# Cardiff School of Computer Science and Informatics

## Coursework Assessment Pro-forma

**Module Code**: CMT313

**Module Title**: Software Engineering

**Lecturer**: Dr Usashi Chatterjee, Matthew Moloughney, Dr Matthew Morgan

**Assessment Title**: Individual portfolio

**Assessment Number**: 3 of 3

**Submission Date and Time**: Spring Week-11, May 4th, 2023 at 9:30am

**Feedback return date**: 5th June, 2023

**Extenuating Circumstances submission deadline will be 1 weeks after the submission date above**

**Extenuating Circumstances marks and feedback return will be 1 weeks after the feedback return date above**

This assignment is worth **40%** of the total marks available for this module. If coursework is submitted late (and where there are no extenuating circumstances):

1 If the assessment is submitted no later than 24 hours after the deadline, the mark for the assessment will be capped at the minimum pass mark;

2 If the assessment is submitted more than 24 hours after the deadline, a mark of 0 will be given for the assessment.

Extensions to the coursework submission date can ***only*** be requested using the [Extenuating Circumstances procedure](https://intranet.cardiff.ac.uk/students/study/exams-and-assessment/extenuating-circumstances). Only students with approved extenuating circumstances may use the extenuating circumstances submission deadline. Any coursework submitted after the initial submission deadline without \*approved\* extenuating circumstances will be treated as late.

More information on the extenuating circumstances procedure can be found on the Intranet: <https://intranet.cardiff.ac.uk/students/study/exams-and-assessment/extenuating-circumstances>

By submitting this assignment you are accepting the terms of the following declaration:

**I hereby declare that my submission (or my contribution to it in the case of group submissions) is all my own work, that it has not previously been submitted for assessment and that I have not knowingly allowed it to be copied by another student. I understand that deceiving or attempting to deceive examiners by passing off the work of another writer, as one’s own is plagiarism. I also understand that plagiarising another’s work or knowingly allowing another student to plagiarise from my work is against the University regulations and that doing so will result in loss of marks and possible disciplinary proceedings***[[1]](#footnote-1).*

Assignment

## This Individual portfolio will be made up of the work undertaken during the module in both the Autumn and the Spring Semester. There will be specified opportunities for you and the team you are working with to demonstrate the software being developed to the teaching team. This document must be read in alongside AAT Prototype Features and Mark Scheme

**INTRODUCTION**

CMT313: Software Engineering is assessed through coursework that is developed as part of a software development project carried out in teams normally of six or seven members. Although this assessment is individual you are expected to complete tasks as part of a team. Working successfully in your team has significant potential to improve the material in this individual portfolio.

Your team should meet regularly outside the scheduled meetings without the module leader (flexible meeting).

**Non-participation of Team Members**

If your team believes that someone is not contributing then you should email Mr. Matthew Moloughney([moloughneymj@cardiff.ac.uk](mailto:moloughneymj@cardiff.ac.uk)) as soon as possible so that he can investigate further. It is also important that anyone who is having difficulty contacting their team or has any other issues that are affecting their ability to work with the team informs as soon as possible.

**Some important advice:**

Your team will need to split up the system into appropriate features / modules which can be allocated to team members to develop. Requirements that need more complicated functionality or complex interfaces can be split. However, each team member should take **lead** responsibility for the development and testing of one requirement. Make sure your team manages the dependencies. If core functionality is required which is needed by other parts of the prototype, you will need to work closely together. Ensure each team member clearly understands what they are developing and how this relates to the work of others.

You need to demonstrate a working prototype. It is a good idea to develop your code in small chunks, integrate and test this frequently, reducing the amount of code to check through if it stops working. You are expected to use GitLab when developing the prototype with your Team.

**Portfolio Deliverables**

Your individual portfolio should include

Task 1 - Test Cases (ONE TEST CASE only)

## Although this is an individual portfolio the test case handed in by each member of your team MUST be for a different main requirement. You can refer to the AAT Prototype Features and Mark Scheme sheet attached for the main requirements). Each test case should be presented using the test case template supplied in the lecture notes:

* Create ONE test case that a user can follow to validate that your prototype meets ONE of the **main** requirements. Each Test Case should have **a clear procedure, and input Data** that can be followed by a tester to carry out the essential steps for the basic flow and a **clear indication of the output**s that your prototype should give in response to the tester’s actions. (You can also provide wireframe diagrams to help them carry out the tests. These will be used to help determine if you have provided sufficient information in your test case to cover the essential steps for each requirement.)

Task 2 - Developing the prototype (700 words limit)

* Explain and evaluate the effectiveness of your team whilst developing the prototype. This section should consider the project management and development methodologies your team used alongside team dynamics covered in the module. (Artifacts such as - charts, and boards appropriate to the methodology used can be included in an appendix of 3 pages max)

Task 3 – **Video & Quality Criteria** – Walk through demonstration, including software quality criteria of the elements of the prototype you developed.

* Make a video (**Maximum of 5-minutes**) with narrative that runs through the working functionality of the prototype that you developed, This video should.
  + clearly showing how your section integrates with other related sections of the prototype.
  + As part of the demonstration highlight TWO examples of how and where **your part** of the final product took into consideration software quality criteria (e.g. usability, reliability, integrity, maintainability, testability, and flexibility).
  + Highlight any extra features or interesting functionality that were successfully implemented.

Task 4 – Peer and Self-assessment (use form provided, max 1 page per student)

* Looking back at your experience having undertaken the team exercise for module CMT313 Software Engineering during the Spring semester, complete a peer/self- assessment for each member of your team including yourself.

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| **Portfolio Element** | **Contribution** |
| Task 1 - Test cases | 20% |
| Task 2 - Developing the prototype | 35% |
| Task 4 - Video - Demonstration (Prototype) | 40% |
| Task 5 – Peer and Self-Assessment | 5% |
| Total | 100 |

## Learning Outcomes Assessed

* Select, follow, and evaluate software development methodologies
* Analyse and reflect on personal and team performance
* Evaluate the outcomes of a project taking into consideration appropriate characteristics of software quality

## Criteria for assessment

The criteria and feedback rubric used for marking are provided so you can see how your coursework will be marked against the stated criteria - see “**Criteria for Assessment’** section at the end of this document.

Overall mark will be awarded as follows:

* 70% or more will be awarded if most criteria are met at ‘Distinction’ level
* 60-69% will be awarded if most criteria are met at ‘Merit’ level
* 50-59% will be awarded if most criteria are met at ‘Pass’ level
* 49% or below will be awarded if most criteria are ‘Fail’

## Feedback and suggestion for future learning

Feedback on your coursework will address the specified assessment criteria.

Feedback and marks for the team will be returned by the date specified on the first page of this document via Learning Central.

Feedback for this assignment will be useful for your dissertation.

## Submission Instructions

If you have any difficulties submitting via Learning Central you MUST e-mail the module leader at least half an hour before the deadline time.

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| Description | | Type | Name |
| Portfolio including Task 1, 2, and 4 | **Compulsory** | One .pdf file | **StudentNumber**\_Assessment\_3.pdf  Replace **StudentNumber** with your student number without ‘c’, e.g. 1234567\_Assessment\_3.pdf |
| Task 3 - Video – Demo of software and quality criteria, | **Compulsory** | MP4 video Max 5 minutes | [StudentID]demoVideo.mp4 |

Any deviation from the submission instructions above (including the number and types of files submitted) will result in a mark of zero for the assessment or question part.

Staff reserve the right to invite students to a meeting to discuss coursework submissions.

## Support for assessment

The module teaching team will usually arrange progress meetings with each team during the Semester. These progress meetings will be an opportunity for the team to review how well they are working as a team and the associated deliverables. Team members will also have an opportunity to raise any questions or concerns they may have about the assessment tasks.

Questions about the assessment can be asked in ***the ‘***[***FORUM for questions and discussion***](https://teams.microsoft.com/l/channel/19%3af070e9f6ea3940548fa5631dcc852b74%40thread.tacv2/FORUM?groupId=0bf671a6-7bcd-4b1b-9ea0-bcc4f9a8ba42&tenantId=bdb74b30-9568-4856-bdbf-06759778fcbc)***’*** channel of the module’s team on Microsoft Teams , or during the contact sessions in Spring Weeks 6 - 10.

**Criteria for Assessment**

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|  | Task 1 – Test Case 20% |
| **Distinction**  **14 -20** | * The test case covers **all** essential steps in the basic flow that are relevant for validating whether the prototype has met the main requirement. * **All** steps in the test case clearly provide the information required to carry out a procedure using appropriate **input test data** with a clear indication of the **outputs** that the user should expect to see in response to their actions. |
| **Merit**  **12 - 13** | * The test case covers most essential steps in the basic flow that are relevant for validating whether the prototype has met the main requirement. * Most steps in the test case provide appropriate information to carry out a procedure using appropriate input test data with an indication of the outputs that the user should expect to see in response to their actions. |
| **Pass**  **10-11** | * The test case provides some reasonable steps for validating whether the prototype has met the main requirement * The test case gives the user a reasonable indication of how to carry out the test and gives some indication of the expected outputs, but provides not actual input test data. * There are some mis-understanding in how the test case template should be filled in. |
| **Fail**  **0-9** | * Steps provided (if any) give little confidence that the main requirement can be validated. * Gives little or no indication of how to carry out test or what outputs to expect. * Appropriate template not used. Most of the sections completed incorrectly. |

TASK 2 – Developing the Prototype 35%

* Explain and evaluate the effectiveness of your team whilst developing the prototype.

No explanation included No project planning or management evident

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| Distinction  25 -35 | * The portfolio contains a clear and consistent explanation of the project management and development methodologies used by the team when implementing the prototype. * Comprehensive evaluation, with excellent justification of the effectiveness of your team, which covers Project Management, Development methodology and team dynamics |
| Merit  21 - 24 | * The portfolio contains a mostly clear explanation of the project management and development methodologies used by the team when implementing the prototype. * Good evaluation of the effectiveness of your team with excellent justification covering 2 from Project Management, Development methodology and team dynamics |
| Pass  18 - 20 | * The portfolio contains an explanation of the project management and development methodologies used by the team, however this explanation is difficult to follow and could have been structured better. * Some evaluation of the effectiveness of your team, with regards to Project Management, Development methodology and team dynamics However justification is limited. |
| Fail  0 - 17 | * The portfolio contains only a very brief explanation of the project management and development methodologies used by the team. * A description rather than an evaluation of Project Management, Development methodology and team dynamics. |

TASK 3 – Quality Criteria & Video 40%

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| **Distinction**  **28 - 40** | * The implemented system exceeds this requirement. It meets the criteria for a good demonstration and has provided interesting and relevant extra features or impressive functionality for this requirement. * This requirement integrates extremely well with the rest of the prototype with the interface having a consistent look and feel. * Two software quality criteria have been correctly and comprehensively explained demonstrating insight and professional understanding. |
| **Merit**  **24 - 27** | * The implemented system clearly satisfies this requirement by covering all essential steps for a suitable basic flow in a logical order and providing a reasonable interface for the task performed * This requirement integrates well with the rest of the prototype, the interface has a similar look and feel. * Two relevant and correct software quality criteria have been identified and clearly explained demonstrating understanding / only one software quality criteria have been correctly and comprehensively explained demonstrating insight and professional understanding. |
| **Pass**  **20 - 23** | * The implemented system shows reasonable progress towards satisfying this requirement. However, a bit more work is needed in one or more of the following: to include some missing steps in the basic flow, correct the logic of the flow, correct some errors in the task or improve the interface. * This requirement integrates with the other necessary components of the prototype however the interface is inconsistent. * Only one relevant example provided highlighting software quality criteria / Two relevant software quality criteria have been identified however the explanation demonstrating limited understanding. |
| **Fail**  **0 - 19** | * The implemented system does not satisfy this requirement and will require a significant amount of work to address one or more of the following: to include missing steps in the basic flow, correct the logic of the flow, correct errors in the task or improve the interface. * This requirement does not integrate with the other components of the prototype * Failed to provide any correct examples / explanation of Software quality criteria |

TASK 4 Peer and Self-assessment 5%

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| **Distinction**  **4-5** | * Comprehensive professional reflection and evaluation of the contributions made by themselves and all team members, including comprehensive justifications. |
| **Merit**  **3** | * Good professional reflection and evaluation, of their contribution and those of all other team members with relevant justification |
| **Pass**  **2.5** | * Professional comments made regarding their and team members contribution, but the evaluation / justification is minimal. (All, Some forms) |
| **Fail**  **0-2** | * Comments have been made regarding the contribution of themselves and team members, but these were not well justified or particularly professional. |

1. https://intranet.cardiff.ac.uk/students/study/exams-and-assessment/academic-integrity/cheating-and-academic-misconduct [↑](#footnote-ref-1)