

## Developer Technical Services

**Lab 1 Handout**

**Topics Covered**

* How to find API Docs
* Build a very basic plug-in: HelloWorld

**Background**

* How to find API Docs

1. Open Maya, in the File Menu, click on Help > Maya Help, or use the shortcut F1 to open the help documentation.
2. In “User Guide” section, there is an item “Maya API Guide”. Click on it, it will bring you to the API web page:

<http://www.autodesk.com/maya-sdkdoc-2012-enu>

**Assignments**

* For every Plug-in, we will provide an “Exercise” folder and a “Solution” folder. In addition we will provide a C++ and Python version of the Exercise and Solutions of the assignments. Solution folder includes the complete code for you to finish the Plug-in, it is for you to reference when you are stuck at problems when adding code into the “Exercise” folder. In the “Exercise” folder, all the code you need to finish is specified with comments “##- TODO:” you need to search for all the “TODO” comments and add your code there.
* **Configuring Your Maya Plug-in Path**

1. Browse to the folder:

(Windows 7®)

* drive:\Users\username\Documents\maya\version
* drive:\ Users\username\Documents\maya

(Mac OS X)

* /Users/username/Library/Preferences/Autodesk/maya/version
* /Users/username/Library/Preferences/Autodesk/maya

(Linux®)

* ~/maya/version
* ~/maya

2. Create a text file named: Maya.env

3. In Maya.env, insert the line, for example:

MAYA\_PLUG\_IN\_PATH= $SHARED\_MAYA\_DIR/plug-ins

* **Tips: Safely reloading a plug-in without restarting Maya**
  1. Clear the scene:
     + File > New Scene
     + file –f –new
  2. Clear the undo queue:
     + flushUndo
  3. Unload the plug-in:
     + unloadPlugin helloWorld.py
  4. Reload the plug-in:
     + loadPlugin helloWorld.py

**helloWorld Plug-in**

* **Overview**

In this exercise, we will implement a simple python plug-in. When the plug-in gets loaded, it prints out “Hello World! The plug-in has been loaded successfully” in the script editor, when you unload the plug-in, it prints out "The plug-in has been unloaded successfully." in the script editor window.

* **Exercises**

1. Go to “\Maya 2012 Python API Training\Lesson\_2 \_Maya\_API\_Overview helloWorld\Exercise” folder, open helloWorld.py, the skeleton of the plug-in is there.
2. Add corresponding code into the skeleton to make it work. The system print out methods for python is sys.stdout.write and sys.stderr.write

* **Result**

In maya script editor, python tab, execute the following line:

import maya

maya.cmds.loadPlugin("helloWorld.py")

You will see “Hello World! The plug-in has been loaded successfully.” printing out in the script editor. Now execute the following line:

maya.cmds.unloadPlugin("helloWorld.py")

In the script editor, the sentence “The plug-in has been unloaded successfully.” gets printed out.