**Department of Computer & Information Sciences**

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| **ASSESSMENT BRIEF** | |
| **Module Title:** | Team Project and Professionalism |
| **Module Code:** | KV6002 |
| **Academic Year / Semester:** | 2022-23 / Semester 2 |
| **Module Tutor / Email (all queries):** | Rebecca Nicholson [rebecca.nicholson@northumbria.ac.uk](mailto:rebecca.nicholson@northumbria.ac.uk) |
| **% Weighting (to overall module):** | 10% |
| **Assessment Title:** | Terms of reference presentation |
| **Date of Handout to Students:** | 27/01/23 |
| **Mechanism for Handout:** | Module Blackboard Site |
| **Deadline for Attempt Submission by Students:** | To be submitted by 23:59 GMT on 9th Feb 2023 |
| **Mechanism for Submission:** | You will find a submission link on the module’s eLP / Blackboard site.  This assignment contains group as well as individual components.  The group should upload one copy as a powerpoint or pdf document to Blackboard. The submission uses Blackboard assignment handler. Blackboard assignment handler allows only one submission so please check carefully before you submit. It should clearly mark which slides are by which member of the group as well as which persona was created by which member. |
| **Submission Format / Word Count** | The group should upload one copy as a powerpoint or pdf document to Blackboard. The group work should not exceed 3000 words in length.  Each group member then separately uploads their individual sections to Blackboard. The individual sections should not exceed 1000 words in length.  Appendices are not included in the word count. |
| **Date by which Work, Feedback and Marks will be returned:** | 10th March 2023 |
| **Mechanism for return of Feedback and Marks:** | You will receive detailed verbal feedback in your presentation session. Your agreed team targets provided as written feedback together with your marks will be available by the grade centre in the Module Site on Blackboard. For further queries please email your team’s supervisor. |

**LEARNING OUTCOMES**

The learning outcomes (LOs) for this module are:-

**Knowledge & Understanding:**

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)

2. Critically apply a well-integrated requirements, design and development methodology to a computing problem

**Intellectual / Professional skills & abilities:**

3. Develop a significant computing product using industrial standard development tools and techniques (including those related to information security) including the application of the required project management and team working skills

4. Apply appropriate quality assurance techniques and work to appropriate professional standards for documentation, quality control and product integrity

**Personal Values Attributes (Global / Cultural awareness, Ethics, Curiosity) (PVA):**

5. Critically evaluate project work in terms of the technical decision making, group work, processes and responsibilities, the final project deliverables as well as the professionalism, ethical and legal considerations and potential social impacts (including information security).

**This assessment addresses learning outcomes LO1.**

**PROGRAMME LEARNING OUTCOMES**

The completion of this assignment will enable you to demonstrate full or partial achievement of the following programme learning outcomes:

**Framework Knowledge and Understanding (KU):**

KU1. Demonstrate a systematic, critical understanding and detailed knowledge of computing facts, concepts, principles, theories, techniques, and technologies

KU2. Demonstrate a detailed understanding of technical, professional, security, commercial and economic issues and risks surrounding the development, operation, and maintenance of computing systems

KU3. Deploy knowledge and understanding of techniques and tools (some of which are at the forefront of the discipline) for the specification of requirements, analysis, design, implementation, testing and management of secure computing systems, thereby applying and critically evaluating a software engineering approach

KU4. Demonstrate a critical understanding of the professional, ethical, social, and legal issues involved in the development and operation of computing systems

**Framework Intellectual / Professional Skills & Abilities (IPSA):**

IPSA1. Ability to select, plan and manage individual and team-based development projects

IPSA2. Discuss, explore, and critically evaluate available development tools, methods, and technologies and associated user and professional issues

IPSA3. Identify and analyse complex problems and select and apply effective methods, tools, and algorithms for their solution, some of which are at the forefront of the discipline

IPSA4. Integrate and critically evaluate information and data from a variety of sources

IPSA5. Reflect on the professional and ethical issues surrounding computing applications development and use

IPSA6. Analyse, design, build, test, and manage secure computing applications, adopting a software engineering approach, in increasingly complex and varied computing problem domains

IPSA7. Use a range of tools, techniques, knowledge and technologies in the development, operation, and effective management of computing applications

**Personal Values Attributes (Global / Cultural Awareness, Ethics, Curiosity) (PVA)**

PVA1. Articulate critical independent thinking, justify your own opinion, and recognise the need to challenge your thinking and the thinking of others

PVA2. Communicate information, ideas, problems, and their solutions effectively for complex scenarios, in both written and oral form to both specialists and non-specialists

PVA3. Apply an appropriately advanced ability to work both individually and as a member of a team, recognising different team roles and multi-cultural environmental issues

PVA4. Demonstrate professional and reflective practitioner attributes, including initiative, personal responsibility, decision-making in complex and unpredictable contexts, the management of time, resources, the evaluation of personal performance, continuous professional development and learning experiences

PVA5. Demonstrate independent research and enquiry skills to direct your learning, making use of scholarly reviews

**PRODUCT DEVELOPMENT DETAILS**

What will I have to do on the module?

In this module, you are going to develop a system. This system will have as many sub-systems as there are group members. Each sub-system should be demonstrable on its own. Commonly this is achieved by each student developing a vertical slice of functionality but please discuss with your supervisor. Normally your sub-systems will be demonstrated as one system. However, if your group cannot get the sub-systems to work together then it would clearly be beneficial to be able to demonstrate your work in isolation (although there will be less credit for doing so). Your Terms of Reference specifies: the system, and the sub-systems you are each going to develop.

What do i need to create?

Your Team project will result in the creation of a prototype system. The sophistication of the developed prototype will vary. The simpler the project you address, the more sophisticated a solution we expect that a technically challenging project will be proof of concept, whereas a technically challenging project will be commercially demonstrable prototype.

How do we divide the work between team members?

Your team is requested to function as Full-Stack Developers. By this we mean you should all engage with all aspects of the software development life cycle. So, everyone is responsible for design, development, testing, etc of their own subsystem. And conversely no one’s sub-system is the design or the testing etc. Normally, it is also better to avoid separating work by architectural component as it can be challenging to assure the size of the work is equitable e.g. It is best to avoid one team member being responsible for the database and another the GUI etc. In this example the GUI will probably require a bit more effort to complete than the database. However please discuss and agree with your supervisor.

Who will be in my team?

Normally this assignment is completed by teams of 5 students, if you are entitled to alternatives to group work, please let the module tutor know and we shall support this. In this case we shall agree a smaller project for you to complete. If there are less than 5 students in your group, you will complete fewer subsystems. So, if there are 4 of you, you shall complete 4 subsystems and so on. However please note if you form a team of less than 5 students you may be allocated an additional team member later.

**Choosing your team**

We recognise some of you prefer forming your own teams. Equally we recognise some of you would prefer for us to assign you a team. Can you let us know your intention at the earliest opportunity please by completing the form on blackboard. Assigned teams will be allocated on a first come first served basis.

The development of the project and the preparation and delivery of the demonstration of it should take approximately 100 hours of work for each of your team. So, it is not of an insignificant size.

What sort of project can i work on?

Projects **must** address the needs of a stakeholder or a set of stakeholders. **That cannot be you.**

The system that you create will address the requirements of a stakeholder / group of stakeholders who can provide feedback.

We expect you to demonstrate that you have spoken to your stakeholder at least twice during the development process. As an absolute minimum you should meet with them initially to discuss their needs for the project and again at the end of the process to ensure you have gathered feedback from your client.

In all cases the project must involve practical development work so that everyone has completed some software development.

**Possible project types**

Your 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 (and your supervisor in particular) for further guidance if you are unsure. Areas that must be 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.
* Commercially sensitive projects
* Any other high-risk factor (please check with your supervisor)

Your project **must be for defined group of stakeholders**. It must not require you to be standing on a street corner with a clipboard asking passers-by questions for example.

We ask you to minimise the personal data you collect to only that which is essential for your project (name, home address, computer IP address, phone number etc)

You must not collect any special category data including:

* + personal data revealing racial or ethnic origin
  + personal data revealing political opinions
  + personal data revealing religious or philosophical beliefs
  + personal data revealing trade union membership
  + genetic data
  + biometric data (where used for identification purposes)
  + data concerning health
  + data concerning a person’s sex life
  + data concerning a person’s sexual orientation

Projects must be of an agreed size. This is something that should be discussed with your supervisor, however you need to discuss as a team what you feel is reasonable to complete given the timeframes of the module. In discussions with your supervisor, they will help you to consider whether your project might be too simple or too challenging. It is not in your interests for it to be too challenging, however if it is too simple it will not support enough evidence of the skill development needed for the module. Given this is a level 6 module, an element of complexity is expected. The development of the project including the preparation and delivery of the demonstration should take approximately 100 hours of work for each member of your team.

As part of this module, you are encouraged to select your own project. This is so that you can work on something you find interesting. In previous deliveries, some groups of students have selected projects they appeared to think are "easy" rather than interesting. These groups of students have tended to find the module less intellectually stimulating than those who have selected their project based on interest. Remember this is 100 hours of work so where possible try and pick a project that is of interest to you!

**Some project ideas:**

**If you do not have a specific client in mind however, we have a number of projects that we have already spoken to clients about and these will be made available to your supervisors to discuss with you as potential projects you may wish to work on.**

If you are having discussions with clients, then these ideas provide as an illustration of the type of project you could do.

**Idea 1:** Building a system for an organisation or person you know already.

- Do you know an organisation or a group of people you could build an application for?

These are often the best projects. You could potentially build a system for a generic group of stakeholders providing you have access. Although building for specific (and named stakeholders) usually results in better projects (and marks).

- One common example is a dynamic web application for a local small business.

**Idea 2:** A system to help students at the university in some way.

- Could you host this application in the cloud? In Microsoft Azure maybe? (Other providers also exist.)

- Would your application support multiple languages (e.g., not just English?)

**Idea 3:** A computer game of some sort.

- a puzzle game, or a small game using the unreal engine can work. You need to be careful when defining these projects and the scope and functionalities of the game so you can be clear who is completing which aspect.

**Idea 4:** A small e-commerce system can work well (nail bar, dog walking, shop etc)

Given the short timeframe you have to create these projects, we encourage you to make use of software and equipment you have access to, rather than specialist equipment that would require you to make use of the university’s specialist laboratories.

**ASSESSMENT DETAILS**

What does this assessment entail?

In this assessment your group needs to present your project plan to your supervisor. This presentation should be maximum 15 minutes which will leave 15 minutes for questions and feedback from your supervisor.

This presentation will be done in your supervision session in week 4 of the semester (w/c 13th February). There will only be your group and your supervisor present, and you will not be required to present to a wider group.

You are required to upload your final slides by the assignment deadline (10th February 2023). These slides will be used to present your project to your supervisor – you will not be able to make changes to these slides between submission and the presentation.

Your supervisor will provide you with verbal feedback in this supervision session to enable you to confidently plan and carry out your project development for assignment 2. Your marks will be available on Blackboard within the usual 20 working days of the assignment deadline.

Your presentation and submitted slide deck must follow the following structure:

**SLIDE 1:** Intro to your project.

This should include:

1. Information about your client
2. Their initial ‘pitch’ (what they wanted you to develop at a high level).
3. Introduce your group – who is in the team?
4. How you gathered the requirements for your system and refined them.

**SLIDE 2 and 3:** Your team plan.

This should include:

1. The Epic in the format:

**For:**

**Who:**

**Our:**

**Is a:**

**That:**

|  |  |
| --- | --- |
| Example: |  |
| **For:** [The user group]  **Who:** [Problem]  **Our:** [Type of system]  **Is a:** [Outline project idea]  **That:** [How it solves the problem] | For Northumbria students  Who need to find good coffee  Our mobile app  Is a good coffee finder  That will show students ratings and locations. |

1. Your team plan outlining how your features work together as a plan.

This plan should include:

* 1. details of the overall system,
  2. who will complete which subsystem
  3. how you intend to test the system, and
  4. integration of the subsystems.

1. Project requirements – what equipment / software access do you need?
2. Potential commercial, economic, legal, ethical, social and professional factors

**SLIDE 4:** The intended users.

This should include:

1. 1 persona per person in the group.

**SLIDE 5 – 14 (max):** Your individual plans.

Nb: This slide limit varies but it is absolute maximum 2 slides per person in your group.

These slides should include:

1. A clear outline of the subsystem you are working on.
2. 5 user stories (these should all be connected to one of your group personas).
3. A clear outline of the tasks you intend to complete and the deliverables.

You should also submit a disclaimer signed by your client. Failure to do so may result in a mark of 0 for this assignment.

(An electronic signature with email evidence will suffice).



**Feedback**

You will receive verbal feedback on your presentation at the time of delivery and you will get marks uploaded to blackboard within 20 working days of submission. Verbal feedback will be given so that you are able to action the feedback and make changes to your proposed plan as soon as possible. It is your responsibility in this session to take notes of the verbal feedback offered to you, however your supervisor can help you to outline some specific and actionable tasks as part of the feedback process.

**Module Specific Assessment Criteria and Rubric**

There are 100 marks available for this assignment (50 group marks and 50 individual marks). They are broken down as follows:

Project idea (20 group Marks)

This includes:

a) Developing the vision for your system – writing out the epic for your project in the correct format.

b) Providing a list of the stakeholders involved in the project idea and your groups existing relationship with them

c) Describing how you intend to define the system. E.g., how will you ensure you meet the expectations of the stakeholder? This is likely to include activities like discussions with a stakeholder or research into existing systems.

d) Identifying the proposed subsystems and who is going to complete each. This is the sub-system names and who is responsible.

Your project plan (30 group marks):

This includes:

a) Defining how you are going to complete the project including clearly outlining the project tasks and deliverables.

This section should be completed as a group. It is expected that you will consider 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 systems by the group and subsystems 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.

Remember, this is the plan to complete a set of activities. For example, you may commit to producing a use case model or a set of wireframes for each subsystem, but these will be produced later.

A suggested approach would be to ensure you address the following:

* Agreed deliverables – list the deliverables and map these to each stage of the adopted development life cycle.
* Resources list – detail the hardware, software, languages used, including versions if applicable, plus any associated standards. Please check you have access to all you require. Simulation of specialist hardware is acceptable. You may for example like to check what is available via the loans room. You are strongly recommended to discuss with your supervisor as soon as possible.
* 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)

Personas for the intended users (20 individual marks).

Create personas (one per group member) for the intended project. This persona does not have to be specifically linked to your subsystem, rather it should reflect a person who is likely to be a target user of the intended system as a whole, e.g. if you are creating a stock checking subsystem, your persona may be a customer who would not specifically interact with your subsystem but who may use your system (a small e-commerce site).

These personas should be documented within the slides.

Intended plan for your individual subsystem (30 Individual Marks).

This includes:

1. Outlining your specific subsystem and how it fits within the wider proposed system.
2. Creating stakeholder stories for your individual subsystem. We expect to see 5-7 stories per subsystem.

Stakeholder stories are expected to be written in the format:

As a <role> I want <something> so that <benefit>

This is expected to be a list of the stakeholder stories / requirements that the specific subsystem will meet and therefore will be addressed by *an individual group member*

They will include relevant items to ensure appropriate professional, ethical, legal, social issues are addressed, and the product is secure. The stories will form a backlog / list of work to complete and hence will need to be prioritised.

Typically, there will be 5-10 stories / requirements for each group member to address individually.

1. Defining how you are going to create your subsystem. This should include tasks and deliverables and detail how these deliverables align with those of other team members to ensure the subsystems are integrated.

***Please see the marking rubric document for the full specification of how this will be marked.***

**ASSESSMENT REGULATIONS**

You are advised to read the guidance for students regarding assessment policies. They are available online [here](http://www.northumbria.ac.uk/about-us/university-services/academic-registry/quality-and-teaching-excellence/assessment/guidance-for-students/). (<http://www.northumbria.ac.uk/about-us/university-services/academic-registry/quality-and-teaching-excellence/assessment/guidance-for-students/> )

**Late submission of work**

Where coursework is submitted without approval, after the published hand-in deadline, the following penalties will apply.

For coursework submitted up to 1 working day (24 hours) after the published hand-in deadline without approval, **10% of the total marks available for the assessment** (i.e., 100%) **shall be deducted** from the assessment mark.

Coursework submitted more than 1 working day (24 hours) after the published hand-in deadline without approval will be regarded as not having been completed. **A mark of zero will be awarded for the assessment and the module will be failed**, irrespective of the overall module mark.

These provisions apply to all assessments, including those assessed on a Pass/Fail basis.

The full policy can be found [here](https://northumbria-cdn.azureedge.net/-/media/teaching-excellence/pl,-d-,008-v005-late-submission-of-work-and-extension-requests-policy-stc.pdf?modified=20221130140248).

**Word limits and penalties**

If the assignment is within +10% of the stated word limit no penalty will apply.

The word count is to be declared on the front page of your assignment and the assignment cover sheet. The word count does not include your appendices.

Please note, in text citations [e.g. (Smith, 2011)] and direct secondary quotations [e.g., “*dib-dab nonsense analysis*” (Smith, 2011 p.123)] are INCLUDED in the word count.

The full Word Limits Policy is available [here](https://northumbria-cdn.azureedge.net/-/media/services/academic-registry/documents/qte/assessment/guidance-for-students/pl013-v002-word-limits-policy.pdf?modified=20200803200335).

**Group Work**

The Group Work Assessments Policy can be found [here](https://northumbria-cdn.azureedge.net/-/media/services/academic-registry/documents/qte/assessment/guidance-for-students/pl002-v001-group-work-assessments-policy.pdf?modified=20200804084402)

**Academic Misconduct**

In all assessed work you should take care to ensure that the work you submit is your own. The University takes academic dishonesty and cheating very seriously, and it is your responsibility to ensure that you don’t attempt to cheat or become victim to cheating.

There are many different forms of academic misconduct or ‘cheating’.  Plagiarism is the most common and both the University library and your academic tutors are able to provide further guidance on proper citation and referencing in your assessed work.

The full Academic Misconduct Policy is available [here](https://northumbria-cdn.azureedge.net/-/media/services/academic-registry/documents/qte/assessment/guidance-for-students/pl,-d-,005-v004-academic-misconduct-policy.pdf?modified=20210212163133).

Useful guidance for avoiding academic misconduct can be found [here](https://northumbria-cdn.azureedge.net/-/media/services/academic-registry/documents/qte/assessment/guidance-for-students/avoiding-academic-misconduct---student-guidance.pdf?modified=20200120124857).