The test project should provide tools and insights to assist the decision making for the following

Business Problem:

Company considering opening several restaurants in Toronto. There are many factors affecting the business decision and calculations. Amongst them

- Location of restaurants (Neighborhoods and Clusters of Neighborhoods)
- What type of cuisine (perhaps Italian?) would be most suitable
- Various levels of competition, i.e. existing vendors of the same type (i.e. Italian) vs. general competition from all restaurants etc.

Data:

1. The project will need a list of Toronto Neighborhoods (zip) which will be scraped from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

	Postcode	Borough	Neighborhood
0	M1B	Scarborough	Malvern, Rouge
1	M1C	Scarborough	Highland Creek, Rouge Hill, Port Union
2	M1E	Scarborough	Morningside, Guildwood, West Hill
3	M1G	Scarborough	Woburn
4	M1H	Scarborough	Cedarbrae

2. The project will need a geo data (using http://cocl.us/Geospatial_data)

	Postal Code	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

3. The project will need a list of Foursquare labels (venue categories for and all subcategories for restaurant venues (Food) which will be obtained programmatically via Foursquare API https://developer.foursquare.com/docs/resources/categories as json

```json
{
  "meta": {
    "code": 200,
    "requestId": "5854a3664434b94a0959cfb7"
  },
  "notifications": [
    {
      "item": {
        "unreadCount": 13
      },
      "type": "notificationTray"
    }
  ],
  "response": {
    "categories": [
      {
        "categories": [
          {
            "categories": [],
            "icon": {
              "prefix": "https://ss3.4sqi.net/img/categories_v2/arts_entertainment/default_",
              "suffix": ".png"
            },
            "id": "56aa371be4b08b9a8d5734db",
            "name": "Amphitheater",
            "pluralName": "Amphitheaters",
            "shortName": "Amphitheater"
          },
          {
            "categories": [],
            "icon": {
              "prefix": "https://ss3.4sqi.net/img/categories_v2/arts_entertainment/aquarium_",
              "suffix": ".png"
            },
            "id": "4fceea171983d5d06c3e9823",
            "name": "Aquarium",
            "pluralName": "Aquariums",
            "shortName": "Aquarium"
          },
          {
            "categories": [],
            "icon": {
              "prefix": "https://ss3.4sqi.net/img/categories_v2/arts_entertainment/arcade_",
              "suffix": ".png"
            },
            "id": "4bf58dd8d48988d1e1931735",
```

4. Finally, the project will rely on data queried from Foursquare API for the venues in all Food categories returned in json format like this

```json
{
  "meta": {
    "code": 200,
    "requestId": "5ac51d7e6a607143d811cecb"
  },
  "response": {
    "venues": [
      {
        "id": "5642aef9498e51025cf4a7a5",
        "name": "Mr. Purple",
        "location": {
          "address": "180 Orchard St",
          "crossStreet": "btwn Houston & Stanton St",
          "lat": 40.72173744277209,
          "lng": -73.98800687282996,
          "labeledLatLngs": [
            {
              "label": "display",
              "lat": 40.72173744277209,
              "lng": -73.98800687282996
            }
          ],
          "distance": 8,
          "postalCode": "10002",
          "cc": "US",
          "city": "New York",
          "state": "NY",
          "country": "United States",
          "formattedAddress": [
            "180 Orchard St (btwn Houston & Stanton St)",
            "New York, NY 10002",
            "United States"
          ]
        },
        "categories": [
          {
            "id": "4bf58dd8d48988d1d5941735",
            "name": "Hotel Bar",
            "pluralName": "Hotel Bars",
            "shortName": "Hotel Bar",
            "icon": {
              "prefix": "https://ss3.4sqi.net/img/categories_v2/travel/hotel_bar_",
              "suffix": ".png"
            },
            "primary": true
          }
        ],
        "venuePage": {
          "id": "150747252"
        }
      },
```