DM809 Computer Game Programming I: Graphics

August/Fall 2010

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Introduction

The purpose of this project is to learn to apply the concepts from the course during actual programming in a 3D library of your choice.

The project is to be done in groups, preferably of size two. Groups of size one and three are allowed.

Requirements

You are to implement a game-like application, with focus on 3D graphics. This can be a 3D visualization of a simple board-type game, or the graphics part of a (possibly quite rudimentary) prototype of a more advanced game.

Examples could be:

- A 3D version of the *15-puzzle* (full game).
- A 3D version of *Rubik's cube* (full game).
- First person shooter/adventure game (only graphics part).
- Car chase game (only graphics part).
- Space battle game (only graphics part).

What is required is: the 3D drawing (including texturing and lighting) of geometric objects and surrounding scene, movement of some objects, some kind of movement of camera, and the handling of user input for controlling movements. Issues like AI, collision detection, and physics simulation need not be dealt with in this project.

You are free to come up with other project ideas yourself. The requirement is simply that the above issues are covered.

Formalities

You should hand in: An executable program or installer (must run on either Linux or Windows, preferably on the machines in the Imada terminal room), source code, and a report of 8-10 pages (excluding any appendices) in pdf-format. The main aim of the report should be to describe the design choices made during development, the reasoning behind these choices, and the structure of the final solution, as well as give a simple user manual for the program. For groups of size more than one: For formal reasons, you will need to designate who wrote which part of the program and report.

The project will be evaluated by pass/fail grading. The grading will be based on:

- The clarity of the writing and of the structure of the report.
- The ability to apply the concepts of the course.
- The amount of work done.

The material should be handed in using the `aflever` command on the Imada system: Move to the directory containing your code and issue the command `aflever DM809`. This will copy the contents of the directory to a place accessible by the lecturer. Repeated use of the command is possible (later uses overwrite the contents from earlier uses). In the directory, you must for identification purposes have an ASCII file named `names.txt` containing the names of the group members, with one name per line.

You must hand in the material by

Wednesday, October 6, 2010, at 23:59