

CST3511 Coursework 2

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1 Brief Task Description

In your allocated groups, you must design and implement a multi-player, networked game. The game will be selected by the group (**and must be approved by your class tutor**). The game must use network programming (sockets, RMI, Web Sockets, etc.) and should allow at least two players on different computers to play. For the highest grades you should also include a graphic user interface.

The submission(s) will include a proposal, the software and a report created as a group. The report will include a statement of the contribution of each member of the group. Also, you will individually prepare a screencast demonstrating the software and your understanding of it.

2 Submission

- Proposal: Friday of teaching week 16
- Code and final report: Friday of teaching week 23
- Individual screencast demonstration of software: Friday of teaching week 23

The proposal and final report must be uploaded to Moodle as **PDF** files by the relevant deadlines. The code must be submitted as a single **zip** file of the Netbeans project, including **all** necessary files to compile and run your game. Carefully check that the zipfile includes all required files before submission. The screencast demonstrations must be prepared and uploaded individually by each member of the group (should not be prepared together), and should use the exact same code as the submission. The screencast should be submitted as a single **MP4** video file.

3 Detailed Description

3.1 Proposal

You must submit a proposal containing:

- a brief description of the game
- network communication protocol and planned approach to network programming (e.g. sockets, RMI, Web Sockets, JMS)
- description of the application protocol
- GUI design
- plan of the tasks involved and when you will complete each of them

- statement of the percentage contribution of each member of the group to preparing the proposal

You should include diagrams and/or examples as necessary and show how the technologies will be used.

3.2 Software

The software submission will include all required source code to run the game. This must be exactly the same as the code you use to demonstrate your work in the screencast.

You are not required to deploy the code on a server, a working prototype running in Netbeans is sufficient.

3.3 Report

Your report should include:

- abstract (a paragraph summarising the work)
- introduction
 - brief description of the project
 - paragraph describing the layout of the rest of the report
- design
 - description of the game
 - protocol(s) and approach to network programming
 - application protocol
 - GUI design
- implementation
 - describe the working game
 - screenshots (of game, *not source code or Netbeans*)
- conclusion
 - brief summary of what was achieved
 - critical reflection of your work
- references
 - Harvard referencing
- appendix
 - statement of the percentage contribution of each member of the group in completing the software and report

3.4 Screencast

Each member of the group should individually prepare a screencast where they demonstrate the software working and their understanding of how it works and was implemented. This should be no longer than 5 minutes (if a video is longer than this, only the first 5 minutes will be watched when marking).

4 Academic Misconduct

This is group work and you should complete it yourselves. You should not work with others or submit work you find online (even with minor changes) as your own. Any material or ideas found online, in textbooks, etc should be properly referenced.

You should familiarise yourself with the university's academic integrity and misconduct policy:
<https://www.mdx.ac.uk/about-us/policies/university-regulations>

5 Extenuating Circumstances

There may be difficult circumstances in your life that affect your ability to meet an assessment deadline or affect your performance in an assessment. These are known as extenuating circumstances or 'ECs'. Extenuating circumstances are exceptional, seriously adverse and outside of your control. Please see link for further information and guidelines:

<https://unihub.mdx.ac.uk/your-study/assessment-and-regulations/extenuating-circumstances>

6 Marking

The proposal will be marked according to the attached marking scheme.

The report and code will be marked according to the attached marking scheme and your understanding of the work in the screencast demonstration.

All individual marks will be weighted according to the contribution made by that member of the group, as identified by the group in the report submission and evidenced in the screencast demonstration.

7 Feedback

Provisional marks and written feedback will be available on Moodle within 15 working days of your submission. If you would like clarification or more detailed feedback on your coursework contact your module tutor.

You should use the feedback from your proposal to improve the quality of your final submission.

8 Marking Scheme

8.1 Proposal

Item	Marks
Brief description of the project idea and game	4
Details of the protocol and approach to network programming	5
Description of the application protocol	6
Graphic user interface design	3
Time plan including tasks, estimated duration and when each will be completed	6
Layout and English	6

8.2 Code

Item	Marks
Code quality (e.g. comments, layout, exception handling, input validation, etc.)	10
Functional multi-player game	6
Complexity of game (GUI, high score system, etc)	8
Network programming	10
Use of application protocol	6

8.3 Report

Item	Marks
Abstract	4
Introduction	5
Design, including: a description of the game; the network protocol(s); the application protocol and GUI design	5
Description of implementation with screenshots	5
Conclusion	8
Layout and clarity of writing (references if required)	8