

The objective of the practical assessment is to allow you to show your skills in, and understanding of:

Games design techniques
Games programming techniques
The use of tools and development environments

You are not expected to create a new application from scratch: rather, choose one of the demo applications distributed with the game components we've studied (ODE, OGRE or both) and plan your application using this demo as a starting point. Of course, you can change the demo completely if required – but remember, it's important that your program compiles and runs throughout your implementation process.

The assessment comprises three sections.

1. Use your understanding of games design to write a detailed proposal for a game or graphical demo. Justify your plans in terms of the technologies available to support your ideas. You should aim to write approximately 750-1000 words. [30%]

2. Use your knowledge of C++, Open Dynamics Engine and/or OGRE to implement a prototype of your proposal. [60%]

3. Outline clearly and concisely the structure and operation of your prototype, mention any issues you encountered and any shortfall from your original proposal. You should aim to write approximately 250-500 words. [10%]

Writing a game for modern hardware is an extremely involved process and you are not expected to produce a professional quality implementation; you are required only to successfully integrate some core components into a working program. Your work in part two should be considered “proof-of-concept” rather than a final, polished implementation. However for full credit you must realise a significant proportion of your ideas for the game which you encapsulated in part one.

For the written component of part one, marks will be awarded evenly between:

- a) novel, creative game ideas and uses of the game components, and
- b) sensible evaluations of the feasibility of your proposal in terms of the capabilities of the game components and the time available to you.

For the programming component, the following checklist applies:

Checklist:

Program compiles and runs. All aspects of the written proposal implemented successfully. An excellent demonstration of the use of the features of the underlying game library or libraries. No instabilities evident when program runs. Evidence of independent research beyond material delivered in lectures.

Your coding quality and style will not be assessed directly. The primary mechanism for evaluating your program will be running the software which is why it is imperative that your code compiles and runs, and that you supply step-by-step instructions to:

- a) build the executable code from the source code you submit, and
- b) fully experience your program.

Your source code will be inspected as part of the assessment and as such it is important that your code “speaks for itself” - i.e. that it is easy to see how your program works. The best way to achieve this is to ensure that code is well formatted and commented. You may also be asked to explain aspects of your program verbally before the final marks are delivered.

Of course, the quality of your implementation may depend on the scope of your original plan and this will be taken into account when marking.

Make sure that your code does not make use of external libraries other than the standard, unmodified C++, ODE and OGRE software.

Deliverables

- A document (.doc, .txt or .pdf) containing your game design proposal for part one.
 - A zip or tar archive of your work for part two, containing:
 - source code and either compilation instructions or a working Makefile, which compiles on the Linux workstations in the Reeves lab.
 - A pre-compiled binary file which runs on the same workstations.
 - Any supplementary resources (Models, Textures, etc.) required by your program, in the correct directory structure and formats.
 - A file called “readme.txt” which briefly describes how to compile your program, the locations of the various supplementary files and a brief description of how to play your game.
 - A document (.doc, .txt or .pdf) containing your description and evaluation for part three.
- These items should be submitted through the Blackboard system in the usual way. Allow plenty of time before the submission deadline to ensure your work arrives on time.