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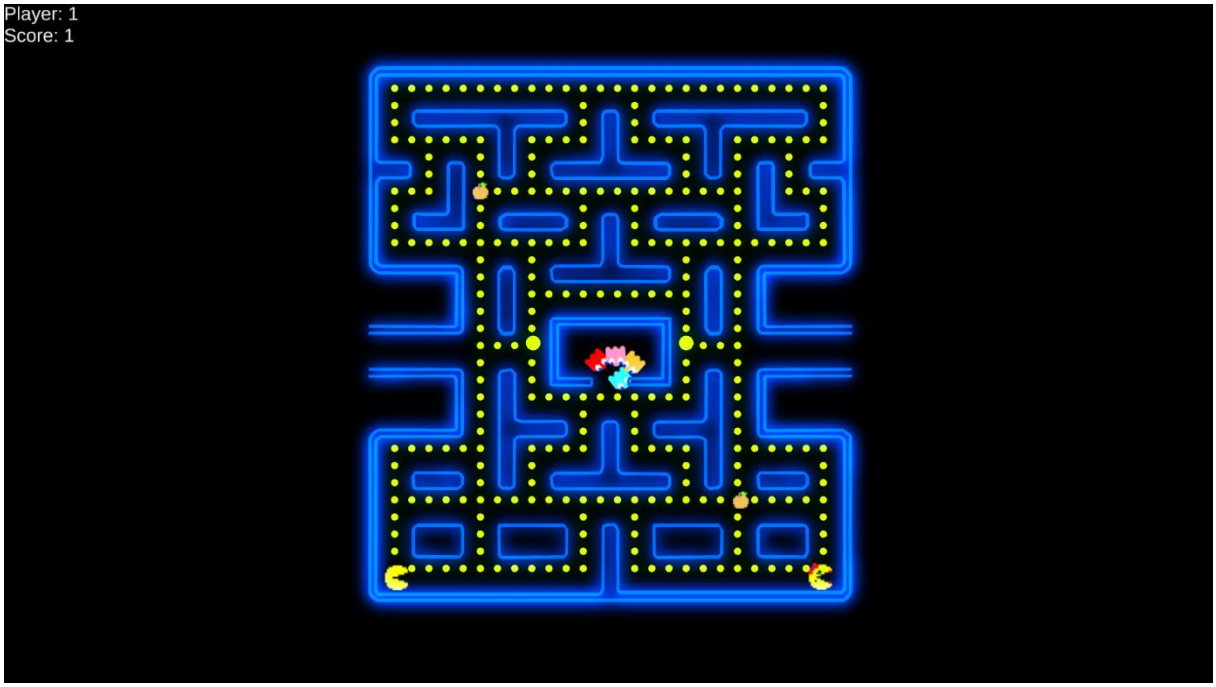
Programming Assignment #3

In this assignment, we had to create a networked PacMan game.



We can see there are several players on the map, the map is filled with pacDots that each gives 1 point when eaten, different fruits (up to 5 different fruit) that give between 20 and 100 points and 4 ghosts that follow the players (according to your current rank or distance to the ghost). There are also two power PacDots that make the pacMan grow in size and be able to eat both ghosts and other players.

The networking part of this assignment has been made with the photon engine and makes it so that each client owns its own pacmanController and calls rpc's for every collision between the pacman and either a ghost, fruit, pacDot or power pacDot. The position is synchronized through the Photon Transform component.

The ai movement is done through a Tile Graph and kinematic movement, and their decisions with a behavior that is set at the start, and a simple state machine that is either alive, dead (going back to their base), or waiting (as they have to wait for 5 seconds after getting back to base when they die). The positions of the power pacDots and fruits are chosen randomly between 6 locations and the type of fruit is random as well.

The randomness is shared through the network with a seed set by the masterClient and given to the other clients through an rpc.

There is no lobby and the game starts when the masterClient presses space.

It ends either when only one player is present (he automatically wins), or after two minutes, where the highest score wins.