

Lab: Introducing Map Mashups

GEOG 319/658

Exercise #6

FALL 2014

Introducing Map Mashups

Due Date: October 20

A. Working with the basic Google Map

Download the code for Chapter 10 of the Peterson text from <http://maps.unomaha.edu/cloud/code.html>
Edit the code for Figure 10.1 (use the Google folder and file 10-01-Google1-Roadmap) so that it accomplishes the following.

1. Document the section that specifies the link with the Google Maps API.
2. Document the section that reserves space for the map in the Document Object Model (DOM).
3. Document the section that creates a map object.
4. Document the section that initializes the Google Map.
5. Center the map on Lawrence, KS and document this section.
6. Specify a zoom level of 18 and document this section.
7. Specify a map size that is 1400 pixels horizontally and 600 pixels vertically and document this section.
8. In general, check through all code and make sure that it is clearly documented.

In editing the code, you may find the following site useful: <https://developers.google.com/maps/documentation/javascript/tutorial#HelloWorld>

B. Creating a clickable marker on a Google Map

Experiment with the code for Figure 10.2 and 10.3 (these will be files 10-02-Google2-Marker and 10-03-Google3-Clickable_Marker in the Google folder). Then edit the code for the file 10-03-Google3-with_PICT (in the Google folder) as follows:

1. Center the map on Lindley Hall at the University of Kansas.
2. Set the zoom level to 18.
3. Substitute Peterson's jpg picture with a picture of your choosing.
4. Document all sections related to creating the picture and the marker and getting the picture to pop up when the marker is clicked on.
5. In general, document other lines of the program.

C. Using the Bing Maps API

Edit the code for the file 10-07-BingMaps_Pushpin_Hover (in the Bing folder) as follows:

1. Document the section that specifies the Bing maps API.
2. Document the line that specifies the Bing Maps key.

3. Center the map on Lindley Hall (note that you will also need to specify this as the location for the pushpin) and document these sections.
4. Change the “title” to Lindley Hall.
5. Change the “description” to University of Kansas.
6. Since we won’t be working extensively with Bing, we won’t require that you document the entire program.

D. Using the OpenStreetMap API

Edit the code for the file 10_17-Controls (in the OpenStreetMap folder) as follows:

1. Center the map on Lawrence, KS.
2. Experiment with the overview map in the lower right corner of the map.
3. Discuss the benefits of having an overview map.

E. Using the Leaflet API

Open the file 10_24-Choropleth (in the Leaflet folder). You should see a choropleth map of population density by state displayed.

1. What is the population density for South Dakota? What is the population density for Texas?
2. Discuss any problems you see in trying to portray population density using a choropleth map at the state level.
3. Open up the us-states.js file in Notepad++. Describe the structure of this file.

Create a folder for exercise 6 on the webhosting service. Load all files related to parts A, B, and C into this folder. Post the resulting URLs to the following [Google worksheet](#). Hand in a hard copy version of your response to parts D and E.