

# Week 3 - Module 2a - Web-based Mapping Clients. Google Maps API

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## Introduction

This week we will begin our work with the popular Google Maps *Application Programming Interface* (API) in developing an interactive web-based mapping client. This development activity will build upon the the work you've done over the last couple of weeks in developing basic web pages by using the capabilities that Google has made available for building mapping interfaces based upon their Maps platform. You will begin working with javascript as a client programming language to both interact with Google's servers and to provide the needed information for Google's mapping tool in your web page.

### *Expected Outcomes*

By the end of this class module you should understand the following:

- What an Application Programming Interface (API) is
- How Javascript can be used to define the behavior of elements in a web page
- What the basic structure of a javascript code block for defining a Google Maps - enabled page looks like
- How to write a basic web page that includes an interactive Google Map

### *Key Concepts*

- Application Programming Interface (API)
- Javascript and its location within an HTML page
- The interaction between javascript behaviors and structural elements in a web page

## Class Prep

- w3schools [JavaScript Tutorial](#)
- [Google Maps API Tutorial](#)
- Balkan Uraz, & Alper Dincer. (2013). \*Google Maps JavaScript API Cookbook\*\*. (Weeks 3 and 4)<https://www.safaribooksonline.com/library/view/google-maps-javascript/9781849698825/>
  - *Google Maps API Basics*

- [Adding Raster Layers](#)
  - [Adding Vector Layers](#)
  - [Working with Controls](#)
- Google Maps API Key - a Google Maps API key is now required to write web pages that make use of the Google Maps API. You can get your API key [here](#)

## Reference Materials

### Weekly Milestone - Creation of a Web Page with an Embedded Google Map

In preparation for creating a web page with an embedded Google Map you should first answer the questions provided in Learn about what and how you want to map. As you define the type of map you want to build, think about a specific problem or topic that you would like to address with your map. In other words - *what is the story you want to tell with your map?*

In this exercise you will be generating the configuration for the base map (i.e. The Google Maps background layers). In future assignments you will add your own custom content to free-standing web pages that include a mapper based upon the base map you define here.

Once you have answered the questions in Learn about the map that you want to create, refer to the examples in the lecture notes, the [Google Maps Tutorial](#), and this week's reading and video tutorial assignment to create a custom Google map.

Provide the link to your Google map in response to the last question in the assignment in Learn.

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