

Exercise 4

Creating a Grecian Temple

This exercise will teach you how to create complex objects (lofts) from a series of shapes and a simple path. In addition you will learn how to use an image in a viewport background for reference modeling. The reference photo method can be used for modeling lofts, organic objects sketched out and scanned in or planned architecture.

Add an image to the front view for reference drawing

Select an image from the column folder to use in a viewport background.

Place this image into a folder you create in the local drive. The image is saved as a .tif file, but .jpg can be used as well as .bmp and .png.

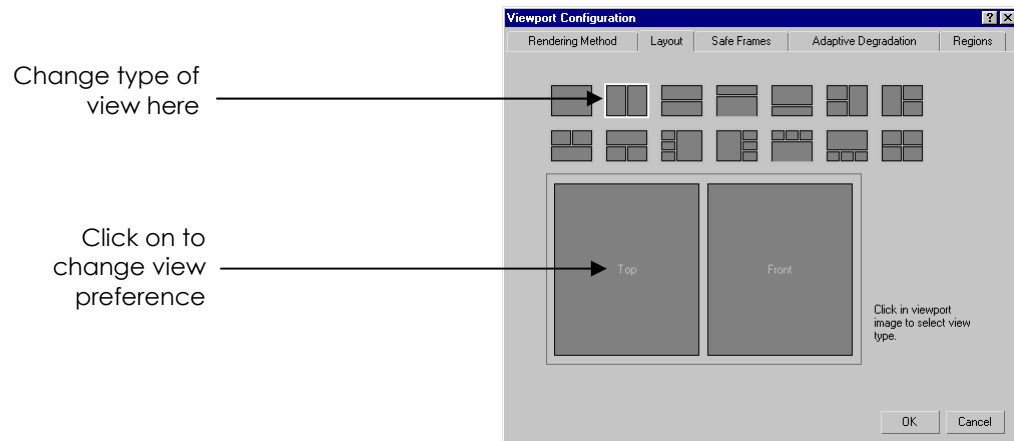
Create a new Max scene.

Change configuration of viewports so only top and front viewports show so it will free up screen space and allow you to create faster.

Customize: Viewport Configuration

Or

Right-click on viewport name and choose configure – select layout tab



Select the front view. Import the image into the front view.

Views: Viewport Background...

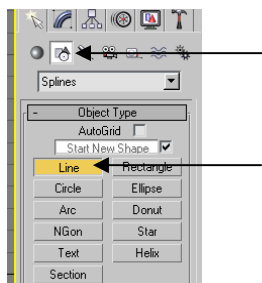
click on 'files' to retrieve image.

Use the preferences denoted below:

now add the same image to the top viewport
 Select the top view. Import the image into the top view.
Views: Viewport Background...

click on 'files' to retrieve image.
 Use the same preferences above.

draw the path
 (representing the height of the column)



The path is literally just a straight vertical line. It should be double or triple the size of the column pictured above.

Draw the first shape

(to represent the various curves and contours of the column)

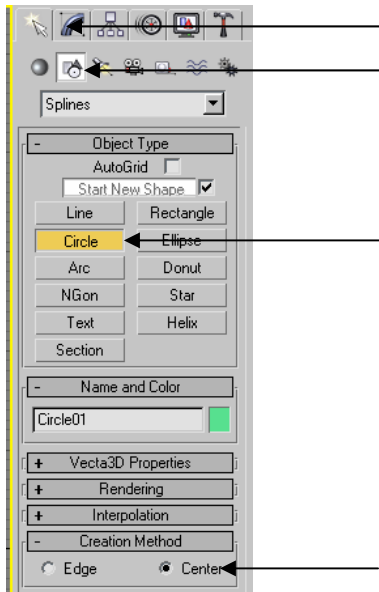
Shapes will be drawn in the top viewport

Create the fluted shape first. In a loft all shapes to be used in the loft must have the same amount of vertexes less it will not calculate properly. So the fluted part of the column is created first then copies of the flute is created BEFORE the flute is modified. Then the shape is modified to represent the fluting of the shape.

you might want to maximize the top view for better drawing



Use the circle spline to draw a circle in the top viewport. You will eventually draw a second circle. But not yet.

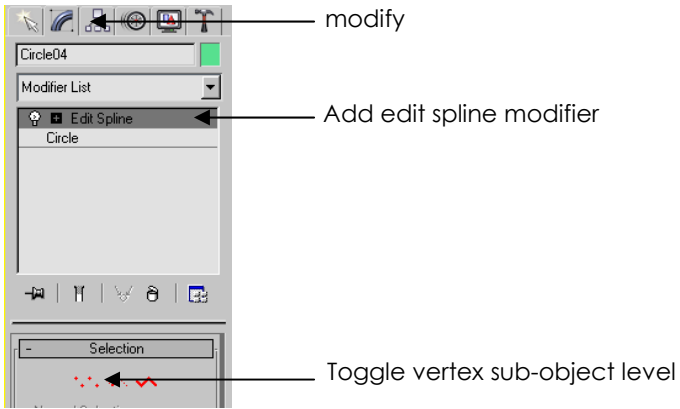


The innermost circle will be modified to include the fluting on the column. Select this circle and go into modify – add an edit spline to it

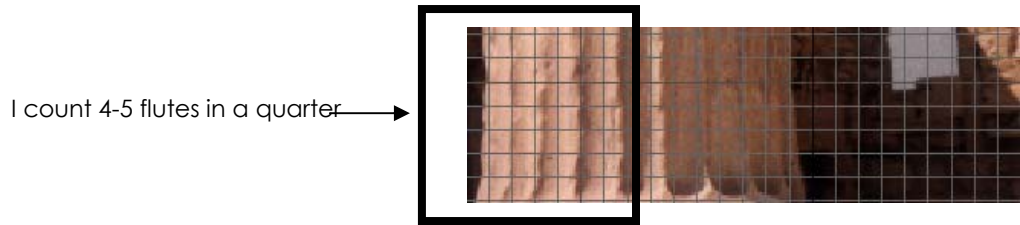
Patch/Spline Editing: edit spline

Refine your shape

Select the vertex sub-object level and refine your shape



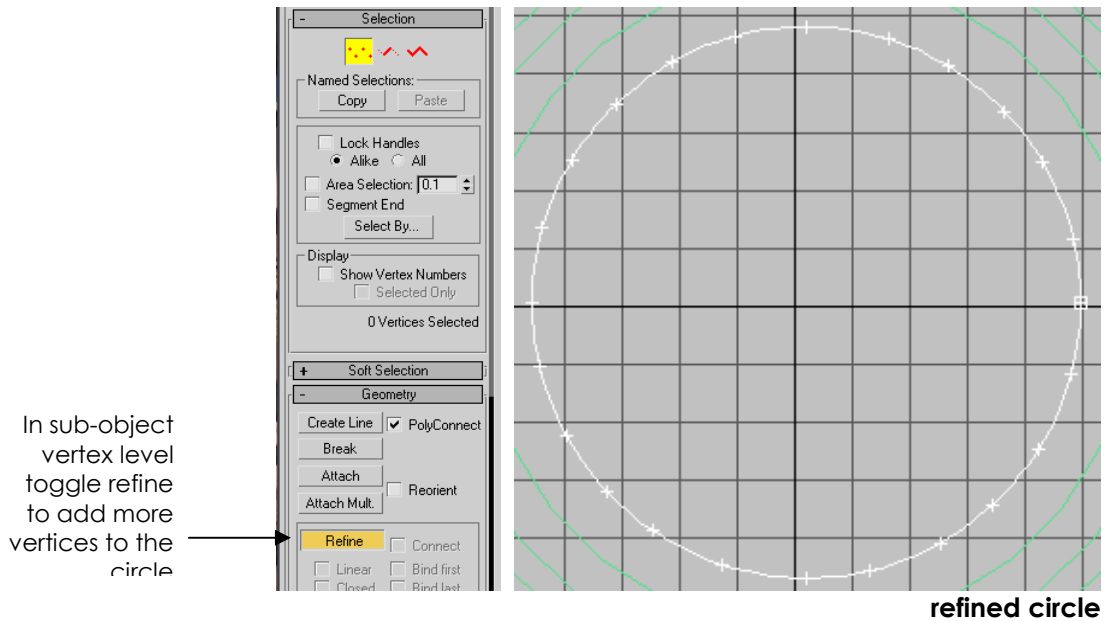
Look at the column reference photo and count the amount of flutes around the base (only in one-half of it as shown below).



I refined it by adding additional vertices around the circle after counting how many flutes I wanted to add to the column.

Toggle refine while vertex sub-object level is selected

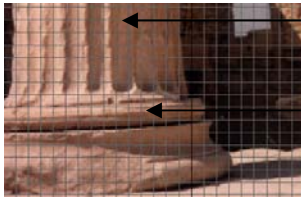
Click evenly around the circle to create additional vertices. (I start by halving it then add 2 more points thus thirding it).



Copy the first circle to create another circle

this will represent the rounded contour of the column

Add a few more circles for detail based on the circle you just refined. Select the uniform scale tool and while holding down the shift key scale. You will be prompted to name a copy of the previous circle.



2 circles are created – one is for fluted section. One is for round section noted here.

Create the fluting on one of the circles circle

Now select points at 12, 3, 6 and 9 o'clock and use uniform scale to pull the points in. Be sure to set the selection center before scaling



Turn off vertex sub-object level when done

Minimize views (to see both top and front view)

Select your path and create loft

Select Geometry Tab; pull down menu: compound objects; Loft

Toggle the **Get Shape** button – pick the non-fluted circle (you can modify the order later)

A new 3 dimensional piece of geometry is created

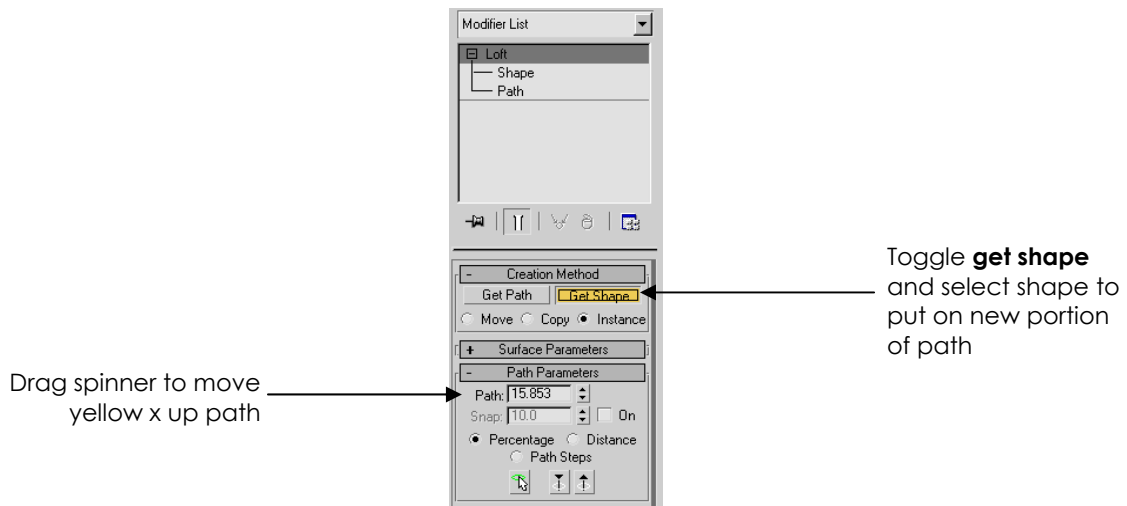
Add more circle shapes (flute or no flute) to the path at different distances for detail

You will go in and edit the scale of each one later to better represent the column in the photo but for right now add circle shapes where detail will be necessary. Work on just the bottom of the column and get it right.

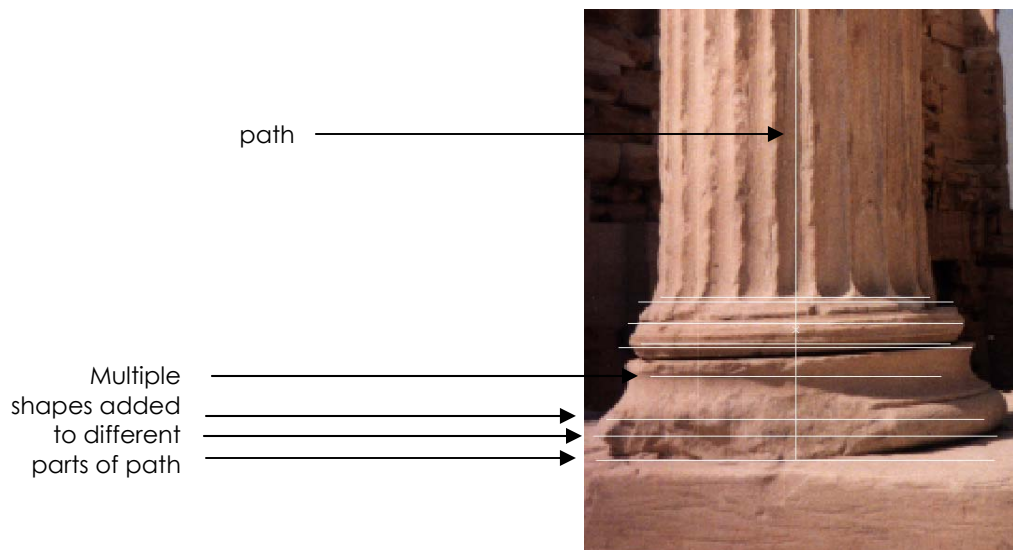
Make sure the viewport background is turned on in the front view

Go into the modify tab and uncheck skin in the skin parameters.

Path Parameters: Path – drag path spinner up watching in the front viewport. A small 'x' will move up the path. When the path is at the next shape section click get shape.

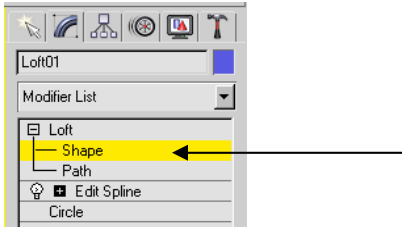


If you selected instance- an instance of the shape you picked will be moved to the path. You can then go into the sub-object selection of the loft and edit the shapes scale to be more like the contoured column in the picture.



You can also edit your fluted circle spline (not the loft shape but the original shape) and the edits will be updated to your loft!

Add more shapes where necessary (you can add the same shapes you have and then modify their scale in the shape sub-object)



shape sub-object – use to scale your shapes to match the reference photo better

To achieve the top part of the column

Toggle shape sub-object level

Select one shape at a time and shift drag to the top; you will be prompted to create a copy or instance.

Choose **instance** if you want to further manipulate the column shapes but want the top and bottom shapes to be the same.

Choose **copy** if you want either top or bottom shapes to have different sizes.

Create the rest of your temple

Hide any object not directly related to the loft.

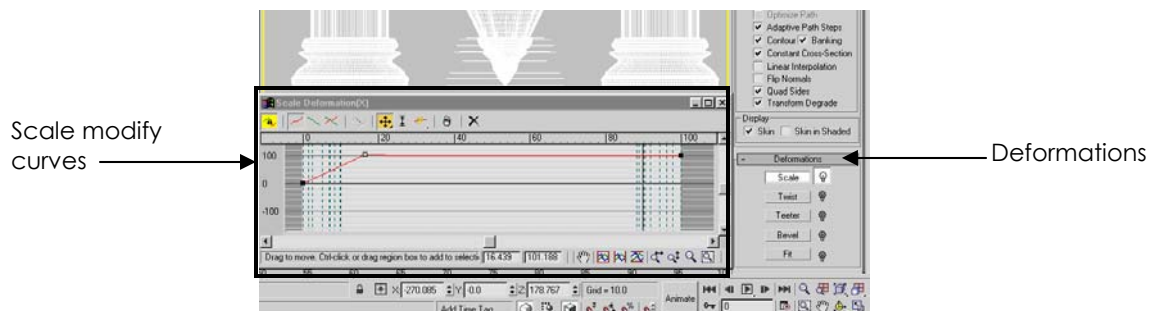
Finally recreate the temple by copying the lofted column and adding a floor and roof (box primitives)

Extra stuff: you can modify any of the lofts to look a bit different from each other by editing shapes of each on (only if you created a copy or reference)

Or

You can play with scale, twist, teeter, bevel, fit modifiers under **Loft: Deformations**

X = R
Y = G
Z = B



middle column is being deformed using scale under deformations in lofted object