CS324 Computer Graphics Coursework 2018

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Thomas Archbold
1602581
Unversity of Warwick

Features of the solution

This solution features an archery game in the style of a first-person shooter. The player is equipped with a simple bow and a limited number of arrows, which can be used to shoot at the targets floating in the field before them. There are several aspects of the gameplay that the user is able to change as they are playing, implemented using GLUT's `glutKeyboardFunction` and `glutSpecialFunction`, namely the number of arrows available in the quiver, the number of targets, the position of the targets, and the difficulty of the game. This difficulty ranges from having stationary targets, to having targets which move horizontally only, to ones which move both horizontally and vertically. Simple sine and cosine functions are used for this to make movement interesting, and their periodicity prevents them going too far astray.

The two objectives available to pursue during gameplay are to try to obtain a high score, by hitting targets as close to the centre as possible, or by attempting to hit all the targets (anywhere) as quickly as possible.

Main design aspects

Specific OpenGL/GLSL features are employed

Compiling and running

Using the application

Further ideas

Known bugs/limitations