Comp 261

Assignment 1

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What I have Done Minimum - Core - Completion -Challenge (Except Quad Tree)

- The program reads the data and draws a map.
- It constructs a graph structure using collections of stops, trips, and connections.
- The map can be zoomed and panned, and the user can select stops with the mouse
- Stop names can be entered into the text box and the stop and all the related trips are highlighted on the map.
- The ids of all trips joining the selected stop are outputted, without duplicates.
- The time complexity of getting from a stop to the list of all the incoming/outgoing connections of it, and from a connection to the trip it belongs to is constant.
- Correct code for a trie structure, with methods to add an element and find all elements with a given prefix.
- Trie is used to output the names of all stops which match a prefix in the search box, as well as highlighting them on the map. If the prefix exactly matches a stop name, only output and highlight stop(s) of that id.
- The GUI is improved, with one of mouse-based panning and zooming or adding a drop-down suggestion box to the search bar.

Data Structure I used

I have used HashMap to store my stops objects, ArrayList to store my Connections object.

I have used trie Structure .

I have used HashMap to Store my Outgoing and Incoming Connections in my stops class.

What I Haven’t Done

- A quad-tree structure is used to quickly find a stop near a mouse click.
- The quad-tree retrieves the closest stop in all cases.