

# Mesh Smoother Manual



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# Requirements & Setup

## Requirements

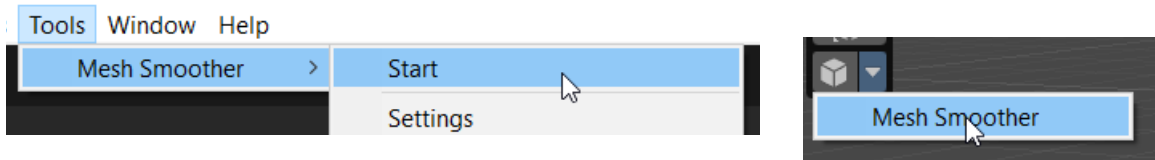
**Unity 2021.3** or higher is required since that is the min version Unity allows for new assets in the store. However it may work just fine in older versions of Unity with minor changes.

# Tutorial

This section will help you understand how to use the tool.

## Opening the Mesh Smoother Tool

You can open it via: **Tools** → **Mesh Smoother** → **Start** or you use the tools menu.



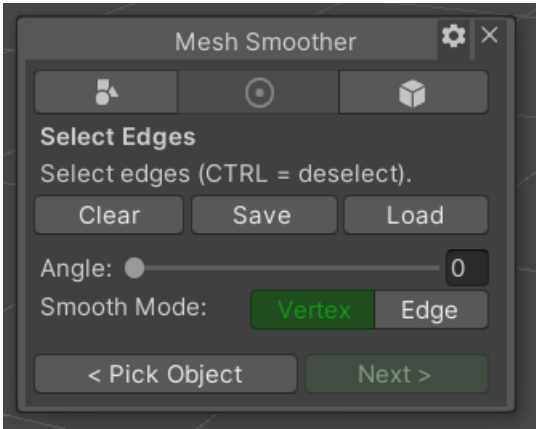
If you did not select an object before starting the tool then it will ask you to select an object. Once you have one selected the „Next“ button will turn green and you can move on to selecting the edges of your mesh.



If you had already selected an object before starting the tool then it will jump directly to the second step, which is „edge selection“.

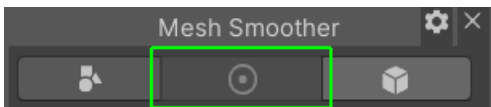
## Edge Selection

Once you have an object selected you can start selecting the edges that you wish to smooth.



### How to Select Edges

1) Make sure you are in the selection mode of the tool (the middle tab at the top).



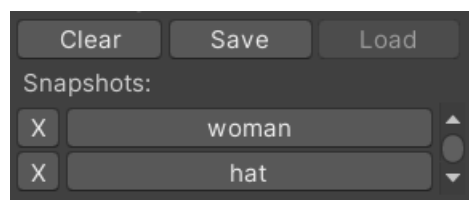
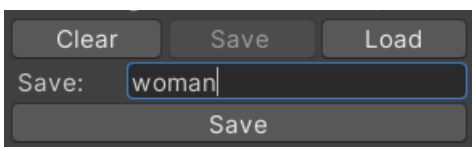
2) Move your mouse over the model. A green highlight should appear for each edge. Press the left mouse button to select an edge. Hold CTRL to deselect an edge. That's it.

HINT: You can DRAG the mouse over the mesh to select multiple edges quickly.



### Clear, Save and Load Selections

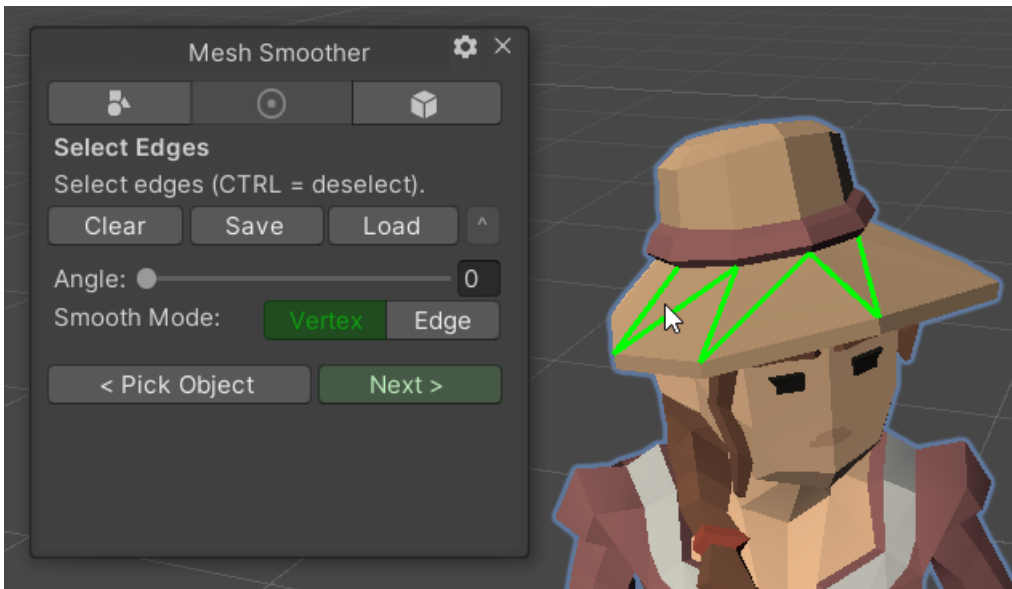
You can clear, save and load your current selection at any time. Loading selections is additive which means you can easily combine multiple selections into one big selection.



## Angle

You may have noticed that by default the tool selects any edge, even those that are within a quad. Setting an angle ignores edges whose adjacent triangle normals differ less than the given angle (in degrees). Useful for ignoring edges inside quads.

Example with no angle set:



Angle set to 20 degrees:



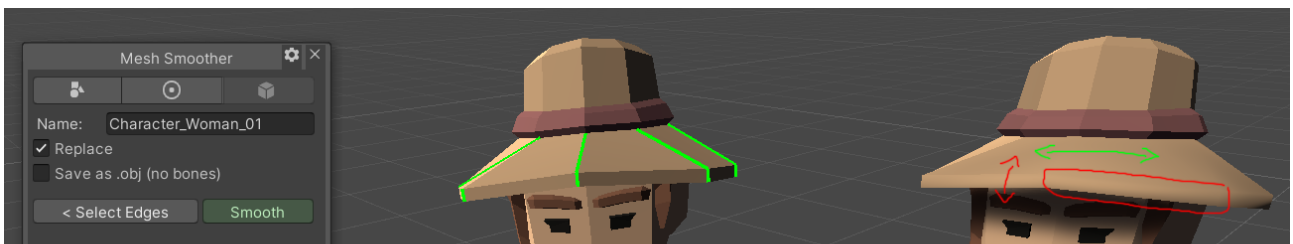
## Smooth Mode

Let's consider this hat. We want to smooth it along the horizontal edges (left to right) but we do want to retain the sharp edge from top to bottom.

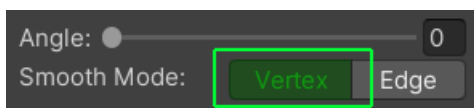


To do that we select the vertical edges and hit „Smooth“ in the execution tab.

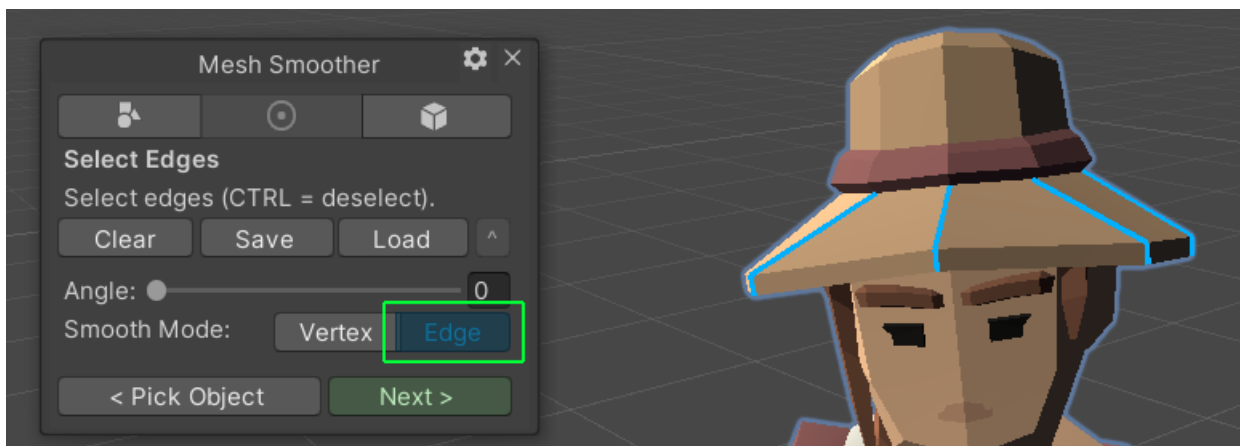
NOTICE: The result does not like what we wanted. The edges are smoothed in both directions.



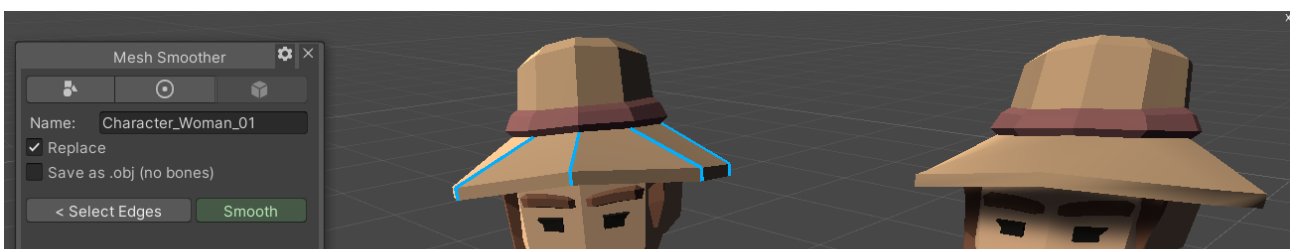
The reason for this is that we have marked these edges as „vertex“ smoothed (indicated by the green color).



In order to get the result we want we have to mark them as „edge“ smoothed (indicated by a blue color). Let's switch to „Edge“ mode and repainted the selection like this:

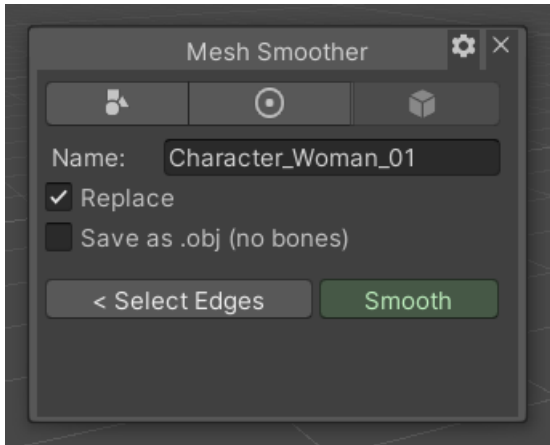


Using the edge mode we get the result we want. HINT: You can mix both modes.



## Mesh Export

The last step in the process is to export the new smoothed mesh.

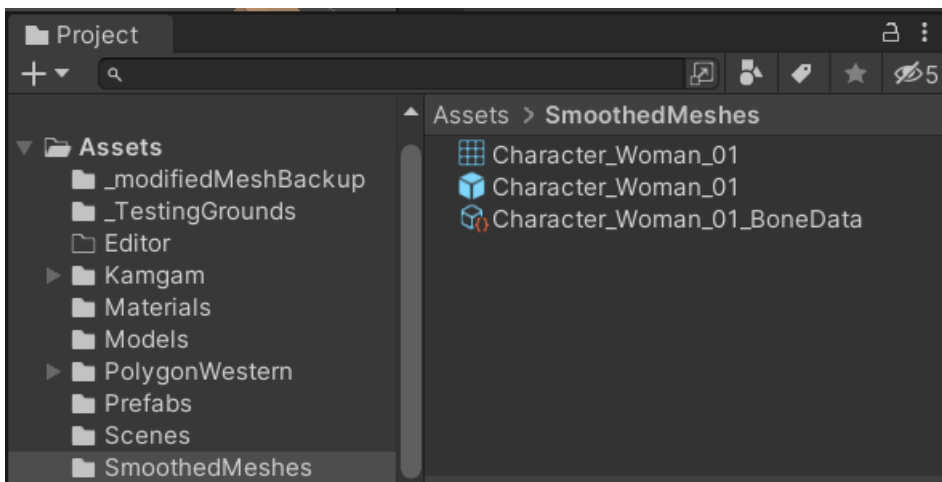


### Name

You can pick a new name for the resulting mesh. By default the same name as your existing mesh is used.

HINT: By default new meshes are stored under „Assets/SmoothedMeshes“. This can be configured in the settings.

For each new smoothed mesh a new mesh file, prefab and some bone data (for skinned meshes) will be created.



### Replace

If you do not want to generate a new mesh every time then enabling the „replace“ checkbox will ensure your previous mesh file is replaced by the new one.

NOTICE: Your original mesh file will NEVER be changed so you will never loose it and you can always restart from scratch if needed.

## Save as .obj

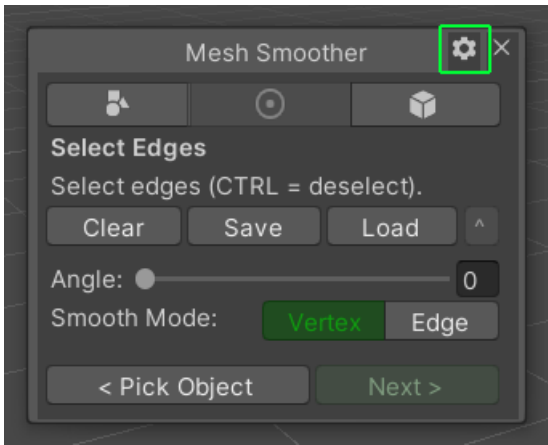
This will export the mesh in the OBJ format.

NOTICE: OBJ does not support bone data but it may be handy for importing into other tools like Blender, Maya, Max, ... .

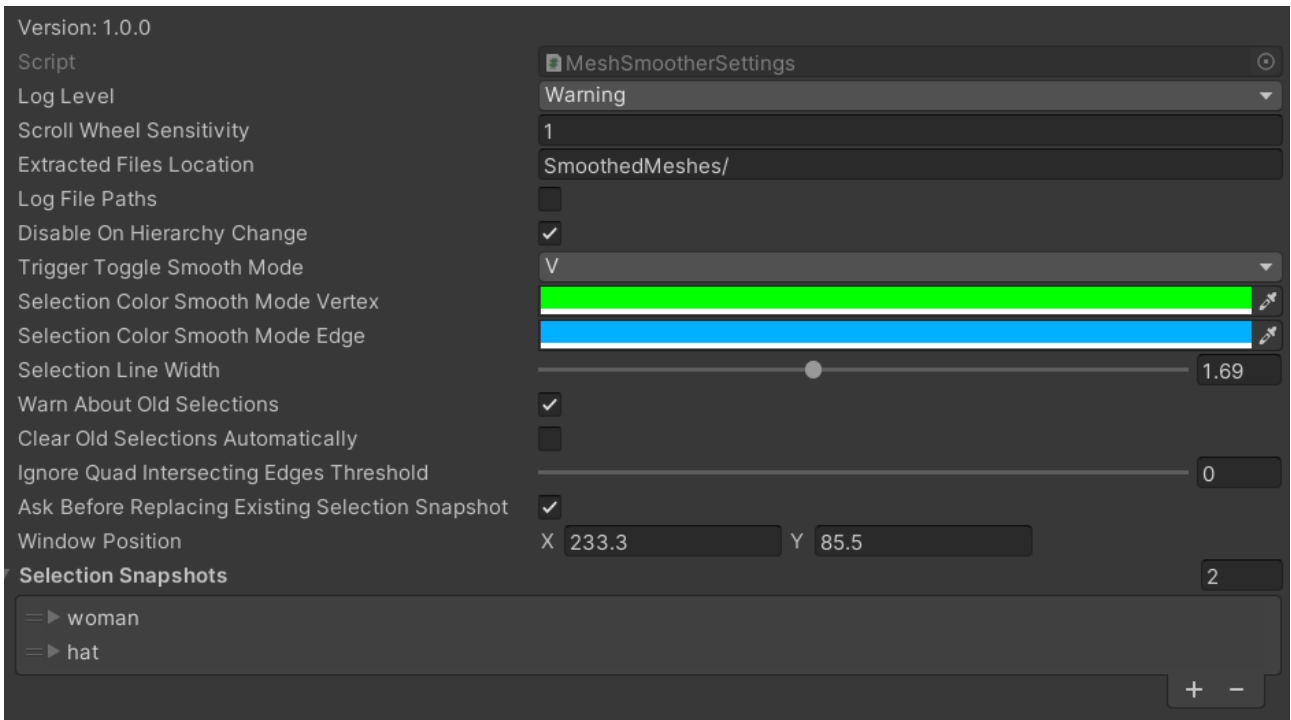


# Settings

You can access the settings via the tools menu (Tools > Mesh Smoother > Settings) or the gear icon in the tool window:



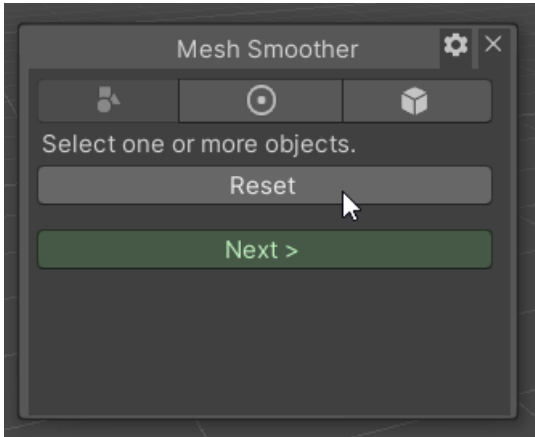
In the settings you can configure keyboard shortcuts, colors, the default location and more.



# Frequently Asked Questions

## The selection highlights are displaced (skinned mesh)

This sometimes happens for skinned meshes. If it does then please save your selection and go back to the first „object selection“ tab. In there hit the „Reset“ button and start again. Resetting should clear out the mesh cache and the highlights should align again.



## I have dragged the tool window off screen. How do I get it back?

You can set the window position in the settings. Simply close the tool. Reset it to 0/0 in the settings and restart the tool.

You can find the settings under Tools → Mesh Smoother → Settings.

