

Objective

To understand and utilize ES6 features present in TypeScript.

Description

This lab will use the Google Maps api to demonstrate the use of interfaces and classes. Additionally, we will explore how to use the Maps geocoder feature when faced with a limiting factor (Maps' queries per second). Make sure the Geocoder API is active.

Instructions

Part 1

Set up a page that will display a Google Map that centers on Toronto. First, define an interface for Latitude and Longitude. This interface is to have two properties, lat and lng. Name this interface LatLng.

Second, define a variable that is typed to the LatLng interface. It's lat value will be 43 and it's lng value will be -79.38 (these are the latitude and longitude coordinates of Toronto).

Third, use the variable defined above as the "center" property of the Google Map.

Once your map has been centered on Toronto using an interface as your coordinates, commit these changes using git.

Part 2

Resources

Cooling Centres in Toronto

<https://www.toronto.ca/city-government/data-research-maps/open-data/open-data-catalogue/#d7f09371-1386-cc5c-69c9-79d4cf7f6faa>

Geocoder in Google Maps

<https://developers.google.com/maps/documentation/javascript/geocoding>

Adding Markers to Google Maps

<https://developers.google.com/maps/documentation/javascript/markers>

Use the cooling centres data to mark each centre's location on the map made in part 1. Use the addresses of the cooling centers for the Geocoder api to return latitude and longitude. For this exercise, do not use the latitude and longitude already present in the data.

Define a class for each marker. This marker class is to be named "MapMarker" and have at least two properties:

- Address, a string property that will hold a location's address
- LatLong, a property typed to the LatLng interface defined in part 1

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Assuming there is no paid service from Google, you will find that looping over this data will limit the markers to the first ten entries, then stop adding markers altogether. Find a way to add markers for all locations. Once finished, commit these changes to git.