

In assignment 4 you will write a 3D game (interpreted loosely: an interactive 3D program meeting the requirements below is fine even if it's not really a game).

For this assignment you are encouraged to work in pairs, though doing it by yourself is also an option. Groups of three or more people may be possible—come see me well in advance if you want to do this—but note that significantly more will be expected from a large group than a pair or singleton.

This is an open-ended assignment: it's up to you to define what your game will be about and how it is played. If you're not feeling creative, feel free to “copy” popular existing games: first-person shooters, tank games, flight simulators, driving games...

The game must have the following features:

- It must be programmed using OpenGL, running on either the CS department linux workstations or a computer you can bring in to demonstrate the game.
- It must be fully 3D (e.g. a 2D game like chess doesn't qualify even if rendered with 3D pieces).
- It must be interactive: the user can change what's happening in the game world in a meaningful way.
- The viewpoint on the 3D game world must change interactively.
- There must be texture-mapped objects in the 3D game world, with appropriate lighting.
- There must be some form of collision detection involved in the game dynamics.

Other than that, you are free to do whatever you want, with additional or more advanced features counting towards a better grade. You may use other code or libraries, provided you give appropriate credit, but the code that implements required features must be your own.

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 Handing it in is broken up into two phases. Before midnight **November 13** one member of your group must submit (via `handin cs314 assn4demo`) the following:

- a text or PDF file clearly listing: who is in your group, what your game is about, and a brief list of the features you plan to implement
- the start of your code for the final game. It should be runnable, even if there are bugs, at the point where something is rendered and the basic interaction is possible. You needn't have texture mapping or lighting or collision detection working correctly yet, but there has to be something to show your project is progressing.

This is **worth 4% of your final mark**.

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 The final version is due before midnight **November 28**. One of your group's members must use `handin cs314 assn4` to submit the following:

- a text or PDF file clearly listing who is in your group, what your game is about, and a list of the features you implemented (with any interesting details you think we should know about).
- the final code, with instructions on how to build and run it.

If your game does not run on the CS department linux machines, you must also set up a time in the last week of classes to demonstrate your game to the professor or TAs, where you bring a computer it can run on.

This is **worth 12% of your final mark**.