Department of Computing and Information Sciences.

COURSEWORK ASSESSMENT SPECIFICATION

Module Title:	*Team Project and Professionalism*
Module Number:	*KV6002*
Module Tutor Name(s):	*Tom Prickett*
Academic Year:	*2018-2019 (Semester 2)*
% Weighting (to overall module):	*10%*
Coursework Title:	*Terms of Reference*
Average Study Time Required by Student:	*40 study hours*

Dates and Mechanisms for Assessment Submission and Feedback

Date of Handout to Students:
Week commencing: Semester 1 2018

Mechanism for Handout to Students:
via elp

Date and Time of Submission by Student:
On, or before, 25th February 2019 4pm

Mechanism for Submission of Work by Student:
via Blackboard

Date by which Work, Feedback and Marks will be returned to Students:
Week commencing: 25th March 2019

Mechanism for return of assignment work, feedback and marks to students:
Feedback will be returned via Blackboard.

Contents

KV6002 Team Project and Professionalism

Learning Outcomes tested in this assessment:

If you are studying KV6002 Team Project and Professionalism, completion of this assignment will enable you to demonstrate achievement of:

1.   Plan appropriate requirements, design and implementation strategies and methods for the development of a significant computing product related to your programme of study (including consideration of commercial, economic, legal, ethical, social and professional factors)

Assessment Criteria/Mark Scheme:
Attached

Nature of the submission required:
Terms of Reference for the project

Instructions to students:
This is a group/individual assignment

In this module, you will complete a software development project as a group. This assignment defines:

- The Project Team
    - Please sign up via Blackboard
    - Please document who is in your team clearly in your terms of reference.
- Ethical Approval
- The Vision of the Project (A draft of which must be submitted to Blackboard before 4pm 31 January – failure to do so will result in a 20% marks penalty)
- Code of Conduct (A draft of which must be submitted to Blackboard before 4pm 31 January – failure to do so will result in a 20% marks penalty)
- Scope of Project
    - Team system specification
        - Requirements analysis for common elements
        - Requirements specification for common elements
    - Subcomponent specification
        - Requirements analysis
        - The Project Specification
- The Project Tasks, Deliverables and costing

Referencing Style:
Harvard standard

Expected size of the submission:
There is no formal requirement regarding length of documentation. However a document in the region of 15-20 pages is anticipated. Further sizing guidance will be provided in the briefing session and later in this document in the individual sections.

Academic Conduct:
You must adhere to the university regulations on academic conduct. Formal inquiry proceedings will be instigated if there is any suspicion of misconduct or plagiarism in your work. Refer to the University's regulations on assessment if you are unclear as to the meaning of these terms. The latest copy is available on the university website.

Please make use of the lectures and supervision sessions to seek clarification and further guidance related to the assignment.

Each group must provide the assessors with ONE document, plus appendices, containing the documentation for the entire group. This should comprise of the documentation for the group element with separate, attached, appendices containing documents for each of the individual elements. Please ensure the appropriate names are on <u>all</u> pages of submitted work

The completion of this assignment is critical to the success of your project. This assignment defines the project you will complete. If you do not define your project appropriately there are likely to be negative consequences for the other assignments upon this module (you will not know what your project is intended to be or have agreement to pursue it). As such once you have received feedback from the formal hand in we will encourage you to refine your terms of reference based upon the feedback you have received.

It is your responsibility to:

1. Ensure you have agreement from the teaching team for the project you are completing.

2. Ensure appropriate Ethical Approval is in place. Your group must seek Ethical Approval for your project. <mark>If you do not obtain such approval, we are sorry but we will not be able to mark your work and as such you will receive a mark of 0.</mark>

Types of project that are acceptable

- All the projects involved the creation of a digital product. This is normally a piece of software.
- The type of product you intend to generate should be appropriate for your programme title and use the practical skills developed in your programme
- Your system is a prototype that evidences an effective solution would be possible. You should not attempt to produce the fully realised solution within this module. Although you may choose to afterwards. The university does not accept any liability or responsibility for the product you develop. It is your responsibility to ensure any 3rd party you are working with is fully aware of this
- The system produced must be demonstrable using university hardware, or freely available web/cloud technology or you own technology / hardware the group has equal access to

Types of projects which are not acceptable

- A functioning digital product is anticipated. Projects that do not follow the full development life cycle are not acceptable. Therefore, you could not for example just complete a large literature review or a design. You have to develop a potentially deployable artefact.
- Given the relatively short time available to gain ethical approval projects with ethics complications are not acceptable. So you project must not require any direct access to any vulnerable groups (children for example) or be in other way ethically contentious. Please talk to the module team for further guidance if you are unsure. Areas that are normally best avoided include:
  - Work in a school
  - Contact with children or young people under 18.
  - Contact with vulnerable adults or anyone who may not be able to give informed consent
  - Projects involving the National Health Service
  - Any project where there may be intellectual property or contractual issues
  - Any project where non-disclosure may be required
  - Any other project that raises concerns that are not satisfactorily covered by the usual procedures for consent and confidentiality.

- Projects must be of an agreed size. So if your project is seen as too simple or too challenging that too is clearly not in your interests so it is also not acceptable. This is true of the whole project and the individual sub components.
- Projects that use hardware / software that some of the group have and some do not are not acceptable. If you choose to use your own software / hardware it is at your own risk if it is lost, damaged etc during the project.
- During the delivery of the module you will be briefed regarding how you seek any required Ethical approval.

What are you required to submit

The Project Team

This assignment will be completed as a group. Groups are normally 5 students. You will sign up for your group via Blackboard. You are expected to sign up for your group before the end of semester one. Each group will be supervised by member of the module team. You will be timetabled to meet your tutor on a weekly basis in semester two. In addition to the supervision sessions you'll be provided further guidance in the form of lectures in semester two**.**

The module has a broad module team, blackboard will sign post to you to which tutors are the most appropriate for your programme.

Your terms of reference must clearly indicate who is in your team.

Vision of the system

The group is asked to define the scope of the project. If possible, we would like you to produce a system that addresses a real world need. The group needs to define the overall vision for the system. The vision is

1. A statement of the overall purpose of the system. This is anticipated to be a paragraph or two.
2. The main functional areas of the system. A paragraph for each functional area is anticipated. There must be as many main functional subcomponents as there are group members. Each group member will ultimately complete one of these subcomponents.
3. If any third parties are anticipated to be involved. Who these third parties are? Confirmation you have agreement from these third parties to be involved.

Overall this is anticipated to be approximately one side of A4.

You must submit a draft of your groups vision of the system to Blackboard before 4pm 31 January or your will incur a 20% mark penalty to this assignment.

This should be completed as a group.

The Code of Conduct

The group should first draw up a Code of Conduct that states the agreed responsibilities and commitment expected from all group members. This is to provide a foundation for the management of the project and should be considered an important part of the documentation. You are expected to discuss and agree your Code of Conduct with your supervisor in the second week of teaching.

This should state the agreed responsibilities and commitment expected from **all** group members and should be considered as a binding agreement on each individual member. This is intended to focus on the professionalism required to complete such a project in order to maximise the likelihood of a successful outcome.

Your Code of Conduct is expected to provide the ground rules for how the group will operate and would typically include:

How you will work together (respect, professionalism, inclusive, etc)
When and how frequently will you meet?
Who will attend meetings (everyone?)
Where will you meet?
Where will you store work in progress of group tasks?
Will you work on group tasks between meetings or will you work on them only when all together?
Which tasks are you each going to work on? (suggest all complete group tasks and clearly you each complete the individual tasks separately)
How you are going to manage your group?
What are you going to do if there are issues?
Time management / Project planning / Do now, do later, do last minute?

Clearly this must be completed and agreed as a group.

You must submit a draft of your groups code of conduct to Blackboard before 4pm 31 January or your will incur a 20% mark penalty to this assignment.

Ethical Approval

You are required to seek ethical approval for your project using the University's Ethics Online system. You can access this from the MyNorthumbria Pages. See the A-Z Links. You must complete the Ethics Approval process with the team you will work on for the module. *If you do not obtain Ethical Approval for*

Module Tutor – Tom Prickett
Research Supervisor – The supervisor you have signed up to on Blackboard
Named Submission Coordinator (PGT/UGT only) – The supervisor you have signed up to on Blackboard

The Scope of the project

The scope of the project is defined by two deliverables; the team system specification and the specification for the main functional subcomponents.

Team system specification

This will be completed as a group. This relates to the common elements of your project. Aspects of this are likely to be non-functional for example choice of architecture, look and feel, security, etc. It may also include functional aspects.

This section is split into three parts

1. Requirements capture and analysis for common elements
   This will include:
   a. The sources of the requirements for the common elements. This could include relevant literature, identified existing systems to analyse, set of standards, generic stakeholder groups (for example a system might be aimed at "university students"), specific stakeholders who have agreed to participate in the study (for example it might be something for your placement provider or other third party)
   b. A requirement capture plan
      This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. It is expected to be supported by appropriate references. It is expected to include consideration of legal, ethical, social, professional and security issues
       Please discuss and agree your requirement capture plan with the teaching team before you start it. You must have appropriate Ethical Approval before you involve any third parties. Please wait until you receive feedback upon your terms of reference before executing your requirements capture plan.
      If your project involved third parties it is likely your engagement with them will continue beyond the production of the terms of reference.

2. Requirements specification for common elements
   This is a high level description of the project (a paragraph or so), together with a list of prioritized requirements. Example project specifications are provided to give you guidance regarding project size and level of detail that is required at this stage.

3. The legal, social, ethical and professional dimension
   The group is required to document how their system may impact on others (individuals or groups) within wider society. This may be users of the system. It could be others who are impacted by the systems use. This should be for both the prototype system and any future full implementation of the system. You should also consider whether there are, or may be, ethical concerns with the system you intend to build. Discuss any potential legal problems (or what you might consider SHOULD be legal problems) which may occur as a result of the application.

Specification of main functional subcomponents.

These will be completed individually. You will each address one subcomponent. The subcomponent each person addresses must be different. As a group you must discuss your requirements to ensure more than

one of you are not addressing the same functionality. Like the Team system specification this is also split into two parts.

1. Requirements capture and analysis for individual subcomponent
    This follows the same format as for the common elements (above) but it is for each individuals subcomponents. You are expected to provide:
    a. The sources of the requirements for the individual subcomponents. There may be some commonalty with the sources for the group elements. Normally there will also be something additional.
    b. A requirement capture plan for the individual subcomponents. Again this is similar to the related common elements section but needs to be contextualised to the individual element

2. Requirements specification for individual elements
    Example project specifications are provided to give you guidance regarding project size and level of detail that is required at this stage. The project must be separated into as many distinct subcomponents as there are group members. Each subcomponent must have five high level requirements. Requirements must be prioritised. There requirements must be essential, one preferred, and one 'nice to have'. The requirements must demonstrate a degree of challenge and provide the opportunity for you to be innovative. You are expected to individually define of the subcomponents.
    Note: each individual area must have three "MUST" requirements, one "SHOULD" requirement and one low priority "COULD" requirement.   The intention is the 'could' requirement is more technically challenging. The system proposed and the elements within it should be of similar complexity to those provided below. So we may, for example, insist the complexity of your proposal is increased or decreased to ensure parity of challenge

The project tasks, deliverables and costing

This section should be completed as a group. This is a statement of the strategies adopted to develop the system. An overview of the method chosen is expected followed by a detailed approach of how the following stages of the development life cycle will be completed:
1. Requirements capture
2. Analysis and design
3. Systems build
4. Approach to testing
5. Configuration Management/Integration

Please remember the project will require the development of central components by the group and subcomponents by individuals in the group. As such you are encouraged to consider the mechanisms for group as well as individual tasks. For example, a database design may be a group task, some shared user interface design may lead to a more cohesive system. The end system should provide one integrated user experience.

The identified Legal, Social, Ethical, Professional are expected to be addressed / mitigated. The group is expected to consider how the system will be made secure. This will clearly require the identification of any security requirements. You are also encouraged to consider usability to support your intended user group.

Please note this document is the plan to complete a set of activities. For example, you may commit to producing a use case model for each subcomponent but the model will be produced at a later date.

The detailed approach would normally address the following outcomes:
- **Agreed deliverables** – list the deliverables and map these to each stage of the adopted development life cycle. You may wish to adopt an Agile approach. You would still need to evidence how this is going to be achieved.
- **Resources list** – detail the hardware, software, languages used, including versions if applicable, plus any associated standards.
- **Testing procedures/strategy –** explain what you intend to do to ensure the project deliverables are of good quality

- **Risk analysis -** determining the probability and impact of a risk to the completion of the case project.
- **Project plan** – The group should produce a Gantt chart to show how each project task has been scheduled. (you might wish to consider here the time needed to integrate the individual elements into one cohesive system)

Project costing

Finally you are expected to calculate the notional cost for the development of the system. It is not notional cost in the sense you are not going to charge for the system and are not going to be paid to do it. You may assume you should be paid a real living wage for this activity (Living Wage Foundation (2018))

References

Living Wage Foundation, 2018, *What is the real living wage*, Available at: https://www.livingwage.org.uk/what-real-living-wage (Accessed 05/07/2018)

Marking criteria

Each group member should produce the documentation for their designated area of responsibility. The group should produce the documents indicated as group tasks. Please also seeing earlier consequences for not seeking appropriate initial approvals.

1. The Vision of the Project (10 Group Marks)

Rating	Description of Quality
9-10	Difficult to fault. An exceptionally clear vision of the system is provided. A real need from an exceptionally well defined stakeholder community is articulated. The proposed system is extremely clearly and appropriately divided into the correct number of main functional subcomponents. At the high level the subcomponents display a parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference.
8	An outstanding and clear vision of the system is provided. A real need from an outstandingly well-defined stakeholder community is articulated. The proposed system is outstandingly clearly and appropriately divided into the correct number of main functional subcomponents. At the high level the subcomponents display a parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Very minor improvements may be possible but these are very minor and the document is usable as it is.
7	An excellent and clear vision of the system is provided. A real need from an excellently defined stakeholder community is articulated. The proposed system is clearly and appropriately divided into the correct number of main functional subcomponents. At the high level the subcomponents display a parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but these are minor and the document is usable as it is.
6	A clear vision of the system is provided. A real need from a defined stakeholder community is articulated. The proposed system is appropriately divided into the correct number of main functional subcomponents. At the high level the subcomponents display a parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. Addresses the areas with some thought and evidence of relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible but the document is usable as it is. However the group is encouraged to consider making the improvements.
5	A satisfactory vision of the system is provided. A need from a stakeholder community is articulated. The proposed system is appropriately divided into the correct number of main functional subcomponents. At the high level the subcomponents display some parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. There is evidence of some relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible but the majority of the document is usable as it is. The group is strongly encouraged to consider making the improvements.
4	A poor but satisfactory vision of the system is provided. An attempt has been made to articulate the need from a stakeholder community. The proposed system is divided into the number of main functional subcomponents. There may be issues parity of challenge and complexity. Which group member is responsible for each subcomponent is defined. Any group elements are highlighted. There is evidence of some relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements / rework is required.
3	An unsatisfactory vision of the system. A clear attempt to address the question has been made. Either the vision is barely recognisable as a vision or the content is seriously flawed, or both. Significant amounts of improvements / rework is required.
1-2	Either the vision is not recognisable as a vision or the content is seriously flawed, or both. Overall, a very unsatisfactory vision. A very limited attempt to address the question. A resubmission is expected.
0	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood.

2. Team system specification – Requirement capture and analysis (10 group marks)

Rating	Description of Quality
9-10	Difficult to fault. The sources of the requirements are extremely clearly defined. Extremely high quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Supported by appropriate references.
8	An outstanding answer. The sources of the requirements are very clearly defined. Outstanding quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but these are very minor and the document is usable as it is. Supported by appropriate references.
7	An excellent answer. The sources of the requirements are very clearly defined. Excellent quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but these are minor and the document is usable as it is. Supported by appropriate references.
6	A good answer. The sources of the requirements are clearly defined. Good quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible but the document is usable as it is. Supported by some references.
5	A satisfactory answer. The sources of the requirements are defined. Research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Addresses the areas with some thought and relevant research. There are flaws. These could be errors, omissions or oversights. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible and are recommended.
4	A weak but satisfactory answer. An attempt has been made to define sources of the requirements. Research practice has been attempted. This could take the form of some evidence of the agreement to participate, together with a fact finding plan. Equally it could take the form of a flawed literature review and / or weak analysis of existing products which can be used to derive your requirements. Addresses the areas expected. Demonstrates that a professional approach (possibly with minor lapses) has been taken when specifying the terms of reference. Improvements will be possible and are recommended.
3	An unsatisfactory requirements analysis for the system. A clear attempt to address the question has been made. Either the requirements capture is barely recognisable as a requirement capture plan or little attempt to identify sources or the content is seriously flawed, or both. Significant amounts of improvements / rework is required.
1-2	Either little attempt has been made to identify a plausible set of requirement sources and requirement capture plan or the content is seriously flawed, or both. Overall, a very unsatisfactory requirements analysis. A very limited attempt to address the question. A resubmission is expected.
0	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood.

3. Specification of main functional subcomponents (30 individual marks)

Rating	Description of Quality
27-30	Difficult to fault. The sources of the requirements are extremely clearly defined. Extremely high quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Supported by appropriate references.
24-26	An outstanding answer. The sources of the requirements are very clearly defined. Outstanding quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but these are very minor and the document is usable as it is. Supported by appropriate references.
21-23	An excellent answer. The sources of the requirements are very clearly defined. Excellent quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a well thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Comprehensively addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but these are minor and the document is usable as it is. Supported by appropriate references.
18-20	A good answer. The sources of the requirements are clearly defined. Good quality research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a thought through fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Addresses the areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible but the document is usable as it is. Supported by some references.
15-17	A satisfactory answer. The sources of the requirements are defined. Research practice is in evidence. This could take the form of evidence of the agreement to participate, together with a fact finding plan. Equally it could take the form of a literature review and analysis of existing products which can be used to derive your requirements. Addresses the areas with some thought and relevant research. There are flaws. These could be errors, omissions or oversights. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements will be possible and are recommended.
12-14	A weak but satisfactory answer. An attempt has been made to define sources of the requirements. Research practice has been attempted. This could take the form of some evidence of the agreement to participate, together with a fact finding plan. Equally it could take the form of a flawed literature review and / or weak analysis of existing products which can be used to derive your requirements. Addresses the areas expected. Demonstrates that a professional approach (possibly with minor lapses) has been taken when specifying the terms of reference. Improvements will be possible and are recommended.
9-11	An unsatisfactory requirements analysis for the system. A clear attempt to address the question has been made. Either the requirements capture is barely recognisable as a requirement capture plan or little attempt to identify sources or the content is seriously flawed, or both. Significant amounts of improvements / rework is required.
1-8	Either little attempt has been made to identify a plausible set of requirement sources and requirement capture plan or the content is seriously flawed, or both. Overall, a very unsatisfactory requirements analysis. A very limited attempt to address the question. A resubmission is expected.
0	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood.

4. The Project Tasks and Deliverables (10 group marks)

Rating	Description of Quality
9-10	Extremely comprehensively addresses all the expected areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the task and deliverables. Difficult to fault.
8	Comprehensively addresses all the expected areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the task and deliverables. Any improvements are very minor. Overall outstanding.
7	Comprehensively addresses all the expected areas with thought and relevant research. Demonstrates that a professional approach has been taken when specifying the task and deliverables. Any improvements are minor. Overall excellent.
6	Strongly addresses the areas with thought and relevant research. Demonstrates that a good approach has been taken when specifying the tasks and deliverables. There are some suggestions for improvement which would be of benefit however it is still workable as it is. Overall good.
5	Satisfactorily addresses the areas with thought and relevant research. Demonstrates that a sensible approach has been taken when specifying the tasks and deliverables. Presentation of information is satisfactory. There are some suggestions for improvement which the group is strong encouraged to make. Overall satisfactory.
4	Weak but satisfactorily addresses the areas with thought and relevant research. Demonstrates that a reasonable (if weak) approach has been taken when specifying the tasks and deliverables. The presentation of information may be poor. There are some suggestions for improvement which the group is expected to make. Overall satisfactory (just).
3	Unsatisfactorily addresses the areas without thought and/or relevant research Lacking in thought and relevant research AND/OR lacking a professional approach when specifying the tasks and deliverables in some areas. In need of significant rework. Not satisfactory.
1-2	A very limited attempt, lacking thought and relevant research. Indicates an unprofessional approach to specifying the tasks and deliverables. Very weak.
0-	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood

5. The legal, social, ethical and professional dimension (10 group marks)

Rating	Description of Quality
9-10	Fully addresses legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. A high level of critical thinking is evidenced supported by relevant research. Strong support from relevant reference material. Difficult to fault.
8	Comprehensively addresses legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. A high level of critical thinking is evidenced supported by relevant research. Strong support from relevant reference material. Any improvements are very minor. Overall outstanding.
7	Comprehensively addresses legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. A high level of critical thinking is evidenced supported by relevant research. Strong support from relevant reference material. Any improvements are minor. Overall excellent.
6	Addresses each of legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. A critical thinking is evidenced supported by some relevant research. Support from relevant reference material. There will be areas of improvement. All areas addressed to some extent. Overall good.
5	Attempts to addresses each of legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. There may be lapses in critical thinking however the tone remains critical in the main. Some relevant research is evident. Support from relevant reference material. There will be a number of areas of improvement. Overall satisfactory.

4	In a weak but just about satisfactory manner the answer attempts to addresses each of legal, social, ethical and professional dilemmas that can reasonably be expected to rise either during the development of the prototype system as part of this modules assessment and those which may arise from the live deployment of the developed prototype in the future. There is some evidence of critical thinking. Some relevant research is evident, although this may be from solely unreliable sources. Support from relevant reference material. There will be a number of areas of improvement. Overall satisfactory (just).
3	Unsatisfactorily addresses the areas without thought and/or relevant research Lacking in thought and relevant research AND/OR lacking a professional approach when specifying the tasks and deliverables in some areas. In need of significant rework. Not satisfactory. May not cover 1 or more of the expected areas at all.
1-2	A very limited attempt, lacking thought and relevant research. Indicates an unprofessional approach to specifying the tasks and deliverables. Very weak.
0-	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood

6. Costing (10 group marks)

Rating	Description of Quality
9-10	A full costing of the proposed project has been calculated. This is extremely clearly explained. Research underpins figures as appropriate. Difficult to fault.
8	A full costing of the proposed project has been calculated. This is very clearly explained. Research underpins figures as appropriate. Any errors, omissions or oversights are very minor. Overall outstanding.
7	A full costing of the proposed project has been calculated. This is clearly explained. Research underpins figures as appropriate. Any errors, omissions or oversights are minor. Overall excellent.
6	A costing of the proposed project has been calculated. This is in the main, clearly explained. Research underpins the vast majority of the figures. There are errors, omissions or oversights. However it is still good overall.
5	A satisfactory costing of the proposed project has been calculated. There may be lapses when it could be explained more clearly. Research underpinning for figures has been attempted. There are errors, omissions or oversights. However it is still satisfactory.
4	In a weak but just about satisfactory manner the answer attempts to cost the project. Some relevant research is evident. There will be a number of areas of improvement. Overall satisfactory (just).
3	Unsatisfactorily addresses the areas without thought and/or relevant research Lacking in thought and relevant research AND/OR lacking a professional approach to calculate the costing. In need of significant rework. Not satisfactory.
1-2	A very limited attempt, lacking thought and relevant research. Indicates an unprofessional approach to the costing. Very weak.
0-	Not meaningfully addressed. A minimal attempt or the task has been seriously misunderstood

7. Subcomponent Specification – Requirement Specification (20 Individual Marks)

Rating	Description of Quality
14-20	A clear specification of the five requirements of the subcomponent is provided. The requirements have been appropriately prioritised. The requirements appear achievable. The level of challenge is appropriate. The requirements form a cohesive whole. Demonstrates that a professional approach has been taken when specifying the terms of reference. Improvements may be possible but the document is usable as it is.
12-13	Strongly addresses the areas with thought and relevant research. Demonstrates that a good approach has been taken when articulating the vision of the system. There may be some minor modifications required before the document is usable.
10-11	Satisfactorily addresses the areas with thought and relevant research. Demonstrates that a sensible approach has been taken when specifying the vision of the system. Presentation of information is satisfactory. There may be some major modifications required to be necessary before the document is usable. However the vast majority of the vision is appropriate.
8-10	Weak but satisfactorily addresses the areas with thought and relevant research. Demonstrates that a reasonable approach has been taken when specifying the terms of reference. The

	presentation of information may be poor. It is likely a number of significant adjusts are required to be made to the vision. However the majority of the vision is acceptable.
6-7	Unsatisfactorily addresses the areas without thought and/or relevant research Lacking in thought and relevant research AND/OR lacking a professional approach when specifying the terms of reference in some areas. The majority of the vision is unacceptable and significant rework is required.
0-5	No meaningful attempt, lacking thought and relevant research. Indicates an unprofessional approach to specifying the project terms of reference.

Example Projects

There are a number of example project scenarios on Blackboard.