COMP2003
Computing Group Project

40 CREDIT MODULE

ASSESSMENT: 80% Coursework
20% Practice

MODULE LEADER:	**Dr Shirley Atkinson**
CO-TEACHER	**Dr Alaa Alkhafaji**
MARKING PANEL:	**Dr Amir Aly**
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MODULE AIMS

- To develop the skills required to participate in a live, team-based online/offline software development project within a project management paradigm.
- To apply appropriate design process, take charge of development milestones, evaluate their software solution as well as consider the broader context of business, legal, social and ethical elements on project delivery.

ASSESSED LEARNING OUTCOMES (ALO):

1. Work as part of a team in identifying, analysing, proposing and documenting a solution to a specific problem appropriate to the degree and/or field of study.
2. Implement an effective solution using appropriate techniques accounting for appropriate legal, social and ethical constraints.
3. Evaluate and reflect upon the suitability of the solution to the given problem.

Overview

This document contains all the necessary information pertaining to the assessment of *COMP2003 Computing Group Project*. The module is assessed via **80% coursework** and **20% Practice**.

The sections that follow will detail the assessment tasks that are to be undertaken. The submission and expected feedback dates are presented in Table 1. All assessments are to be submitted electronically via the respective DLE module pages before the stated deadlines.

	Submission Deadline	Feedback
1 Application for Team	**Thursday 14th October 1600**	18th October 1600
2 Client / Project Networking Event	**Wednesday 20th October 0900 - 1300**	N/A
3 Project Bid	**Monday, 25th October 1600**	29th October 1600
4 Initial client meetings	**Wednesday 10th November**	N/A
5 Requirements validation client meeting	**Wednesday 24th November**	N/A
6 Project Plan client presentation	**Wednesday 12th January 2022**	N/A
7 Interim Submission	**Thursday 14th January 2022 1600**	10th February 2022
8 Marketplace Demo and associated video upload	**Tuesday 18th January 2022 0900 - 1600**	15th February 2022
9 Development sprints begin	**2nd February 2022**	N/A
10 Final demonstration to client	**11th May 2022**	N/A
11 Final Submission (individual and team poster)	**Monday 9th May 2022 1600**	20th June 2022
12 Showcase Presentation	**Tuesday 17th May 0900 – 1600**	23rd June 2022

Table 1: Assessment and other important Deadlines

All assessments will be introduced during the first timetabled session to provide further clarity over what is expected and how you can access support and formative feedback prior to submission.

This Group project module is an all year, 40 credit, module that provides you with an opportunity to apply your knowledge and skills to a real-world problem. This is the application of technology to solve a problem where you make use of your previous learning (hardware/software, interaction design) as appropriate and apply it to a problem relevant to your degree.

You are required to work in a distributed team environment, using agile project management to deliver a technical solution with some complexity. This module serves as an integrating project to bring together the various aspects of software engineering, data driven design and subject specific learning encountered in your course so far.

All students are expected to provide evidence for their work as this is required to achieve the marks.

Submissions

1 Application for Team

This section provides you with the information you need for this **individual** submission.

Teams

This module provides you with the opportunity to develop technological solutions in a team-based environment. Working with others is a key graduate skill highly prized by employers and most careers will involve working as part of a team. The skills you gain here are going to help you demonstrate to employers that you have developed good interpersonal, communication and time management skills.

In many careers, the global nature of our economy may require you to work as part of a distributed team based in different parts of the world. It is important that you can show you can work in different types of groups, interacting both face to face as well as by using technology.

You are expected to engage with the team processes through all stages of the project. Failure to do so will result in failing the module.

Teams are expected to hold weekly meetings and to follow an agile methodology, carrying out incremental development and delivery using a Scrum based approach. A rigorous planning and review cycle in short two-week sprints is expected.

Team roles

Teams are non-hierarchical and are to be made up of 4 people who will each have a developer role but also take on an additional leadership role as described below. The roles described below are to be determined at the beginning of the project.

Leadership Role	Responsibility
Product Owner	The team member responsible for identifying product features and attributes. They review the work done and drive the testing requirements. They lead on the prioritization of the backlog.
Scrum Master	A team coach who guides the team in effective use of scrum. They are responsible for the team meetings where progress is reviewed and work to be done is discussed and agreed. They lead the planning of the sprints.
Technical Lead	The team member for ensuring Version Control in place, they manage the repo ensuring appropriate branches/comments, lead in identifying and communicating appropriate design patterns, ensure the quality of the code base.
Client Liaison	The team member who is responsible for organising the meetings with the client, taking notes during the meetings and being the main point of contact for the client.

Having a leadership role as provided above does not mean that person does all the work but shows leadership in ensuring the team fulfil their obligations.

Team Allocation

Working with others can feel very scary and students often will attempt to avoid any form of group work in case it has a detrimental effect on their marks. However, this module is about learning how to work in a team and the marking is structured so that it is the individual work effort and process that gains the grades. Future employers are not interested whether a student can work nicely with their friends, they are keen to know whether skills of working with a diverse set of people have been

developed. Our Industry panel of advisors have praised our team working module with especially supportive comments from our representatives from Google and Microsoft.

The first two weeks of the module will explore the principles of effective teamwork. During these two weeks you must reflect on your own skill set and identify the skills you need to develop. Based on that self-evaluation you must then form or apply for a team. It is recommended that you identify one person that you can work with and either seek out another pair or apply together as a pair to be placed with a pair.

As mentioned earlier, teams must have 4 members. The only reason to have less is if somebody leaves the course. There must not be any more than 4. You may apply to have a multi-disciplinary team across the different Computing degrees.

There are two types of application: Route 1 or Route 2 as described below:

Route 1:

Apply to form a team. Four students may decide together that between them they have the appropriate team skills to create a good team. This must not be about working with your best friends just because you have in the past. You must have a clear thought and justification as to why together you will form an effective team. Teams will not be allowed just because students think they can do their best work with their mates.

Individually you create your team application document outlining the following:

- The group letter chosen from the DLE (eg: Group-A, Group-B etc). Make sure you have all entered your names into this group on the DLE.
- A list of the proposed team members.
- An indication of which role each team member will take with your own role highlighted.
- One paragraph justifying what qualities you individually will bring to the team and how your personality complements the others.

Between you, you decide which letter to choose in the Team Applications group chooser and you all sign up for that group. You **individually** submit your team support document as a PDF.

Route 2:

Apply to Allocation Pool: Some students wish to expand their horizons to enhance their team working skills and this route is for them. Students should choose the "Allocation Pool" option in the Team Application component and provide a team application document outlining the following:

- An indication of the leadership role you would like to take on taken from the list above.
- One paragraph to outline the qualities you bring to a team.
- If relevant, the name of one other person you would like to work with. This is not mandatory.

Deliverable 1 Application for Team

By ***4pm on 14th October*** you must have submitted your application for your team. This requires you to sign up to a group as discussed in the routes above and to have submitted your support documents via the appropriate links on the DLE. This is an individual submission.

In the *1 Team Applications component* on the DLE (found in the Assignments section) choose your group, either choose the same letter with the other members of your proposed team or the Allocation Pool at the top.

Choice	Group Show descriptions	Members	Group members Show Group Members
○	Allocation Pool	0	
○	Group A	0	
○	Group AA	0	
○	Group B	0	
○	Group C	0	
○	Group D	0	
○	Group E	0	

Submit a PDF document containing your Team Application at the *1.Application for Team (Individual)* submission point. You will receive confirmation or otherwise of your group allocation by 19th October. Teams with little justification or wrong number of members will result in a discussion with the module leader to determine further actions.

2 Client / Project Networking event

Clients will have provided a summary of their project which will be available on the DLE at the start of the module. At the date given, clients will attend the University to participate in a networking event with you the student. This is going to take place across a number of the labs.

The agenda for the morning is as follows:
09:35 Introduction and welcome. Questions from students.
10:00 Clients arrive.
10:15 Commence pitch discussion. Clients will provide a 2-minute pitch each for their ideas.
10:45 (Timing dependent on how many clients attend). Networking session.
12:00 Finish session

During the networking part of the session students are expected to move around and speak to all of the clients. You must take notes as these will be important for your project bid. Clients will be looking to find students who understand their project ideas and they will provide the module leader with their preferences. Decide on questions beforehand and arrange who will ask which questions. All the team are expected to attend. Attendance is part of the marking schema.

3 Project Bid

This section provides you with the information you need for this **group** submission.

This deliverable will follow the Client/Project Networking event. You and your group must bid to work on a project and provide a suitable justification for being allocated. You are to bid for more than one client from those provided as it may not be completely possible to provide you with your first choice.

Your project bid must contain an application letter and a discussion of your team skillset and how this applies to the client project you are bidding for. You need to be specific and objective. Your application letter should draw attention to relevant and pertinent experience and attributes that demonstrate why your team should be allocated to the client project you have requested.

Notification of the bid success will be provided by the end of the week. You are expected to commence working with your client to immediate effect.

4 Initial Meetings with Clients

Teams are to arrange an initial meeting with their clients. Clients have been briefed that this will take place on the date given.

During this initial meeting you are to agree the following:

- Communications protocol. How will you and the client communication. What are preferred timings and methods.
- Requirements. Discuss the scope and the functionality of the proposed system.

A summary of your meeting detailing who attended and an overview of discussions must be provided via email to the module leader. You must copy your client into the email.

Following on from this meeting, you should be identifying the point of your project. This will require you to consider a title and work up a project vision. You need to know at the start roughly where you want to develop your ideas. By ensuring you start with a coherent project title and project vision, you can ensure you start in an organised fashion.

At this point, the concept of Sprint Zero comes into play. Sprint zero requires you to set up your team communication environment, development environment, sort out a version-controlled repository, identify the test environment, identifying the things that could go wrong and creating the initial product backlog. The product backlog will be an evolving, living item that changes and evolves as the project progresses. You must ensure that there is enough in the product backlog to being with.

You are to use the COMP2003 GitHub classroom found here. https://classroom.github.com/g/5zL0eI7m The first member of the team must use the team name provided to the module leader.

Students can apply for a Student Developer pack from GitHub. https://help.github.com/en/articles/applying-for-a-student-developer-pack. You must clearly provide your project title and description in the readme file.

Should you wish to host your project, you may negotiate University server space from Shirley Atkinson. This must be done during sprint zero not later in the project. Please see the appendix for further details.

This is the stage where you must give some consideration as to the potential for things to go wrong. Please read around the topic matter and identify what pertinent risks there might be to your project. Once you have identified what could go wrong, you need to also consider the likelihood of that happening and then what you will do about it. Any risks that are a high likelihood and a high impact MUST have actions taken to prevent them.

5 Requirements validation meeting with clients

Following on from your initial meeting you are to validate your understanding of the requirements with your client. You are to present to them your overall project vision, a set of functional and non-functional requirements and a product backlog. You are to write up feedback from the client following this validation meeting to be saved into your project plan.

A summary of your meeting detailing who attended and an overview of discussions must be provided via email to the module leader. You must copy your client into the email.

6 Project Plan Client Presentation

By this date you should have developed the following:

- A project vision.
- A list of project objectives.
- A set of requirements models. These should include the user stories, use case diagrams and other appropriate UML diagrams that decompose the user stories.
- A sprint plan showing when user stories will be developed by the team and an outline of what will be released at the end of each sprint.
- A risk management plan.
- A communication plan.
- Initial interface diagrams (sitemap, wireframes etc)
- An initial prototype illustrating one key concept from the project.

The initial prototype, sprint plans and models should be demonstrated during a presentation to your client that you must organise. You are to gather feedback from the client which should be used to reflect upon and adjust where appropriate.

The above items must all be in place in your GitHub classroom repo.

7 Interim Submission

This deliverable is an individual deliverable where you provide evidence for your own work to date. You must ensure that the items from section 6 above are in place in readiness for the marketplace demo. This submission combined with the results of the Marketplace demo will account for **30%** of your coursework mark.

This submission cannot be anonymous as evidence of attendance is also considered in the marks. The mark that you will receive back via the DLE under this heading will also account for the 50% team mark that will be allocated after the Marketplace Demo.

You must submit a PDF document that will provide the following information:

- Evidence of working as a team. You must provide hyperlinks to the evidence that shows your participation and engagement as a team member. Evidence should be held in the GitHub repo. The following evidence is expected:
    - Weekly meeting minutes showing attendance at meeting, actions completed and actions agreed.
    - Kanban tasks with clear indication of who was allocated the task and who completed it
    - GitHub commits to match Kanban tasks.
    - Attendance record.

- Evaluation and reflection. You must write approximately 1000 words where you evaluate work carried out to date, your actions in completing the work to date and a reflection on your own experiences. You must structure your reflections appropriately.

8 Marketplace demo

This deliverable is a **group** deliverable that will contribute towards **30%** of your practice mark. The exact breakdown for marks is provided below.

Tuesday 18th of January for the whole day students are to demonstrate their work to date. Teams will be required to provide a form of physical presence on campus in the timetabled labs. Students are to use their initial prototype from the section above for usability testing and discussions.

The marking panel will circulate amongst the student groups during the course of the day. Computing students from final stage will attend to help provide peer feedback. Computing students from 1st year will also attend to assist with the usability testing.

All team members are expected to engage but not all must physically be present. Teams are expected to help support each other in relation to the physical set up within the labs.

During the course of the day, each team must record a short 2 to 4-minute video containing all the team members discussing in turn what they have gained from the day. This should be uploaded to the DLE by the end of the day. This combined with your attendance at the event provides 30% of your final mark for the practice element.

Your team video must be uploaded to You Tube, be unlisted and to have visuals as well as you being seen on screen. Use sub-titles to indicate who is talking. You are to submit the URL in the text entry box via the submission link. You do not need to save the URL in a document, it can be entered directly.

Your interim deliverables are graded according to the criteria below.

Assessment Criteria: Interim Coursework (30% of total grade)

INDIVIDUAL (50%)							
Category and marks weighting:	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Team (30%) Evidence provided of contributions to meetings, attendance, participation. GitHub Commits evidenced User story/Kanban tasks evidenced	Little to no contributions evident	Inadequate contributions; very poor engagement.	Unclear or under-developed contributions. Vague &/or illogical claims for contributions.	Clarity on contributions &/or validity could improve.	Clear and sensibly defined contributions. Clear evidence provided for contributions.	Contributions very well defined, explained and justified with robust evidence	Perfect definition of contributions; concise, compelling, clearly measurable evidence
	Little to no evidence for participation	Inadequate participation	Some project participation but needs much more detail &/or clarity.	Participation mostly well planned & evidenced. Some questionable logic &/or may lack detail.	Participation generally well planned. Clear evidence provided	Clear and logical project participation; robust evidence provided	Professional project management strategy illustrated showing past and future stages of the project.
	Little to no evidence of working in the team	Minimal relevant work done to work with team	Some relevant work but far short of that expected in the time allocated for 40 credits.	Team engagement &/or depth of coverage of task could improve.	Good team engagement and coverage of the project.	Good depth of team engagement, showing a high level of engagement.	Comprehensive coverage of team engagement throughout project so far. Very high level of engagement.
Evaluation (20%) Report writing appropriate Evaluation in appropriate depth Reflection appropriate	Report is devoid of critical analysis & evaluation.	Poor critical awareness showing little understandin g of project results.	Critical evaluation is superficial, sparse &/or often flawed.	Appropriate critical evaluation in some areas with some omissions, issues &/or errors.	Competent critical evaluation in most areas of the project.	Highly competent critical awareness showing a good understanding of results.	Expert critical analysis throughout, showing deep understanding of results.
	Absent/irrelevant conclusions.	Inadequate/unjustified conclusions.	Conclusions vague and/or largely unjustified.	Relevant conclusions. Accuracy, evidence &/or clarity could improve.	Logical conclusions predominantly evidence-based and clearly presented.	Appropriate, well presented and well justified conclusions.	Clear, concise and fully quantitively justified conclusions.

	Little or no coherent report structure.	Structure lacks logic - rather "thrown together".	Some structure but disjointed/confusing.	Structure reasonable but could be easier to follow.	Sensible structure with minor issues/errors.	Excellent; clear and logical structure.	Faultless structure - perfectly presented.
Group (50%)							
Category and marks weighting:	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Process (20%) "Scene setting" & defining the project aims & objectives, considers the problem domain and/or research question/task/problem (aims & objectives). Producing a structured project plan, considering time, resources, cost & ethics. Project vision is created. Sprint plans map to backlog and aims. Releases planned every two weeks with appropriate plans and reviews. Verification & Validation planned - appropriate tests planned and placed into sprints. Consideration and mitigation of setbacks that might realistically be seen in the remainder of the project.	Task totally unclear, undefined &/or irrelevant.	Inadequate task definition; very poorly defined.	Task definition under-developed; vague &/or illogical.	Task clarity &/or validity could improve.	Clear and sensibly defined task.	Task very well defined, explained and justified.	Perfect task definition; concise, compelling, SMART.
	Little/no evidence of having prepared a structured project plan.	Inadequate project planning; tasks vague &/or illogically planned.	Some project planning and logic but needs much more thought, detail &/or clarity.	Project mostly well planned & managed. Some questionable logic &/or may lack detail.	Project generally well planned. Project Management strategy in place	Clear and logical project planning; risks and mitigation carefully planned.	Professional project management strategy illustrated showing past and future stages of the project.
	No thought to possible future setbacks or their mitigation.	Superficial consideration of possible future setbacks or their mitigation.	Some consideration of possible future setbacks; lots overlooked &/or confused/ impractical mitigation.	Some consideration of possible future setbacks & mitigation; needs more depth &/or practical thought.	Good consideration of possible future setbacks & mitigation; minor issues overlooked.	Excellent work in identifying and mitigating for possible future setbacks.	Comprehensive plan for overcoming all reasonably foreseeable possible setbacks.

Product (25%) Implementation to a depth appropriate for half way through a 40 credit module. Evidence of good progress and engagement over the first half of the module. LSEP issues identified and planned for appropriately.	Little or no relevant work done so far.	Minimal relevant work done so far.	Some work done; far short of expectation at this stage in a 40 credit module.	Project engagement &/or progress could improve.	Good project engagement and progress.	Excellent progress, showing a high level of project engagement.	Outstanding progress; major challenges overcome. Very high level of engagement.
	Little or no evidence of coding skills in project implementation.	Poor skills in implementing code - incorrect &/or very confused.	Some skill in implementing the software, but with errors &/or confusion.	Skill in most areas of software implementation - some issues/errors.	Competent implementation of software with minor issues/errors.	Highly skilled implementation of software (far beyond the level of taught modules).	Expert level of skill in all relevant areas clearly evident throughout. Software is of commercial quality and could be implemented in real world situation with very little modification. OR research of quality that could easily lead to publication.
Innovation and Proactivity (5%)	Little to no indication of any attempt to go beyond the coursework teaching/brief.	Inadequate and poorly defined plan	Plan for innovation vague and/or largely unjustified	Relevant features considered. Accuracy, evidence &/or clarity could improve	Logical consideration given to innovative features, predominantly evidence-based and clearly articulated	Appropriate, well presented and well justified innovations	Clear, concise and fully justified innovation plan. Shows original thinking and proactive development

Assessment Criteria: Interim Practice : Marketplace demo and Video (30% of total grade)

Individual (50%)							
	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Attendance evidence (25%)	% of attendance						
Contribution to submissions (25%)	% of contributions as per evidence						

Group (50%)							
Category and marks weighting:	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Demonstration and video (50%) Verbal presentation of the project (what you did, why, and what you discovered). Your response to the moderator's questions should demonstrate a deep understanding of the subject matter and the implications of your results. You should show your software running. No screenshots but live demo. Video should include all the team and indicate appropriate reflections.	Little/no ability to verbally communicate technical information.	Inadequate verbal communication of technical information.	Verbal communication of technical information is very difficult to follow.	Mostly effective verbal communication of relevant concepts/outcomes.	Good verbal communication of relevant concepts/outcomes.	Clear and eloquent verbal presentation of relevant concepts/outcomes.	Expert verbal communication; concepts/outcomes pitched at the right audience level.

9 Development Sprints

This phase will begin at the start of Semester 2 and you are expected to meet with your client every two weeks. The clients will be sending a summary to the module leader stating who attended their meetings and what was presented. You are to also take notes and incorporate this into your final report.

A summary of each of your meeting detailing who attended and an overview of discussions must be recorded and provided via email to the module leader. You must copy your client into the email.

10 Final submission

This deliverable is an individual deliverable where you provide evidence for your own work to date. This will form the final **70%** of your coursework mark when combined with the assessment from the Final Showcase demo.

You should ensure that the following team created items are complete in your GitHub repo and the poster submitted to the DLE submission point:

- A representation of the final project plan. This should illustrate your backlog and sprints.
- A complete set of UML diagrams to represent your application.
- A complete set of meeting summaries saved in a “Meetings” folder in the repo.
- A completed and finished GitHub repo containing the source code. The readme file must outline your project and clearly indicate who the team members are and their roles.
- a poster illustrating the key features of your application and the architecture. This must be uploaded to the Final Poster (Team) submission point.

This submission cannot be anonymous as evidence of attendance is also considered in the marks. The mark that you will receive back via the DLE under this heading will also account for the 50% team mark that will be allocated after the Showcase Demo.

You must submit a PDF document that will provide the following information in the same way as you did for the interim report – however you must be reflecting on and providing evidence for Semester 2:

- Evidence of working as a team. You must provide hyperlinks to the evidence that shows your participation and engagement as a team member. Evidence should be held in the GitHub repo. The following evidence is expected:
    - Weekly meeting minutes showing attendance at meeting, actions completed and actions agreed.
    - Kanban tasks with clear indication of who was allocated the task and who completed it
    - GitHub commits to match Kanban tasks.
    - Attendance record.
- Evaluation and reflection. You must write approximately 1000 words where you evaluate work carried out to date, your actions in completing the work to date and a reflection on your own experiences. You must structure your reflections appropriately.

11 Final Assessment Demonstration

This deliverable is a **group** deliverable that will contribute towards **70%** of your practice mark. The exact breakdown for marks is provided below.

Tuesday 17th of May for the whole day students are to demonstrate their work to date. Teams will be required to provide a form of physical presence on campus in the timetabled labs.

The marking panel will circulate amongst the student groups during the course of the day. Computing students from final stage will attend to help provide peer feedback.

All team members are expected to engage but not all must physically be present. Teams are expected to help support each other in relation to the physical set up within the labs.

These are graded according to the criteria below.

Assessment Criteria: Final Coursework : Final portfolio (70% of total grade)

Individual (50%)

Category and marks weighting:	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Team (30%) Evidence provided of contributions to meetings, attendance, participation. GitHub Commits evidenced User story/Trello tasks evidenced	Little to no contributions evident	Inadequate contributions; very poor engagement.	Unclear or under-developed contributions. Vague &/or illogical claims for contributions.	Clarity on contributions &/or validity could improve.	Clear and sensibly defined contributions. Clear evidence provided for contributions.	Contributions very well defined, explained and justified with robust evidence	Perfect definition of contributions; concise, compelling, clearly measurable evidence
	Little to no evidence for participation	Inadequate participation	Some project participation but needs much more detail &/or clarity.	Participation mostly well planned & evidenced. Some questionable logic &/or may lack detail.	Participation generally well planned. Clear evidence provided	Clear and logical project participation; robust evidence provided	Professional project management strategy illustrated showing past and future stages of the project.
	Little to no evidence of working in the team	Minimal relevant work done to work with team	Some relevant work but far short of that expected in the time allocated for 40 credits.	Team engagement &/or depth of coverage of task could improve.	Good team engagement and coverage of the project.	Good depth of team engagement, showing a high level of engagement.	Comprehensive coverage of team engagement throughout project so far. Very high level of engagement.
Evaluation (20%) Report writing appropriate Evaluation in appropriate depth Reflection appropriate	Report is devoid of critical analysis & evaluation.	Poor critical awareness showing little understanding of project results.	Critical evaluation is superficial, sparse &/or often flawed.	Appropriate critical evaluation in some areas with some omissions, issues &/or errors.	Competent critical evaluation in most areas of the project.	Highly competent critical awareness showing a good understanding of results.	Expert critical analysis throughout, showing deep understanding of results.
	Absent/irrelevant conclusions.	Inadequate/unjustified conclusions.	Conclusions vague and/or largely unjustified.	Relevant conclusions. Accuracy, evidence &/or clarity could improve.	Logical conclusions predominantly evidence-based and clearly presented.	Appropriate, well presented and well justified conclusions.	Clear, concise and fully quantitively justified conclusions.

	Little or no coherent report structure.	Structure lacks logic - rather "thrown together".	Some structure but disjointed/confusing.	Structure reasonable but could be easier to follow.	Sensible structure with minor issues/errors.	Excellent; clear and logical structure.	Faultless structure - perfectly presented.
Group (50%)							
Process (40%) "Scene setting" & defining the project aims & objectives, considers the problem domain and/or research question/task/problem (aims & objectives). Producing a structured project plan, considering time, resources, cost & ethics. Project vision is created. Sprint plans map to backlog and aims. Releases planned every two weeks with appropriate plans and reviews. Verification & Validation planned - appropriate tests planned and placed into sprints. Consideration and mitigation of setbacks that might realistically be seen in the remainder of the project.	Little or no evidence of implementation of agile project management	Minimal relevant work done to implement agile.	Some relevant work but far short of that expected for an agile project	Agile engagement &/or depth of coverage of task could improve.	Good agile application and coverage of the task.	Good depth of coverage of the agile, showing a high level of engagement with theory leading to good implementation. Implementation of agile of excellent quality and could be in commercial environment	Comprehensive coverage of a highly demanding agile implementation. Very high level of engagement.
	Little or no relevant work done to achieve project aims & objectives.	Minimal relevant work done to achieve project aims & objectives.	Some relevant work but far short of that expected in the time allocated for 40 credits.	Project engagement &/or depth of coverage of task could improve.	Good project engagement and coverage of the task.	Good depth of coverage of the task, showing a high level of project engagement.	Comprehensive coverage of a highly demanding task. Very high level of engagement.
	Project is devoid of appropriate testing plan	Poor skills in applying testing, incorrect &/or very confused	Some relevant testing applied. V&V superficial, sparse &/or often flawed	Appropriate testing in place but with some omissions, issues &/or errors	Competent testing plan in place. Appropriate Validation and Verification approach in place.	Highly competent testing regime in place both in plan and implementation. Shows a deep understanding of testing above and beyond taught modules.	Expert testing plans and implementations in place, could be appropriate for commercial application with very little modification.

Product (50%) Demonstrating appropriate skills in the implementation of that methodology; skills depend on type of project (experimental, creative, mathematical, computational, etc.) Implementation of agile artifacts match proposed plans earlier or deviation from plan discussed appropriately. Implementation of code at appropriate level with demonstration of good software engineering principles. eg. DRY, YAGNI, SOLID. Showing a clear understanding of relevant subject matter throughout the project. Legal, Social, Ethical and Professional issues clearly and appropriately addressed	Little or no evidence of relevant skills in project implementation.	Poor skills in implementing the methodology - incorrect &/or very confused.	Some skill in implementing the methodology, but with errors &/or confusion.	Skill in most areas of methodology implementation - some issues/errors.	Competent implementation of methodology with minor issues/errors.	Highly skilled implementation of methodology (far beyond the level of taught modules).	Expert level of skill in all relevant areas clearly evident throughout.
	Little or no evidence of coding skills in project implementation.	Poor skills in implementing code - incorrect &/or very confused.	Some skill in implementing the software, but with errors &/or confusion.	Skill in most areas of software implementation - some issues/errors.	Competent implementation of software with minor issues/errors.	Highly skilled implementation of software (far beyond the level of taught modules).	Expert level of skill in all relevant areas clearly evident throughout. Software is of commercial quality and could be implemented in real world situation with very little modification. OR research of quality that could easily lead to publication.
Innovation and Proactivity (10%) Realistic and concerted attempt at introducing innovation. Attempt is logical and systematic Evaluation of successes and failures realistic.	Little to no indication of any attempt to go beyond the coursework teaching/brief.	Inadequate and poorly defined plan	Plan for innovation vague and/or largely unjustified	Relevant features considered. Accuracy, evidence &/or clarity could improve	Logical consideration given to innovative features, predominantly evidence-based and clearly articulated	Appropriate, well presented and well justified innovations	Clear, concise and fully justified innovation plan. Shows original thinking and proactive development

Assessment Criteria: Final Practice (70% of total grade)

Group (50%)							
	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Attendance evidence (25%)	% of attendance						
Contribution to submissions (25%)	% of contributions as per evidence						
Individual (50%)							
Category and marks weighting:	<30%	30-39%	40-49%	50-59%	60-69%	70-79%	80-100%
Demonstration (25%) Verbal presentation of the project (what you did, why, and what you discovered). Your response to the moderator's questions should demonstrate a deep understanding of the subject matter and the implications of your results. You should show your software running. No screenshots but live demo.	Little/no ability to verbally communicate technical information.	Inadequate verbal communication of technical information.	Verbal communication of technical information is very difficult to follow.	Mostly effective verbal communication of relevant concepts/outcomes.	Good verbal communication of relevant concepts/outcomes.	Clear and eloquent verbal presentation of relevant concepts/outcomes.	Expert verbal communication; concepts/outcomes pitched at the right audience level.
Communication of information (25%) The poster should be pitched at an audience that is scientifically literate, but non-expert in this particular subject specialism. The video is for a more specialist technical audience. They should communicate: • The rationale for the project and the project aims (with any essential background information). • What has been done over the course of the project. • A summary of project results/discussion. • The main project conclusions. Demo reflects upon the whole of the project and presents a summary of project results. Video presents highlights for the project and a summary of the project output/results.	Little/no presentation of project results.	Minimal insight into key project results.	Some presentation of project results - rather vague/confusing.	Useful presentation of project results - clarity could improve.	Clear presentation of key project results.	Key project results are efficiently, creatively and clearly presented.	Innovative presentation of results - appropriate to non-expert audience.

General Guidance

Extenuating Circumstances
There may be a time during this module where you experience a serious situation which has a significant impact on your ability to complete the assessments. The definition of these can be found in the University Policy on Extenuating Circumstances here:
https://www.plymouth.ac.uk/uploads/production/document/path/15/15317/Extenuating_Circumstances_Policy_and_Procedures.pdf

Plagiarism
All of your work must be of your own words. You must use references for your sources, however you acquire them. Where you wish to use quotations, these must be a very minor part of your overall work.

To copy another person's work is viewed as plagiarism and is not allowed. Any issues of plagiarism and any form of academic dishonesty are treated very seriously. All your work must be your own and other sources must be identified as being theirs, not yours. The copying of another persons' work could result in a penalty being invoked.

Further information on plagiarism policy can be found here:

Plagiarism: https://www.plymouth.ac.uk/student-life/your-studies/essential-information/regulations/plagiarism

Examination Offences: https://www.plymouth.ac.uk/student-life/your-studies/essential-information/exams/exam-rules-and-regulations/examination-offences

Turnitin (http://www.turnitinuk.com/) is an Internet-based 'originality checking tool' which allows documents to be compared with content on the Internet, in journals and in an archive of previously submitted works. It can help to detect unintentional or deliberate plagiarism.

It is a formative tool that makes it easy for students to review their citations and referencing as an aid to learning good academic practice. Turnitin produces an 'originality report' to help guide you. To learn more about Turnitin go to:
https://guides.turnitin.com/01_Manuals_and_Guides/Student/Student_User_Manual

Referencing
The University of Plymouth Library has produced an online support referencing guide which is available here: http://plymouth.libguides.com/referencing.

Another recommended referencing resource is Cite Them Right Online; this is an online resource which provides you with specific guidance about how to reference lots of different types of materials.

The Learn Higher Network has also provided a number of documents to support students with referencing:
References and Bibliographies Booklet:

http://www.learnhigher.ac.uk/writing-for-university/referencing/references-and-bibliographies-booklet/
Checking your assignments' references:
http://www.learnhigher.ac.uk/writing-for-university/academic-writing/checking-your-assigments-references/