

Test Task for a Junior JS developer

Coding Test:

Please define a new JavaScript object called 'CityMap' that can be instantiated with 'new', using its constructor. The constructor takes one parameter as a string - this list of cities and their latitudes and longitudes:

```
"Nashville, TN", 36.17, -86.78;  
"New York, NY", 40.71, -74.00;  
"Atlanta, GA", 33.75, -84.39;  
"Denver, CO", 39.74, -104.98;  
"Seattle, WA", 47.61, -122.33;  
"Los Angeles, CA", 34.05, -118.24;  
"Memphis, TN", 35.15, -90.05;
```

This 'CityMap' object should have the following methods:

- 1) Return the name of the northernmost, easternmost, southernmost or westernmost city from the list, as requested by the caller.
- 2) Pass longitude and latitude as parameters, and return the name of the city that is closest to that location.
- 3) Return a single string containing just the state abbreviations from the list of cities, each separated by a space. The method should eliminate duplicate states. The result string should not have leading or trailing spaces.

Advanced tasks:

- add an ability to search by states (show list of cities of the state)
- create a tool to add cities with coordinates and states manually on the UI
- add a possibility to save the list of cities in a localStorage and pull it in common list automatically after page reload

Super advanced task:

- add visual representation for the states using webix charts (https://docs.webix.com/samples/08_chart/04_pie_chart/04_donut.html). You can copy a solution from that link and apply it to your project.
- or you can do a visualization with d3 chart (https://www.d3-graph-gallery.com/graph/pie_basic.html) You can copy a solution from that link and apply it to your project.