

## Developer Technical Services

**Assignment - Maya Nodes Part 1**

**Topics Covered**

* Build Maya Custom Node with MPxNode

**simpleNode Plug-in**

* **Topics Covered**
  + Write a skeleton of a custom node “simpleNode” with MPxNode class from scratch
  + Add simple attribute using MFnNumericAttribute class
* **Overview**
  + In this exercise, we will implement a custom node simpleNode, it has two attributes: “input”, ”output”

Whenever the “input” attribute changes value, the “output” attribute will always be the “input” attribute value multiplied by 2.

* **Exercises**
  + Go to “simpleNode python Plug-in\Exercise” folder, open simpleNode.py, the skeleton of the command is already there.
  + In simpleNode.py, adding declaration of “output” attributes and also declare your unique node ID
  + In simpleNode.py, implement functions that are declared in simpleNode.py.

Relevant classes and methods:

MFnNumericAttribute::create()

MPxNode::attributeAffects(), MPxNode::addAttribute()

MDataBlock::outputValue(), MDataBlock::setClean()

MDataHandle::set()

* + In simpleNode.py, implement both initializePlugin() and uninitializePlugin() functions to handle registration and de-registration of the simpleNode node.

Relevant classes and methods:

MFnPlugin:: registerNode()

MFnPlugin:: deregisterNode()

* **Result**

In script editor, execute:

createNode simpleNode;

Open “Attribute Editor”, you will see there are two attributes listed, “input”, “output”. If you change “input” value, “output” value will be 2\* input.