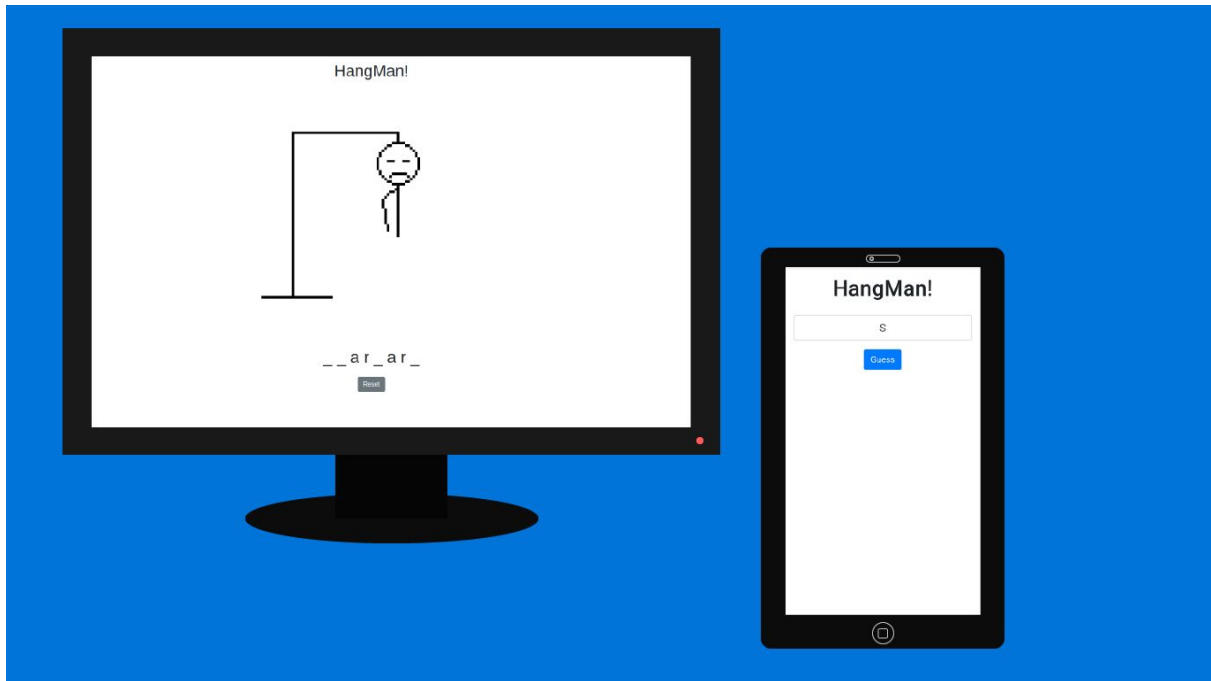


Client-Server Experiment: HangMan

We decided early on that we needed to build a prototype to test our novel idea. After a bit of searching, we decided on using Node.js with Socket.io to build it. We learned the basics with a few tutorials and chose to build a version of Hangman as the actual gameplay would be very easy to code (just check if a letter is in a word).



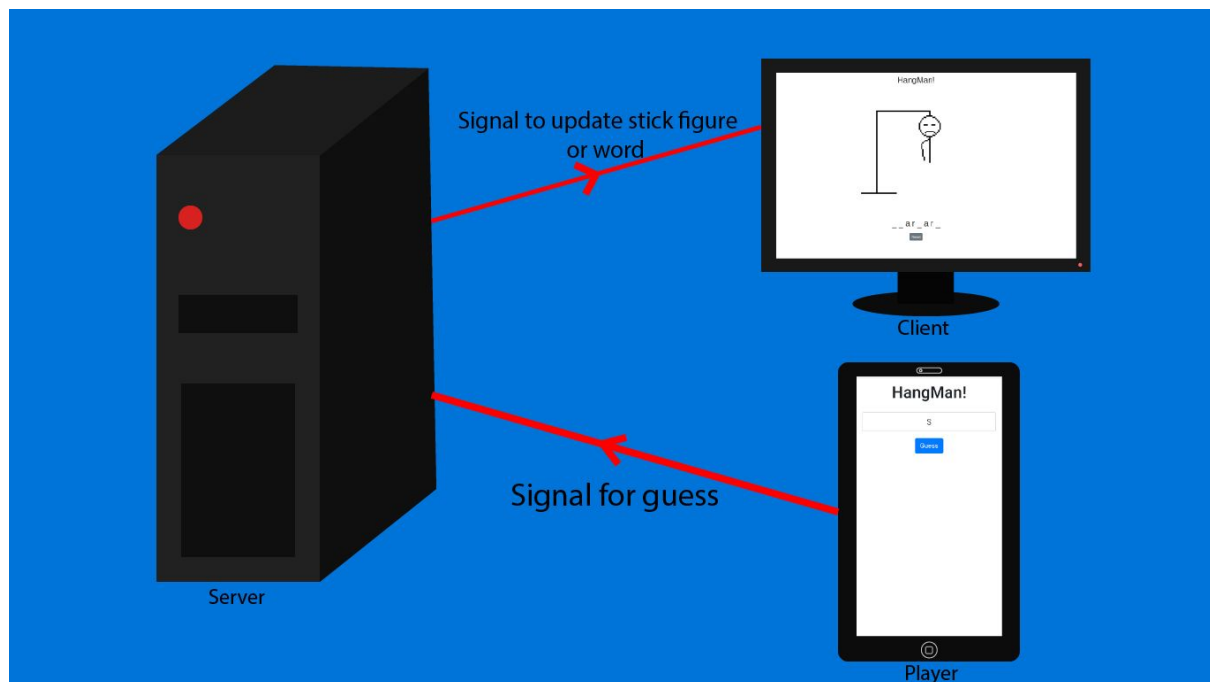
How the game works, more devices can be connected.

This version of Hangman used one device as a client and allowed many other devices to connect and guess letters. Much like a Jackbox Party Pack game, it allowed for any device with a web browser to be used to play. It was a basic idea and didn't really make sense as a multiplayer game but it was more a proof-of-concept and the game itself is instantly recognisable.

Implementation:

Thanks to Node.js the code itself turned out to be quite short. There were three main files, a HTML file for the client view, another for the player view and a JavaScript server file to serve both pages and handle most of the logic.

Using Socket.io and a bit of jQuery we could allow a player to guess a letter from the player view, this would, in turn, emit a signal to the server to process that guess and, depending on the result, a signal would be sent out to the client view. This signal would either cause the word displayed on-screen to be updated or would display more of the stick figure on the main screen to illustrate the player had lost a life.



A diagram explaining the relationship of the client, the player and the server.

We could have added many extra features. Currently, the word you have to guess is hard-coded into the game and previous letters guessed don't appear anywhere on-screen.

All of these bells and whistles are outside the scope of a simple prototype. The purpose of the game is just to display how Node.js and Socket.io can be used to create a dynamic web version of a multiplayer game, which we think it does well.

Link to the prototype's git repository: <https://github.com/Eoghan-Murphy/HangMan>