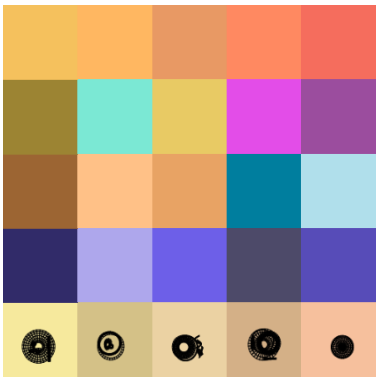
SwatchM8: User Guide

Intro

To understand how to use this plugin we first have to understand what's going on behind the scenes.

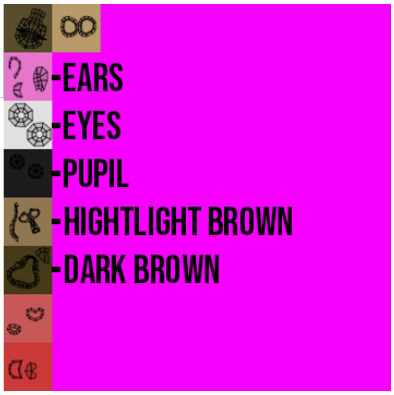
The foundation of the pipeline is the use of a color grid



By unwrapping the faces on a color, we can flat color the object with an extremely low texture budget.

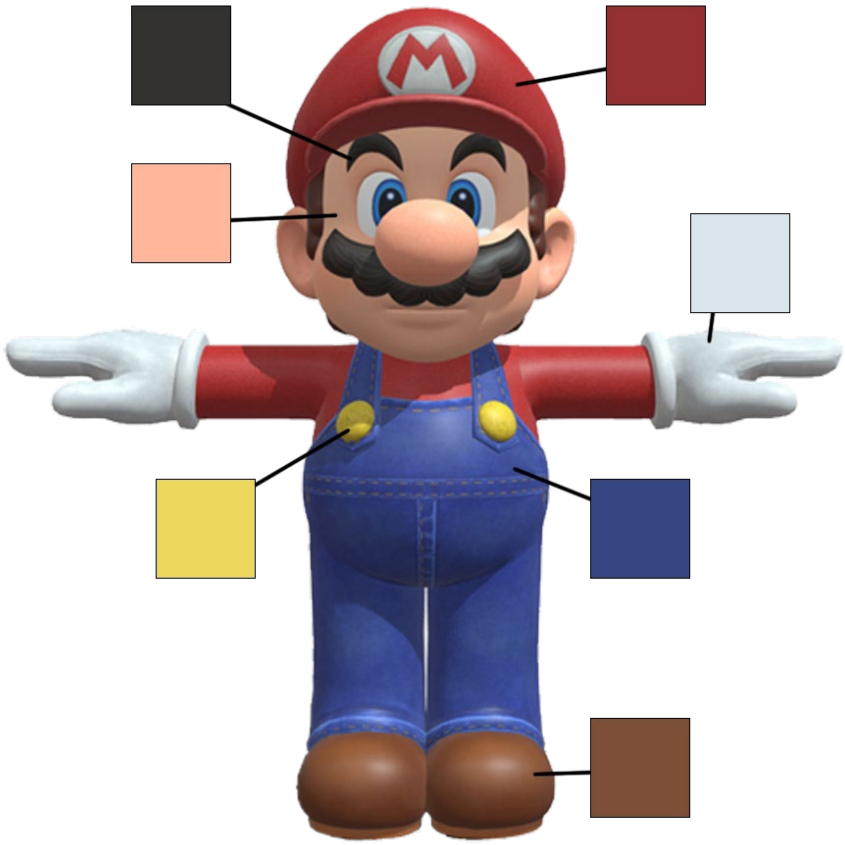
This script automates this process and keeps track of what parts are unwrapped on which square -> "swatch" on the grid.

Each square -> "Swatch" has its own unique name

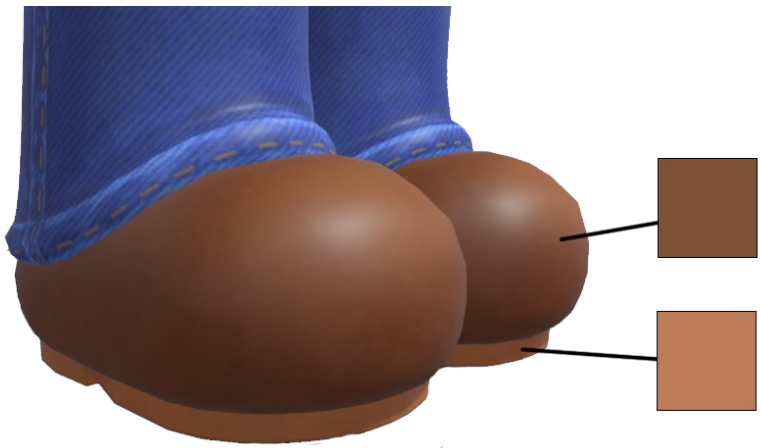


Each swatch will keep a list of parts that are unwrapped on it. These parts are a selection of faces from the 3d Model you are working on. Fe:

Mario is the model
Mario consists of multiple parts: His Hat, Gloves, Shoes, shirt etc…

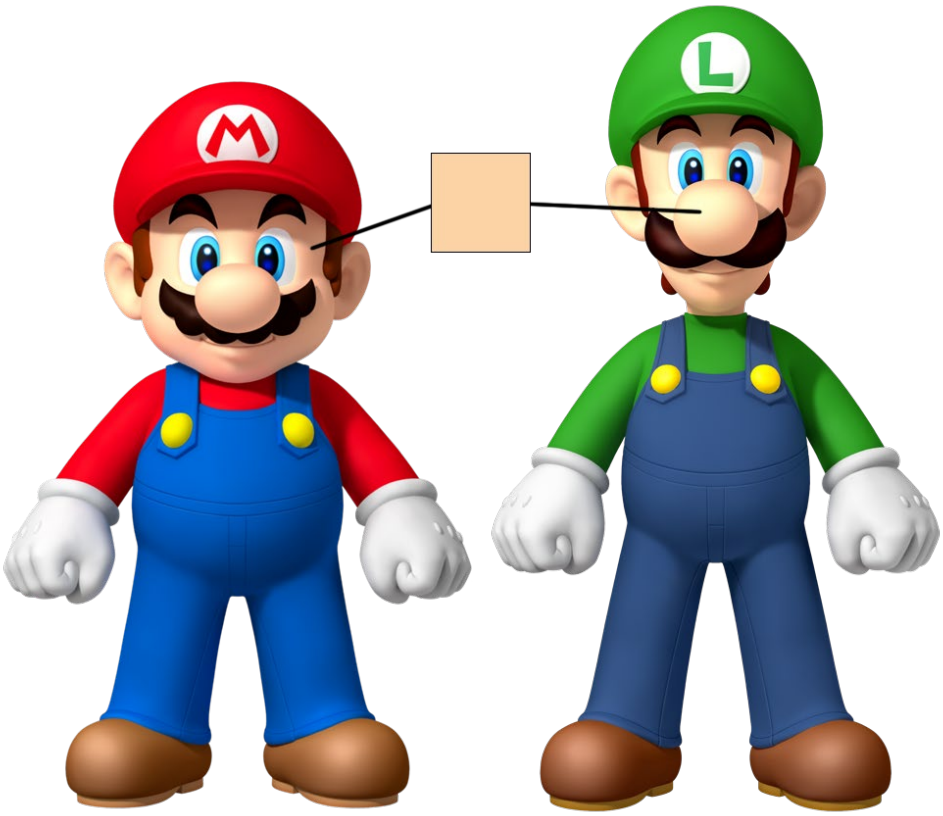


These parts can be split up even more if they consist of multiple colors.
fe: The shoe of Mario can consist of 2 parts: the leather and the sole



Because these 2 parts have their own unique swatches their color can be changed independently from each other.

The opposite is also possible, if you don’t need the option to change colors independently from each other multiple parts can be added to the same Swatch. Fe:

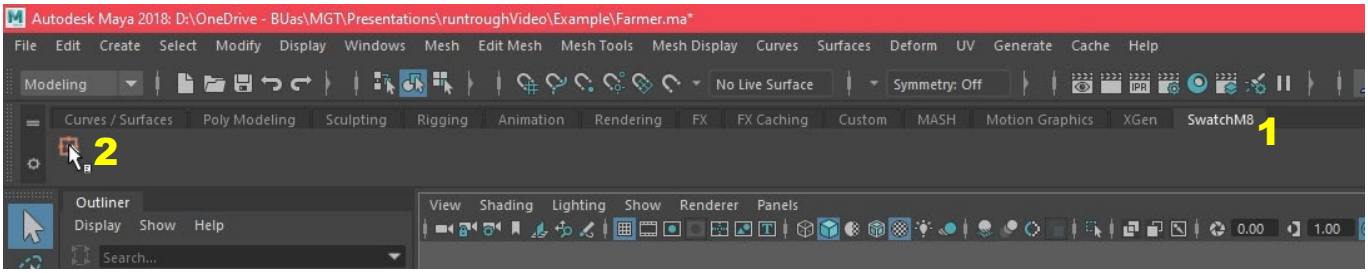


Mario and Luigi their skin have same tone and let’s say you don’t want to change them independently. The user can create a swatch named “skin” and link these 2 parts to it. If you change the color of this swatch both Mario and Luigi their skin tone will update.

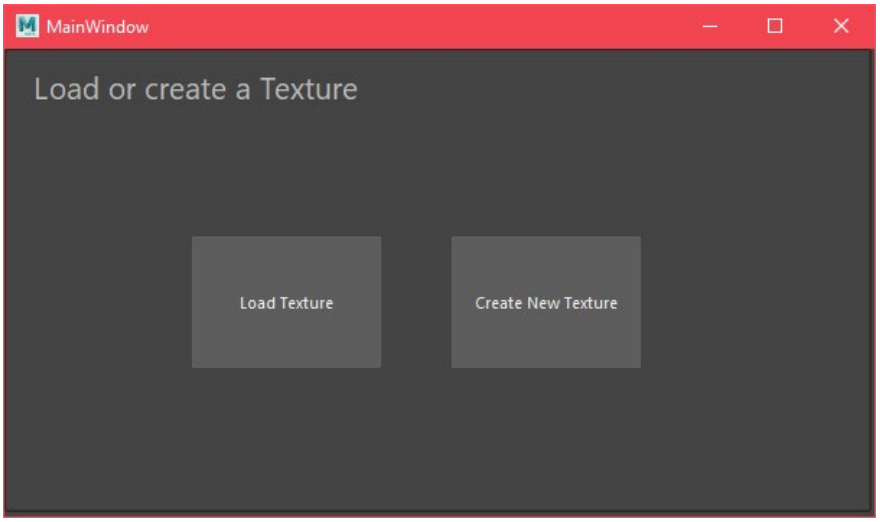
The script itself

1. Launching the script

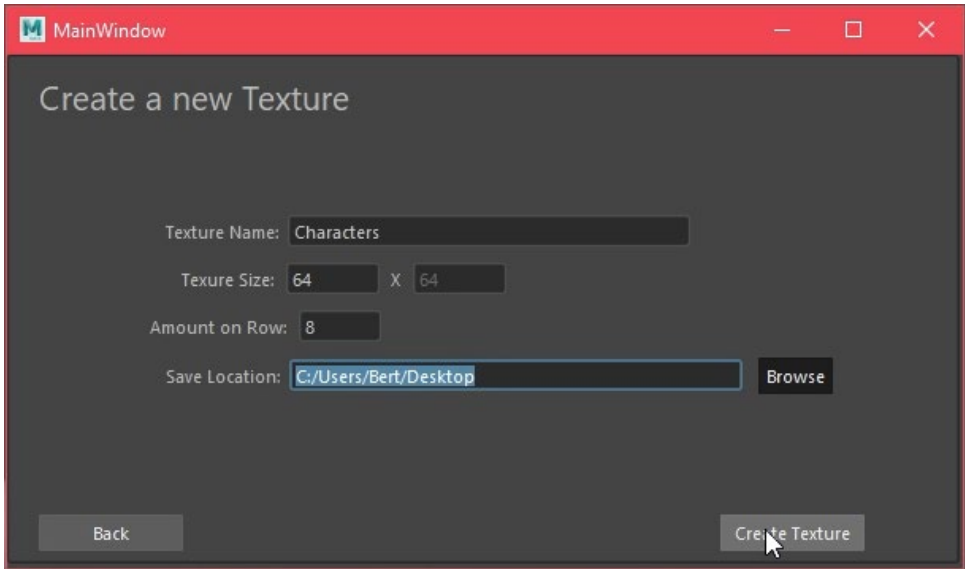
After you successfully installed the script navigate to the shelf and press the SwatchM8 tab. [1]
To open the script press the button. [2]
Give it a couple seconds and the script should launch.



When the script is open you have 2 options
load and continue on a existing texture, or create a new one.



2. Creating a texture



First you have to fill in a texture name, for this example I called it characters.
Then you must decide what size in pixels our texture has to be, in this example a texture of 64 by 64 pixel.
After that we have to decide how many colors or swatches we want on a row.

The amount of swatches have to fit precisely into the texture size. This can be checked by dividing the Texture size by the amount on row. This has to result in a round number.

64/7 = 9.14
64/12 = 5.3

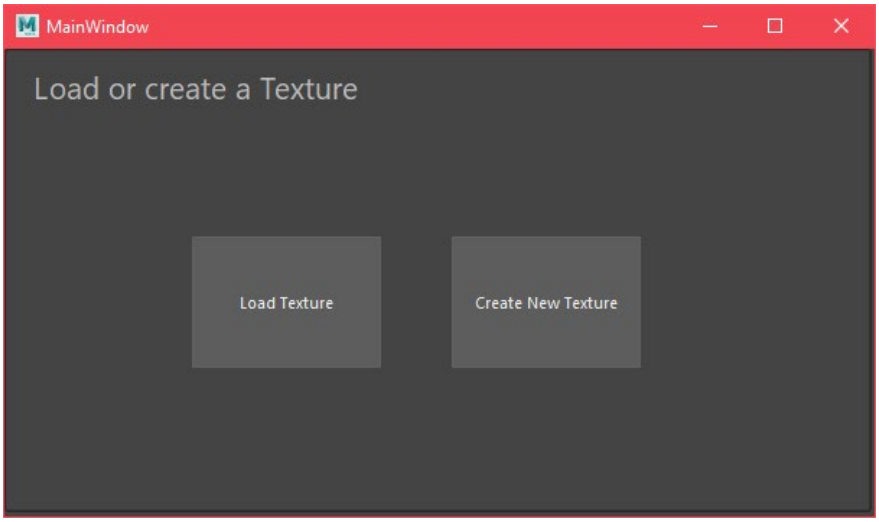
64/8 = 8
33/11 = 3

$$\underbrace{64}_{\text{Size In pixels}} \;/\; \underbrace{16}_{\text{Amount on row}} = \underbrace{4}_{\text{Result must be round number}}$$

In this example I chose 8 which if we do the math 64/8 results in 8 which is a round number, 4 16 32 2 also would have worked.

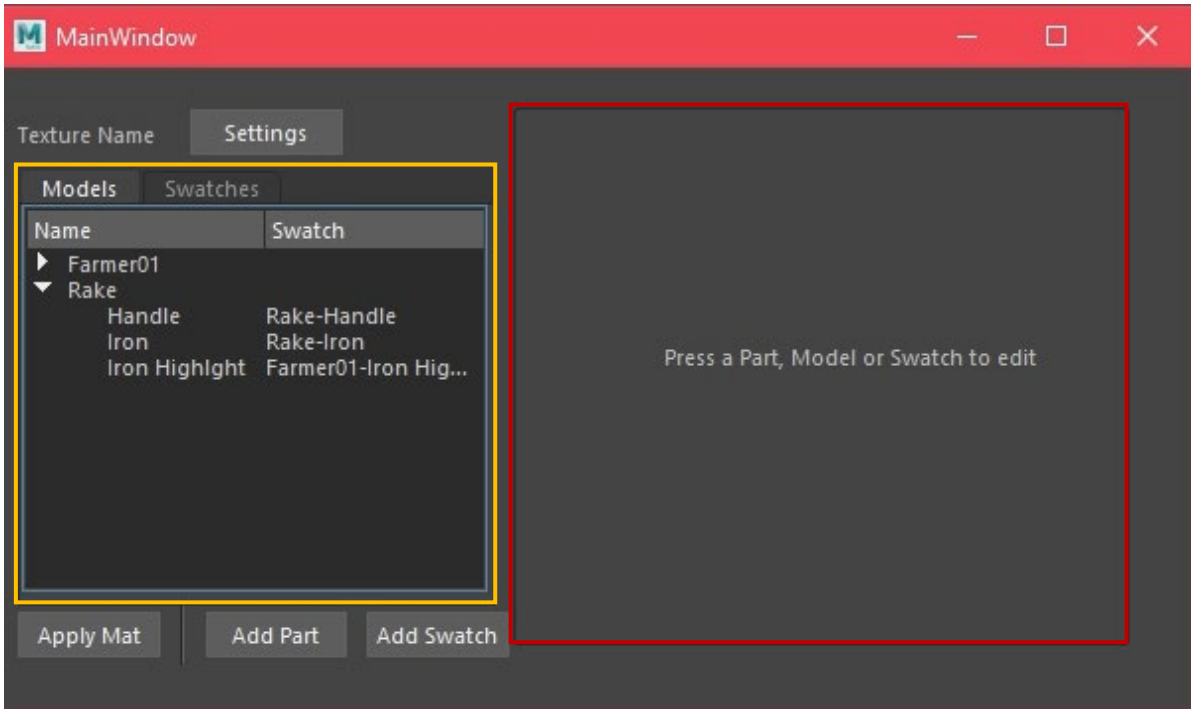
Finally choose a folder where the project should be saved.
Press the create texture button.

3. Loading a texture

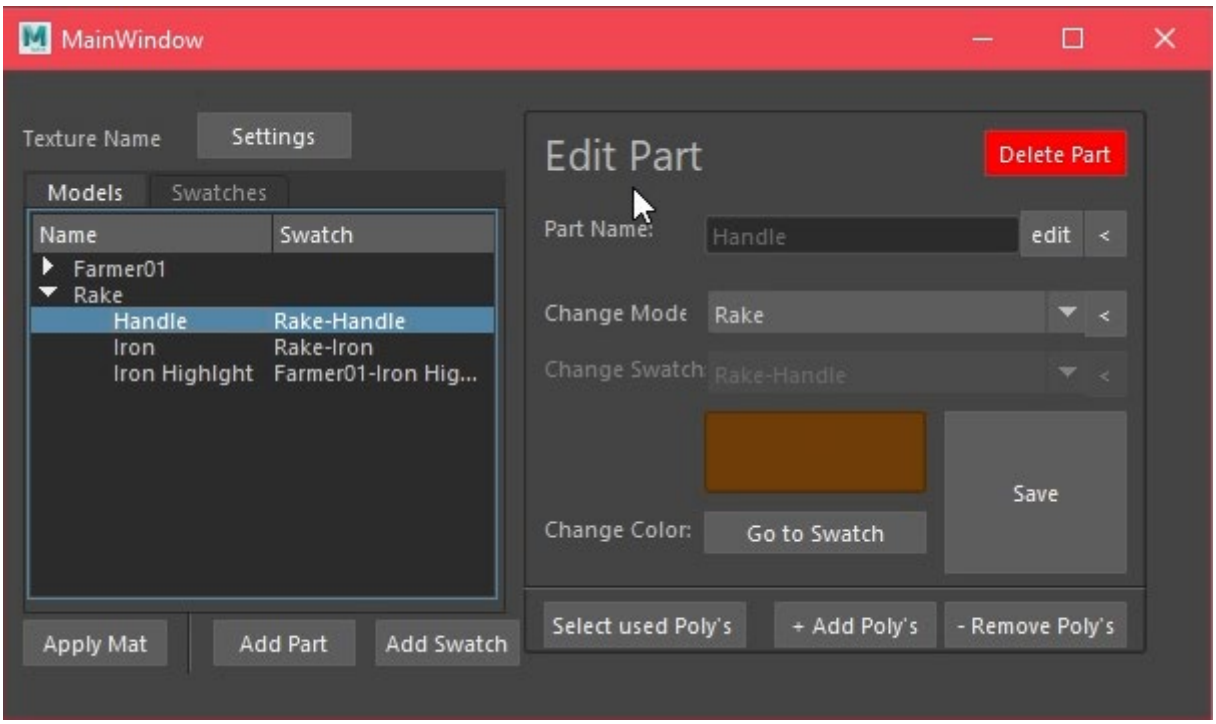


If you want to load an existing texture press the load button and selected the .Json file of the project you want to load in.

4. UI Overview



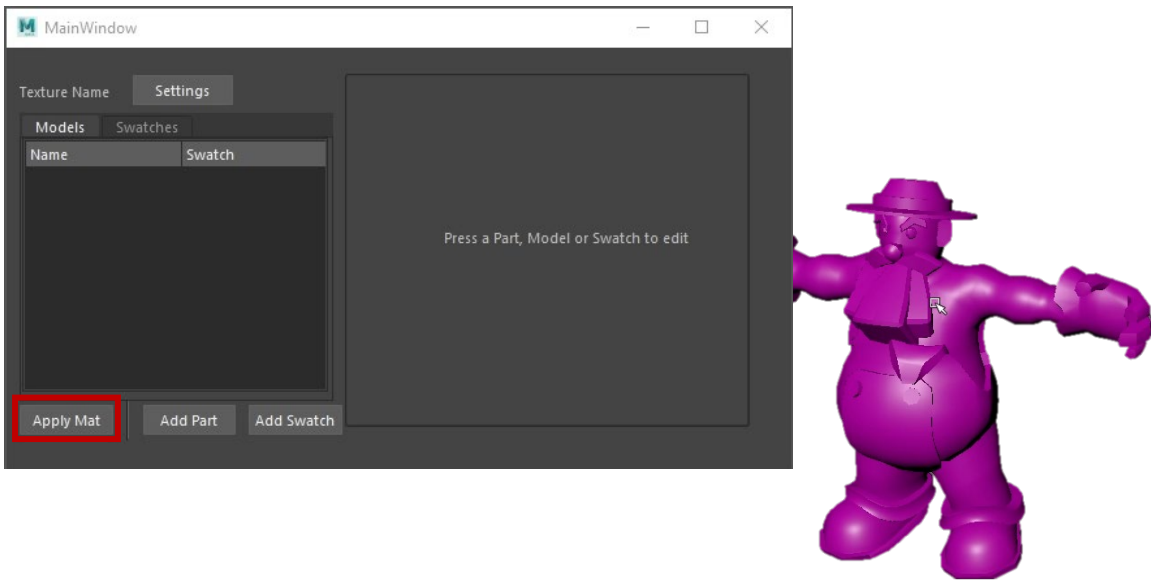
The UI is divided into 2 main parts, a list on the left and the properties panel on the right. Everything you add or create will show up in this list and if you select something in that list the inspector panel will show that data.



In this example the list contains 2 models: Famer01 and Rake, if you click on the triangle next to the name the parts will show. The rake has 3 parts: Handle, Iron and Iron Highlight.

If the name of a model or object is clicked the properties panel will show it's data.

5. Creation process



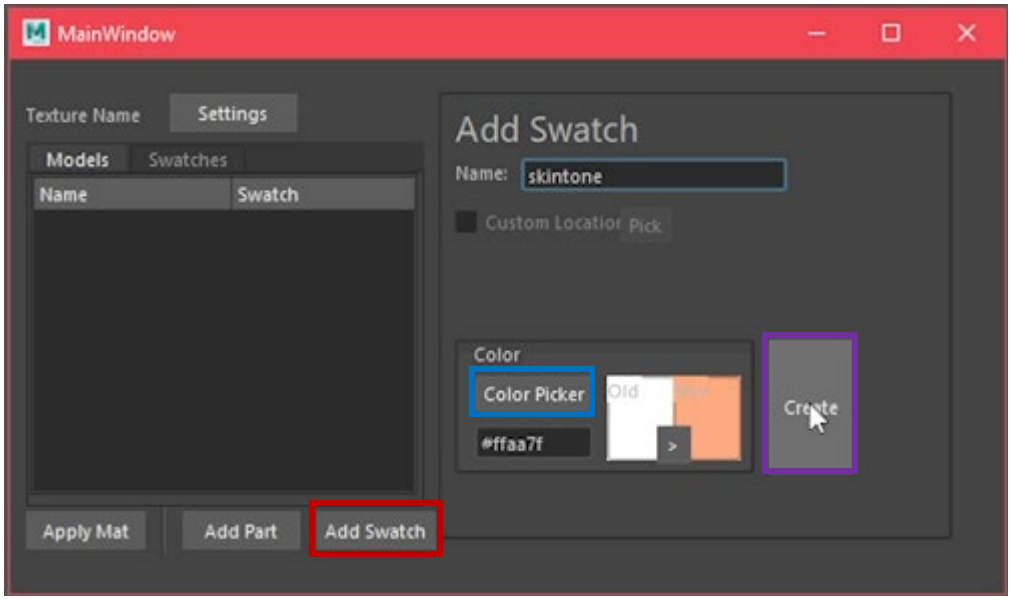
This example starts from a new project, before you start apply the texture to the model so you see what you are doing. Do this by selecting the model and clicking the Apply Mat button.

The model should now be *"no texture purple."*

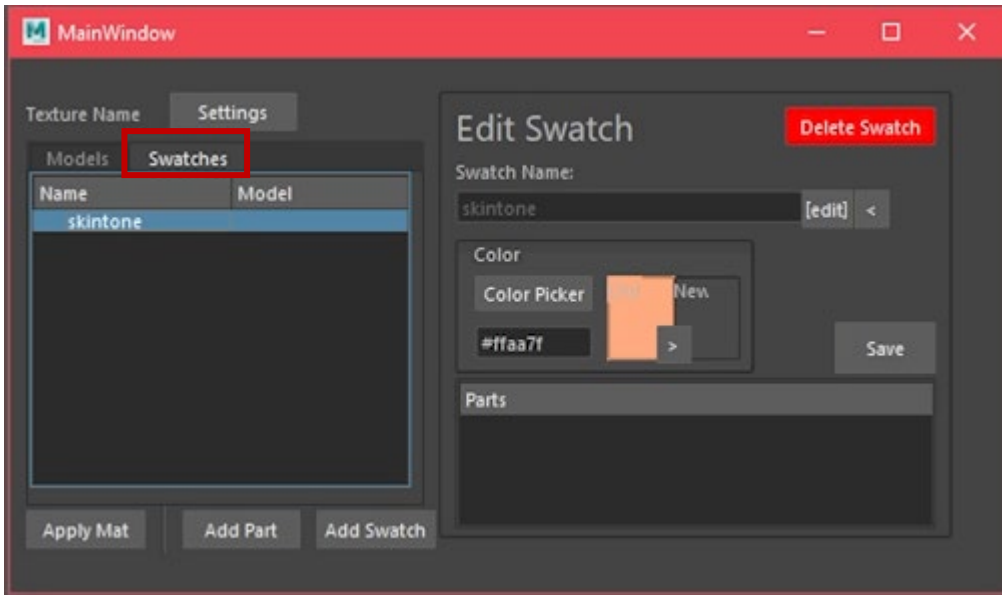
There are 2 ways to use the script.

1. Create the swathes first and assign the parts to it later.
2. Create the parts and swatches at the same time.

5.1 First method

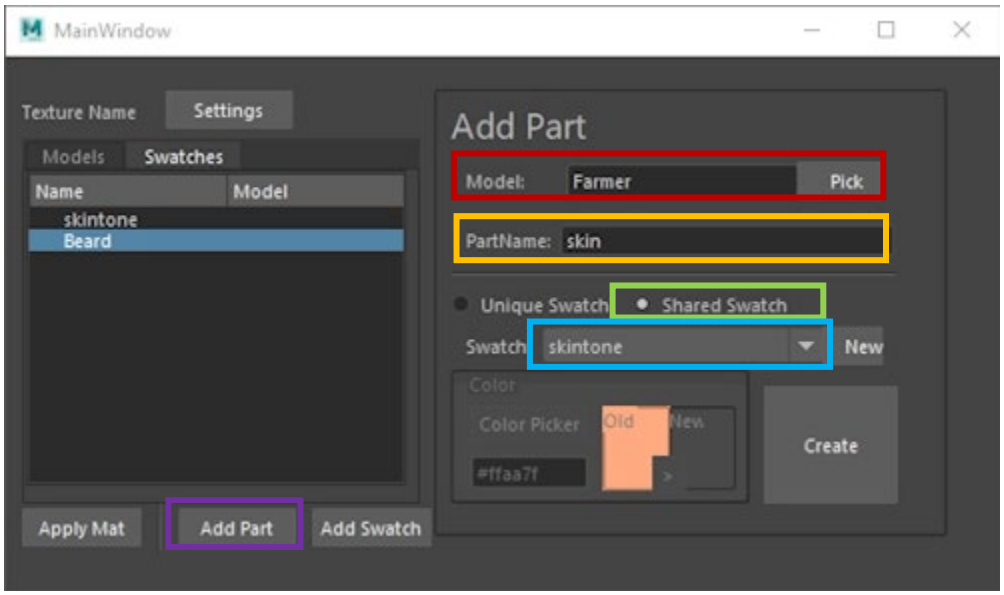


First press the "Add Swatch" button, this will update the properties panel.
Enter a name for the swatch and press the "Color Picker" button to select a color.
When you did this you can click the "create" button.



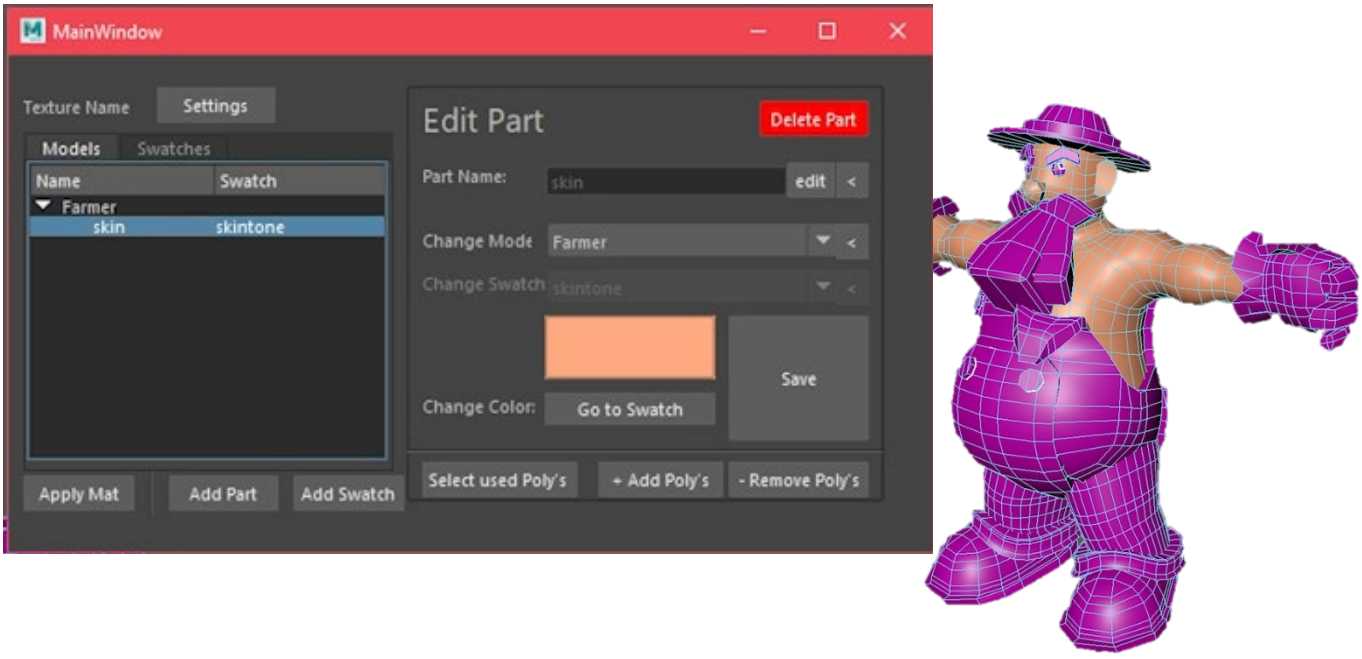
On the left side of the UI you can switch to the "Swatches" tab, this shows all the swatches that are currently present on the texture. The skintone swatch is listed and if you click on the name the properties of that swatch will show.

Now you need to create a part so you can assign polys to the swatch.



Press the “Add Part” button the properties panel should now update.
Enter a name for the model in this example it is the farmer, the name for the part will be skin.

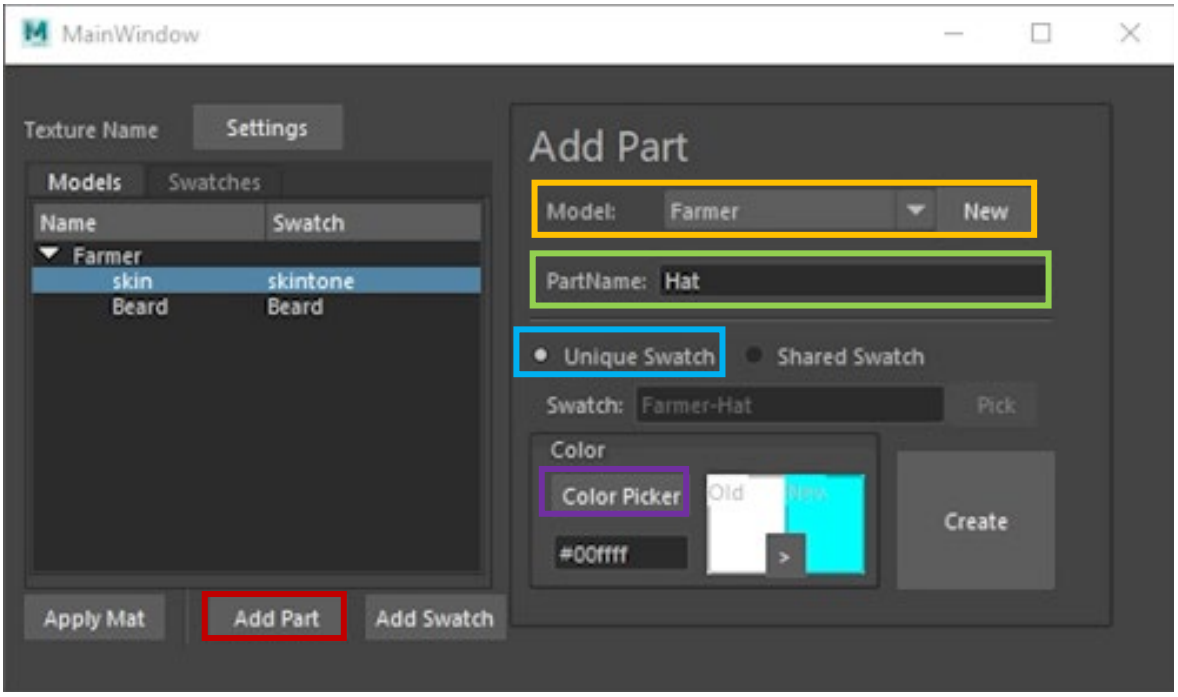
Now you need to connect this part to the swatch you’ve just created. Click in the shared swatch option, then the pick button and select the swatch you need from the dropdown list. In this case it is skintone. The only thing you need to do now is select the faces you want in this part and then press the “Create” button.



The farmer model has been added to the model list and currently contains the skin part.
If you click on the skin in the list, the properties panel will show the properties of that part.

5.2 Second Method

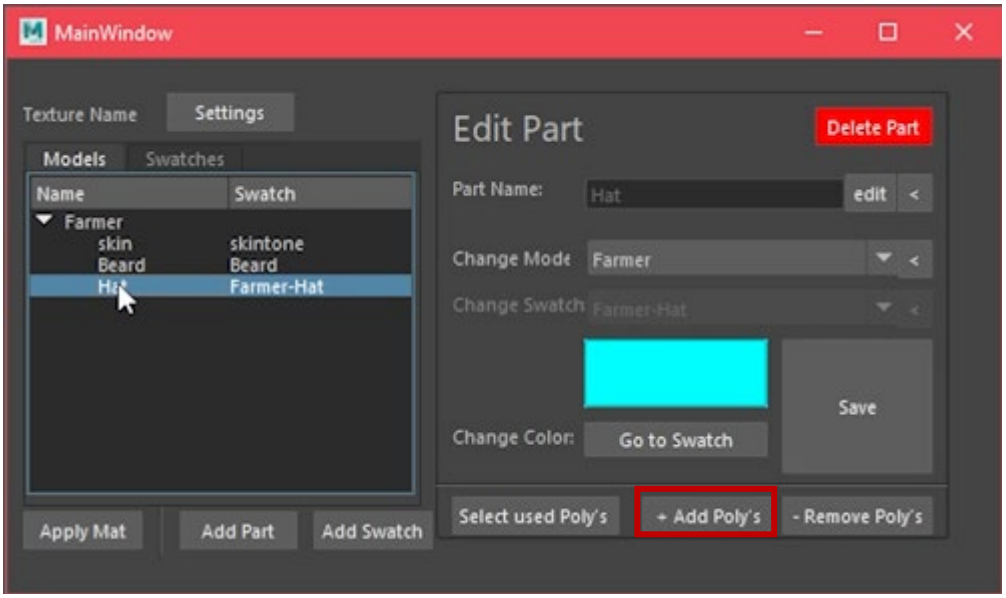
This method lets you create parts and swatches at the same time.



Press the "Add Part" button, choose the correct model. Fill in a name for the part, in this example it is a Hat.

Choose "Unique Swatch" and pick a color. Select the faces and press create. The part and swatch should now be added in the list.

6. Iterative Process

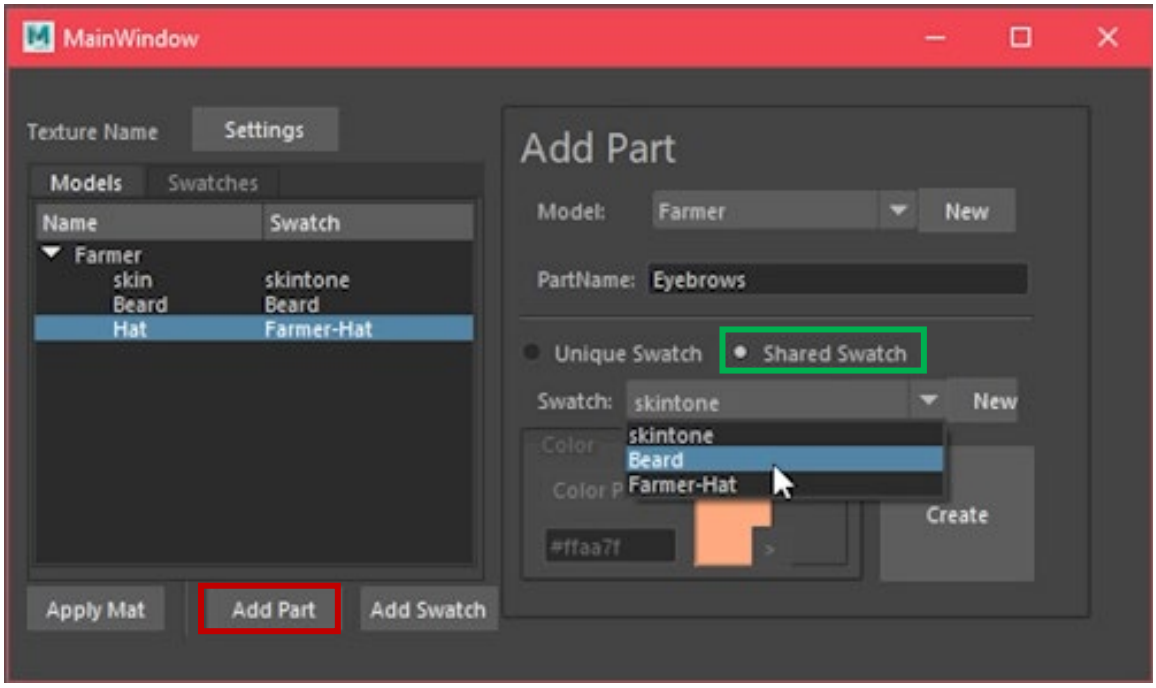


If you want to change properties of model, parts or swatches you need to locate them in the list and click on their name. The properties panel should then update with the corresponding data.

If you want to add faces to an already existing part, click on the part, select the faces and press the "+ Add Poly's" button.

7. Specials

It is possible to have 2 sperate parts on the same swatch.



Click on the “Add Part” button and fill in the model and part name.
Pick the “Shared Swatch option” and select the swatch from the dropdown.
Don’t forget to select the polygon’s and press Create.