Task Two: Client Project

Overview

This task is worth 80% of the overall module mark and is focused on a group project. Teams of 4/5 students will work together to produce an application for a real client based on the client's specification.

The marks for the task breakdown as follow:

1. Preparation Report (15%)
2. Scrum Week Performance and Deliverable (70%)
3. Post-Scrum Weeks Reflective Report (15%)

The Preparation Report and the Post-Scrum Week Reflective Report are individual assignments.

The Scrum Week Performance and Deliverable is a group assignment, but your mark may be adjusted based on your contribution to the team.

Allocation of Teams

The client projects will be made available at the start of the supporting lecture series. Every attempt will be made to allocate students their first choice of client. Teams will be 4/5 students strong.

Where it would benefit the client project, teams will be made up of a mix of Software Engineers and Computer Science students.

Academic Consultant and Client Communication

Each team will be allocated an academic consultant. The academic consultant will facilitate the introduction of the team to the client.

Once communication between the team and the client is established it is strongly recommended that a single point of contact is set up to avoid bombarding the client with requests.

The academic consultant will hold at least three meetings with their teams in the run up to the first scrum week.

During the Scrum Weeks your progress will be monitored daily by your academic consultant.

Preparation Report 15%

Submission 17/12/2020

This is an individual task and consists of a written report of no more than 1500 words.

The task is designed to assess your preparedness for the first Scrum Week.

You should address the following issues:

Project Specification Critique (50 marks)

You should critique the project specification provided by the client. The client specification may vary in style and in detail. In all cases you should illustrate you understand the high-level aim of the application in relation to the client's domain. You should consider what information is missing from the initial specification that requires more detailed explanation.

If your client provides a detailed project specification you must indicate those requirements have been understood. You should provide evidence of discussion with the client to refine the specification. If the client provides a weak and/or unclear specification you should provide evidence that your team has communicated with the client to produce a workable document. This document that may evolve during further preparation for the Scrum Week.

Comprehensive critiques will include the development of sample user stories and/or data flow diagrams.

You should include the project specification provided by the client as supporting evidence. This **does not count** towards the task word count and should be included as an appendix.

Software Development Processes and Supporting Tools (30 marks)

You should discuss the software development processes that your group will adopt to manage the development process. You should consider communication, planning, testing, version control and the tools that you could use to help.

You will be having lectures from visiting speakers who will be giving their perspective on software development processes. Where appropriate you should use their insight to inform your team processes.

Resource Management (20 marks)

You should discuss the resources needed for a successful project in terms of software, hardware and expertise.

You should consider any software and/or hardware requirements for the project.

You should discuss how team roles have been allocated. Consider your role in the team. How do you intend to plug gaps in your skill set?

As part of the above you should reflect on how or why the project may fail. What factors, both external and internal, may affect your team's ability to deliver the project as outlined in the specification?

Outline what can be done prior to the Scrum Week to avoid the threats identified. How can you mitigate against these potential issues?

You may find it useful to produce checklists for any or all of the above.

Scrum Week Performance and Deliverable 70%

You will be working for 10 days on your application over two scrum weeks. The scrum week dates are:

First Scrum Week: Monday 11 January 2021 to Friday 15 January 2020
Second Scrum Week: Monday 15 February 2021 to Friday 19 February 2021

Your team will be allocated a room for the duration of the scrum week as well as an academic supervisor who will see the group at least once daily.

Note room availability is subject to Covid-19 restrictions. If rooms are not available virtual teams will need to be established.

On the Friday afternoons of both week's you will demonstrate your application to your client and academic staff.

This will take the form of an informal demo rather than a presentation, as such there is no requirement to produce slides. However, you will be questioned by the academic staff on the processes followed and will need to evidence them.

After the second Scrum Week you will be marked on the following four criteria:

Requirement Satisfaction (20 marks)

How well does the application meet the initial project requirements outlined by the client?

The Quality of the Application (40 marks)

The completeness and quality of the application including evidence of testing. The complexity of the client project will be taken into account when considering completeness.

Client Focus (20 marks)

The extent to which the team successfully interacted with the client and responded to and/or suggested changes to the application.

Team Performance and Professionalism (20 marks)

How successfully did the team perform? Did team members act professionally throughout the process? This will be monitored through the scrum weeks by your academic consultant.

Submission

One member of the team should submit a ZIP file of the application with installation instructions in the form of readme.txt file.

Peer Review

A mark for the group will be allocated. **However individual marks may be adjusted.**

Peer Reviews will have to be submitted on Friday 15 January and on Thursday 18 February. Any student who consistently performs poorly in the peer reviews, and in the view of the group's academic consultant and module leader are underperforming, will have marks deducted from the group's mark. The amount deducted will decided by the academic consultant and module leader based on case-by-case basis.

In severe cases of under-performance, a team member can be removed from the team and allocated to a generic non-client facing project.

Attendance for the ten days of the scrum weeks is compulsory. You are expected to operate as you would in a real work-place and therefore be in attendance from 9.00am to 5.00pm daily. Any absence must be agreed with the academic consultant. If absent is due to illness or unforeseen circumstances, evidence must be provided. Where possible, extra work has been undertaken to make up any shortfall of contribution.

Post-Scrum Week Reflective Report and ScreenCast 15%

(1000 Words, Screencast of no more than 5 minutes)

Submission 4 March 2021

Following both of the Scrum Weeks, you will need to reflect on the process. You will be marked on the following criteria:

Software Development Processes and Tools (40 marks)

Reflect on the software development processes you used. What worked well? What would you do differently? How successfully did you use the time before the first Scrum Week and the time between the two Scrum Weeks?

Critically reflect on your choice and use of tools to support aspects of software development. You should consider all aspects of the development process i.e. planning, design, production and testing/evaluation.

Critique of the Application (20 marks)

Honestly reflect on the success of the application. If the application did not perform as expected what factors internal, external, processes were the cause?

What improvements could be made to a further iteration of the application?

Screencast illustrating Your Contribution to the Project (40 marks)

In a screencast of **no more than 5 minutes** demonstrate the key aspects of the application that **you** were responsible for.

Focus on **your** contribution to the team. As such you may include examples of the code you worked on. You can also evidence this by reference to the tools you used - for example you might show your commits to github or your entries on a Trelloboard.

Individual Preparation Report (15%)

	Mark	*Fail*	*40-49 (3rd)*	*50-59 (2:2)*	*60-69 (2:1)*	*70+ (1st)*
Project Specification	50	No evidence of client communication. No valid critique of the client specification.	Simple high-level project specification produced. Some evidence of initial communication with client but information weakly translated into a revised specification.	Project Specification produced with evidence of input from the client. Includes summary of what the application should do but with little insight into the client domain.	Evidence that project specification has developed through communication with the client. Some attempt at developing user stories. Demonstrates good understanding of the client domain.	Excellent critique of the project specification with plenty of evidence of communication with the client. Illustrates well developed understanding of the client domain. Well written sample user stories developed. Sample wireframes where appropriate. Sample data flow diagrams where appropriate.
Software Development Processes and supporting tools.	30	Inappropriate tools and techniques selected.	Some discussion of software development processes but choice not clear and/or argued for effectively.	Choice of software development processes justified. Evidence of consideration of tools to support the development process.	Appropriate tools identified and evidence of use to prepare for the scrum week. For example, the setting up and initial population of a Trello board and/or GitHub repository.	Software development processes discussed with reference to industry practice. You may choose to reference examples of industry practice as illustrated by the external speakers. Identification of appropriate testing strategies.
Resources Management	20	Little consideration of software and hardware issues. No attempt to address skills needed.	Some discussion around the software and hardware needs. Some attempt to identify the skills sets needed.	Evidence of pre-planning for the Scrum Week. Software / Hardware requirements listed and checked. Resources identified to plug skills gaps.	Clear evidence of a realistic plan to mitigate against any potential threats to the success of the project. Evidence that your role within the team is clearly understood.	Evidence of a high level of preparedness. Indicative examples may include, the collation of dummy data, setting up of web space and the provision of specialist hardware/software, identification of appropriate training material to fill skill gaps.

Scrum Week Performance and Deliverable (70%)

	Mark	***Fail***	***40-49 (3rd)***	***50-59 (2:2)***	***60-69 (2:1)***	***70+ (1st)***
Requirement Satisfaction	20	The project does not meet basic requirements of the specification.	Some attempt to meet the project specification.	Satisfies most of the requirements and offers useful functionality.	Satisfies all the reasonable requirements and has the potential to be a shippable product.	All the project specifications meet but also demonstrates a deeper understanding of the client's requirements. As such may include extra functionality / features not initially suggested by the client. Team has gained a thorough understanding of the client domain.
Quality of the application	40	Poor quality, incomplete and/or unidentified bugs.	Low quality application given the time available.	Reasonable quality application. Some evidence of testing. Application could be described as a proof of concept.	High quality application. Outstanding issues clearly understood. Testing undertaken but could be more thoroughly undertaken. Application could be described as a prototype.	Shippable or near shippable application. Note: the complexity of the application will be taken into consideration when assessing the completeness of the application.
Client Focus	20	No attempt to involve the client in the development process.	Weak evidence of client focus in the scrum week. Some infrequent communication with the client.	Some client focus but clear that issues arising not properly addressed with the client at an early enough stage.	Good client involvement. Evidence of an appropriate amount of contact with the client.	Involvement with the client professionally managed. Timely response to client queries.
Team Performance and Professionalism	20	Poor teamwork and attendance. No attempt to resolve issues arising within the team.	The team struggled to work effectively. Little attempt to resolve issues within the team.	Team worked reasonably effectively but workload disjointed across team members.	Roles clearly identified. Examples of good team practice - such as pair programming. Documentation supports even distribution of tasks within the team.	Excellent teamwork throughout the scrum week. Issues arising discussed and resolved in a professional manner. Peer review forms consistent with the assessment of the academic supervisor.

Post Scrum Week Reflective Report and Screencast (15%)

	Mark	***Fail***	***40-49 (3rd)***	***50-59 (2:2)***	***60-69 (2:1)***	***70+ (1st)***
Software Development Processes and Tools	40	Inappropriate tools and processes listed.	Software development tools and processes listed but little insight into their effectiveness.	Clear evidence of the use of software development processes used by the team.	Honest reflection on their usefulness in supporting the development process. Some attempt to draw conclusions from the development process.	Tools and processes for all aspects of the development process considered. Suggestions for alternative tools / processes. Strong reflections on what worked well and what was less successful.
Critique of the application	20	Disingenuous critique of the application.	Some insight into the success or otherwise of the application.	Some attempt to reflection honestly on the success of the application. Clear examples given of issues faced.	Good discussion around the success of the application. Good examples of how and where issues arose, and how they were resolved.	Honest reflection on the success of the application. Original set of ideas for taking the application further.
Screencast	40	Overlong unfocused screencast.	Some attempt to showcase the application but little focus on your role in the process.	Screencast provides some evidence of your contribution to the development application.	Screencast covers coding and includes a demonstration of the application with a focus on those features that you worked on.	Excellently presented, planned, structured and executed screencast. Clear evidence of your contribution to the project.