

# Installing and Running the Google App Engine On Windows

This document describes the installation of the Google App Engine Software Development Kit (SDK) on a Microsoft Windows and running a simple “hello world” application.

The App Engine SDK allows you to run Google App Engine Applications on your local computer. It simulates the run-time environment of the Google App Engine infrastructure.

## Pre-Requisites: Python 2.5.4

If you don't already have Python 2.5.4 installed in your computer, download and Install Python 2.5.4 from:

<http://www.python.org/download/releases/2.5.4/>

## Download and Install

You can download the Google App Engine SDK by going to:

<http://code.google.com/appengine/downloads.html>

and download the appropriate install package.

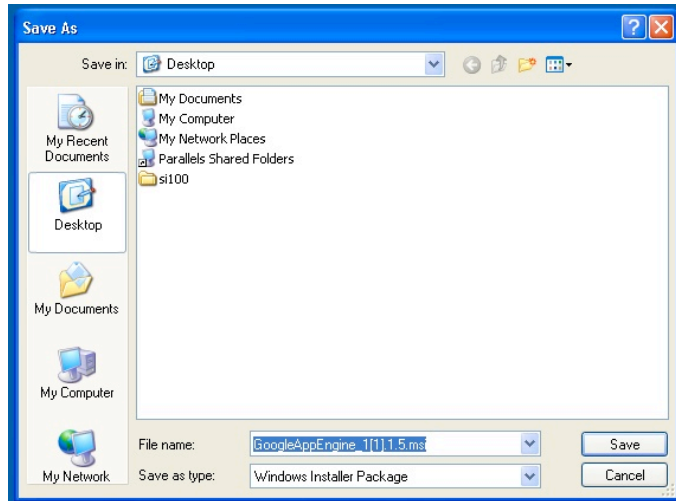
### Download the Google App Engine SDK

Before downloading, please read the [Terms](#) that govern your use of the App Engine SDK.

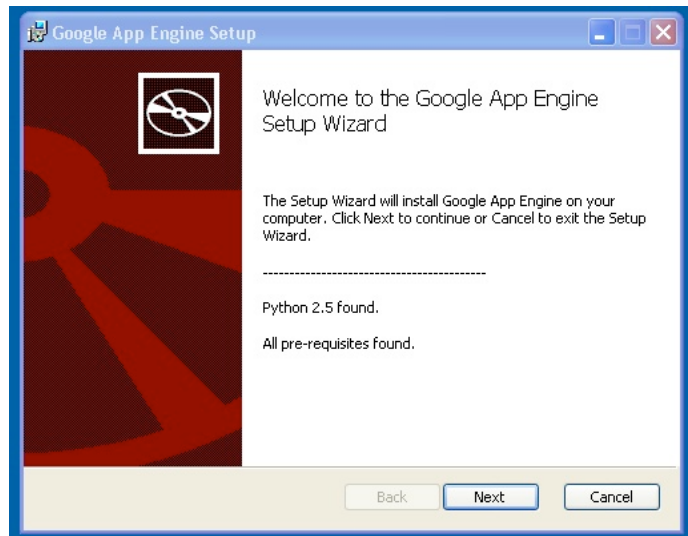
Please note: The App Engine SDK is under **active development**, please keep this in mind as you explore its capabilities. See the [SDK Release Notes](#) for the information on the most recent changes to the App Engine SDK. If you discover any issues, please feel free to notify us via our [Issue Tracker](#).

Platform	Version	Package	Size	SHA1 Checksum
Windows	1.1.5 - 10/03/08	<a href="#">GoogleAppEngine 1.1.5.msi</a>	2.5 MB	e974312b4aefc0b3873ff0d93eb4c525d5e88c30
Mac OS X	1.1.5 - 10/03/08	<a href="#">GoogleAppEngineLauncher-1.1.5.dmg</a>	3.6 MB	f62208ac01c1b3e39796e58100d5f1b2f052d3e7
Linux/Other Platforms	1.1.5 - 10/03/08	<a href="#">google_appengine 1.1.5.zip</a>	2.6 MB	cbb9ce817bdabf1c4f181d9544864e55ee253de1

Download the Windows installer – the simplest thing is to download it to your Desktop or another folder that you remember.



Double Click on the **GoogleApplicationEngine** installer.



Click through the installation wizard, and it should install the App Engine. If you do not have Python 2.5, it will install Python 2.5 as well.

Once the install is complete you can discard the downloaded installer



## Making your First Application

Now you need to create a simple application. We could use the “+” option to have the launcher make us an application – but instead we will do it by hand to get a better sense of what is going on.

Make a folder for your Google App Engine applications. I am going to make the Folder on my Desktop called “**apps**” – the path to this folder is:

**C:\Documents and Settings\csev\Desktop\apps**

And then make a sub-folder in within **apps** called “**ae-01-trivial**” – the path to this folder would be:

**C:\ Documents and Settings \csev\Desktop\apps\ae-01-trivial**

Using a text editor such as JEdit ([www.jedit.org](http://www.jedit.org)), create a file called **app.yaml** in the **ae-01-trivial** folder with the following contents:

```
application: ae-01-trivial
version: 1
runtime: python
api_version: 1

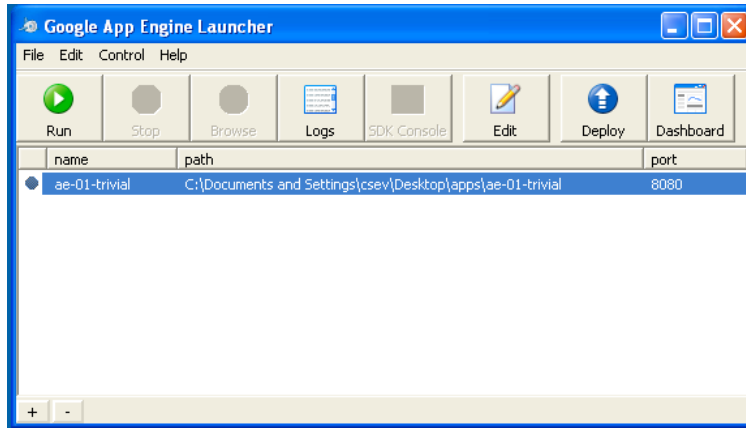
handlers:
- url: /*
  script: index.py
```

**Note:** Please do not copy and paste these lines into your text editor – you might end up with strange characters – simply type them into your editor.

Then create a file in the **ae-01-trivial** folder called **index.py** with three lines in it:

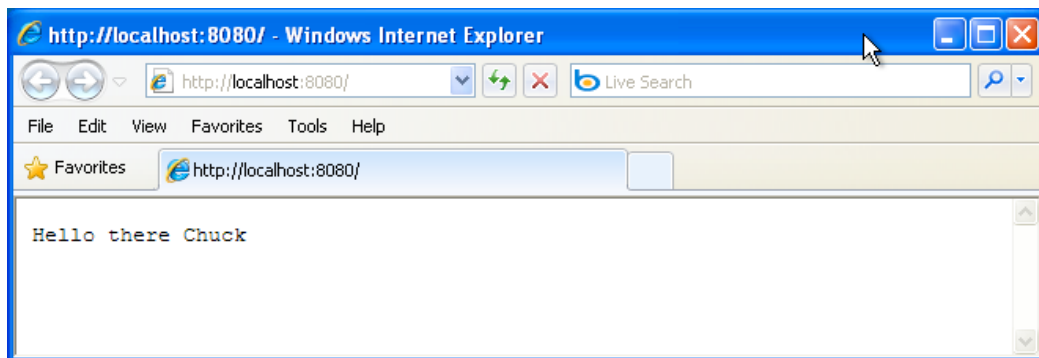
```
print 'Content-Type: text/plain'
print ' '
print 'Hello there Chuck'
```

Then start the **GoogleAppEngineLauncher** program that can be found under **Applications**. Use the **File -> Add Existing Application** command and navigate into the **apps** directory and select the **ae-01-trivial** folder. Once you have added the application, select it so that you can control the application using the launcher.



Once you have selected your application and press **Run**. After a few moments your application will start and the launcher will show a little green icon next to your application. Then press **Browse** to open a browser pointing at your application which is running at **http://localhost:8080/**

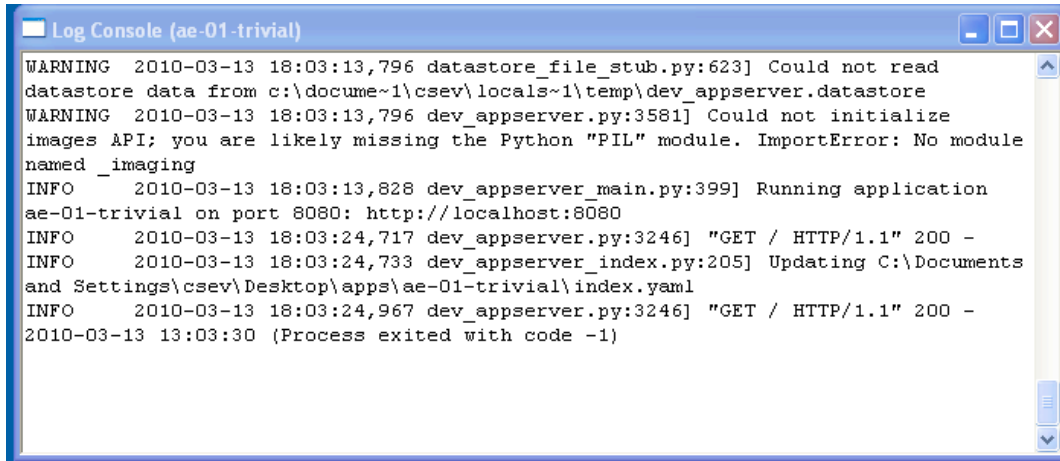
Paste **http://localhost:8080** into your browser and you should see your application as follows:



Just for fun, edit the **index.py** to change the name “Chuck” to your own name and press Refresh in the browser to verify your updates.

## Watching the Log

You can watch the internal log of the actions that the web server is performing when you are interacting with your application in the browser. Select your application in the Launcher and press the **Logs** button to bring up a log window:

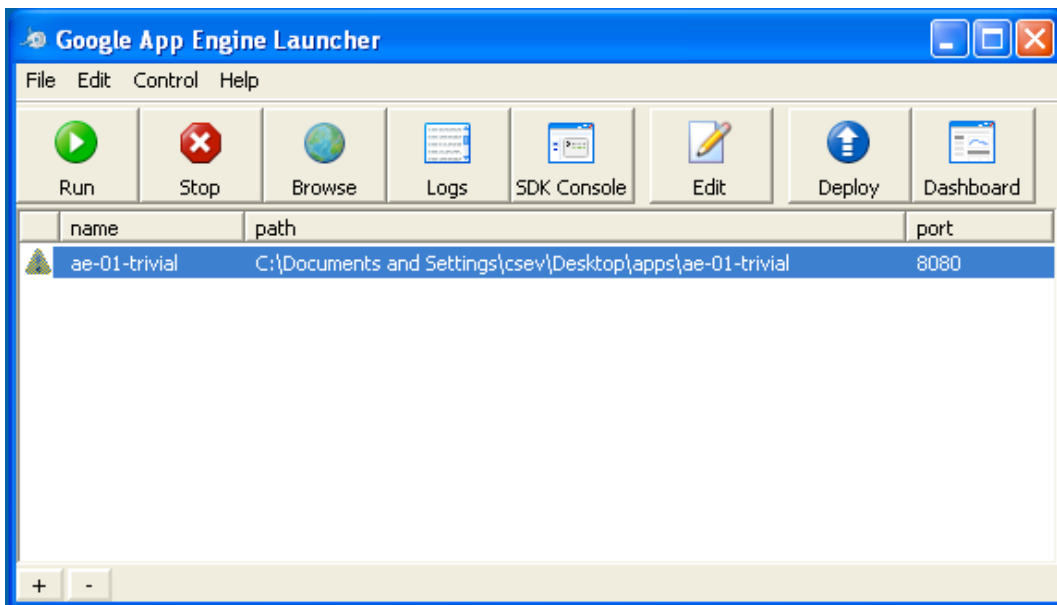


```
Log Console (ae-01-trivial)
WARNING 2010-03-13 18:03:13,796 datastore_file_stub.py:623] Could not read
datastore data from c:\docume~1\csev\locals~1\temp\dev_appserver.datastore
WARNING 2010-03-13 18:03:13,796 dev_appserver.py:3581] Could not initialize
images API; you are likely missing the Python "PIL" module. ImportError: No module
named _imaging
INFO 2010-03-13 18:03:13,828 dev_appserver_main.py:399] Running application
ae-01-trivial on port 8080: http://localhost:8080
INFO 2010-03-13 18:03:24,717 dev_appserver.py:3246] "GET / HTTP/1.1" 200 -
INFO 2010-03-13 18:03:24,733 dev_appserver_index.py:205] Updating C:\Documents
and Settings\csev\Desktop\apps\ae-01-trivial\index.yaml
INFO 2010-03-13 18:03:24,967 dev_appserver.py:3246] "GET / HTTP/1.1" 200 -
2010-03-13 13:03:30 (Process exited with code -1)
```

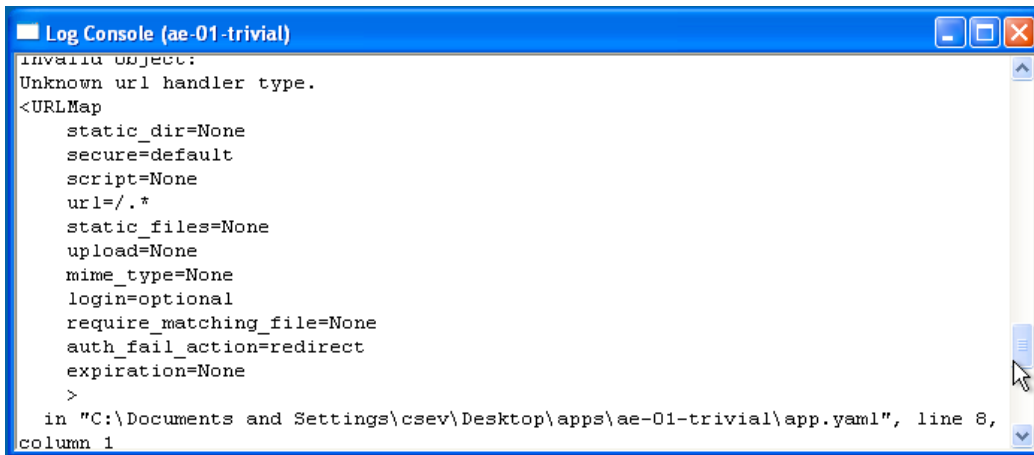
Each time you press **Refresh** in your browser – you can see it retrieving the output with a **GET** request.

### Dealing With Errors

With two files to edit, there are two general categories of errors that you may encounter. If you make a mistake on the **app.yaml** file, the App Engine will not start and your launcher will show a yellow icon near your application:



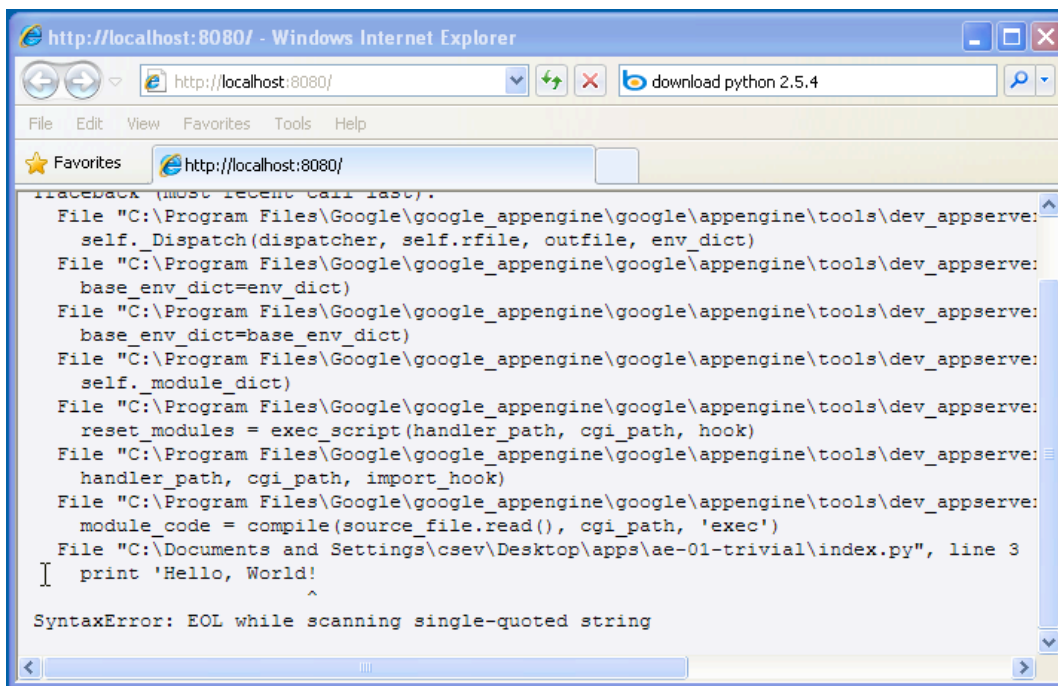
To get more detail on what is going wrong, take a look at the log for the application:



```
Invalid object:
Unknown url handler type.
<URLMap
  static_dir=None
  secure=default
  script=None
  url=/.*
  static_files=None
  upload=None
  mime_type=None
  login=optional
  require_matching_file=None
  auth_fail_action=redirect
  expiration=None
>
in "C:\Documents and Settings\csev\Desktop\apps\ae-01-trivial\app.yaml", line 8,
column 1
```

In this instance – the mistake is mis-indenting the last line in the **app.yaml** (line 8).

If you make a syntax error in the **index.py** file, a Python trace back error will appear in your browser.



```
http://localhost:8080/ - Windows Internet Explorer
http://localhost:8080/
download python 2.5.4
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
self.Dispatch(dispatcher, self.rfile, outfile, env_dict)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
base_env_dict=env_dict)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
base_env_dict=base_env_dict)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
self._module_dict)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
reset_modules = exec_script(handler_path, cgi_path, hook)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
handler_path, cgi_path, import_hook)
File "C:\Program Files\Google\google_appengine\google\appengine\tools\dev_appserve:
module_code = compile(source_file.read(), cgi_path, 'exec')
File "C:\Documents and Settings\csev\Desktop\apps\ae-01-trivial\index.py", line 3
| print 'Hello, World!'
^
SyntaxError: EOL while scanning single-quoted string
```

The error you need to see is likely to be the last few lines of the output – in this case I made a Python syntax error on line one of our one-line application.

Reference: [http://en.wikipedia.org/wiki/Stack\\_trace](http://en.wikipedia.org/wiki/Stack_trace)

When you make a mistake in the **app.yaml** file – you must the fix the mistake and attempt to start the application again.

If you make a mistake in a file like **index.py**, you can simply fix the file and press refresh in your browser – there is no need to restart the server.

### **Shutting Down the Server**

To shut down the server, use the Launcher, select your application and press the **Stop** button.

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