



## **PROGRAMMING TEST FOR COCOS CREATOR / TYPESCRIPT**

Title: Easter Egg Extreme!

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Players have a fixed time limit to collect eggs on the screen.

At the beginning of the game, there will be N players. One will be controlled by the keyboard, the rest are simulated remote players. The remote players should have some sort of simple AI driving them, as if it was a real person.

Players can move: up down left right.

Randomly colored eggs will appear on the screen. Players must run to the egg and touch the egg to collect. The player with the most eggs at the end of the time limit is the winner.

The code will have a "server simulator" module which sends the "local game" update messages of the game state. The "local player" object is controlled by the keyboard, and the others will have their positions controlled from the remote players. However, the simulator must send updates at RANDOM intervals between .1 and .5 seconds. Which means that the player objects must interpolate correctly based on the messages from the server. The server will decide when and where the eggs appear and which player collected each egg.

Remember that the "server simulator" code is code which is in the client, but must operate as if it is a remote simulator. So you will need to define "messages" for the modules to communicate with each other.

Be sure to architect your code so that in the future, it would be very easy to switch to a real server. So be sure to build your code so that it separates all server-side logic from client-side.

Also remember to take into account "net latency" in your simulation. Sometimes it will be very slow to get message updates across the network, but the game still needs to feel smooth

and real-time. So make sure that your code can handle such situations gracefully. Consider adding the ability to simulate different net latencies.

Make sure that the game is able to support any number of players (set by a code constant).

You may create or download any visual art for characters, eggs, background, etc that you wish. Be as creative as you like.

If you have any questions, please feel free to ask for clarification.