	A fair attempt at Expert evaluation but missing some depth with little to no discussion on how this will be used to inform your own design.	Expert evaluation missing or not done to any depth with little to no insight.	
	10-9	8 - 7	6 - 5	4-0	
Part 1: Initial Design and Application of Design Principles (Individual)	Initial design explained and well developed A wide range of interfaces have been submitted covering the full system. The design shows significant design consideration, effort and thought. The evaluation is discussed in significant detail to inform the next iteration.	Initial design is appropriate but missing some range, detail or has significant issues The design shows adequate design consideration, effort and thought. And is suitable for initial testing The evaluation is discussed in suitable detail.	Initial design is limited however is still somewhat suitable for initial testing The wireframes show some design consideration, effort and thought. But significant issues are evident. The evaluation is discussed in limited detail.	Design were not submitted. The designs show little to no design consideration, effort and thought. The evaluation is not completed or very limited	

	40-33	32-26	25-20	19-0	
Part 2: Hi-Fidelity Prototype (Group & Individual)	<p>Each design is appropriate for use.</p> <p>A detailed and in-depth high-fidelity prototype that contains an extensive range of tasks.</p> <p>Design has moved significantly beyond the wireframe.</p> <p>The design is well thought out and appropriate.</p> <p>The prototype has no to minimal major usability issues and there is evidence of critical thought on its design.</p> <p>The designs link well between the two systems.</p>	<p>Each design is appropriate for use but with some issues.</p> <p>A detailed and in-depth prototype that contains a good range of tasks.</p> <p>Design has moved slightly beyond the wireframe. There are still some issues in the overall design.</p> <p>The design is fairly well thought out and appropriate.</p> <p>The prototype has some usability issues and there is some evidence of critical thought on its design.</p>	<p>The designs have some major issues.</p> <p>A limited prototype that contains only some tasks.</p> <p>Design has not moved much beyond the wireframe. There are still issues in the overall design.</p> <p>The prototype has some major usability issues but still adequate in its design.</p>	<p>None or very limited prototype with many parts missing.</p> <p>The prototype has major usability issues and would need major work to be adequate for use.</p> <p>The prototype shows no progression in concept and design in your specific area.</p>	
	15-13	12-9	10-8	7-0	
Part 2: User Evaluation of Design (Group & Individual)	<p>Evaluation showed detailed overview, tasks, analysis of the results and recommendations of the evaluation. The results are clearly explained and summarised.</p>	<p>Evaluation contains all required parts and is in adequate detail.</p> <p>The results are adequately explained and summarised. But some detail is lacking.</p>	<p>Evaluation does not contain all required parts or lacking in detail. The results are poorly explained and summarised. But some major detail is lacking.</p>	<p>Major sections missing.</p> <p>The report makes a poor attempt at summarising the results and making recommendations.</p> <p>The report is poorly written.</p>	