Homework: **Spectral Graph Theory 101**

1. Check the Assignment Schedule for the DUE date.
2. For each Exercise, submit the script, the output of running this script, and the answers to the questions (if applicable).
3. Submit a single html file via Moodle (instructions below).

Programming Environment: Code your script using Python. You may find the igraph or networkx packages to be useful. Networkx is package for handling graphs implemented purely in python and is arguably easier than to use than igraph. However, igraph is probably more efficient since much of the code is implemented in c. If it makes any difference to you, the solution uses networkx.

Project Details:
For this project, we will using IPython notebooks. IPython notebooks can be thought of a more advanced interactive shell where you can intermix regular text, code snippets, and the results from that code. This makes it a really powerful tool for interactively exploring the data, trying different data mining techniques, and taking notes.

To run an IPython notebook, run the following command:

```
$ ipython notebook
```

A new window should be opened in your browser. From here you can open an existing IPython notebook or create your own notebook. Open the IPython notebook included with this project (the .ipynb file), there will be instructions there.

Once you have finished all your code and have answered all your questions, you will need to convert your notebook to an html file for submission. To do this run the following command:

```
$ ipython nbconvert h3.ipynb --to html
```