

Setting Up A Maya Project

Maya projects are an important component of a 3D pipeline. They are used to organize and link together each of the various assets and elements that compose a scene. They are especially useful when working in teams and on large scale productions, which require multiple people to work on multiple assets at any given time. A Maya project should be created at the onset of a production and should ***always*** be set before files are opened, created, or edited.

Typically, when a file is linked or opened on a computer, it is done using an absolute path. An absolute path starts at the root of the file system and traverses through each folder until the specified file can be accessed. For example, *C:\Users\Clayton\Documents\maya\scenes\myScene.ma* points to the myScene.ma file on the local computer. Unless the file is moved or deleted, the absolute path will always point to the correct location. However, if this project were ever moved to a different folder location or computer, the path would no longer function correctly as the absolute path would change.

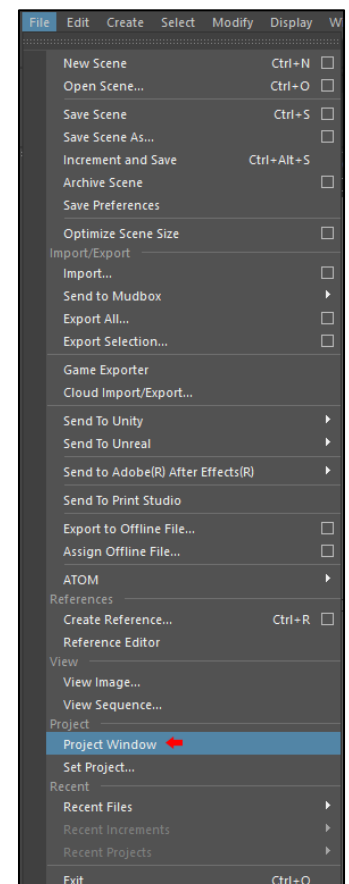
To alleviate this issue, Maya projects allow Maya to work with relative pathing, meaning that rather than starting a path at the file system root it will begin at the project root. To use the above example, assume that project has been created and set to the folder with the absolute directory path of *C:\Users\Clayton\Documents\maya*. That folder now becomes the root and all folders and files within that directory can now be accessed relative to that location. In the case of myScene.ma, the relative path now becomes *scenes\myScene.ma*. Again, this becomes extremely important and powerful when working in teams and ensures each member can access each element of a project successfully.

Again, a Maya project should be created at the onset of a production and should ***always*** be set before files are opened, created, or edited.

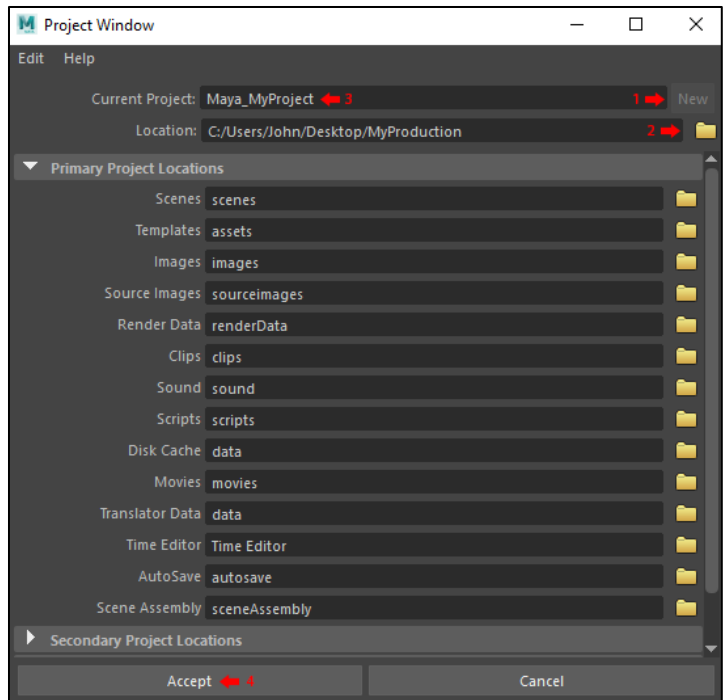
Creating a New Maya Project:

Before creating a project, create or decide upon a folder that will be used to house all the files for your production. In addition to the Maya files, these might also include scripts, storyboards, audio, etc. A common practice is to give this folder the name of the production. A folder named *MyProduction* will be used as an example.

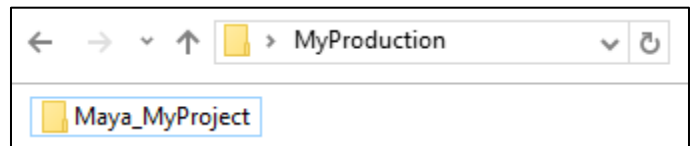
- In Maya, select the menu item File->Project Window.



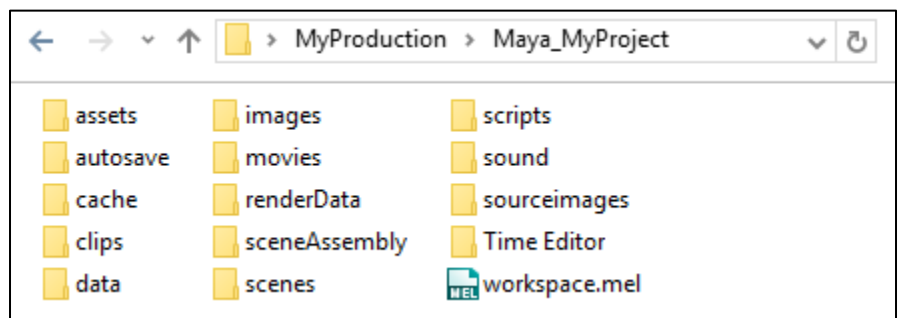
- In the Project Window dialog box, press the **New** button.
- Press the folder icon and navigate to the production folder (i.e. MyProduction) to add the location.
- Type the name of the project into the Current Project line. The naming of projects at UVU should follow a standard naming convention in the format “Maya_PROJECTNAME” (i.e. Maya_MyProject). This helps to differentiate from other media types present in the production folder.
- Click the accept button to create the project.



- Clicking accept will create the project folder into the specified location.



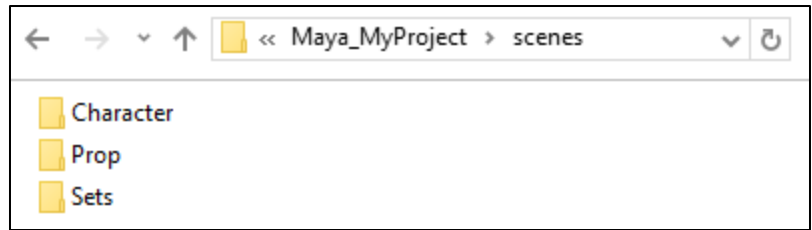
- Maya will also create all the default folders used within the project (as specified above).



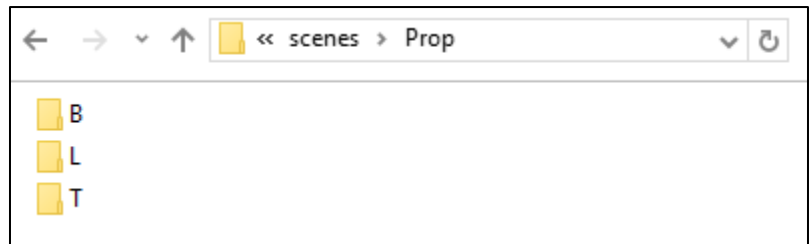
Preparing the Project Hierarchy

- Once a project has been created, Maya will expect all scene files to be in the *scenes* directory. This includes character, prop, sets, background, etc. To best organize the various types of assets, a standard convention will be used to organize the assets within the scenes folder. This example uses a prop asset named *Ladder*.

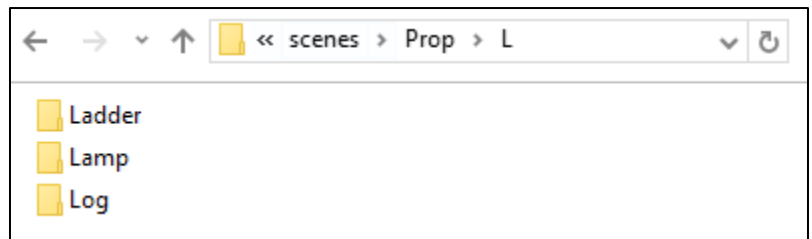
- Create a folder that specifies the *type* of assets it will contain. As mentioned above, this could be in the format Character, Prop, Sets, Background, etc. For the Ladder, the Prop folder would be used.



- A type folder, as created in the previous step, could contain many dozens of assets. To further organize the assets, create *alphabetic* folders within the type folders using the first letter of the asset as the folder name. For example, a folder named L would be created for the Ladder, B for Ball, etc. If another asset is created with the same starting letter, it is simply placed within that folder.



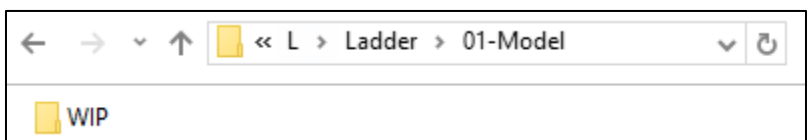
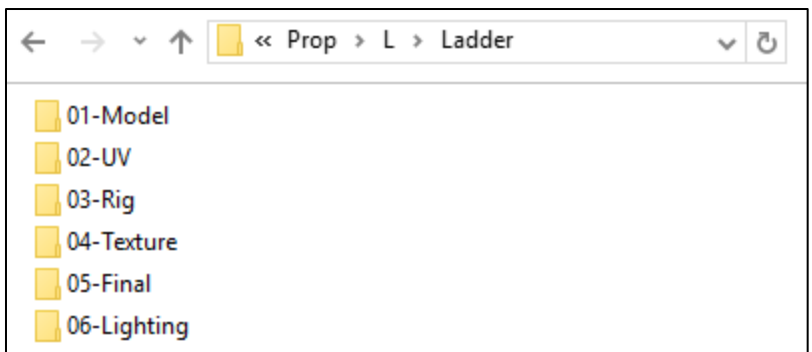
- Finally, create a folder for the *asset* within the alphabetic folder.



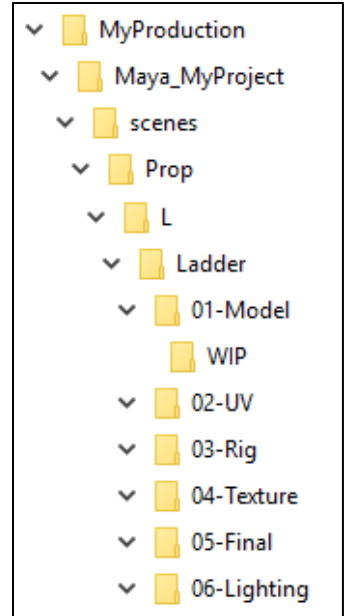
- The final step is to create working folders for each *stage* of the asset production process. These allow the user to easily track and build upon each stage while also providing a way to revert to earlier work when necessary.

- Within the asset folder, create the following folders. Note that each folder also contains an additional folder titled *WIP* (work in progress).

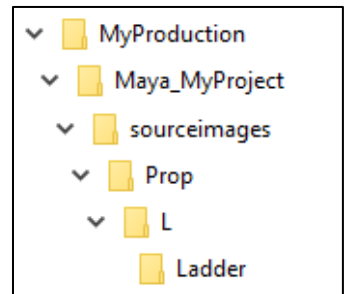
- 01-Model
 - WIP
- 02-UV
 - WIP
- 03-Rig
 - WIP
- 04-Texture
 - WIP
- 05-Final
 - WIP
- 06-Lighting
 - WIP



- The full project hierarchy for the Ladder asset:



- Note the Maya also expects all texture files to be contained within the sourceimages directory at the project root. The same folder structure will be created for each asset only to the point of the *asset* folder. The stage and WIP folders are not needed.



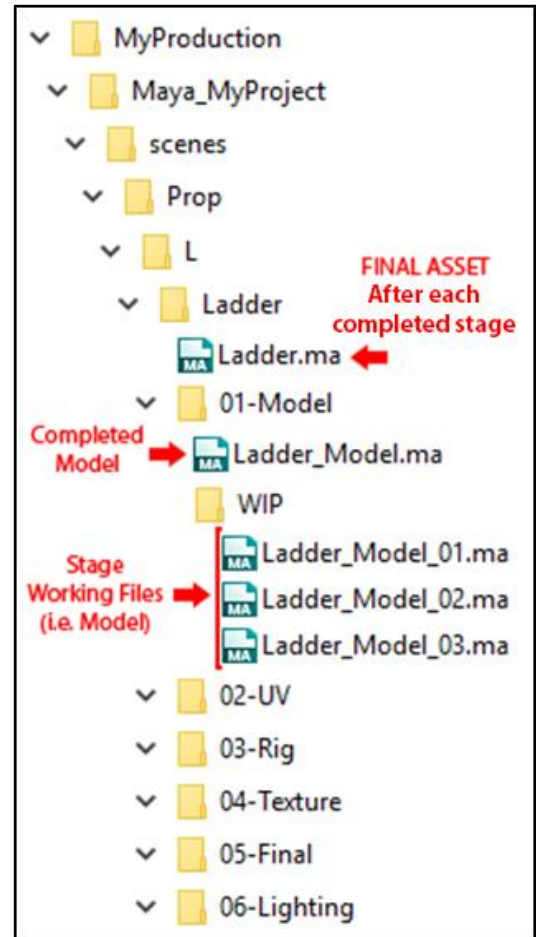
Working in a Maya Project

In a production, assets are generally created in a linear workflow. The *stage* folders were created to help direct and organize the process. Throughout each stage, work should be created and worked on within the *WIP* folder using the common naming convention that follows. The WIP folder allows files to be saved incrementally, allowing previous work to be recovered when necessary. The last incremented file will represent the most recent version of the file.

File naming within the WIP folder follows a simple format, ASSETNAME_STAGE_##.ma, where ## represents the number of incremental save. For example, the initial model of the Ladder asset would be named, Ladder_Model_01.ma, saved in the 01_Model\WIP folder. Each successive save is then incremented to the next number (i.e. Ladder_Model_02.ma, Ladder_Model_03.ma, etc.)

Only when the stage is completed and approved, the file is saved directly into the stage folder to be used moving forward. The naming of the file follows the format, ASSETNAME_STAGE.ma, simply dropping the incremental number. For example, the finished rig of the Ladder would be name, Ladder_Rig.ma, saved into the 03_Rig folder.

Each time a stage has been completed and approved, the file is saved into the main asset folder using the format, ASSETNAME.ma. For example, the final approved Ladder asset would be saved as Ladder.ma in the Ladder folder. This is the main file that will be referenced and imported into the animation and gaming projects. When an asset is revised, the main file must be updated with the most recent changes.



Below is a brief overview of each stage:

Model – The asset is modeled, revised, and organized into its final form.

UV – The completed model is imported and a UV layout is created in preparation for texturing.

Rig – The completed UV model is imported and the rig is created.

Texture – *Either* the completed UV model or the completed rig is used to create textures. This stage can be taken slightly out of order because textures can be exported/imported. This allows for a break in non-linear workflow, even allowing texture and rig to be completed at the same time.

Final – All parts of the asset are brought together and completed. Error checking is performed. Any further updates and revisions are made on the final file moving forward. Never revert to previous stage files at this point.

Lighting – When appropriate, per asset lighting is created using the final file.