# GGR472 LAB 1: Geospatial data for the web (5%)

## Lab objective

GeoJSON is a plain-text format designed for representing vector geometries and is the standard format for passing spatial vector data to the client in web mapping applications.

The aim of the lab is to programmatically build spatial data for web mapping and to combine knowledge with basic web programming skills to create a webpage.

The lab is worth 5% of your final grade, however, keep in mind that the primary purpose of the labs is to develop knowledge and skills which may be applied in your group project. You may use the exercises covered in class as guidance.

**Due Tuesday 31 January, 5pm**

# PART 1: Create a GeoJSON and shapefile (50%)

Using spatial features of your choice, create a GeoJSON file either by hand or using [geojson.io](https://geojson.io/). Export your data as a GeoJSON and as a shapefile. You may wish to save your file in your Working Directory where your index.html file for Part 2 will be saved.

Write up a 250-500 word report in which you:

* Describe what the various elements of the code for the GeoJSON file reference (explicitly list these, using your file as an example)
* Compare the structure and size of the GeoJSON and shapefile
* Describe the advantages and disadvantages to using GeoJSON

**Upload your report to Question 1 on Quercus**

# PART 2: Create an HTML webpage (50%)

Using Visual Studio Code, create an HTML webpage including links to an external webpage, and an internal (local) link. The external link may be to any website you like but the internal link should be to the GeoJSON file you created in Part 1.

Below is a basic code snippet to get you started and [here’s an example](https://smith-lg.github.io/ggr472-lab1/) of what I’m looking for. Think about styling, different tags, tag attributes, and the inclusion of comments. The more creative and advanced you get, the better the grade. For example, you may create different sections in your webpage that describe different types of spatial data and add links to relevant resources.

<!DOCTYPE html>

<html>

<body>

<h1>My Heading</h1>

<p>My paragraph.

<a href=”http://www.google.ca”>My link to Google</a>

<a href="mymappeddata.geojson">My link to view geojson file code</a>

</p>

</body>

</html>

Once complete, upload your files to an online GitHub repository and deploy your website using GitHub pages. You may like to revisit Exercises 1 and 2 from Week 2 for guidance.

**Submit a link to your GitHub repository AND a link to your website via Quercus**