Data Structure for 5Guys

The data structure for our project will consist of an ArrayList in the main body that contains all of the cities covered in the form of Node. A Node will be a data type that we create to contain the data about itself, its neighbors, and its attractions. The Node will contain a String name (the city’s name), a HashMap of Strings as keys (attraction names) and the rating of that attraction as an integer (1-10), a Point of the city’s location(x, y), an ArrayList of the neighbors as Node, a HashMap of Strings as keys (neighboring cities’ names) and an ArrayList of the time, distance, and cost to get to the neighboring city stored as integers for the values.

The ArrayList in the main body is used to keep track of the Node and make sure that they are all available to use in the program and easy to access. This ArrayList will also be used to draw the map. Each Node will contain its neighbors as Nodes to easily traverse through these routes and the distance, time, and cost between itself and its neighbors. The HashMap of attractions lets attractions and their ratings to easily be found.