Reactive Thinking Exercise – Collab Synth

Let's think of the Collaborative Synth example as a case study.
(Code in here)

The client has the following modules:

- **Synth** – Can get a keyboard letter such as 'a', and play or stop the associated tone.

- **Input Handler** – Can get any input (mouse/keyboard/phone) and figure out which synth letter is being played.

- **Socket Client** - Can send and receive messages from the socket server.

- **Piano visualization** – Can find the piano key of a specific letter and change its color in the HTML (for example to red when it's being pressed and back to white when it's released).

Scenario A : The user touches a key on the phone.
Scenario B : A remotely connected user touches a key, leading to a socket message.

Try to think: How does the data flow between modules? Each module can receive some data on the "stream", change it or add new data and then send it along the stream.

Draw on paper a flow chart between the modules. An arrow between two modules means that data is sent on the stream. Above the arrow you can describe what data is sent.

For example, the beginning of Scenario A would be:
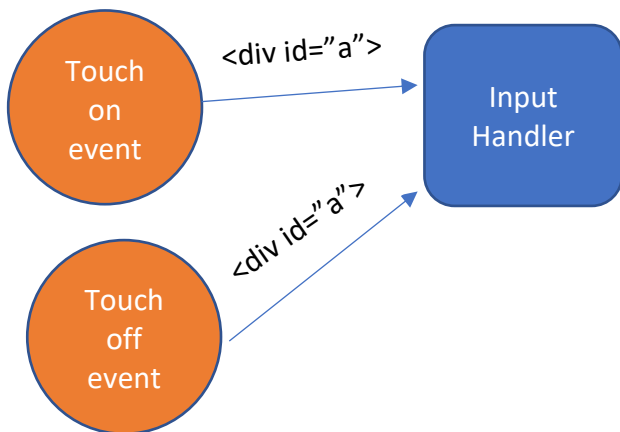
The "Touch on" event means the user has pushed a key and it sends on the stream the actual HTML Element that is being pushed, where the letter is the 'id' of the element. Correspondingly the "Touch off" event is when the user releases the key.
What does the Input Handler do with this event and data? What data does it send over the stream and to whom? What to the other modules do?

In Scenario B, the event would be "Socket message" and it would contain something such as "2Pa" if user 2 is playing 'a' and "2Sa" if user 2 has released the button.

Good luck!!