**Day 9 Assignment**

**April 23**

**Assignments**

**helloWorldCmd Project**

* **Topics Covered**

Implement a simple custom python command “spHelloWorld”. It demonstrates the skeleton code implementation for a python command plug-in with MPxCommand.

* **Overview**

In this project, we will create a custom command “spHelloWorld” in python, which prints out “Hello World!” in the script editor window.

* **Exercises**

1. Go to “helloWorld python project\Exercise” folder, open helloWorldCmd.py, the skeleton of the command is already there.
2. Add corresponding code into the skeleton to make it work.

Relevant Classes and commands:

import sys

import maya.OpenMaya as OpenMaya

import maya.OpenMayaMPx as OpenMayaMPx

def \_\_init\_\_(self)

def doIt(self,argList)

OpenMayaMPx.asMPxPtr()

* **Result**

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

import maya

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

maya.cmds.spHelloWorld()

You will see “Hello World!” printed out in the script editor

**sineNode project**

* **Topics Covered**

Implement a custom python node “spSineNode”. It demonstrates the skeleton code implementation for a python node plug-in with MPxNode.

* **Overview**

In this project, we will create a custom node “spSineNode” in python, this node has an input attribute “input” and an output attribute ”output”, the “output” is a sine calculation of “input”.

* **Exercises**

1. Go to “sineNode python project\Exercise” folder, open sineNode.py, the skeleton of the node is already there.
2. Add corresponding code into the skeleton to make it work.

Relevant Classes and commands:

import sys,math

import maya.OpenMaya as OpenMaya

import maya.OpenMayaMPx as OpenMayaMPx

OpenMaya.MObject()

OpenMayaMPx.asMPxPtr()

def compute(self,plug,dataBlock)

* **Result**

In Maya, load the plug-in “sineNode.py”, execute the following script:

polySphere;

createNode spSineNode -n sine1;

connectAttr time1.outTime sine1.input;

connectAttr time1.outTime pSphere1.translateX;

connectAttr sine1.output pSphere1.translateY;

You will find a polySphere created and move along X axis as time goes on.