Zixuan Shu

Project proposal

For this project, we are going to do the project 9 in the project suggestions which is the visualization of algorithms. We are planning to visualize Dijkstra's algorithm, A\*, Tim Sort, Rank pairing, Fib heap, Splay tree (top down) and MST using JavaScript. By visualizing we mean that user can choose the input freely and hope that the animations can help them gain better understanding of the algorithms.

Before a data structure can be animated, it must be draw statically. So, we sure need to create a static graph according to user’s inputs. We will represent nodes as circles with a number in it. After displaying nodes and path between them, we need to show changes to it visually. The animations must be timed for optimal display. This can be done with JS by chaining functions to each be called at the end of the previous animation step. Then we can adjust colors, sizes and thickness of our project.