

# CIS 8020 Systems Integration Fall 2009

## Assignment #2: Web API for Mashup

Due Date: Oct 25<sup>th</sup> 2009

### Instruction:

Google provides an impressive number of application services through its web APIs. In this assignment, you will have the opportunity to work with one of them to demonstrate your understanding and application of these APIs for a particular problem.

First, take a quick look at the recommended APIs listed below and understand what they offer. Choose one of them as your starting point. Then describe a simple case or scenario (which could be real problems or imagined scenarios) which you can use the API you have chosen. Prepare some example data if needed. You need to describe how the chosen API can be used in your scenario, and develop a small prototype to demonstrate your solution.

You are going to create a blog entry for this assignment (see a sample write-up following the instruction). Your blog entry should consist of the following parts:

1. Introduce the scenario or the case.
2. Explain how you can use one of the Google APIs for a potential solution.
3. Use Google API to build a prototype. The output can be directly integrated to the same blog entry; or you may need a separate HTML/Script gadget.
4. Explain why you chose this web API for implementation; if possible, compare to other possible solutions.

### Recommended Google APIs:

- For starters (examples can be found from the website listed below)
  - Google Charts: <http://code.google.com/apis/chart/>
  - Google Static Maps: <http://code.google.com/apis/maps/documentation/staticmaps/>
- For intermediate and advanced applications:
  - Google Map, see: <http://code.google.com/apis/maps/documentation/introduction.html>
    - Examples (use view source to see how it is implemented):  
<http://code.google.com/apis/maps/documentation/examples/>
  - Google Calendar: <http://code.google.com/apis/calendar/>
  - Google Visualization: <http://code.google.com/apis/visualization/>
  - Google Analytics: <http://code.google.com/apis/analytics/>

### Submission:

This is an individual assignment. Please complete it by yourself. Post your blog entry with the required contents in your group blog site. Name the blog entry title in this format:

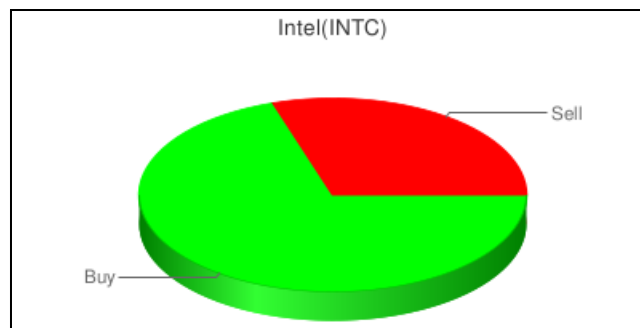
CIS 8020 Assignment 2 [First and Last Name Initials] [Your Google API's Name]

## A sample blog entry:

### CIS 8020 Assignment 2 JZ Google Pie Chart

A small stock tracking website collects stock buy and sell information from many mutual funds. It produces percentages of buy/sell of any stock by all mutual funds within a certain period of time. Besides just presenting these numbers as pure text, the web site wants to put them in charts for better appearance.

Google Chart API is a good candidate solution for this problem. It generates static chart images which can be easily integrated to any webpage. The website just needs to prepare the input data (the percentages of buy and sell) and configure a few setting on its style. A chart is prototyped as following:



[http://chart.apis.google.com/chart?cht=p3&chd=t:70,30&cht=Intel\(INTC\)&chs=400x200&chco=00FF00,FF0000&chl=Buy|Sell](http://chart.apis.google.com/chart?cht=p3&chd=t:70,30&cht=Intel(INTC)&chs=400x200&chco=00FF00,FF0000&chl=Buy|Sell)

Built upon this, the website also provides a dashboard-like page for all Dow 30 stocks.

Compare to other solutions, this is easy to use and implement. Such an API saves the development and maintenance effort. It also saves computing power and bandwidth. The application can be nicely integrated to the website. Service speed is also satisfying.