Interface
So you’ve opened up Maya for the first time and you have a diarrhea of menus and buttons in front of you. Don’t worry! Hopefully, we’ll give you a good overview of what everything (well, most of everything) is.

+ Drop-down menu

Depending on what you’re trying to do at the moment, the drop-down menu gives you access to different options based on your selection. Scrolling through the 4 choices, you will notice that the top bar will change based on each selection.

Basically, everything you can do in Maya can be found in the menus found in the top bar. These menus are determined by your drop-down menu choice.
An alternative way to switch between these choices is to use F2 (for animation), F3 (for modeling), F4 (for Dynamics), and F5 (for Rendering).

Going through the top bar menus, you may notice little black boxes next to the text in these menus. **These option boxes are very important.** As a rule of thumb, before I choose anything in these menus, I almost always check the option box.

These option boxes allow you to tweak the settings on your selection. Using the option boxes allow you to change the behavior of your selected action.

You can also have floating menus that are ALWAYS open. To do this, select a menu at the top bar and then CLICK the beveled top of the menu. You may now drag this new window as you would any other menu.
Sometimes, you're just sick of the extra clicking time it takes to go through all the menus to do one action that you often use. A good idea here is to make a shelf icon so that one click will allow you to select the action you want instead of multiple clicks through massive menus. The only drawback to this, compared to menu selection method, is that you do not have access to the option box. However, if you set the options of an action that you know will not change, using this shortcut will save you valuable time. Notice the tabs at the tops of the hotkey bars. These are sub-bars that have pre-made icons of commonly used actions for that particular tab.

Anyway, here's a quick example of how to customize your own shelf:

First, choose the CUSTOM tab (in reality, you can create shelf icons under any of the tabs available, which is more efficient).

Next, choose MODELING option in the drop down menu (or hit F3) in the upper left corner of the screen, and then select EDIT POLYGONS then highlight the SMOOTH action.
Next, hold CTRL + SHIFT and then CLICK the smooth option. A new SMOOTH icon should pop up in your CUSTOM shelf.

To delete, MMB (Middle Mouse Button) drag the icon to the TRASHCAN in the upper right part of the screen. You can even add a shelf icon for scripts or segments of code that you frequently use. More information about this feature can be found by selecting the HELP menu from the top bar, then choosing TUTORIALS. In the search field, type in “shelf” and tons of tutorials (as well as information about the shelf) should pop up. You can actually search for information on ANY function or feature of Maya.

This is a very important skill to have. I can’t stress this enough. Using the HELP menu of Maya, as well as any software program, allows you to become more comfortable with the program quickly.
+ The Timeline

For those of you who have used Flash or anything like that, the timeline should be very familiar to you. This is basically how you animate objects, which we will go into at a later time. But for now, just know that it’s there. However, if you’re really interested about this feature, LIU (Look It Up) in the HELP menu.

+ Script Editor

Here, you will find the SCRIPT EDITOR of Maya. Basically, everything done in Maya is a segment of code. To see this in action, you can open the script editor up, and under the POLYGONS shelf tab, select the first four icons. You will notice that after every click, the object that is created by clicking is also created in the script editor by code. This means that not only can you click menu options and icons, you can actually use code to do anything you want. If you want to learn more, either LIU or ask one of us!
An important menu that I recommend checking before doing ANYTHING in Maya is the SETTINGS menu. Making sure that everything is setup correctly before you start is very important in synchronizing your files with other people as well as saving yourself lots of headache later on when you realize that you did all your work under an undesired setting. As you can see, there are lots of other menus to choose from the PREFERENCES button and these will either be discussed later or in class.
+ Attributes and Channels

Modifications on any action or objects created in Maya can be accessed and changed through these menus. How to use this will be discussed later and in class (so come to class 🌞) or you can LIU.

+ Selection Options

These options allow you choose what objects you are able to click on in the main window. This is very useful when you have overlapping objects. How to use these options will also be discussed later and in class or you can LIU.
A quick note, if you every accidentally close a taskbar on the screen, such as the shelf or timeline (this can be done with the dotted+arrow tab on the top or left part of every taskbar), and you want it back, just reset everything by following this order of selections starting from the top bar: Display > UI Elements > Restore UI Elements

Windows
Okay! So now we’re starting to see where everything is located, but what about the place where everything comes together? The biggest part of the interface in Maya is the big window in the center of the screen (hmm .. really?) because this is where you can visually see everything you do.

+ Perspective

This window shows you exactly what the name implies; a PERSPECTIVE view. I usually use this option to check how my object looks/behaves from every angle. This is a very useful window in “debugging” your object. You will use this window a lot when modeling to make sure your model looks proper from every angle.

+ 4 Windows
This is a very important window as it shows you the top, front, side, and perspective view of your object all in the same window. This is very useful in modeling as you will only want to deform things in a 2D plane rather than a 3D plane. This will be explained later.

A nice feature about these windows is that you can actually have the sub-windows show more than just cameras. Choosing the PANELS menu from the top of each sub-window, you can choose what you want shown in that particular window. This can actually be down with any of the other window options in Maya.

+ Perspective/Outliner

Along with the PERSPECTIVE view window, comes the OUTLINER. Basically, anything created in your current file will appear in the OUTLINER. Navigating the outliner to select objects and organize your scene is a very important skill to have. Organization, such as proper naming and hierarchical connections, allows you to easily modify and manage your scene. Later on, when we begin modeling, you will see how important it is to have good organization.

+ Perspective/Graph
Along with the PERSPECTIVE window, comes the animation GRAPH window. This window is primarily used to tweak and modify animation curves of your objects.

+ Perspective/Hypershade

Including the PERSPECTIVE window, the HYPERSHADE window allows you to see all the textures AND connections you have in your scene. Parallel to the OUTLINER, the HYPERSHADE window allows you to physically see the connections.
Domo Arigato, Mr. Roboto - Your First Piece of Art
So after a quick run-through of some of the interface of Maya, I’m going to show you how to use
the rest of the tools on the screen. The following tutorial will build your navigation skills in the
Maya interface.

+ Hotkeys, Hotkeys, Hotkeys

Using keyboard shortcuts will save you valuable clicking time. **Knowing the core QWER
hotkeys is very important.** You will be more efficient and look a hell of a lot cooler when
someone is watching you use Maya.

To the left, you have your basic Tool Box for Maya. These tools are a few of the most frequently
used actions in Maya. Hovering over each icon gives you a description of what they do.
However, instead of manually clicking each icon to enable their use, the hotkeys Q W E R allow
you to do the same thing without ever having to move your mouse. So what’s the best way to
show how each of these hotkeys work? Examples!

*There are a million (ok, maybe not that much but it’s a crap-load) hotkeys predefined in
Maya already and you can check them out by following this sequence following from the
top bar: Windows > Settings/Preferences > Hotkeys... Here you can see what the
hotkeys are for specific commands as well as set your own. You can learn more from the
HELP menu.*
Let’s start by first going to the 4-window mode (forgot how to do this? Scroll up!). Next, go to your shelf and choose the Polygons and let’s create our first polygon! Click on the cube icon and an outline of a cube, named pcube1, should appear in all 4 of your windows.

Notice the green, red, blue, and yellow gizmo that is coming from the center of the cube. What is this gizmo? That is exactly what it is … the gizmo. We’ll see how to use this in a bit but for now … let’s learn some hotkeys!

+ Focus – F

You may notice that the cube that you just created seems to be very small. However, this is not necessarily the case. Starting in the persp sub-window, hover your mouse over each sub-window and hit the F key. This will bring all objects selected into focus.
If you’re like me, then working with solid objects makes more sense to you. To change how an object is represented in a window can be done through the SHADING menu in the top of each sub-window. In this example, choose the SMOOTH SHADE ALL selection.

Notice how the cube looks different from the rest of the sub-windows now.

Personally, this is my favorite shade for objects, but you can sample the other choices such as, WIREFRAME ON SHADED or X-RAY (this is pretty cool). Anyway, after finding a shade you’re comfortable with, go back to the SHADING menu and at the very bottom click APPLY CURRENT TO ALL. You should notice that all 4 sub-windows sport the new shading option.
+ The Selection Tool – Q

Pressing Q enables you to use the selection tool. This is useful when switching between objects when modifying them.

+ The Move Tool – W

Pressing W enables you to use the move tool. Pressing Q, brings you back to the selection tool. Let’s play around with the move tool for a bit. Go to the persp sub-window (upper-right) and click on the cube. Now press W and a blue, red, and green arrow gizmo with a yellow box in the middle should appear.

Notice that your cursor should have a transparent box at the pointer. Hovering the box over the tips of each arrow, click and drag in the direction of the arrow and you should notice the cube
moving. This moves the box in the direction of the arrow ONLY. **This is very important.** To see why, try hovering the box over the middle yellow box. Now click and drag the cube in a certain direction. Notice how the cube moved in ALL 3 of the other sub-windows. You equivalently moved the cube in the 3 dimensional space, which is usually unwanted. Press **z** to undo and return the cube to its original position. Now try moving the cube by using only the arrows, one at a time, and you notice that only 2 of the sub-windows move. By moving your object in a 2D plane, you control where your object is in 3D space.

Now we’re done playing with the move tool and want to return to our selection tool. How do we do this? Just press **Q** and you enable your selection tool again. Notice how the gizmo disappears.

+ The Rotate Tool – **E**

To rotate an object press the **E** key. Notice that the gizmo turns into an outline of a sphere with a green, red, and yellow line. The yellow color always modifies the object in 3D space, which is usually unwanted. The colored lines modifies the object in only that direction. Play around with the rotate and hit **z** after you are done to return the cube to its original position. Try switching between the selection (**Q**), move (**W**), and rotate (**E**) tool. Notice how the gizmo changes.
+ The Scale Tool – R

To scale an object, press the R key. Notice that the gizmo turns into different colored cubes. To scale in only one direction, click and drag a colored cube in one direction or to scale in all direction, click and drag the yellow cube.

+ Middle Mouse Scroll (MMS)

To manually zoom in and out on an object, just hover over the window you want and scroll up or down.

+ Middle Mouse Button (MMB)

This is equivalent to clicking and dragging the yellow gizmo in any of the modify tools. This button has many other uses that you will see later on.
+ Rotate View

Select the cube in the persp sub-window and hold **alt + click + drag**. You should notice that you are now rotating around the cube. Now try the same thing in any of the 3 other sub-windows. You should notice that it doesn't work. This is because they are fixed camera views. Now switch to PERSPECTIVE view to get a better view of your object and rotate around your cube.

![Image]

+ Move View

To move the view, hold **alt + MMB (Middle Mouse Button) + drag** in any direction. You should notice that the view moves in the direction of the drag. Now go back to the **4 windows**. Try moving the view in the 3 other sub-windows and notice that moving the view does work, unlike rotating the view. To re-center the focus back to the cube, select the cube, and press **F**. This should center the view back to the cube.

+ Channel Box

Notice that with every modification you do to the cube (moving, rotating, scaling), the values corresponding with each tweak changes accordingly. You can actually input numerical values into the fields to achieve the same effect but with more precision.

+ Right-Click

Right clicking and holding it down on an object opens up sub-selection menus. This will be explained later on.

+ Spacebar

Holding down the spacebar opens up the HOTBOX. Here, you can access multitudes of menu all within a comfortable circumference on your screen.

+ Insert

This shows the pivot point of your current selection. This will be explained in later on and in class.
Great! You now know the basics of using Maya. Now, let’s begin on our first assignment; creating your very own robot.

+ Creating a simple robot

In this assignment, you’re going to have to create a robot using primitive polygons. You may use any modification tool you like. I’ll show you how to make a quick robot with the tools explained in this tutorial.

Starting in the 4 window mode, I’m going to set my settings.

I set my linear option to FOOT, my angular to DEGREES, and time to NTSC (30 fps).

Next, I go to my POLYGON shelf and click on the CUBE icon to create my head. After focusing my view and shading options, I’m going to use my move tool (W) and position my head in the FRONT view. To be precise, you could type in a numerical value in the Translate Y field in the channel box to achieve the same effect.

Next, I’m going to create another cube, scale it, and move underneath my head (all this is done switching between the FRONT and SIDE view). To see where the objects are relative to each other, use the persp view and rotate around your selection.
Next, I create a cylinder, rotate it about 90 degrees (using the channel box), move it up, and duplicate it and move the duplicate to the other side.

Next, I create a sphere, scale it, and move it to the end of the right (your right, not the robot's) cylinder. I then duplicate it and move the duplicate to the other side.
I then create a POLYGON PIPE, scale it, and move it between the head and torso. To zoom in on an area, you can hold `alt + ctrl + drag` a box around the area and the window should zoom in accordingly.

Next, I create another cylinder, scale it, move it under the torso and rotate it a bit. I then duplicate it and move the duplicate to the other side.
And there you have it, a simple robot! Of course, this is the barest of bare a robot can get. Add your own creativity and style to your robot. It doesn’t necessarily have to be a biped. It could be a quadruped or whatever you desire. As long as you use only primitive objects and the move, rotate, and scale tool, the sky’s the limit.