JavaScript / TypeScript / Socket.io / Firebase / Express

**Main Idea:** The programs outlined below are my attempts at setting up a real-time connection between two computers. It could be through Socket.io or Firebase. They all build on top of each other.

**Git Repo:** <https://github.com/Abdullah2Cool/TankTrouble-Online.git>

Everything is under Code/Scratches/

# Socket.io + Processing

* Uses the node modules **express** and **socket.io**

**Server.js:**

* Imports express and socket.io
* Creates an express app and assigns it a server
* The express app also serves the folder named “public” to the browser
* The server listens to events at localhost:3000
* Socket.io connects to that server and deals with requests being sent to the server and sends back an appropriate response
* The “mouse” event sends data back and forth between clients

**Public/Sketch.js:**

* It’s a quick little processing sketch (self-explanatory)
* It has a variable called socket which connects to the server (localhost:3000)
* It can emit the “mouse” event which the server will detect and broadcast it to other connected clients

**Public/Index.html**

* Standard html page
* Imports the sketch and processing libraries
* The important part is the <script> tag that imports Socket.io from their CDN before it imports any program that needs it

# Socket.io + Processing + Firebase

* Uses the node modules **express**, **socket.io** and **firebase**

**Server.js:**

* Same as previous program
* Connects to firebase using the firebase module
* Logs the mouse coordinates from the client to firebase

**Public/Sketch.js:**

* Same as before

**Public/Index.html**

* Same as before

# Socket.io + TypeScript

* Uses the node modules **express**, **socket.io** and **firebase**

**Server.js:**

* Same as before

**Public/game.ts:**

* Functions like **sketch.js**
* Communicates to the server and the server logs to firebase

**Public/Index.html**

* Imports the **firebase directly** rather than using the firebase node modules
* Sets up firebase and makes the variable “firebase” available for use

# TypeScript + Firebase

* Uses the node modules **express**, **socket.io**

**Server.js (not important):**

* Only used to serve the files to chrome

**Public/game.ts:**

* Functions like **sketch.js**
* Connects to the server and the server logs to firebase

**Public/Index.html**

* Imports the **firebase directly** rather than using the firebase node modules
* Sets up firebase and makes the variable “firebase” available for use

# TypeScript + Firebase + Hosting

* Eliminates the need for “server.js”
* Hosts everything on firebase
* This is what the architecture of the game from now on
* I am going to make scratches, implement them in Version x.x program and then add it to firebase once it is stable