Autodesk Maya modeling, animation, scripting and C++ programming 2017-18

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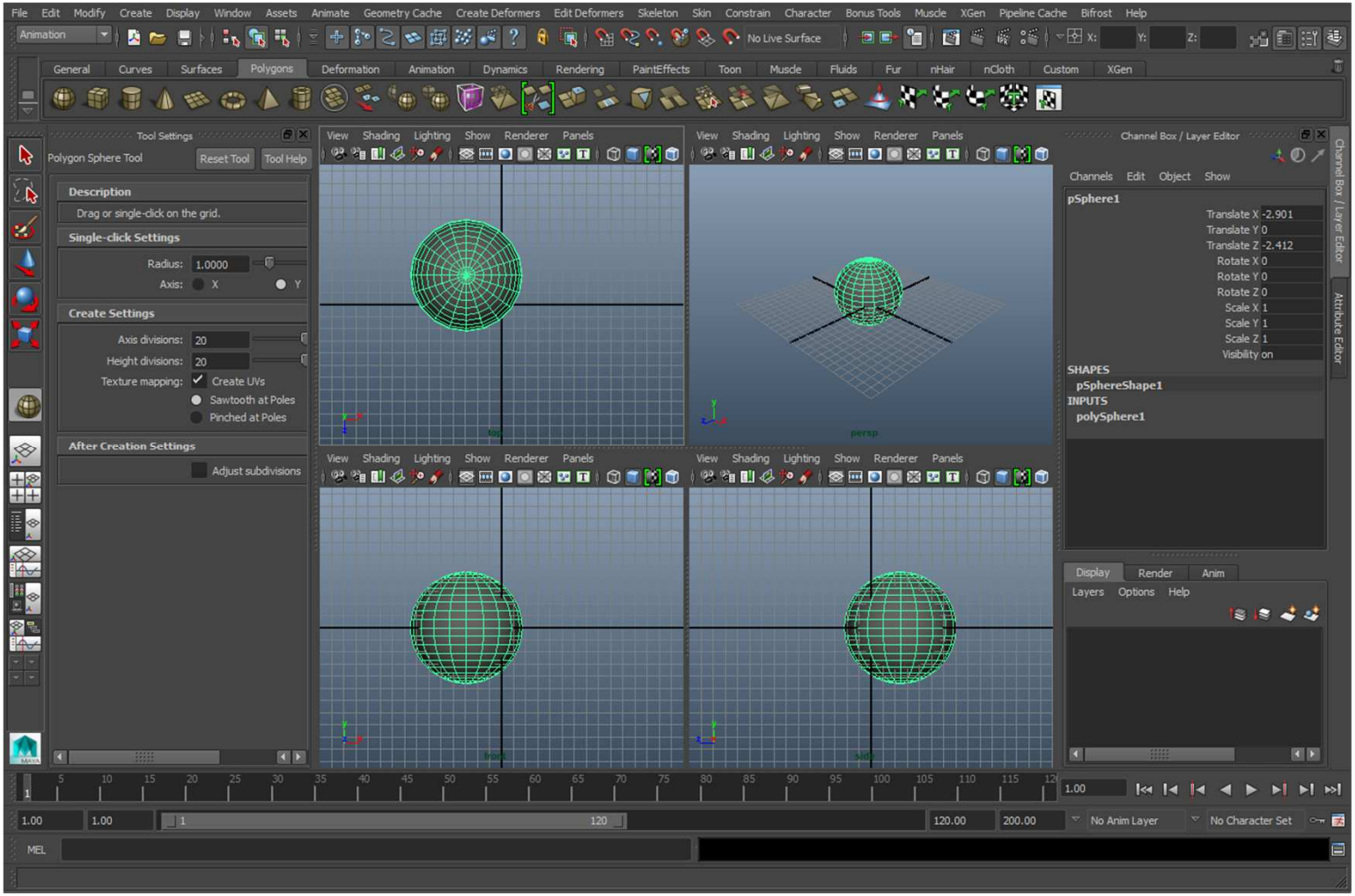
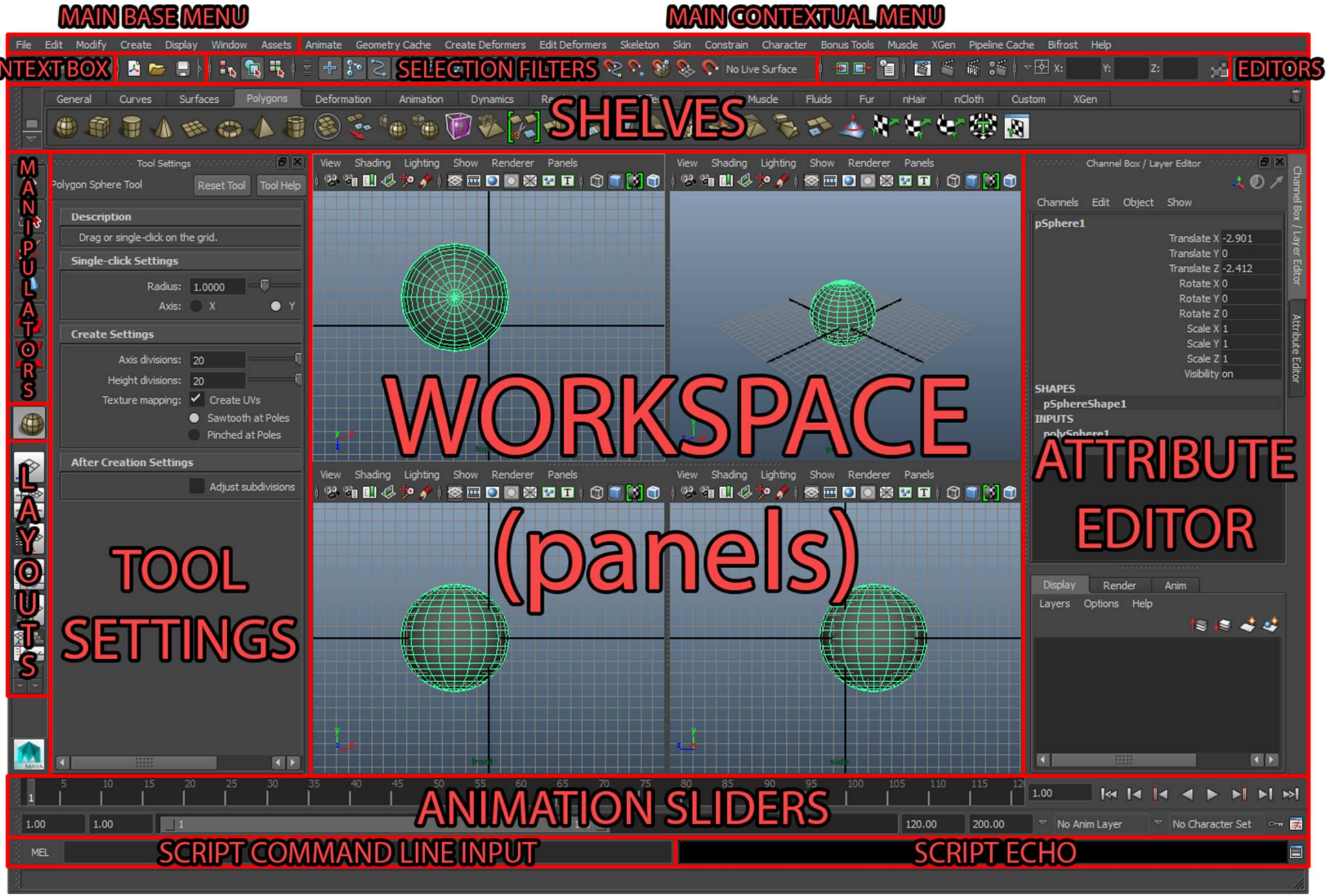
Cours ENSIMAG, Ingénierie de l'Animation 3D

Maya Interface



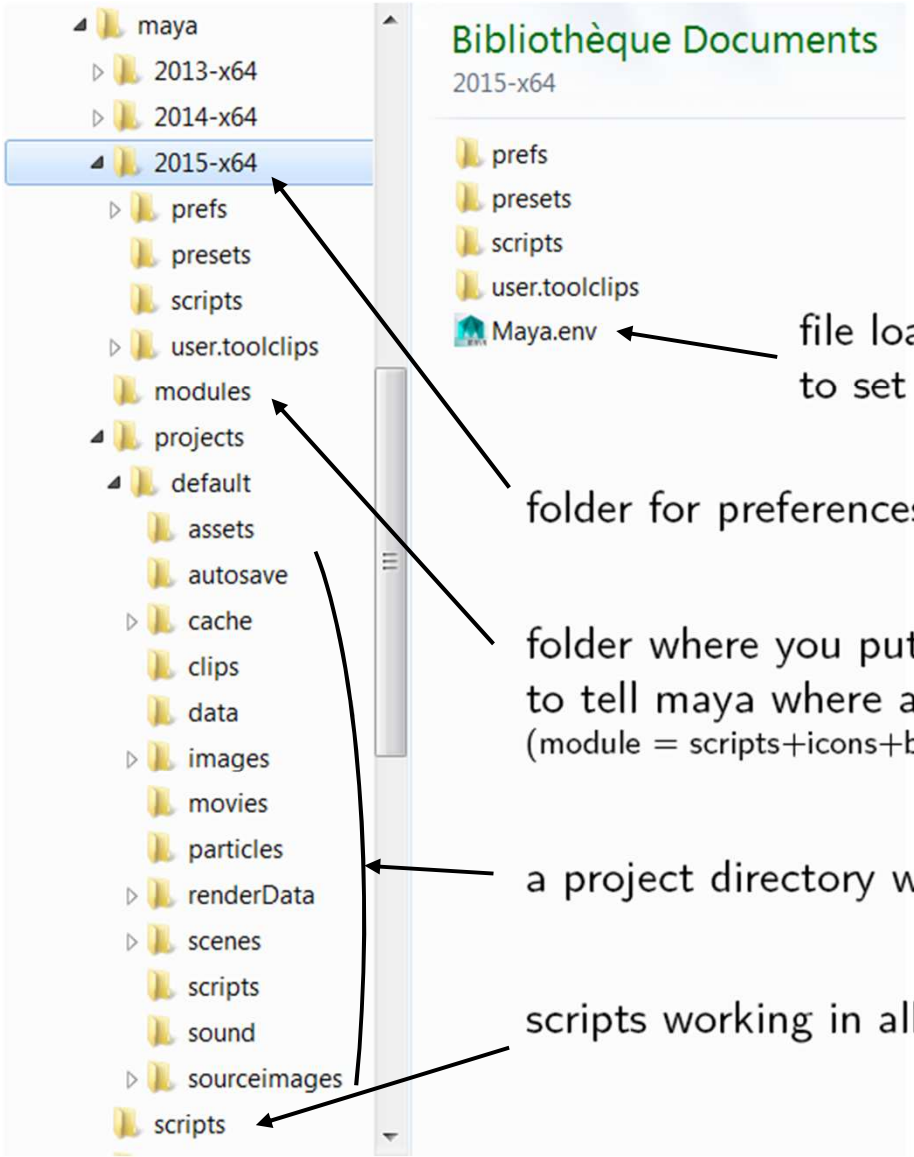

MAIN BASE MENU
MAIN CONTEXTUAL MENU
File Edit Modify Create Display Window Assets
Animate Geometry Cache Create Deformers Edit Deformers Skeleton Skin Constrain Character Bonus Tools Muscle XGen Pipeline Cache Bifrost Help
CONTEXT BOX
SELECTION FILTERS
EDITORS
No Live Surface
General Curves Surfaces Polygons Deformation Animation Dynamics Muscle Fluids Fur nHair nCloth Custom XGen
SHELVES
MANIPULATORS
LAST TOOL
LAYOUTS
Tool Settings
Polygon Sphere Tool
Reset Tool
Tool Help
Description
Drag or single-click on the grid.
Single-click Settings
Radius: 1.0000
Axis: X Y
Create Settings
Axis divisions: 20
Height divisions: 20
Texture mapping: Create UVs
Sawtooth at Poles
Pinched at Poles
After Creation Settings
Adjust subdivisions
TOOL SETTINGS
View Shading Lighting Show Renderer Panels
WORKSPACE
(panels)
Channel Box / Layer Editor
Channels Edit Object Show
pSphere1
Translate X -2.901
Translate Y 0
Translate Z -2.412
Rotate X 0
Rotate Y 0
Rotate Z 0
Scale X 1
Scale Y 1
Scale Z 1
Visibility on
SHAPES
pSphereShape1
INPUTS
ATTRIBUTE EDITOR
Display Render Anim
Layers Options Help
ANIMATION SLIDERS
No Anim Layer
No Character Set
MEL
SCRIPT COMMAND LINE INPUT
SCRIPT ECHO

Practical

- Look at all the 6 startup movies in:
  - “Help/1-Minute Startup Movies”
- Then do:
  - Create a cube subdivided 8 times per axis
  - Move the camera around (tumble, track, dolly) with Alt+Mouse Button
  - Select it then try the following keys and actions
    - F8, F9, space, a, f, 1, 2, 3, 4, 5, 6
    - Stay right clicked on the cube
    - Move some vertices around (try to press “b” to enter in soft select mode)
  - Open these different editors and read their documentation (Help/Help on X..)
    - Window/Outliner
    - Window/Hypergraph
    - Window/Hypershade
    - Window/Node Editor
    - Window/Graph Editor

- A shelf per tool set
  - customizable to support different workflows
    - Ctrl+Shift+[click on command in menu] to add the command to the current shelf.
    - MMB click & hold on a command allows you to drop it where you want in the shelf.
    - Use the Shelf Editor if you want to assign icons to custom scripts or edit shelves

Environment



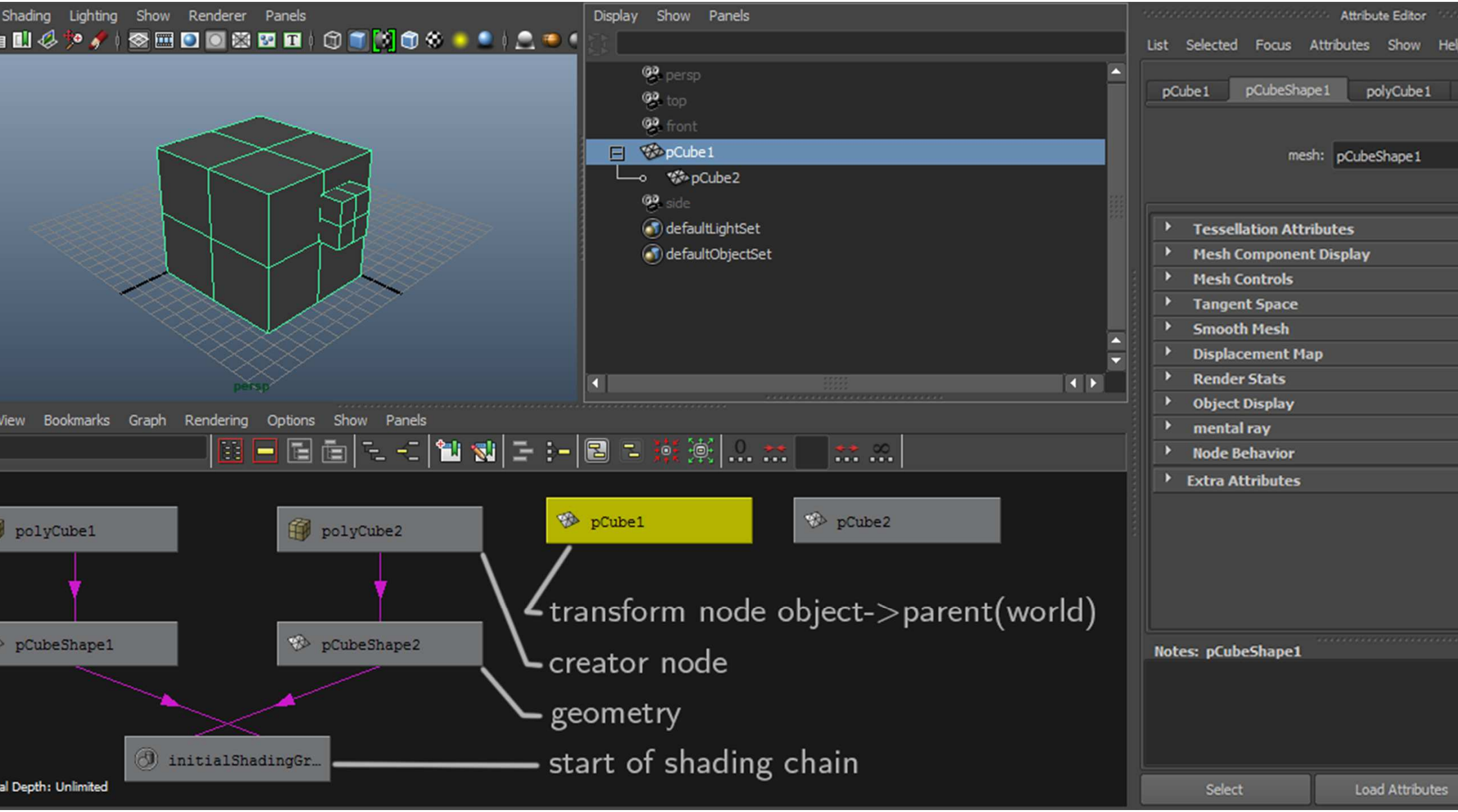
file loaded during Maya's startup
to set environment variables

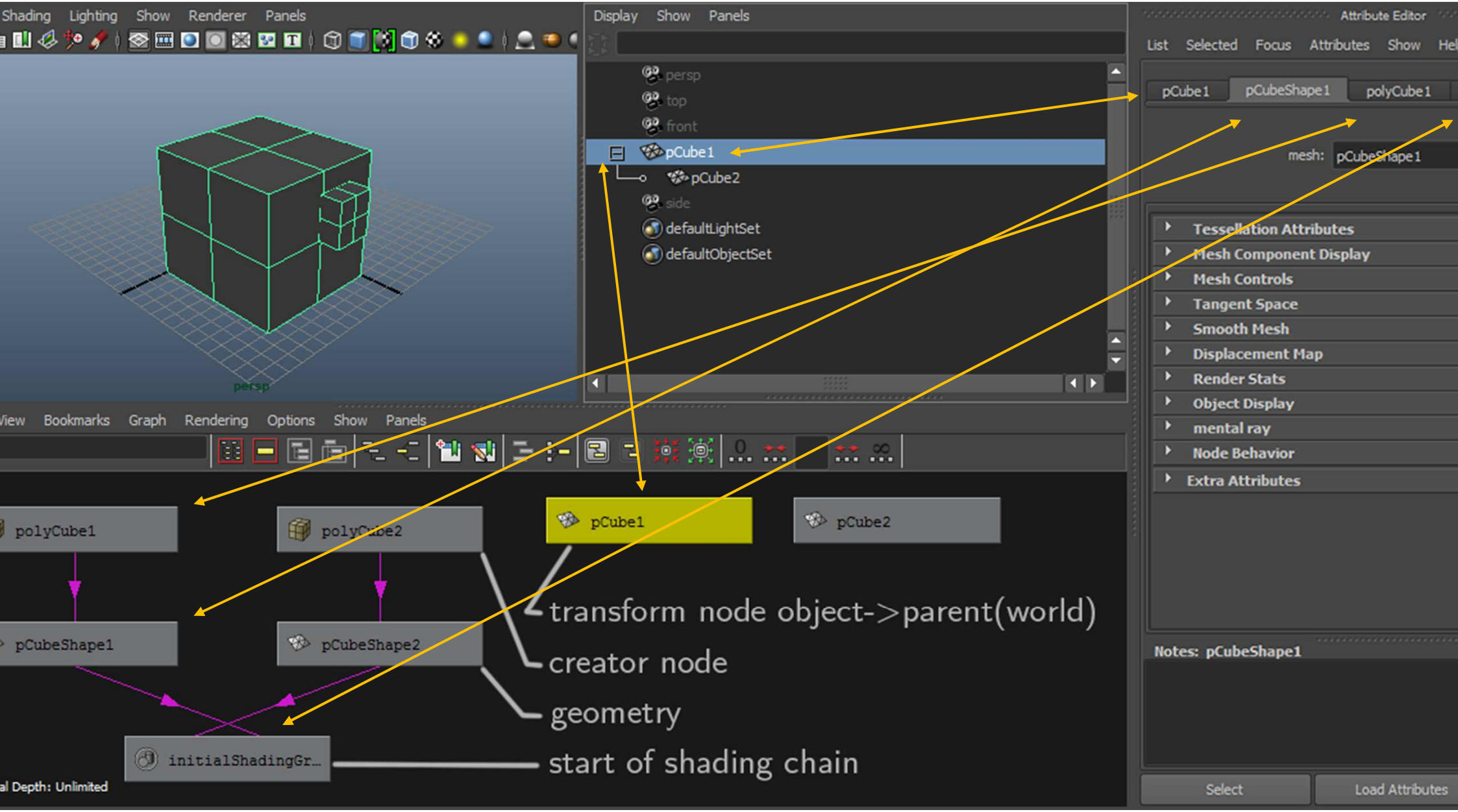
folder for preferences and scripts specific to Maya 2015

folder where you put .mod files
to tell maya where are your modules are installed
(module = scripts+icons+binaries in an external folder)

a project directory with standard folder structure

scripts working in all versions of Maya


Shading Lighting Show Renderer Panels
persp
Display Show Panels
persp
top
front
pCube1
pCube2
side
defaultLightSet
defaultObjectSet
Attribute Editor
List Selected Focus Attributes Show
pCube1
pCubeShape1
polyCube1
mesh: pCubeShape1
Tessellation Attributes
Mesh Component Display
Mesh Controls
Tangent Space
Smooth Mesh
Displacement Map
Render Stats
Object Display
mental ray
Node Behavior
Extra Attributes
Notes: pCubeShape1
Select
Load Attributes
View Bookmarks Graph Rendering Options Show Panels
polyCube1
polyCube2
pCube1
pCube2
pCubeShape1
pCubeShape2
initialShadingGr...
transform node object->parent(world)
creator node
geometry
start of shading chain
al Depth: Unlimited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pCube2
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defaultObjectSet
Attribute Editor
List Selected Focus Attributes Show
pCube1
pCubeShape1
polyCube1
mesh: pCubeShape1
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Mesh Component Display
Mesh Controls
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pCubeShape2
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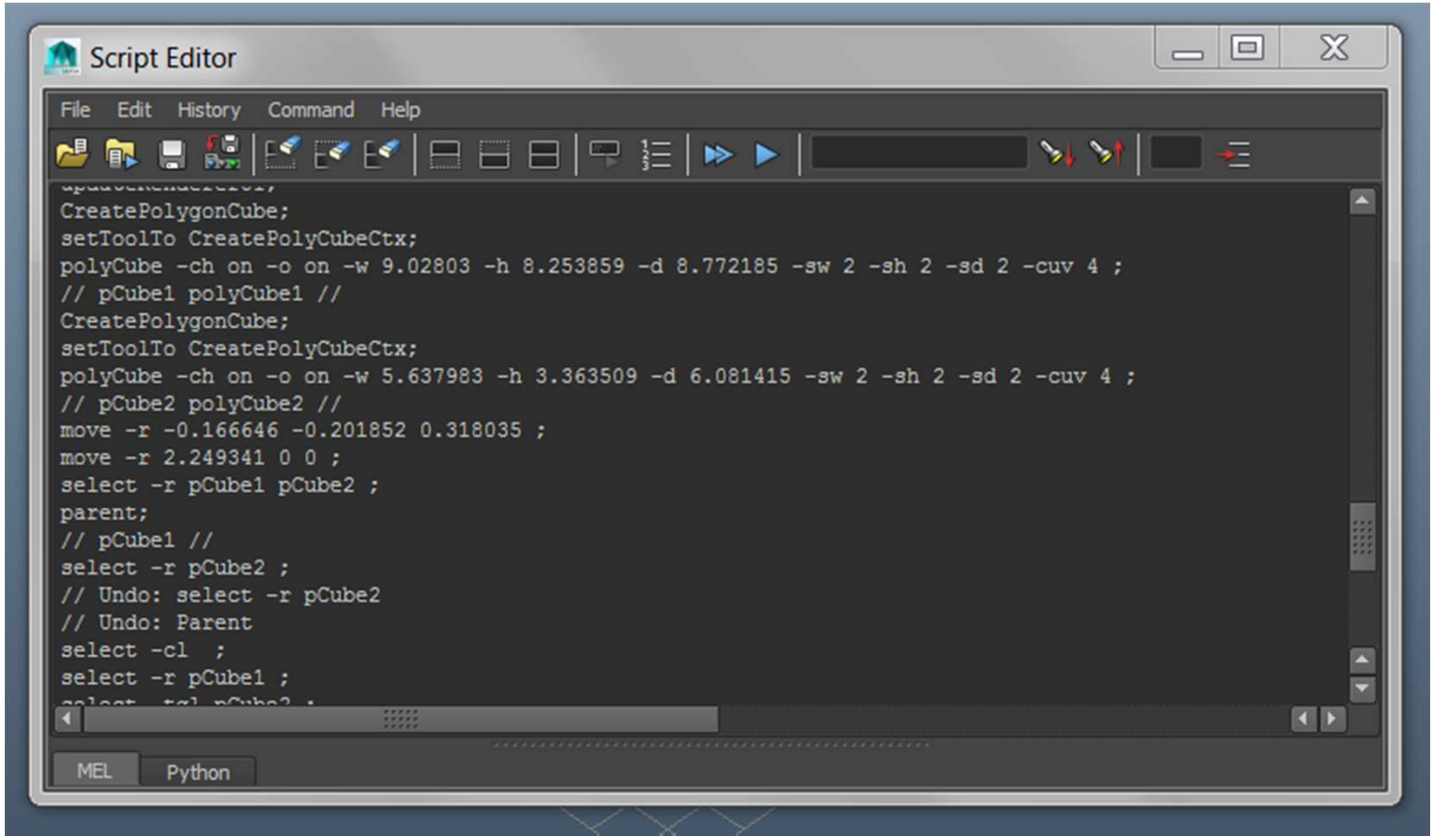
Notes: pCubeShape1
Select
Load Attributes

An echo is issued for each command in the script editor