# Homework 4

Assignment 4: Build a Simple Web Server using Google App Engine

In this assignment, you will put into practice the concepts that we learned in Lecture 5. You will use your password tester that you created in HW2 and turn it into a simple web server app that takes as input passwords from visitors to your app's website, tests them according to the rules in Part 1 of HW2, and then outputs the same responses that your programs did in HW2. Now anyone in the world can use your password checker app!

Steps:
NOTE: WE WILL DO STEPS 1-3 TOGETHER IN THE LAB SECTIONS THIS WEEK TO HELP YOU GET STARTED

1. Download and Install the Google App Engine SDK
https://developers.google.com/appengine/downloads

2. Make a simple Hello World application. We'll first launch it as a server instance on your local machine, so that its not visible to the wider internet. All this application will do is print out "Hello world" to the web browser when you visit the local website associated with your server. Follow the directions in Steps 1-2 of this tutorial:
https://developers.google.com/appengine/docs/python/gettingstartedpython27/introduction

If you wish to use Eclipse as your development environment, I suggest following Steps 1-5 of this tutorial (up to and including "5. Run it Locally"):
http://www.mkyong.com/google-app-engine/google-app-engine-python-hello-world-example-using-eclipse/
Unfortunately the Eclipse tutorial generates an older version of the files, so as a last step, take the contents of the generated "helloworld.py" and "app.yaml" files and replace them with the code from the Google tutorial linked above.

3. Deploy your Hello World application to the cloud by uploading it to the Google App Engine. Follow Step 9 of the Google tutorial here:
https://developers.google.com/appengine/docs/python/gettingstartedpython27/uploading
(Eclipse users, complete the rest of the Eclipse tutorial linked above)

IMPORTANT NOTE #1: When registering your app, please give it the application id "i206-hw4-[lastname]"
So, for example, Mike's would be "i206-hw4-berger".
This is important so that we can find your app online.

IMPORTANT NOTE #2: you need to modify the permissions on your google account to accept connections from less secure apps (such as the one you are building!) You can go here to do that:
https://www.google.com/settings/security/lesssecureapps
If you are uncomfortable with doing that using your existing google account, please create a new throwaway one and use that one instead.

4. Modify your Hello World application so that it can take a password as input from the user, test it, and then give the output according to the same rules as Part 1 of HW2.

Just follow the directions in Step 5 of the Google tutorial here:
https://developers.google.com/appengine/docs/python/gettingstartedpython27/handlingforms
EXCEPT:
a) we arent making a guestbook app so every time it says "guestbook" in the Google tutorial we want to replace that with "pwchecker"
b) instead of the python code they give you to copy and paste into your file, use the stump code that we have prepared, then fill in the TODO sections according to their instructions. Stump code can be found here:
https://www.dropbox.com/s/w0oveqhekv4a86k/pwchecker.py?dl=0

5. Deploy your pwchecker app to the Google App Engine the same way you did in Step 3 above.

6. Run your test suite from HW2 on your new online app.

7. Submit your pwchecker.py and app.yaml files to us using the online submission tool you have used in the previous two assignments.