CMP501 Network Game Development

Coursework Proposal

2202875

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# Brief Overview

A 4-5 multiplayer top-down 2D game with 5 rounds where players start by placing obstacles on the screen and are free to roam around and shoot at other players. After every round, the player with the greatest number of hits gets to place lesser number of blocks compared to the other players.

# Network Architecture

The project will use a Client-Server Architecture with an authoritative server, where the movement is sent through UDP updated every 100-300ms, and important game data like points and obstacle placements are sent over TCP.

# Technology

.Net Sockets, Unity

# Prediction/Interpolation

The player locations are shown on the local machines and then interpolated with the servers’ calculations. The bullets are also predicted on the server after receiving position and direction information and then interpolated on the client.