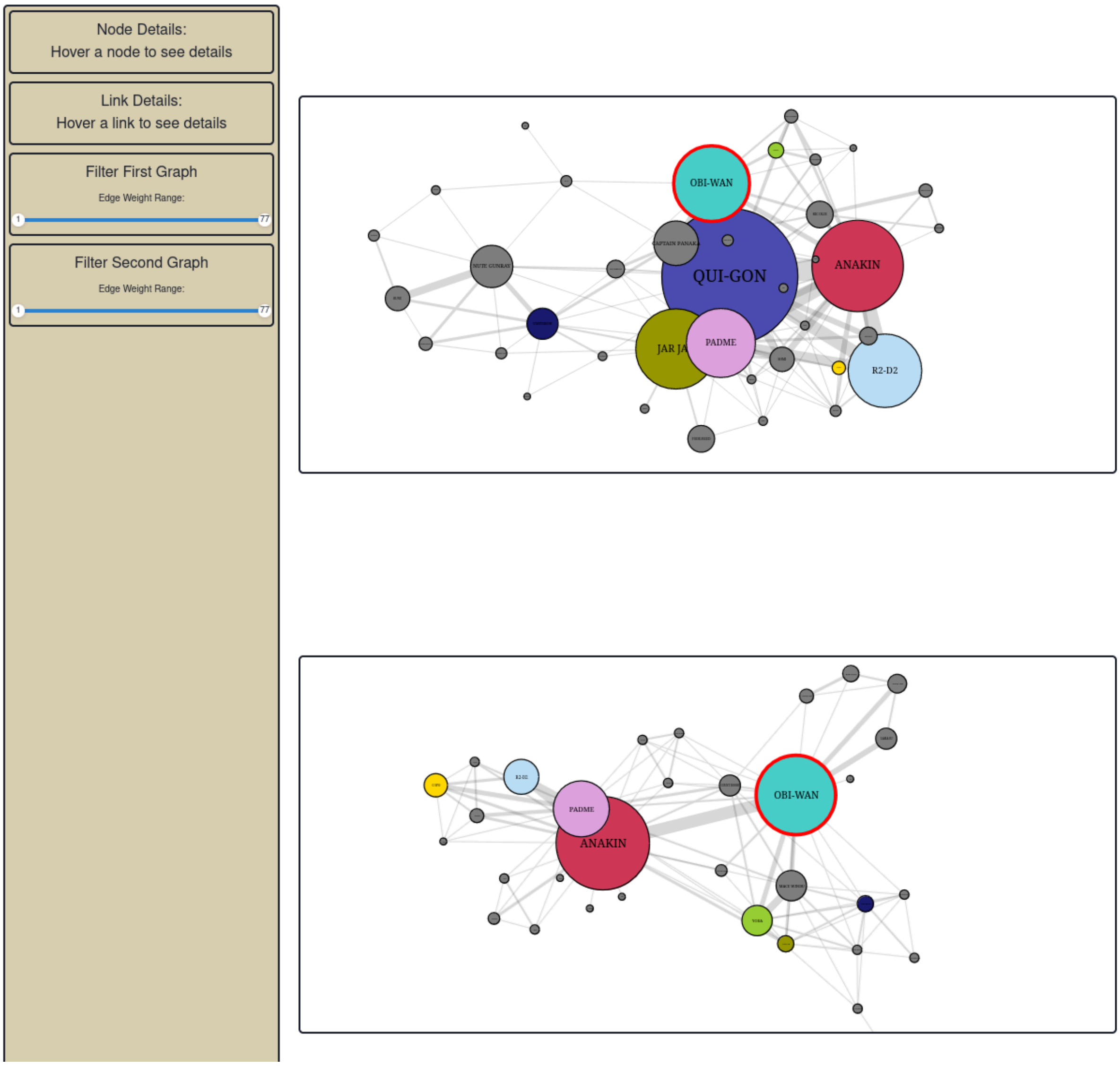
Assignment 4

This code is implemented using React and Typescript with Chakra UI and the network graph visualization is implemented using react-force-graph.

In the App.tsx we read the data from the Star Wars interaction Json files into two different arrays, one for each episode to be displayed in a separate view, in this case episode one and two were chosen to be compared in two separate graphs. The nodes and links are displayed in each view as seen in Figure 1



Node Details:
Hover a node to see details

Link Details:
Hover a link to see details

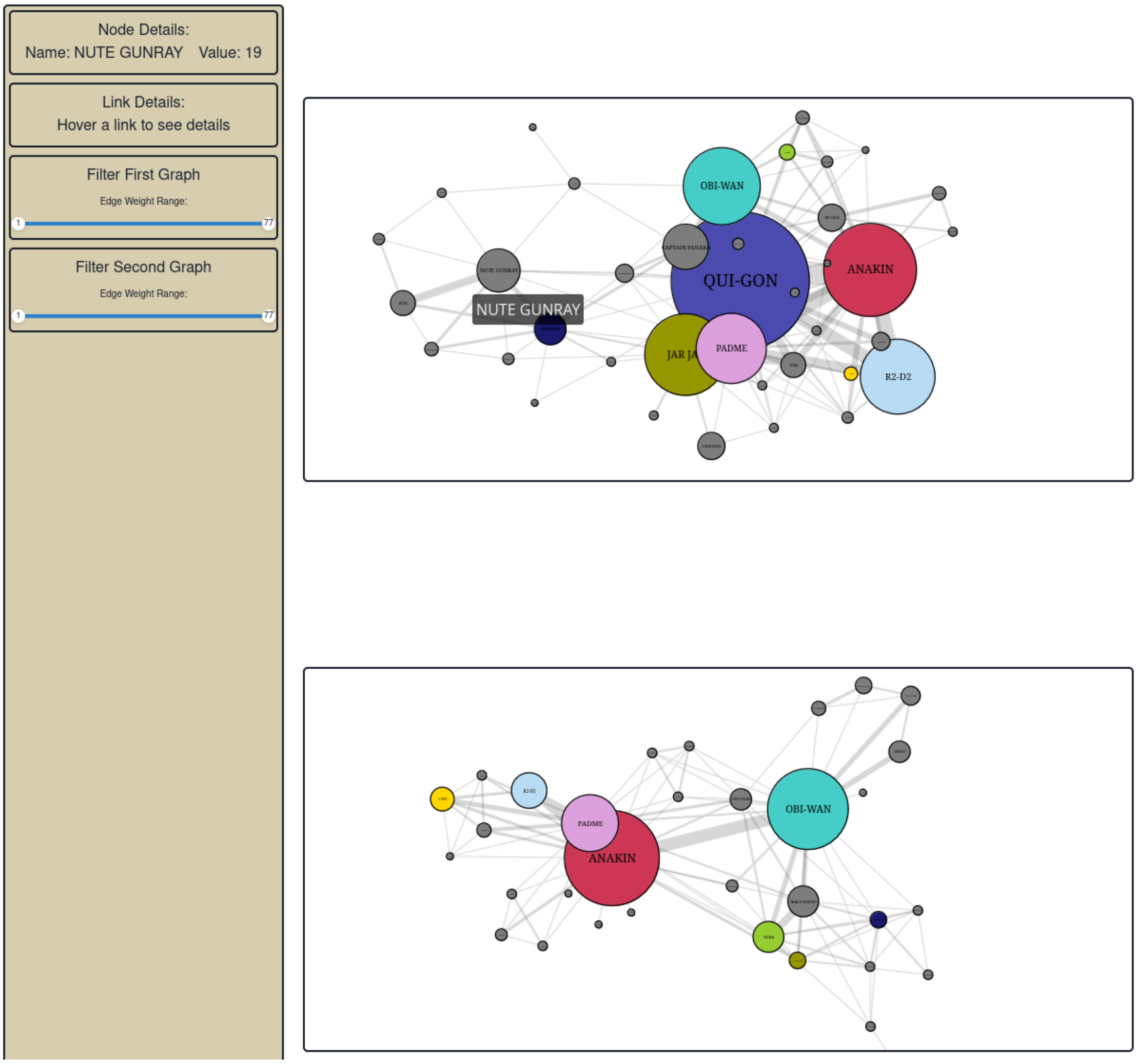
Filter First Graph
Edge Weight Range:
1 77

Filter Second Graph
Edge Weight Range:
1 77

Figure 1: Two episodes shown in two different views with a node selected.

Brushing/linking is implemented so that when the user clicks on a node, the node is highlighted and if the node exists in the other view, it is highlighted there as well. This can be seen in Figure 1.

The nodes and links are interactable, for example the user can hover on either of these to see more detailed information displayed in the left menu/detail component. The information displayed when you hover over a node is the character name and their value (the number of scenes the character appeared in). When the user hovers over a link the character name of both the source character and the target character are shown, as well as the value (meaning the number of how many scenes the characters appeared in together). Node detail on demand can be seen in Figure 2 and link detail on demand can be seen in Figure 3



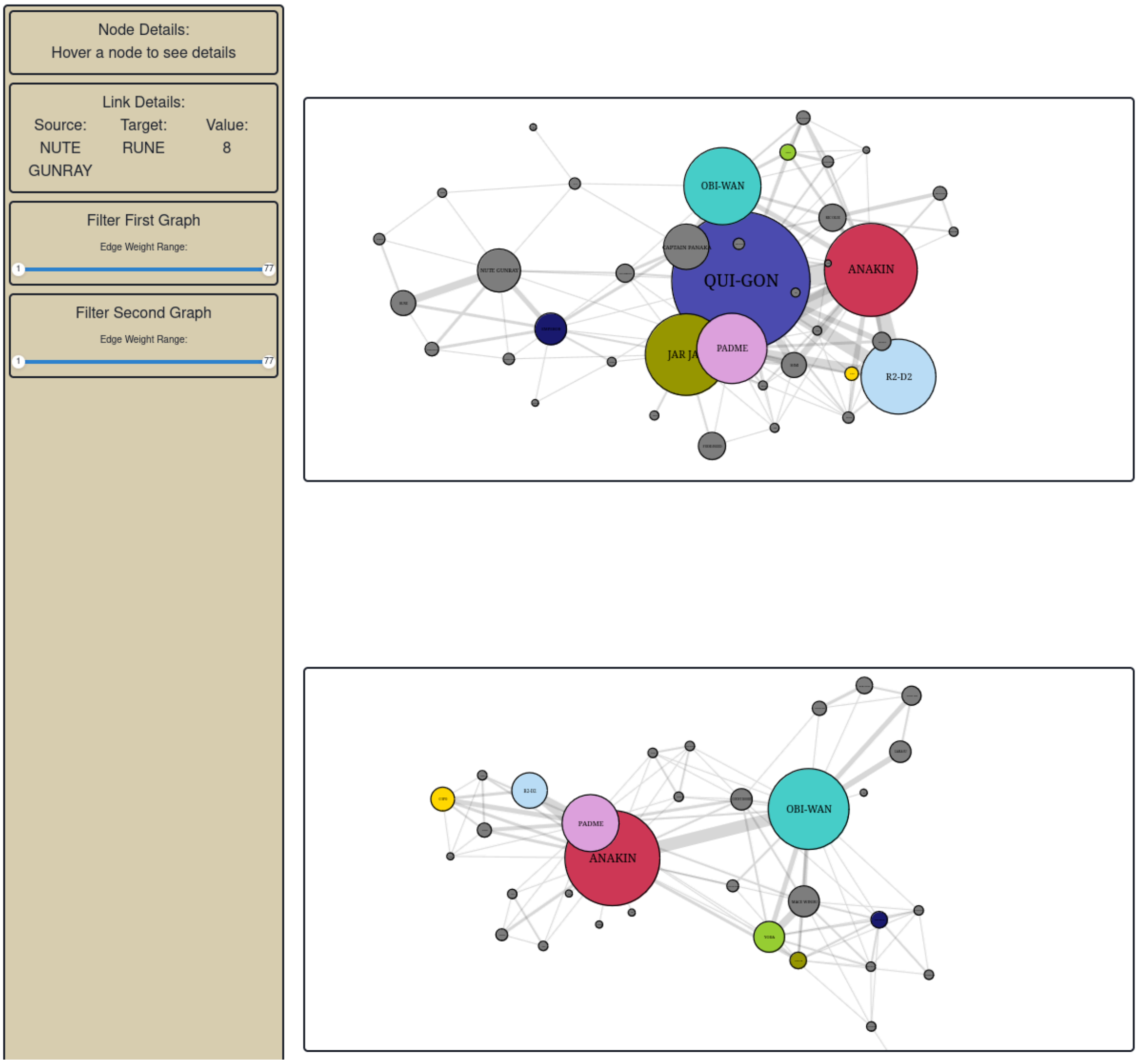
Node Details:
Name: NUTE GUNRAY Value: 19

Link Details:
Hover a link to see details

Filter First Graph
Edge Weight Range:
1 77

Filter Second Graph
Edge Weight Range:
1 77

Figure 2: Hovering over a node.



Node Details:
Hover a node to see details

Link Details:

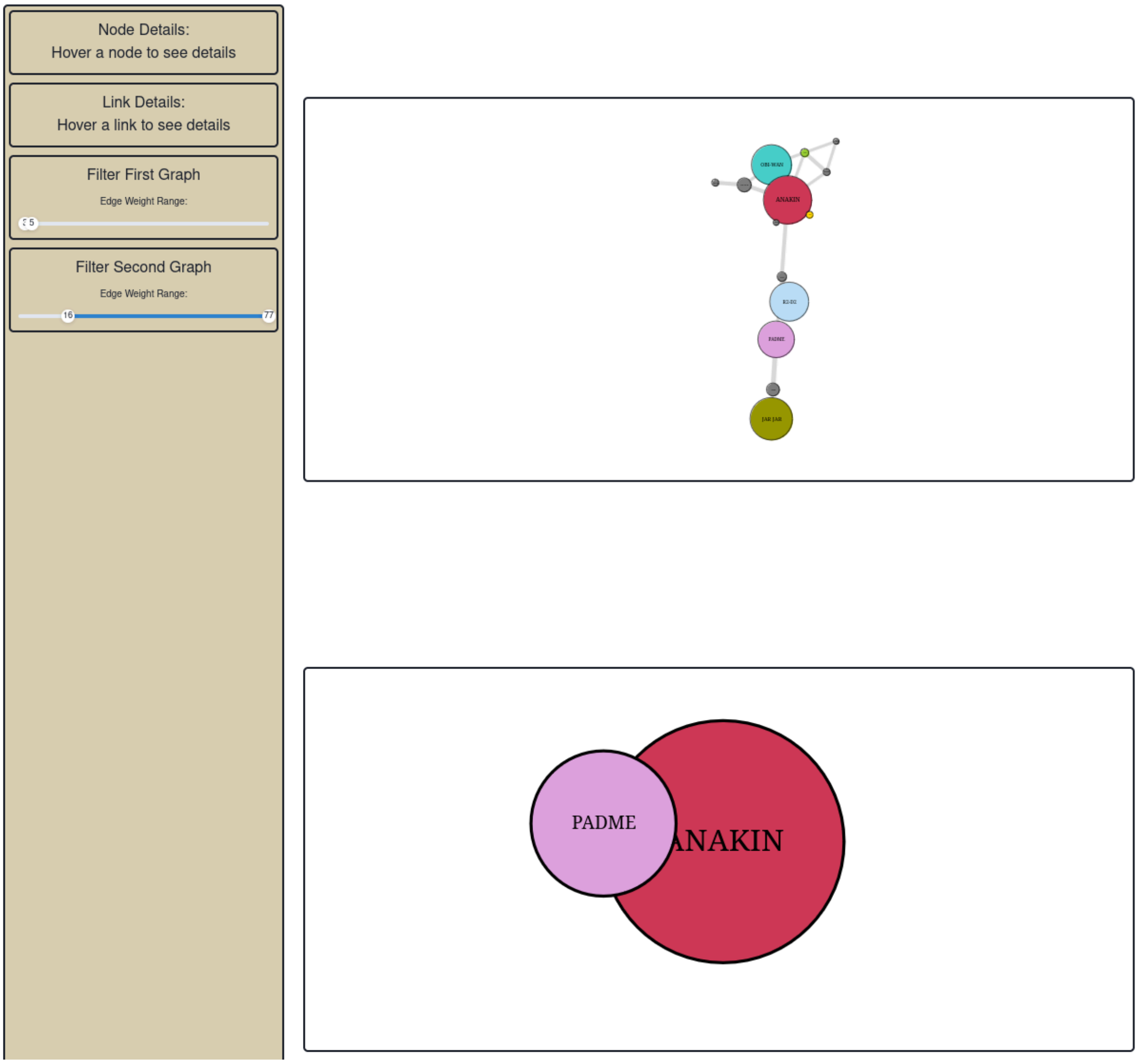
Source:	Target:	Value:
NUTE GUNRAY	RUNE	8

Filter First Graph
Edge Weight Range: 1 – 77

Filter Second Graph
Edge Weight Range: 1 – 77

Figure 3: Hovering over a link.

In the menu to the left there are two sliders, one for each view. These sliders allow the user to select a range for edge weight filtering. This is shown in Figure 4.



Node Details:
Hover a node to see details

Link Details:
Hover a link to see details

Filter First Graph

Edge Weight Range:

5

Filter Second Graph

Edge Weight Range:

16

77

Figure 4: Filtering view two by edge weights.