

Software Project Proposal

Midterm assessment – 30% of your mark for this module

This coursework assignment explores the design and development of your software project. The deliverable here is a proposal which defines and describes a number of key elements of your project. You should produce a document that is no longer than 8,000 words in length (not including appendix) and should be submitted as a single PDF document.

This proposal should be used to explore design decisions, consider the context of use and identify the process by which the software project is developed. As such, your proposal should include a reasoned justification that explores the following topics:

- 1) A clearly defined set of deliverable components of the software and the job of work required to bring these components to completion through research and iterative prototyping informed by said research.
- 2) The defined timescale of work, including any dependencies, milestones or contingencies. There should be a clear narrative describing your breakdown of work and activities as part of the project.
- 3) A formal specification of the desired system. This will include a description of how your iterative design exercises have converged on an appropriate, relevant and acceptable solution. You should also include user-acceptance criteria for testing at this stage.
- 4) A clearly defined scope for the project defining areas that you will and will not be delivering on.
- 5) Some evidence of requirements elicitation involving some/all of your project stakeholders. Evidence should be provided supporting your decision making at all times. This will come either in the form of existing empirical evidence from literature sources or through empirical proof through techniques such as usability studies and heuristic evaluations that you have performed.
- 6) A research summary that highlights the challenges of working within your chosen domain and summarises the capabilities and competencies of similar tools.
- 7) A description of your approach that discusses the motivations and reasoning for working in a particular manner (e.g. User-Centred Design, Test-Driven Development.) This should also include a clear and descriptive narrative that identifies the tasks required to bring this project to fruition e.g. as a backlog, set of use cases or functional/technical specifications supported by evidenced based reasoning.
- 8) Some early prototypes showing iterative design and development activities that identify how the project will work and highlighting the strengths and weaknesses of your proposition.

- 9) Some early evidence of assumption testing and validation of your designs to date (e.g. user tests or automated feedback such as W3C validation/accessibility testing, heuristic tests etc.)
- 10) A critical evaluation of your concept, your project in its current state and the proposed software project.

The document should highlight a clear and systematic rhetoric with critical analysis and an overall evaluation regarding the current state and feasibility of the approach presented.

Marking will follow these general guidelines (out of 30 possible marks.)

Suggested section headings	Marks available
Aims/Objectives	2
Planning	4
Specification	4
Scope	2
Requirements	2
Literature	2
Market Research	4
Motivations	2
Prototyping	4
Assumption testing	2
Analysis/outcomes/evaluation	2

Marking band breakdown

Objectives /2

- 1 - There is a well defined set of objectives but some clarity of expression missing in terms of deliverables and/or strategies for completion of tasks.
- 2 - There is a clearly defined set of deliverable components of the tasks required to bring these components to completion.

Planning /4

- 1 - Some reasonable effort has been made to provide a plan of action though this is not entirely clear or complete.
- 2 - A good set of plans and actions with some description of milestones and contingencies.
- 3 - A very good set of plans and intents with most key elements of the process described to a sufficient level of detail.
- 4 - An excellent definition of the timescale of work, including dependencies, milestones and contingencies.

Specification /4

- 1 - An effort to specify some aspects of the system, though these are somewhat unclear and lots of detail is missing.
- 2 - Some elements of the system are specified to a sufficient level of detail. Some aspects are missing, incomplete or not described to a sufficient level of detail.
- 3 - The specification for the most part is complete, with most elements of the system defined and described in detail. There are some omissions or the level of detail is missing in one or more areas.
- 4 - The formal specification of the desired system is complex and complete enough to bring about the development of the specified system without utilising additional resources.

Scope /2

- 1 - Some effort has been made to define/describe the scope and limitations of the system, though the deliverables are not sufficiently clear or well defined.
- 2 - There is a clearly defined scope for the project explaining the focus of your development activities and any limitations of the project.

Requirements elicitation /2

- 1 - There is some evidence of requirements elicitation involving some key stakeholders and some considerations taken into account regarding their involvement.
- 2 - There is a clear account of evidence of requirements elicitation involving a list of all stakeholders and a comprehensive set of considerations taken into account regarding their involvement.

Literature and introduction /2

- 1 - The research summary highlights the challenges of working within your chosen domain, manifesting as a literature review. Some key references are missing.
- 2 - The research summary is exhaustive, highlighting key research in the field and signifying the relevance to the project.

Market research /4

- 1 - There is evidence that compares your project to similar software tools through market analysis. This is incomplete and has insufficient detail to be useful.
- 2 - A good account of similar software tools, though the analysis is incomplete or missing some important details.
- 3 - The analysis of similar tools is comprehensive, giving a good account of the state-of-the-art. There is sufficient detail to understand the relevance of the proposed design in its given space.
- 4 - There is a systematic, rigorous and exhaustive market analysis highlighting the appropriateness and relevance of the proposed software in a given space.

Approach and motivations /2

- 1 - The approach is reasonably well described, though the motivations, relevance and appropriateness of techniques is not clear from the document.
- 2 - The description of approaches that discuss the motivations and reasoning for working in a particular manner are clear, concise and well evidenced. The techniques proposed are fit for purpose.

Prototyping and iterative development /4

- 1 - There is some evidence of prototyping, though both the prototypes and the rhetoric are somewhat unclear. It is difficult to ascertain why certain design decisions have been made.
- 2 - There is evidence of prototyping, though the prototyping phases are incomplete and/or missing important levels of detail. There is not a clear body of evidence of justifiable iteration between stages.
- 3 - Lots of prototypes with a systematic rhetoric that underpins how and why certain design decisions came about. There could have been a richer discussion

about the process and more analysis/testing regarding the different states of the system.

4 - The prototypes produced highlight how the project will work and evidence the strengths and weaknesses of your proposition. These include different states of iteration and a clear rhetoric that justifies the design decisions taken at each stage.

Assumption testing /2

1 - There is some early evidence of assumption testing and validation of your designs that you plan to do, though this is incomplete and lacking important details.

2 - All assumptions have been tested and validated against a set of expectations. It is clear how and why design decisions were taken and there is a systematic, rigorous approach to testing at each phase.

Analysis and outcomes /2

1 - There is some evidence of analysis and evaluation, though this is incomplete in nature. The level of detail provided here is not sufficient to consider whether the project is likely to be successful/fail based on insufficient evidence in reasoning.

2 - There is a critical evaluation of your concept, your project in its current state and the proposed solution. This includes successes, failures and lessons learned. The level of analytical/evaluative detail is good and has shown a good understanding of the space that they have chosen to work in.