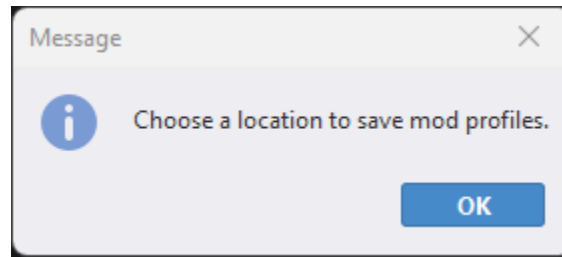


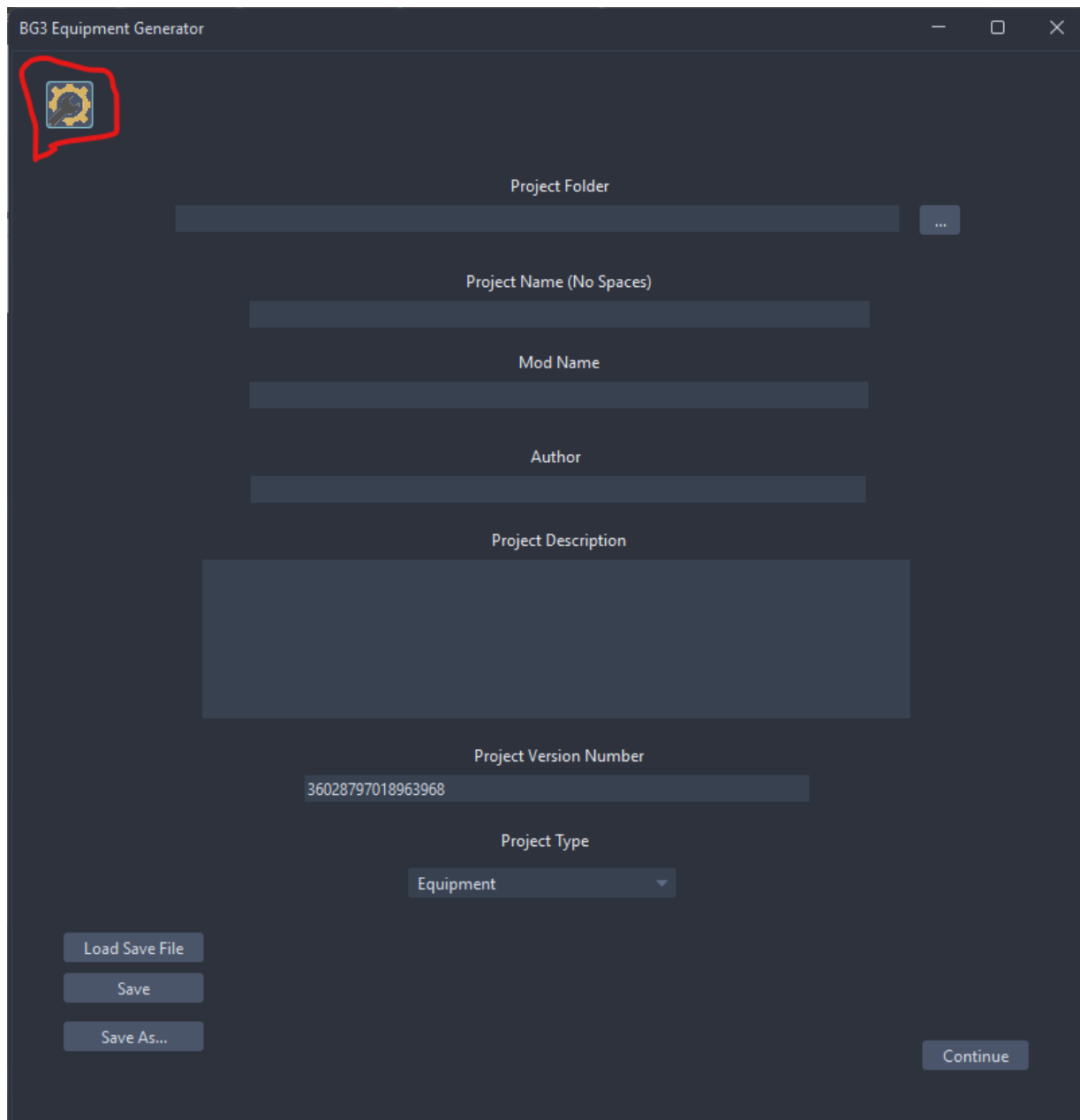
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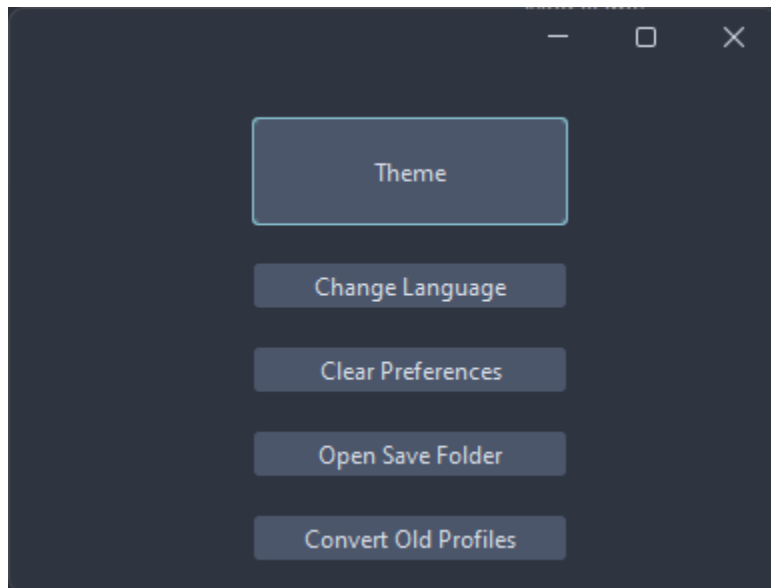
Getting Started



The program will prompt you to choose a location to save any preset profiles you might make. This makes editing and updating mods easier.



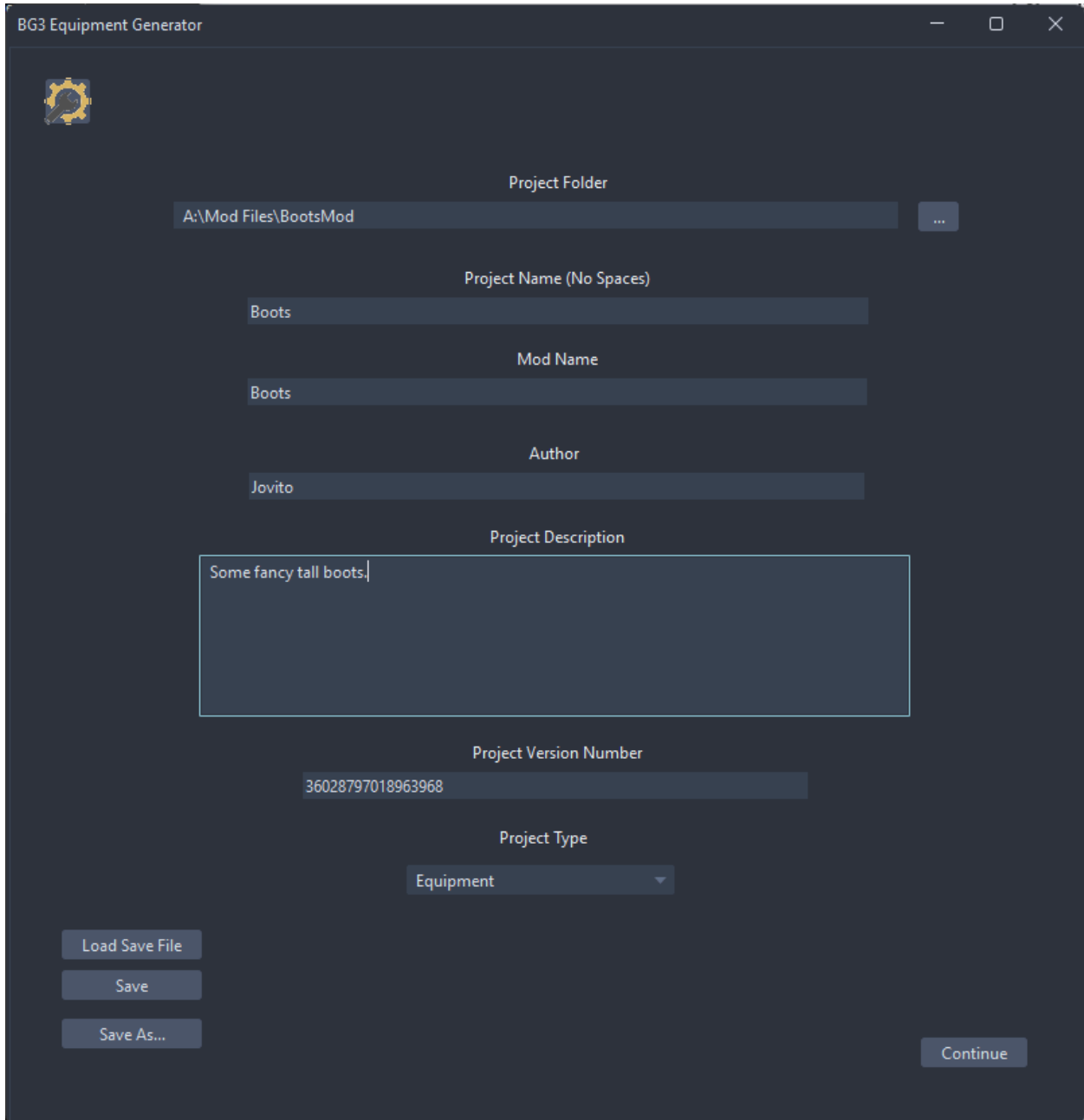
On the first page, there is a gear button in the upper left corner. This is where the **Settings** are located.



Here, you can

- change the **theme** to light or dark
- change the **language** (right now there is only English)
- **clear preferences** to reset the location of your log files
- **open save folder** to find where your log files are currently located.
- **Convert old profiles** if you created save files in a version before 1.3.0

Setting Up the Mod



The screenshot shows the BG3 Equipment Generator application window. The window has a dark theme and a title bar with standard Windows window controls. Inside the window, there is a gear icon in the top left corner. The main area contains several input fields and buttons for configuring a mod project. The fields are labeled: Project Folder, Project Name (No Spaces), Mod Name, Author, Project Description, Project Version Number, and Project Type. The Project Folder field contains the path "A:\Mod Files\BootsMod". The Project Name field contains "Boots". The Mod Name field contains "Boots". The Author field contains "Jovito". The Project Description field contains "Some fancy tall boots.". The Project Version Number field contains "36028797018963968". The Project Type field is a dropdown menu currently set to "Equipment". At the bottom left, there are three buttons: "Load Save File", "Save", and "Save As...". At the bottom right, there is a "Continue" button.

BG3 Equipment Generator

Project Folder
A:\Mod Files\BootsMod

Project Name (No Spaces)
Boots

Mod Name
Boots

Author
Jovito

Project Description
Some fancy tall boots.

Project Version Number
36028797018963968

Project Type
Equipment

Load Save File
Save
Save As...

Continue

The **Project Name** is shown here in this picture as “Boots”. This will make a **new folder** inside the **Project Folder**. The **new folder** will be named whatever is put in as the **Project Name**.

The **Mod Name** is the name that will show up when a user installs the mod into their game.

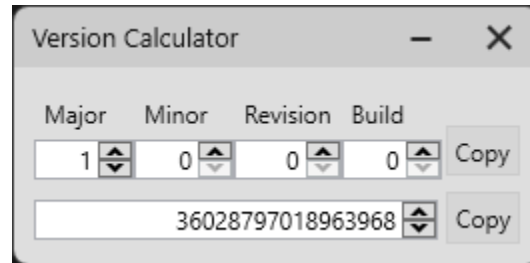
LATEST VERSION:

<https://github.com/Byte0Bard/BG3-Equipment-Generator/releases/latest>

The **Project Description** is a description of the mod.

For the **Project Version Number**, I recommend using the **Baldur's Gate 3 Modder's Multitool** from

<https://github.com/ShinyHobo/BG3-Modders-Multitool/releases> to generate the version number. Go to **Utilities > Version Calculator**



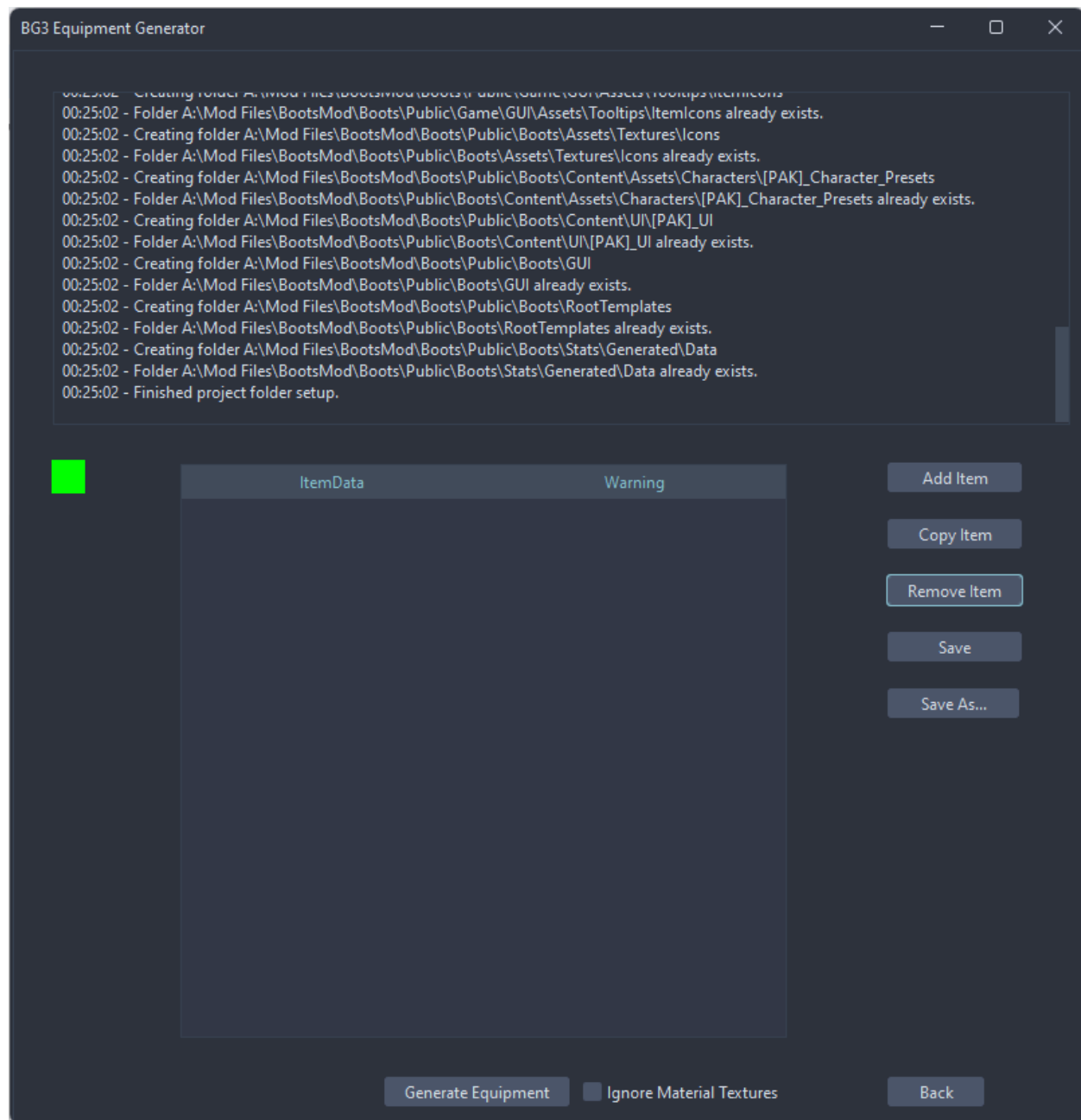
After entering your version information for your specific mod, copy the bottom number from there into the **Project Version Number** field.

The **Project Type** determines whether the mod will be **Hair** or **Equipment**. Click the dropdown to choose a project type.

To **Save** your project so you can edit it later, click the **Continue** button and **Save** on the next page.

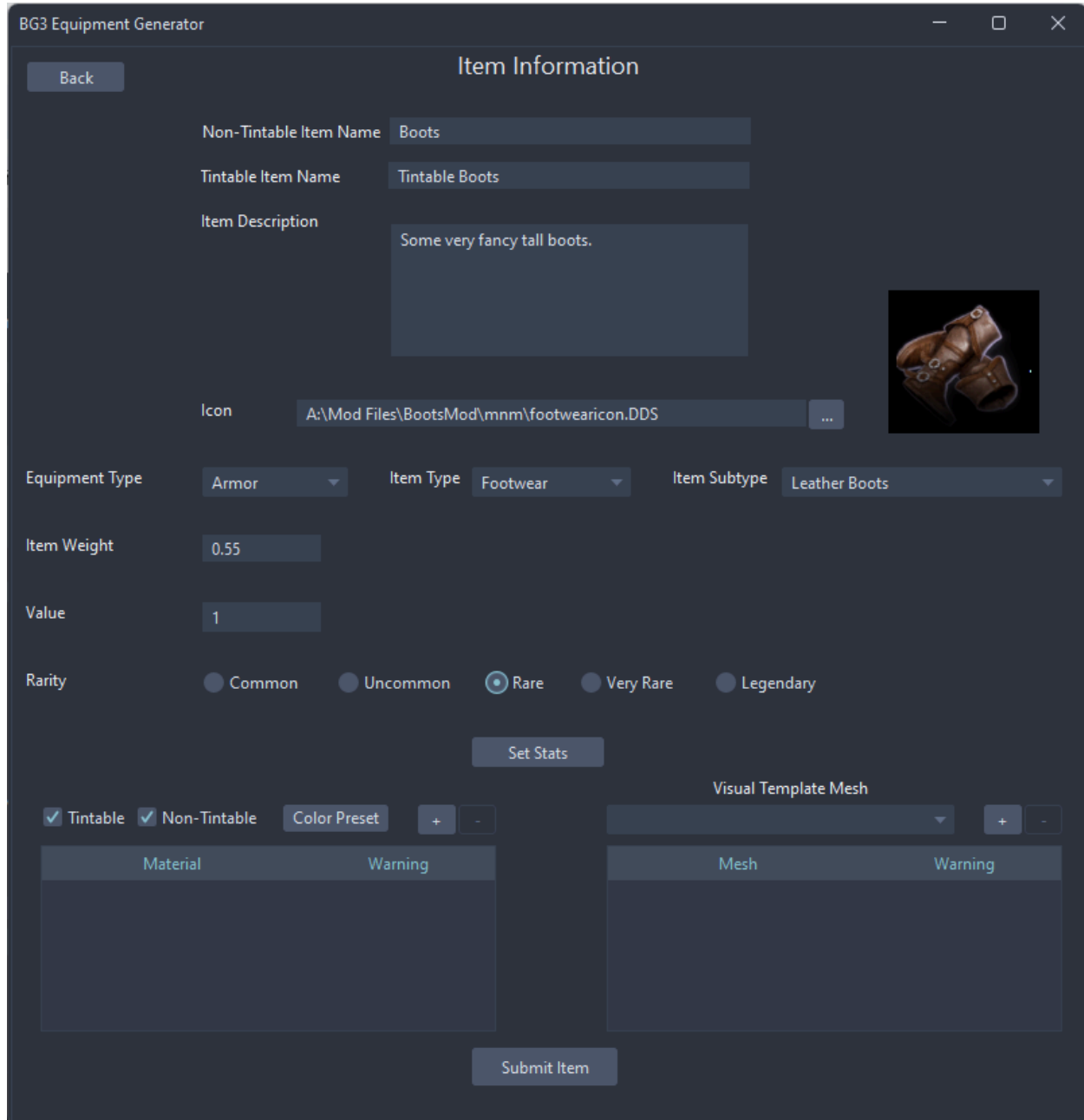
Creating an Equipment Mod

Adding a New Item



To add a new item to the project, click the **“Add New Item”** button. For this first example, I’m adding some boots.

Filling Out the Item Information



The screenshot shows the 'Item Information' window of the BG3 Equipment Generator. The window has a dark theme and contains the following fields and controls:

- Back** button
- Non-Tintable Item Name**: Boots
- Tintable Item Name**: Tintable Boots
- Item Description**: Some very fancy tall boots.
- Icon**: A:\Mod Files\BootsMod\mnm\footwearicon.DDS
- Equipment Type**: Armor
- Item Type**: Footwear
- Item Subtype**: Leather Boots
- Item Weight**: 0.55
- Value**: 1
- Rarity**: Common, Uncommon, **Rare** (selected), Very Rare, Legendary
- Set Stats** button
- Visual Template Mesh** section:
 - ☒ Tintable ☒ Non-Tintable
 - Color Preset** dropdown with **+** and **-** buttons
 - Material** and **Warning** input area
 - Mesh** and **Warning** input area
- Submit Item** button

Enter the **Item Name** and the **Item Description**. To search for your icon image, click the [...] button next to the **Icon** field. The program can handle image files of type .png, .dds, .tiff., .tga, .jpg, and .bmp.

Next, choose an **Equipment Type** and an **Item Type** from their respective dropdowns.

After, choose an **Item Subtype** that most closely matches your item.

Pick a **Rarity** and enter in the **Item Weight**.

LATEST VERSION:

<https://github.com/Byte0Bard/BG3-Equipment-Generator/releases/latest>

Next, you have a choice of making your item **tintable**, **non-tintable**, or **both**. For this tutorial, I decided to make one item and select **tintable** and **non-tintable**. This will make two separate items in the game.

Adding a Custom Material

Click the **[+]** above the **Material Table** to add a new material.

The screenshot shows the 'BG3 Equipment Generator' application window. At the top left is a 'Back' button. The main area is divided into five sections, each with a preview image, a label, a file path input field, and a three-dot menu button:

- Non-Tintable**: Preview shows a brown, textured boot. File path: `Ies\BootsMod\mnm\Boot_BM.dds`.
- Tintable**: Preview shows a white boot. File path: `s\BootsMod\mnm\Boot_BCM.dds`.
- Normal Map**: Preview shows a blue, textured boot. File path: `Ies\BootsMod\mnm\Boot_NM.dds`.
- Physical Map**: Preview shows a boot with a green and red pattern. File path: `Ies\BootsMod\mnm\Boot_PM.dds`.
- Cloth Mask**: Preview shows a boot with a green and blue pattern. File path: `Ies\BootsMod\mnm\Boot_MSK.dds`.

Below these sections is a 'Shader' dropdown menu set to `Public/Shared/Assets/Materials/Characters/CHAR_BASE.Isf`. Underneath is a 'Material Name' section with a checkbox labeled 'UUID' (which is unchecked) and a text input field containing 'Boots Material'. At the bottom center is a 'Submit' button.

Use the **[...]** buttons to navigate to your files.

In the **Non-Tintable** field, put your pre-colored Base Map. This determines the color of your item.

In the **Tintable** field, put your white or almost white base color map that will allow the tint colors to show up on your object.

In the **Normal Map** field, put your normal map. A normal map makes flat surfaces look bumpy and detailed.

In the **Physical Map** field, put your physical map. The physical map determines things like shine and ambient occlusion. A detailed explanation of these maps can be found here:

https://bg3.wiki/wiki/Modding:Colour_map

Instructions on creating them can be found here:

https://bg3.wiki/wiki/Modding:Texture_formatting

In the **Shader** dropdown menu, you can select a shader to enhance the appearance of your material. **AlphaTest** shaders support transparency, allowing you to see through certain parts of the material. Shaders labeled with "**2S**" are double-sided, which means they apply the material to both the front and back of a flat plane. These double-sided shaders are ideal for surfaces without thickness, like a sheet of paper, where both sides need to display the same texture or color.

If you don't find the shader you're looking for in the dropdown menu, you can manually enter the shader's path into the editable box. This allows you to use a custom shader that isn't listed in the default options.

More information about Shaders can be found at these locations:

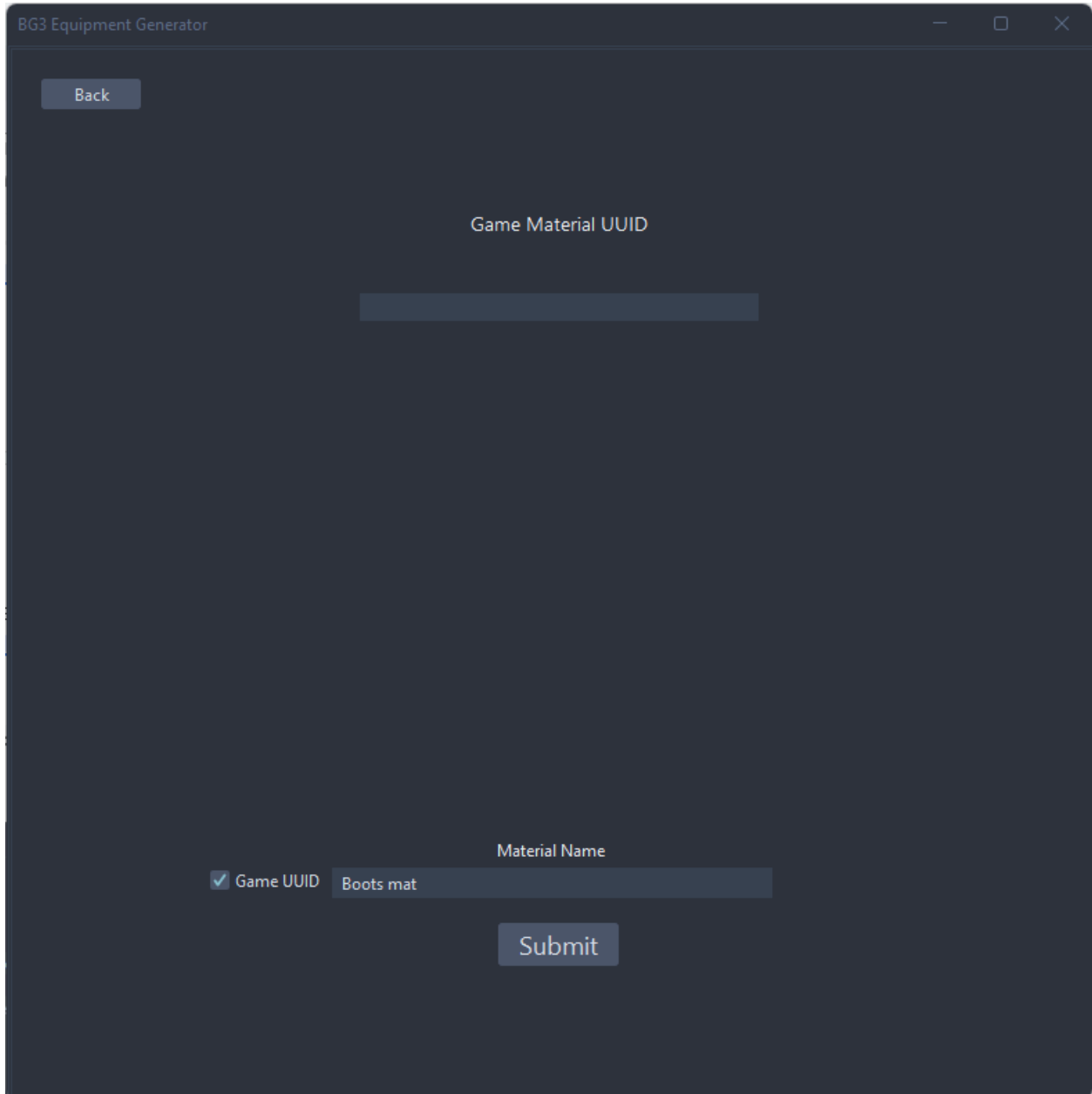
[https://bg3.wiki/wiki/Modding:Armor/Clothing_Texture_Maps#Armor/Clothing_Texture_Maps \(Advanced\)](https://bg3.wiki/wiki/Modding:Armor/Clothing_Texture_Maps#Armor/Clothing_Texture_Maps_(Advanced))

https://bg3.wiki/wiki/Modding:Non-VT_Shaders

Clicking **Submit** will add the material information to the **Materials** table.

Adding a Material from the Game Using a UUID

If you want to add a **Material UUID** from the game for your mesh, you can check the **Game UUID** checkbox. This will bring up the ability to enter a **Material UUID**.



The screenshot shows a dark-themed application window titled "BG3 Equipment Generator". In the top-left corner, there is a "Back" button. The main area is titled "Game Material UUID" and contains a large, empty text input field. At the bottom, there is a "Material Name" label above a text input field containing "Boots mat". To the left of this field is a checked checkbox labeled "Game UUID". Below the "Material Name" field is a "Submit" button.

Pressing **Submit** will add this material to the **Materials** table.

Removing a Material

BG3 Equipment Generator

Item Information

[Back](#)

Non-Tintable Item Name

Tintable Item Name

Item Description

Icon ...

Equipment Type Item Type Item Subtype

Item Weight

Value

Rarity ☐ Common ☐ Uncommon ☒ Rare ☐ Very Rare ☐ Legendary

[Set Stats](#)

☒ Tintable ☒ Non-Tintable [Color Preset](#) [+](#) [-](#)

Visual Template Mesh [+](#) [-](#)

Material	Warning
Boots Material	

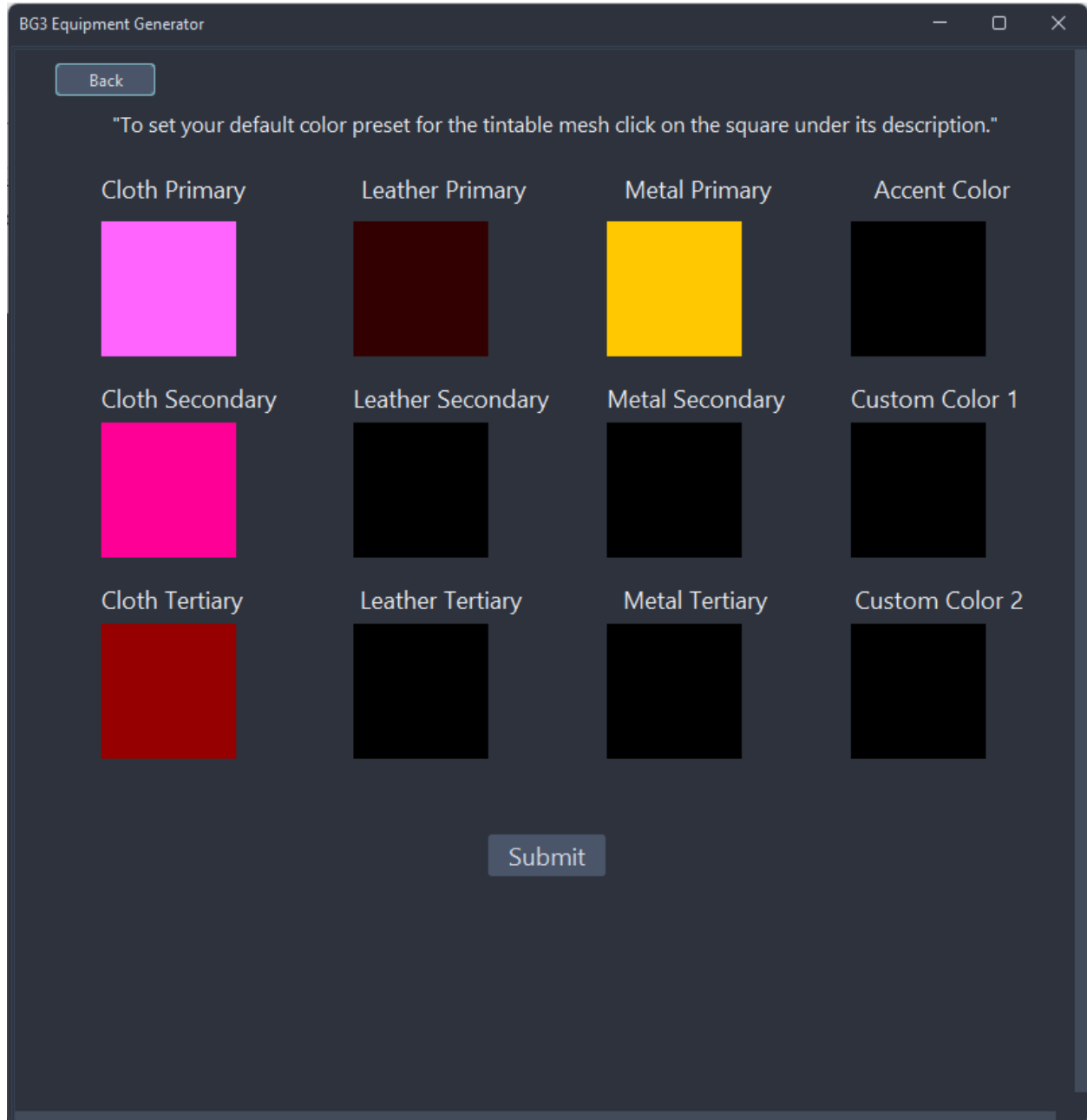
Mesh	Warning

[Submit Item](#)

If you want to remove a material, you can select the material in the **Material Table**, and click the [-] button. If a mesh in the mesh table is linked to a material that has been removed, the mesh table will display an error message indicating that the material no longer exists.

Adding a Color Preset

You can set a default color for your **tintable** object by editing the **Color Preset**. To do this, click the **Color Preset** button. It will bring up a window that allows you to customize the colors of each part of your material.



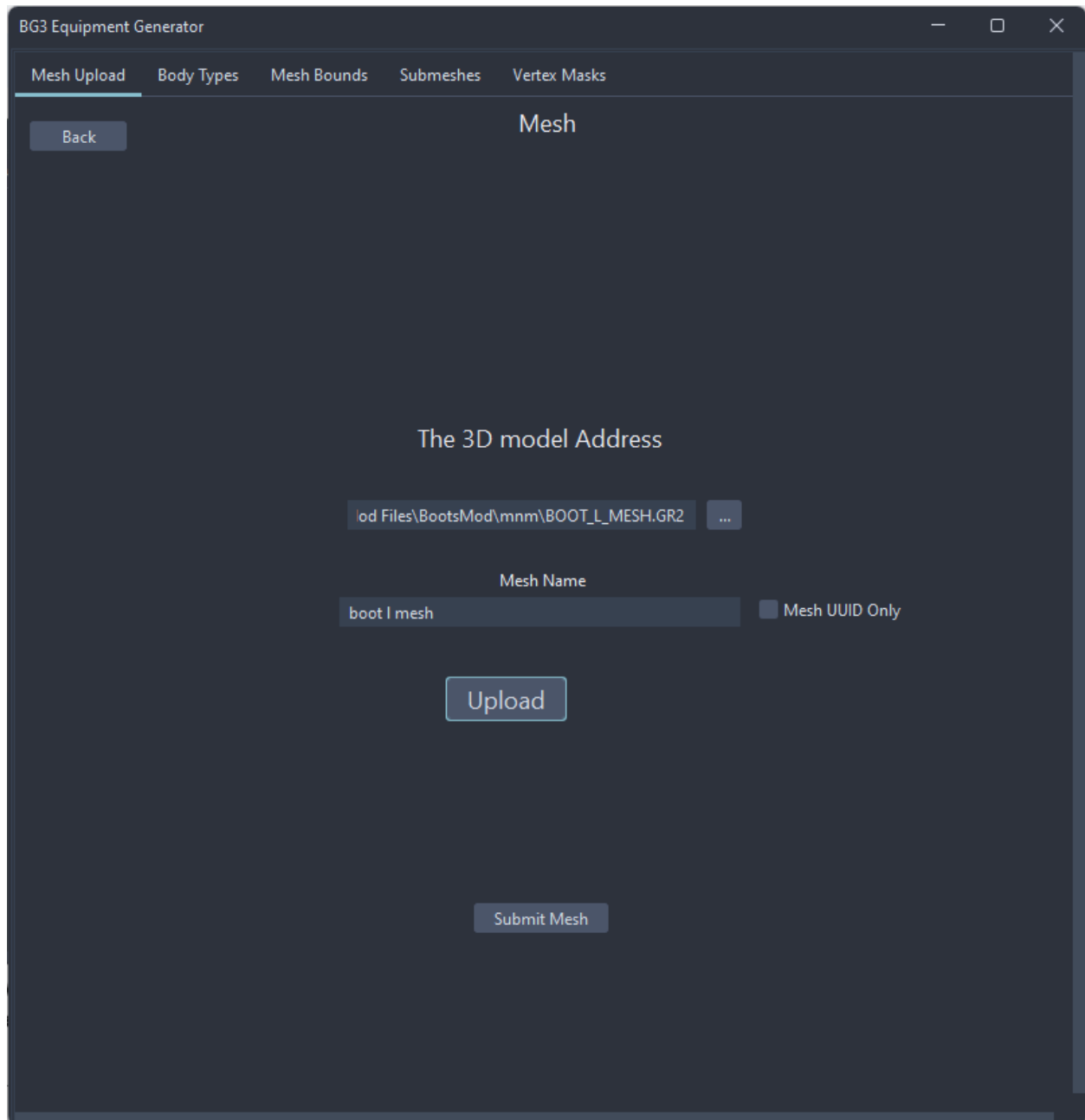
To change a color, click on the square underneath the color you wish to change. A color picker window will pop up. Choose a color from that window, and hit **Okay** to select that color.

After your colors have been chosen, hit **Submit** to submit your **Color Preset**.

Adding a Custom Mesh

Uploading the Mesh File

Now that your material is added, you can add in a mesh. For these boots, I have two meshes: the left boot and the right boot. Click the [+] above the **Mesh Table** to add a new mesh.



The screenshot shows the BG3 Equipment Generator web application. The title bar reads "BG3 Equipment Generator". The navigation tabs are "Mesh Upload", "Body Types", "Mesh Bounds", "Submeshes", and "Vertex Masks". The "Mesh Upload" tab is active. Below the tabs, there is a "Back" button and the word "Mesh". The main content area is titled "The 3D model Address" and contains a file input field with the path "od Files\BootsMod\mnm\BOOT_L_MESH.GR2" and a file selection icon "...". Below this is a "Mesh Name" label and a text input field containing "boot l mesh". To the right of the text input is a checkbox labeled "Mesh UUID Only". At the bottom of the form is an "Upload" button. At the very bottom of the page is a "Submit Mesh" button.

Starting out in the **Mesh Window**, the tabs are disabled. Click the [...] next to the field under the words “**The 3D model**” to search for and add your mesh. The mesh must be a .GR2 file.

.GR2 files can be either exported from Blender using Norbyte’s blender addon here:

https://github.com/Norbyte/dos2de_collada_exporter

or converted from a .dae file using Norbyte’s Islib converter here:

<https://github.com/Norbyte/Islib/releases/latest>

Enter in the **Mesh Name**, and click the **Upload** button. The program will automatically fill out the **Mesh Bounds** and the **Submeshes** information. Once that information is retrieved, the tabs will become enabled and can be clicked on. Go to the **Body Types** tab.

Choosing Body Types

The screenshot shows a web application window titled "BG3 Equipment Generator". It has a dark theme and a navigation bar with five tabs: "Mesh Upload", "Body Types" (which is active), "Mesh Bounds", "Submeshes", and "Vertex Masks".

Under the "Body Types" tab, there is a "Back" button on the left. The main area contains a list of 20 body types, each with a checkbox and a label. The selected options are:

- ☒ Human Masc
- ☒ Elf/Drow Masc
- ☒ Tiefling Masc
- ☒ Half Elf Masc

The other options are:

- ☐ Human Fem
- ☐ Dwarf Fem
- ☐ Dwarf Masc
- ☐ Elf/Drow Fem
- ☐ Halfling Fem
- ☐ Halfling Masc
- ☐ Tiefling Fem
- ☐ Gnome Fem
- ☐ Gnome Masc
- ☐ Human Strong Fem
- ☐ Dragonborn Fem
- ☐ Dragonborn Masc
- ☐ Human Strong Masc
- ☐ Tiefling Strong Fem
- ☐ Half Orc Fem
- ☐ Tiefling Strong Masc
- ☐ Half Orc Masc
- ☐ Githyanki Fem
- ☐ Githyanki Masc
- ☐ Half Elf Fem

At the bottom center, there is a "Submit Mesh" button.

Here, you can choose what body type or types you want your equipment to be for. Next, click the **Mesh Bounds** tab.

Filling Out the Mesh Bounds



Mesh Upload Body Types **Mesh Bounds** Submeshes VertexMasks

Mesh Bounds

Max:	0.19	0.93	0.12
Min:	0	0.01	0.19
Center:	0.1	0.46	0.04
Radius:	0.5		

The bounds of the 3D mesh.

Submit Mesh

This should already be filled out. These are the X,Y,Z coordinates and the radius of the bounding box that encompasses your mesh.

Important: If the bounds numbers are higher than 1-3, your mesh is too large and needs to be resized.

Sometimes the local scale of the mesh is quite large, even though it is parented under something smaller. In Blender's object mode, you can select your mesh and go to:

Object > Parent > Clear Parent and Keep Transform

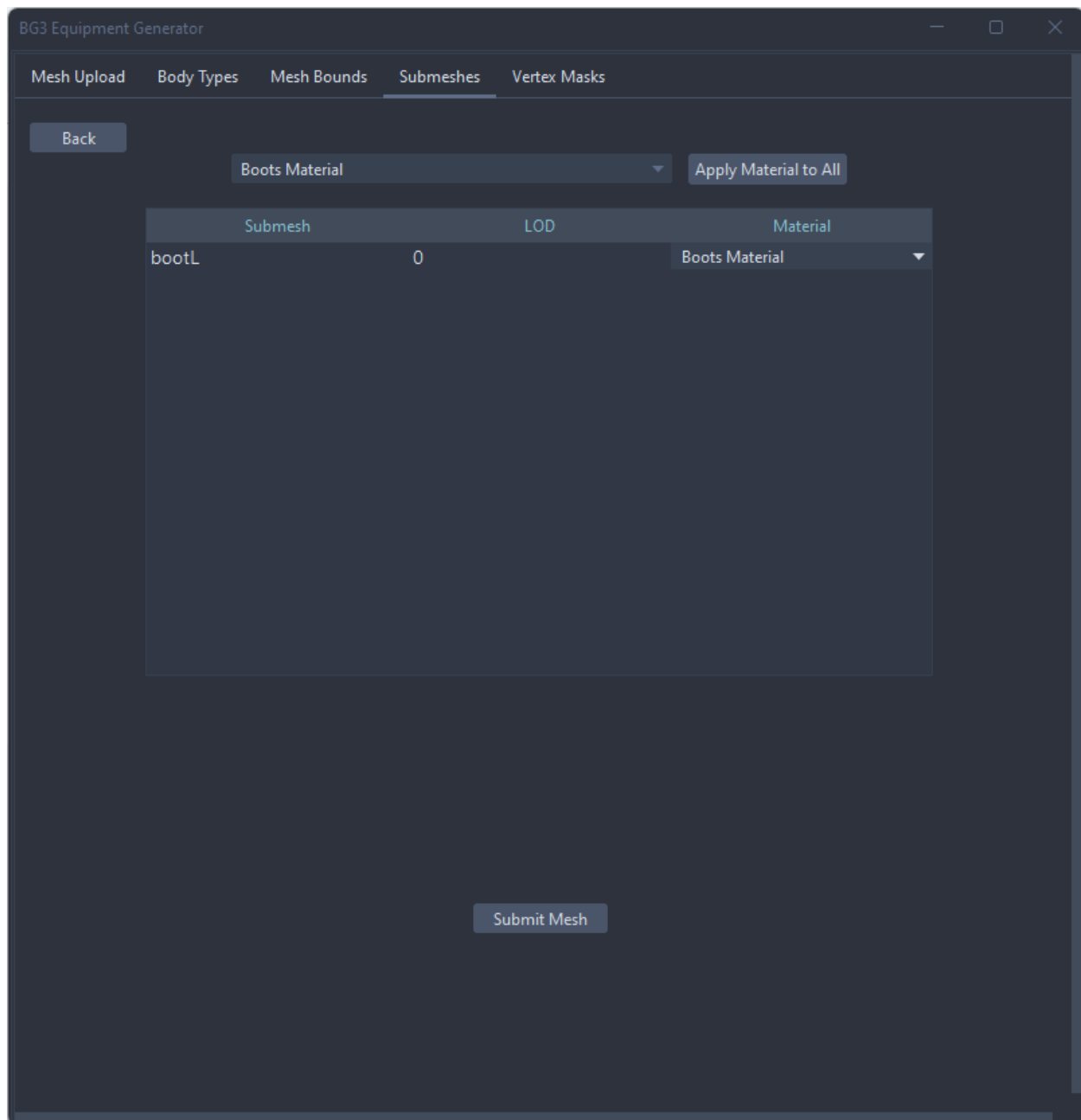
Then, while still keeping your mesh selected, you can use:

Object > Apply > All Transforms

Afterwards, you can parent the mesh again by holding "**Shift**" and dragging your mesh onto its parent object.

After confirming that the bounds are correct, go to the **Submeshes** tab.

Setting Up the Submeshes



This is where you can choose **Materials** for your mesh. If you have multiple objects in your mesh, you can select a different material for each mesh. You can also choose one material at the top and apply it to all the objects below. These objects in the list are the objects that make up your mesh. For example, this is my mesh in Blender.



The first (and only, in this case) object under my mesh is “**bootL**.” This is what is showing up in the submeshes table. The name is determined by the name that is by the **green** symbol.

If I have two objects in my mesh named "bootL" and "soleL," they must be listed in the Submesh Table in the same order as they appear in the Blender window.

The **LOD**, or Level of Detail, is using simpler shapes for things that are farther away. The closer and more detailed an object is, the lower the **LOD** number. I only have one **LOD** for my object, so I have a 0 in the **LOD** section, the lowest it can be.

If you want to create automatic **LOD**, there is a blender addon by Padme4000 at:

<https://www.nexusmods.com/baldursgate3/mods/346?tab=files>

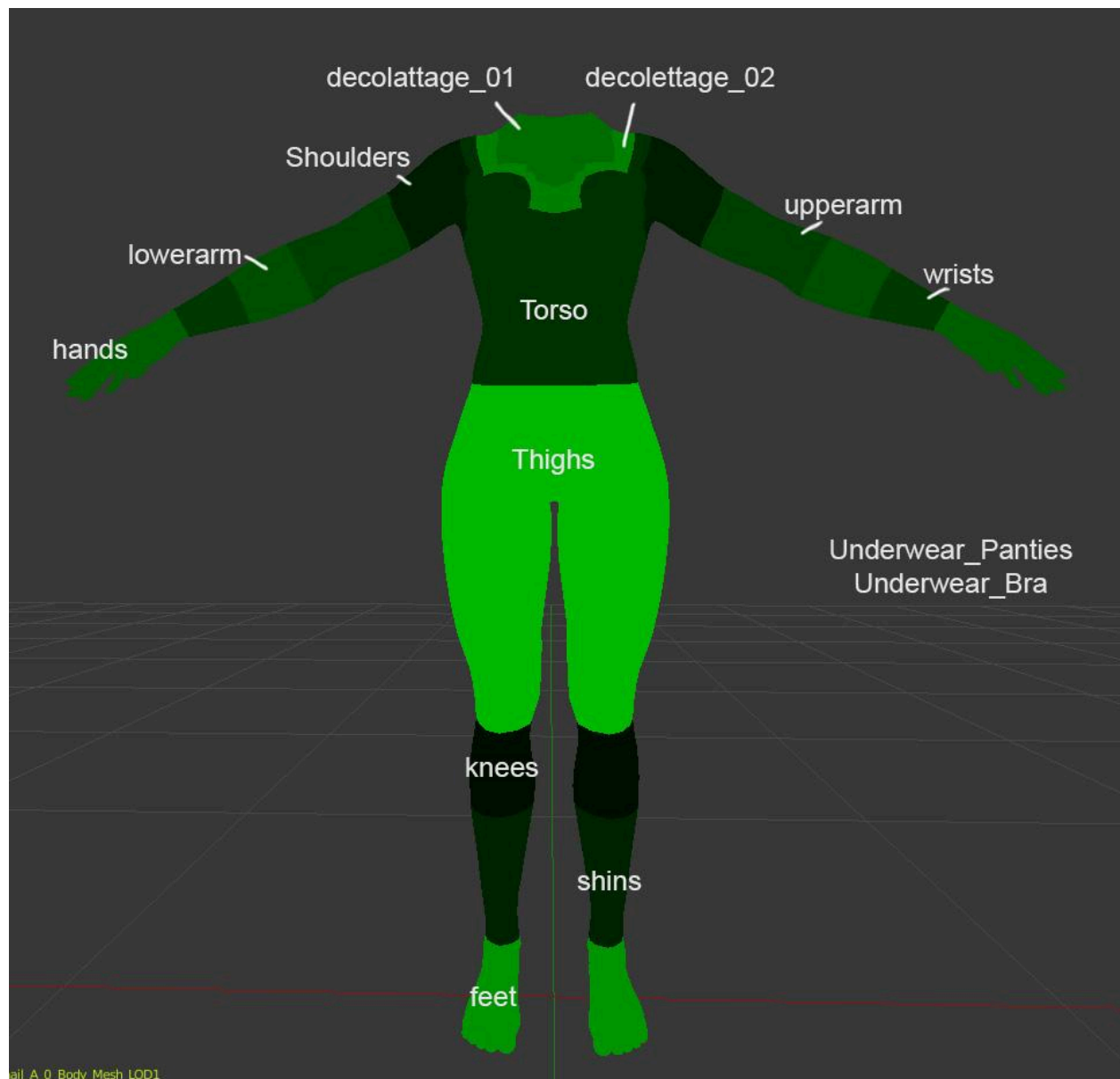
as well as a number of other useful tools.

Once you have the **Submesh Table** filled out, click the **Vertex Masks** tab.

Setting Up Vertex Masks



Select the body parts that your mesh should cover.

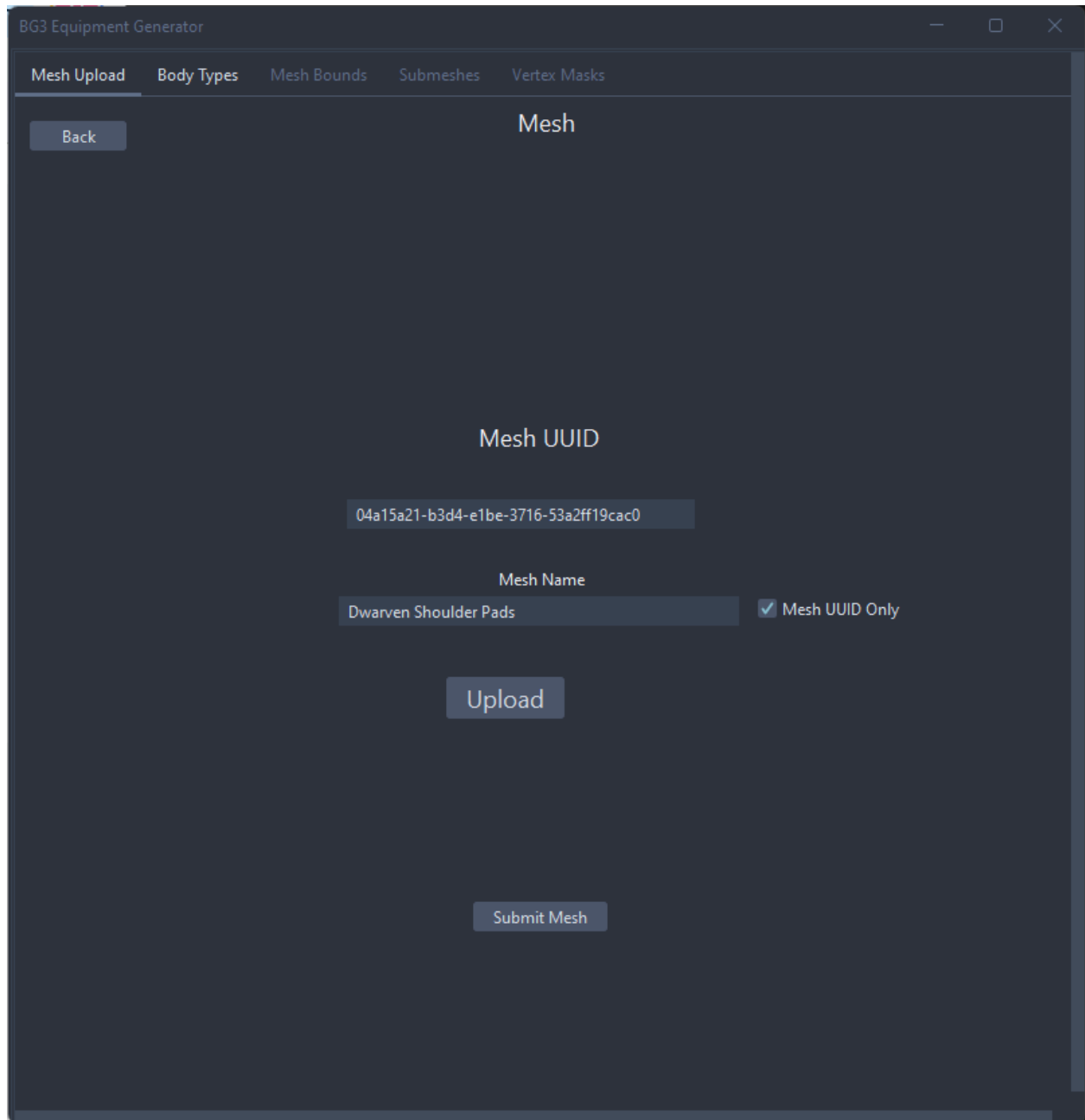


Sometimes parts of the body have to be covered up, or they will clip through the clothing mesh. This is where **Vertex Masks** come in handy. For example, my boots go from the feet, up to the thigh. I don't want to mask out the **Thighs**, or else the legs will be invisible. But I do want to mask out the **feet**, **shins**, and **knees**. This will help to ensure the boots fully cover these parts of the legs. After you are done going through the tabs, click the "**Submit Mesh**" button to finish adding it to the **Mesh Table**.

Adding a UUID Mesh

To add a mesh via a UUID from the game files, click the **Mesh UUID Only** check box. In the top text field, located just below the words **Mesh UUID** enter the unique identifier (UUID) for the mesh. In the **Mesh Name** text field, enter a name for the mesh. **This name can be anything you choose; it doesn't have to match the actual mesh name linked to the UUID.**

Click the **Upload** button. The **Body Types** tab will become enabled. Select the **Body Types** tab to choose what races and genders can use the mesh.



The screenshot shows the 'BG3 Equipment Generator' web application. The 'Mesh Upload' tab is selected in the top navigation bar. The main form is titled 'Mesh' and contains the following elements:

- A 'Back' button in the top left corner.
- A 'Mesh UUID' section with a text input field containing the UUID: '04a15a21-b3d4-e1be-3716-53a2ff19cac0'.
- A 'Mesh Name' section with a text input field containing 'Dwarven Shoulder Pads'.
- A checkbox labeled 'Mesh UUID Only' which is checked.
- An 'Upload' button.
- A 'Submit Mesh' button at the bottom.

Adding Other Meshes

BG3 Equipment Generator

Item Information

Back

Non-Tintable Item Name: Boots

Tintable Item Name: Tintable Boots

Item Description: Some very fancy tall boots.

Icon: A:\Mod Files\BootsMod\mnm\footwearicon.DDS

Equipment Type: Armor Item Type: Footwear Item Subtype: Leather Boots

Item Weight: 0.55

Value: 1

Rarity: Common Uncommon **Rare** Very Rare Legendary

Set Stats

Visual Template Mesh

☒ Tintable ☒ Non-Tintable Color Preset + -

Material	Warning
Boots Material	

Mesh	Warning
boot l mesh	
boot r mesh	

Submit Item

Now that one boot is done, I added the other boot using the same material.

Removing a Mesh

If you want to remove a mesh, you can select the mesh in the **Mesh Table**, and click the [-] button.

Editing Stats Information

The screenshot shows a web application window titled "BG3 Equipment Generator" with a "Stats" tab. The interface has a dark purple background. On the left, there are input fields for "Armor Class", "Armor Class Ability", "Ability Modifier Cap", "Armor Type" (set to "Leather"), "Minimum Level" (set to "1"), and a "Unique" checkbox. On the right, there is a "Proficiency Groups" section with a list containing "LightArmor". At the bottom, there are two tables: "Boosts" (highlighted with a red border) containing "Skill(Acrobatics,1)" and "Passives" (highlighted with a blue border) containing "FastMovement". A "Submit Stats" button is at the bottom center.

Armor Class

Armor Class Ability

Ability Modifier Cap

Armor Type
Leather

Minimum Level
1

Unique
<input type="checkbox"/>

Proficiency Groups
LightArmor

Boosts
Skill(Acrobatics,1)

Passives
FastMovement

Submit Stats

By clicking on the **Set Stats** button, you can edit the object's **Stats** information. There are tables to add **boosts** and **passives** for your armor. In these tables, double click to enter in a boost or a passive. After typing it in, hit the enter key to submit it.

Getting Stats Using Norbyte's Search Engine

To find Boosts and Passives to use, you can go to:

<https://bg3.norbyte.dev/search>

Here you can search for a specific boost or passive. You can also search for an item to grab the stats from.

Getting Stats From Unpacked Files

Alternatively, these boosts and passives can be found in various files from the game. These files can be found by unpacking the **Shared.pak** file using the **Baldur's Gate 3 Modder's Multitool**. Go to

Utilities > Game File Operations > Unpack Game Files

and click the checkbox next to **Shared.pak**. Then hit **Unpack**. The stats files can be found at

[BG3 Modder's Multitool Folder]

\UnpackedData\Shared\Public\Shared\Stats\Generated\Data

Armor.txt

Weapon.txt

Passive.txt

And Many More!

Use **CTRL-F** to look for the words "Passive" or "Boost" to find some passives and boosts in the **Armor.txt** and **Weapon.txt**.

Getting Stats Using BG3 UTAM (Ultimate Tool for Amateur Modders)

If you do not want to unpack the Shared.pak, you can search through stats using Manolov's BG3 UTAM.

The package is hosted here:

<https://github.com/MANOLOV02/BG3-UTAM/releases/latest>

The instructions are here:

<https://www.nexusmods.com/baldursgate3/mods/9035?tab=description>

To start, download the program from the github link. After the program is downloaded, unpack the .zip file into a folder of your choice. Click the **BG3 UTAM.exe** to start the program.

In the upper left corner, click

Paks process > Processor

to open the **Processor** window. Here, you need to navigate to your BG3 installation's bin folder. This is located at

[BG3 Installation Folder]\bin

Choose where your mods folder is located, and where you would like any BG3 UTAM mods to be located. Then click **Process and Save Cache**. It will take a bit of time to go through the BG3 files. **Make sure not to interrupt this process.**

Once the process is finished, you can view the files without having to unpack them. To examine the statistics, go to:

Objects exploring > Stats explorer

This allows you to browse and find the specific stats you want to copy or use.

Hit **Submit Stats** to submit the stats to your item.

Please be aware: If you switch the item type, it will change the stats to match the new item. This will erase any stats you have added.

Submitting an Item

Hit the **Submit Item** button to add this item to the table. If your item is a **weapon**, a **shield**, or an **instrument**, set the **Visual Template** as a mesh in your **Mesh** table before submitting.

BG3 Equipment Generator

Back

Item Information

Non-Tintable Item Name

Example Sword


Item Description

An example of a sword.

Icon

n\TESTWeapons\ExampleSword_Files\mnm\examplesword_icon.png

...



Equipment Type

Weapon

Item Type

Melee Martial ...

Item Subtype

Shortsword

Item Weight

0.9

Value

1

Rarity

☐ Common

☐ Uncommon

☐ Rare

☒ Very Rare

☐ Legendary

Set Stats

☐ Tintable

☒ Non-Tintable

Color Preset

+

-

Visual Template Mesh

sword mesh

+

-

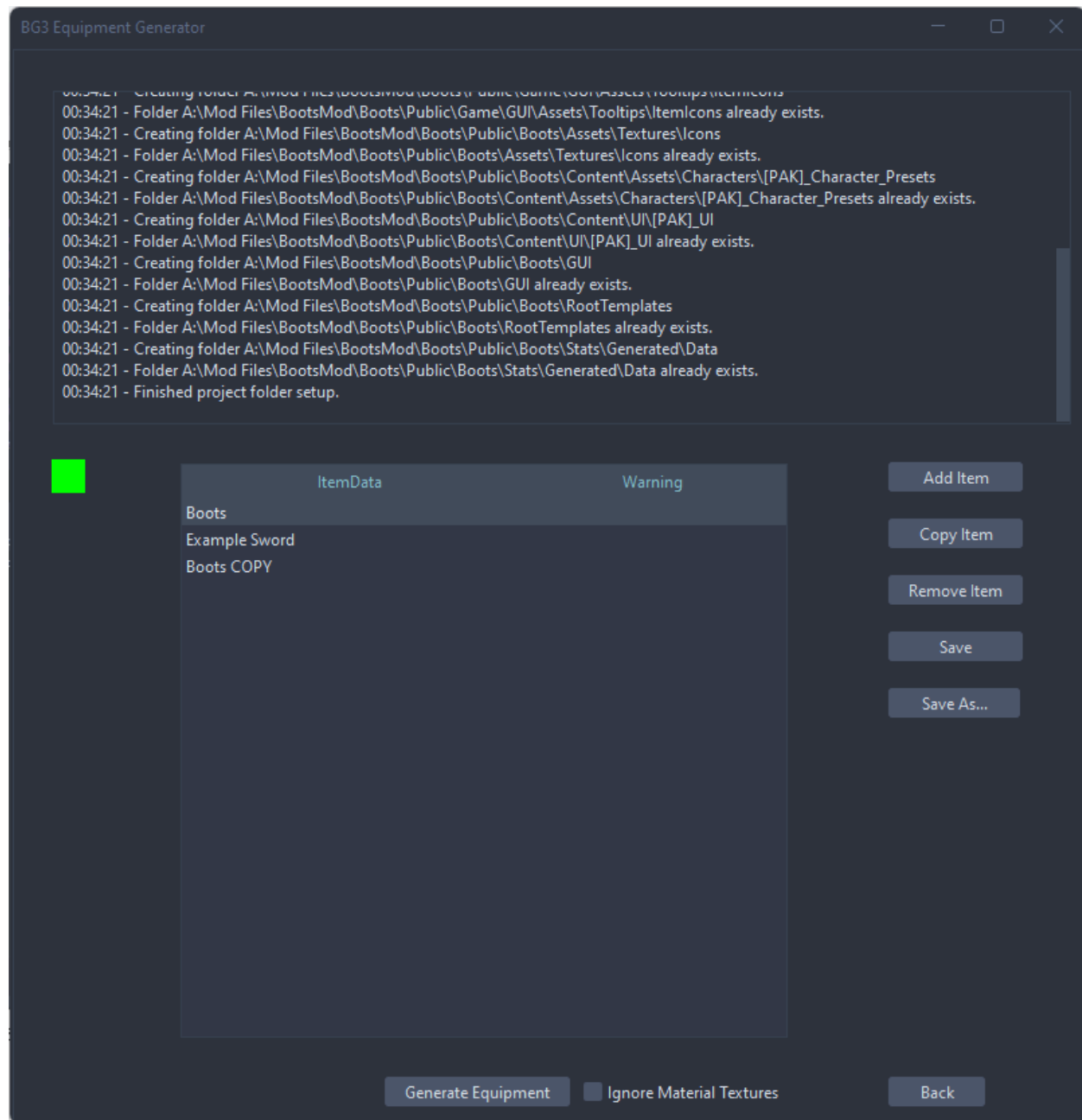
Material	Warning
leather material	
metal 1 material	
metal 2 material	

Mesh	Warning
sword mesh	

Submit Item

Copying an Item

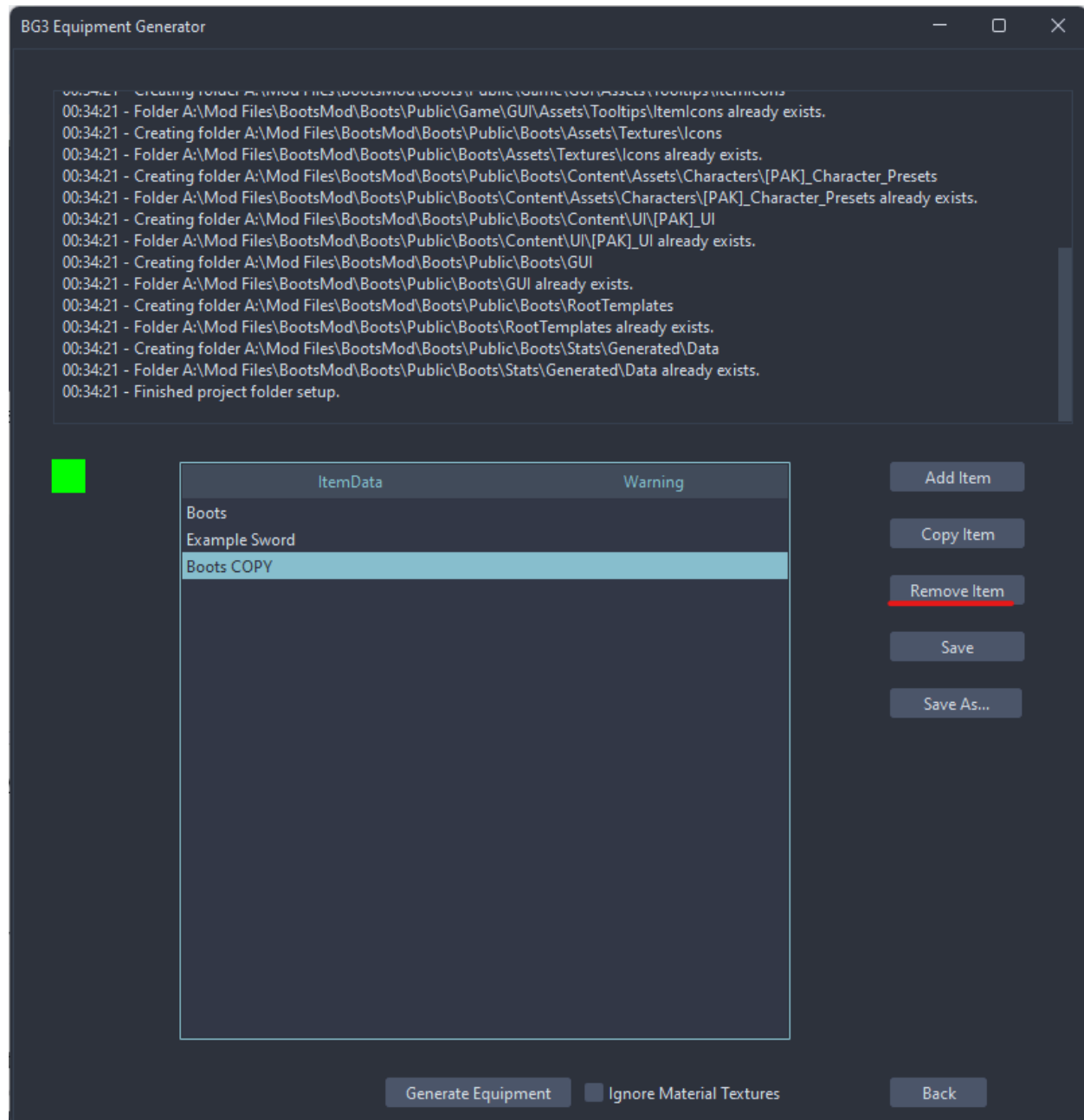
To copy an item, select the item and click the **Copy Item** button.



A new copy is made. To **edit** the item, double click on it.

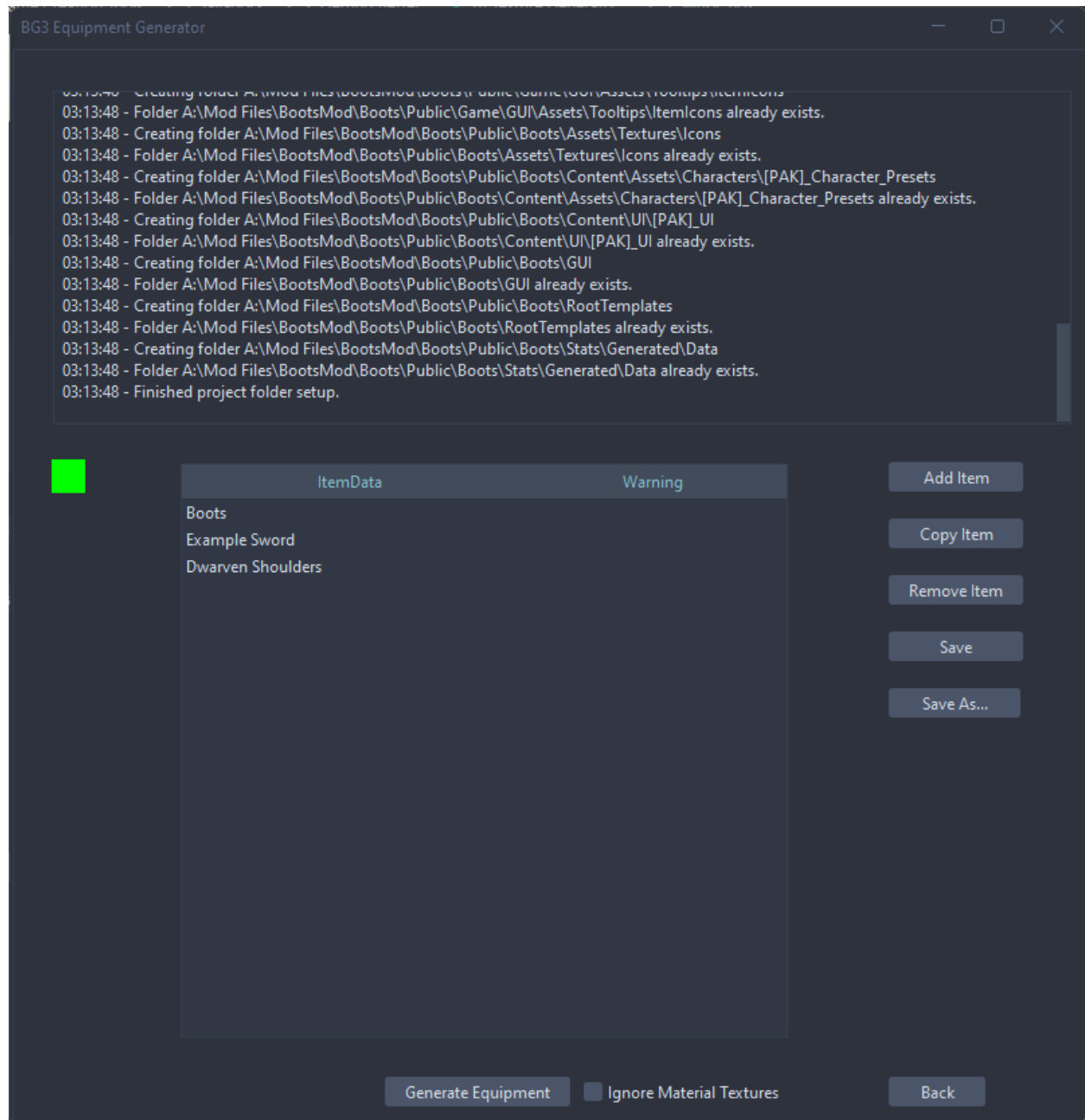
Removing an Item

To remove an item, select the item you would like to remove, and click the **Remove Item** button.



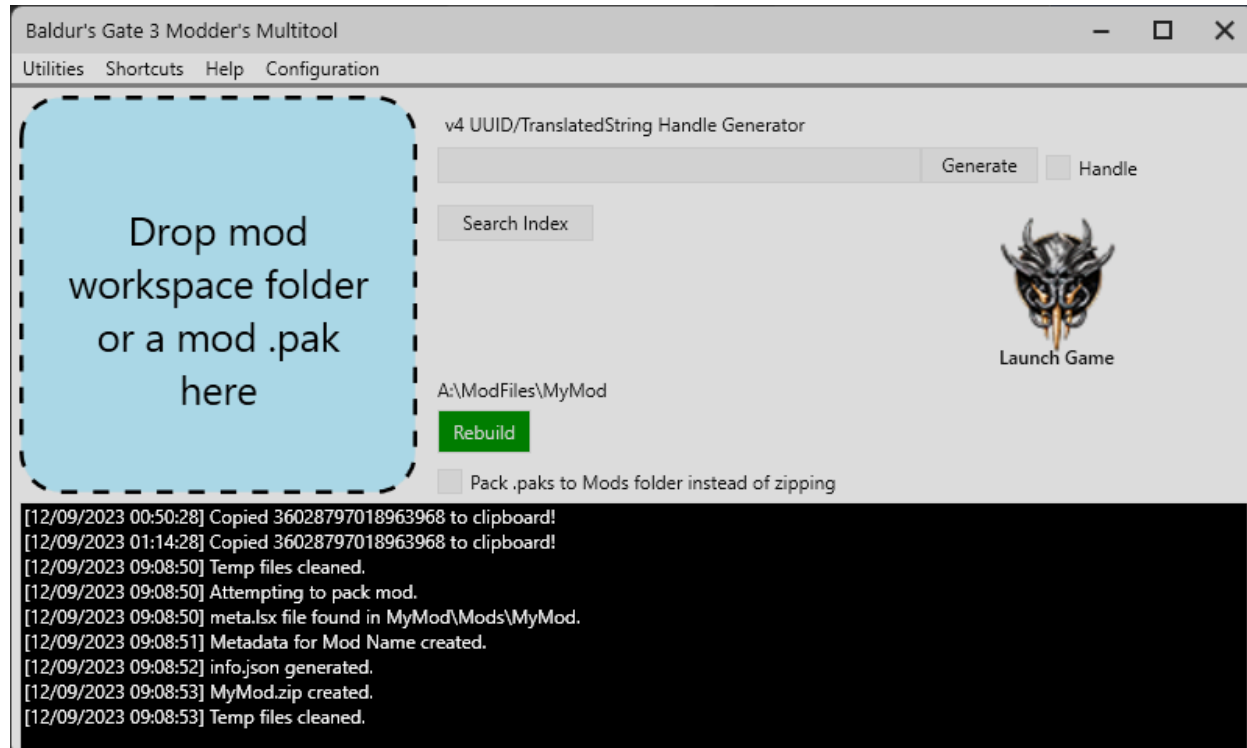
Generating the Equipment Files

Click the **Generate Equipment Files** to create the mod files.



While the program is working, the **green square** will turn **red**. It can take some time, and sometimes it will turn green for a moment before turning red again. Wait for the square to be green for a bit before continuing to the next step.

Packing the Mod Folder



After the files are done generating, navigate to your project folder and look for the created mod folder. With the **Baldur's Gate 3 Modder's Multitool** open, drag the folder and drop it onto the blue square that says “**Drop mod workspace folder or a mod .pak here.**” The mod will automatically be zipped to be used in the mod manager of your choice.

Equipment Mod In Game Location

This program puts your files in the tutorial chest. It would be good to have a mod to summon the chest, such as this one:

<https://www.nexusmods.com/baldursgate3/mods/457>

The files for the location of the items are located at:

[YourMod]\Public\[YourMod]\Stats\Generated\Data\Armor.txt

[YourMod]\Public\[YourMod]\Stats\Generated\Data\Armor_MSK.txt

[YourMod]\Public\[YourMod]\Stats\Generated\Data\Objects.txt

[YourMod]\Public\[YourMod]\Stats\Generated\TreasureTable.txt

LATEST VERSION:

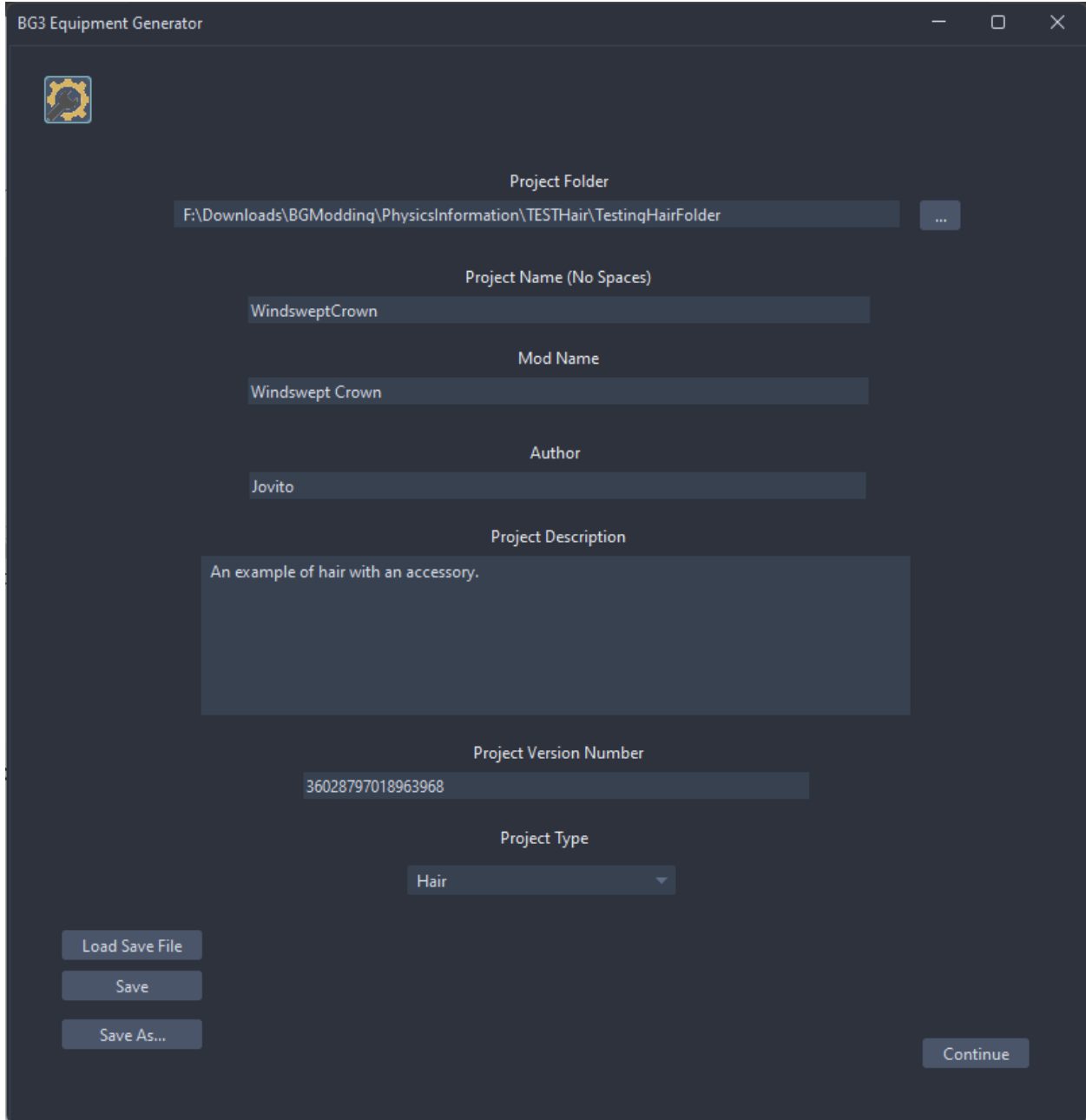
<https://github.com/Byte0Bard/BG3-Equipment-Generator/releases/latest>

Here, you can adjust how your equipment appears in game.
That's all! Now you can enjoy your new equipment mod!



Creating a Hair Mod

To create a hair mod, follow the [setting up the mod](#) instructions, but choose **Hair** as the **Project Type**.



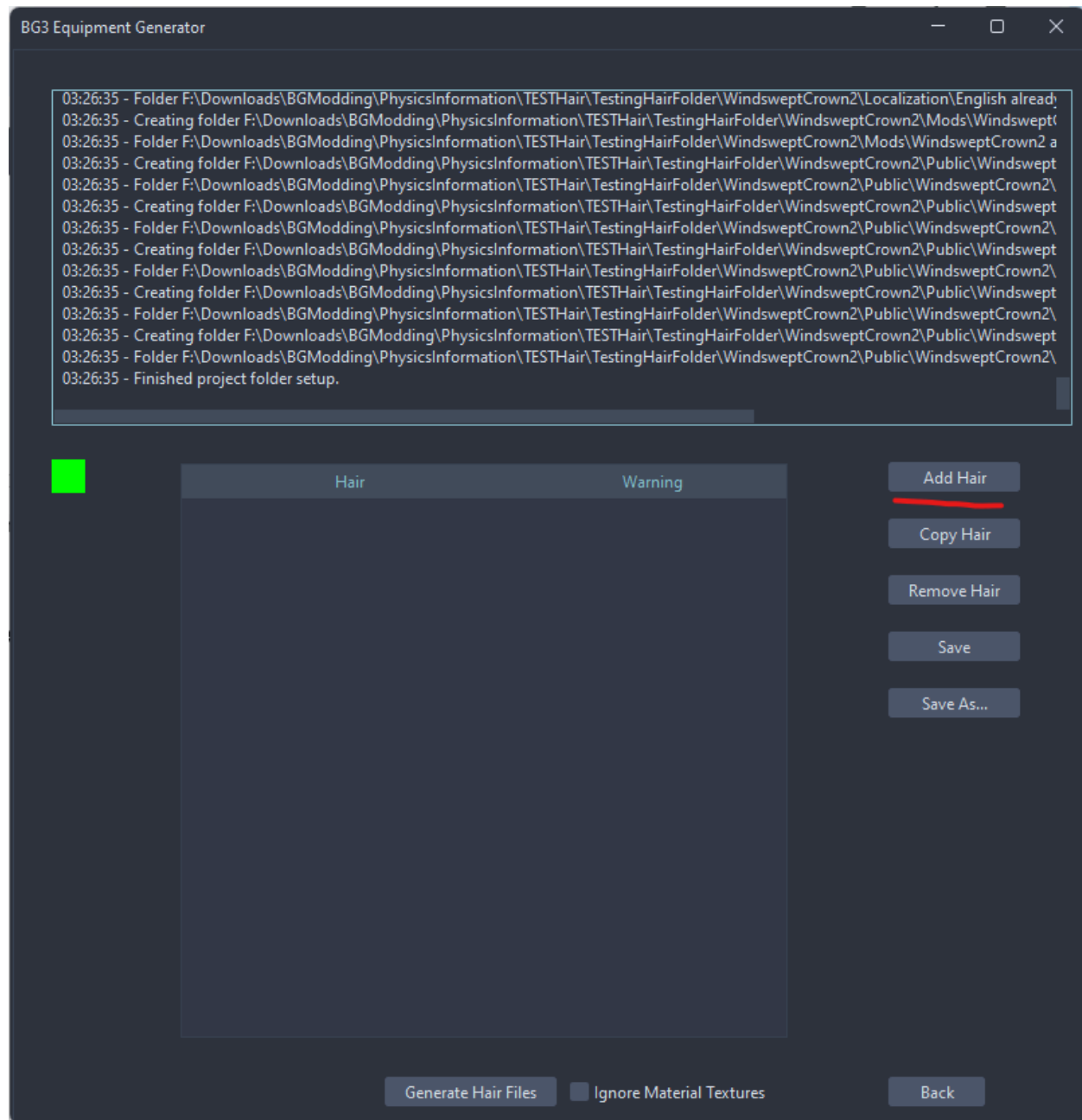
The screenshot shows the BG3 Equipment Generator application window. The window has a dark theme and a title bar with standard Windows window controls. The main area contains a form for creating a new project. The form fields are as follows:

- Project Folder:** A text input field containing the path `F:\Downloads\BGModding\PhysicsInformation\TESTHair\TestingHairFolder` and a browse button (three dots).
- Project Name (No Spaces):** A text input field containing `WindsweptCrown`.
- Mod Name:** A text input field containing `Windswept Crown`.
- Author:** A text input field containing `Jovito`.
- Project Description:** A text area containing the text `An example of hair with an accessory.`
- Project Version Number:** A text input field containing `36028797018963968`.
- Project Type:** A dropdown menu with `Hair` selected.

At the bottom left, there are three buttons: `Load Save File`, `Save`, and `Save As...`. At the bottom right, there is a `Continue` button.

Adding a New Hair

To add a new hair, click the **Add Hair** button.

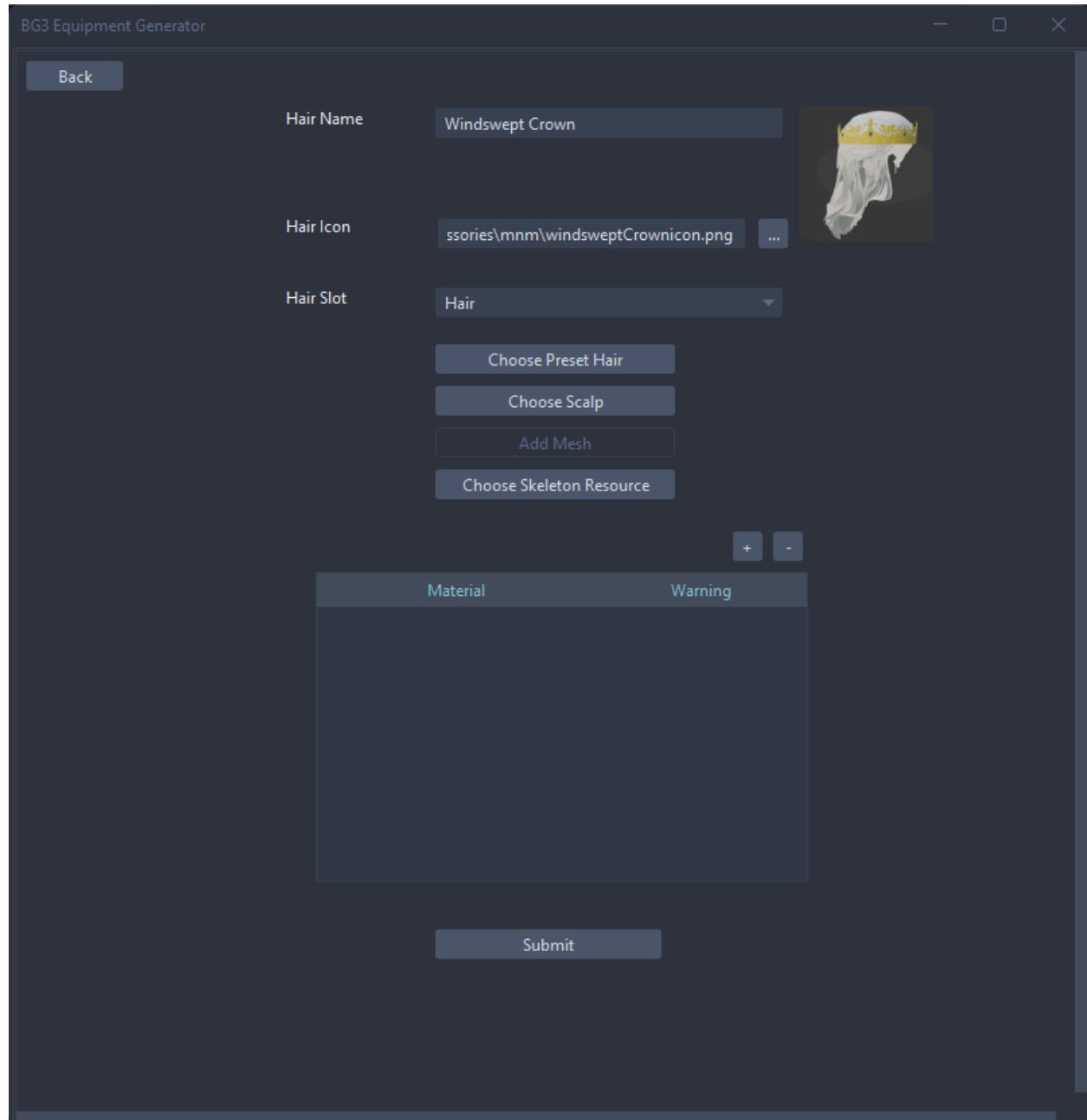


Filling Out Hair Information

In the **Hair Name** text field, put the name of your hair. This will be the display name for the hair that shows up in the game.

To search for an image to be the hair icon, click the [...] button next to the **Hair Icon** text field.

Choose a slot for the hair in the **Hair Slot** dropdown box. **Currently, only the Hair slot is available. In the future, a Beard slot will be added.**



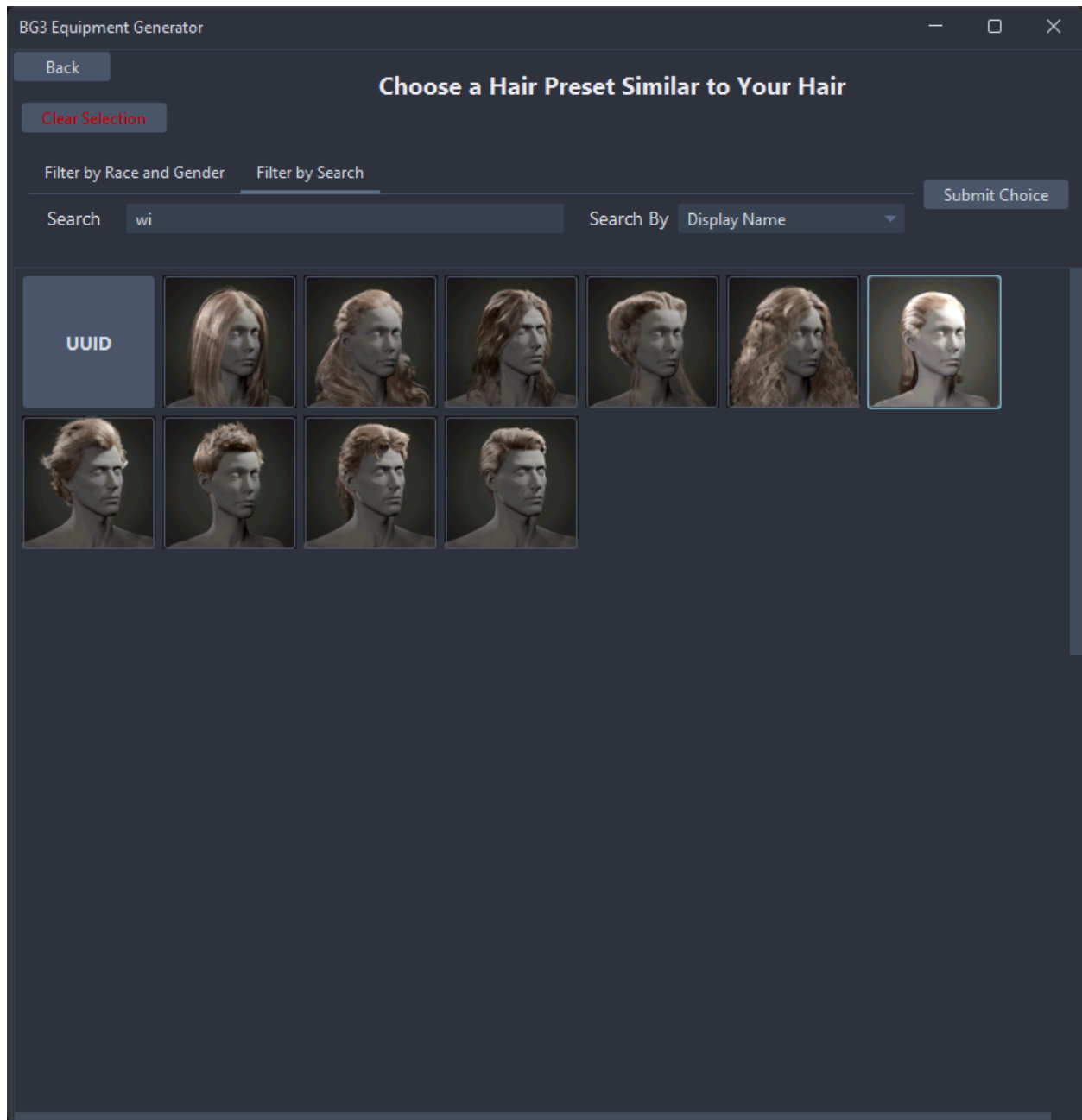
The screenshot shows the 'BG3 Equipment Generator' application window. The 'Hair' configuration section is active, featuring a 'Back' button, a 'Hair Name' field with 'Windswept Crown', a 'Hair Icon' field with a file path and a selection button, and a 'Hair Slot' dropdown set to 'Hair'. Below these are four buttons: 'Choose Preset Hair', 'Choose Scalp', 'Add Mesh', and 'Choose Skeleton Resource'. A table with two columns, 'Material' and 'Warning', is visible below the buttons, with a '+' and '-' button above it. A 'Submit' button is at the bottom.

Material	Warning
----------	---------

Choosing a Hair Preset

BG3 Hair requires a preset to be chosen. The **Preset Hair** is an in-game hair that most closely resembles your custom mesh hair. To choose a hair, click the **Choose Preset Hair** button.

Choosing Hair via Toggle with Icon



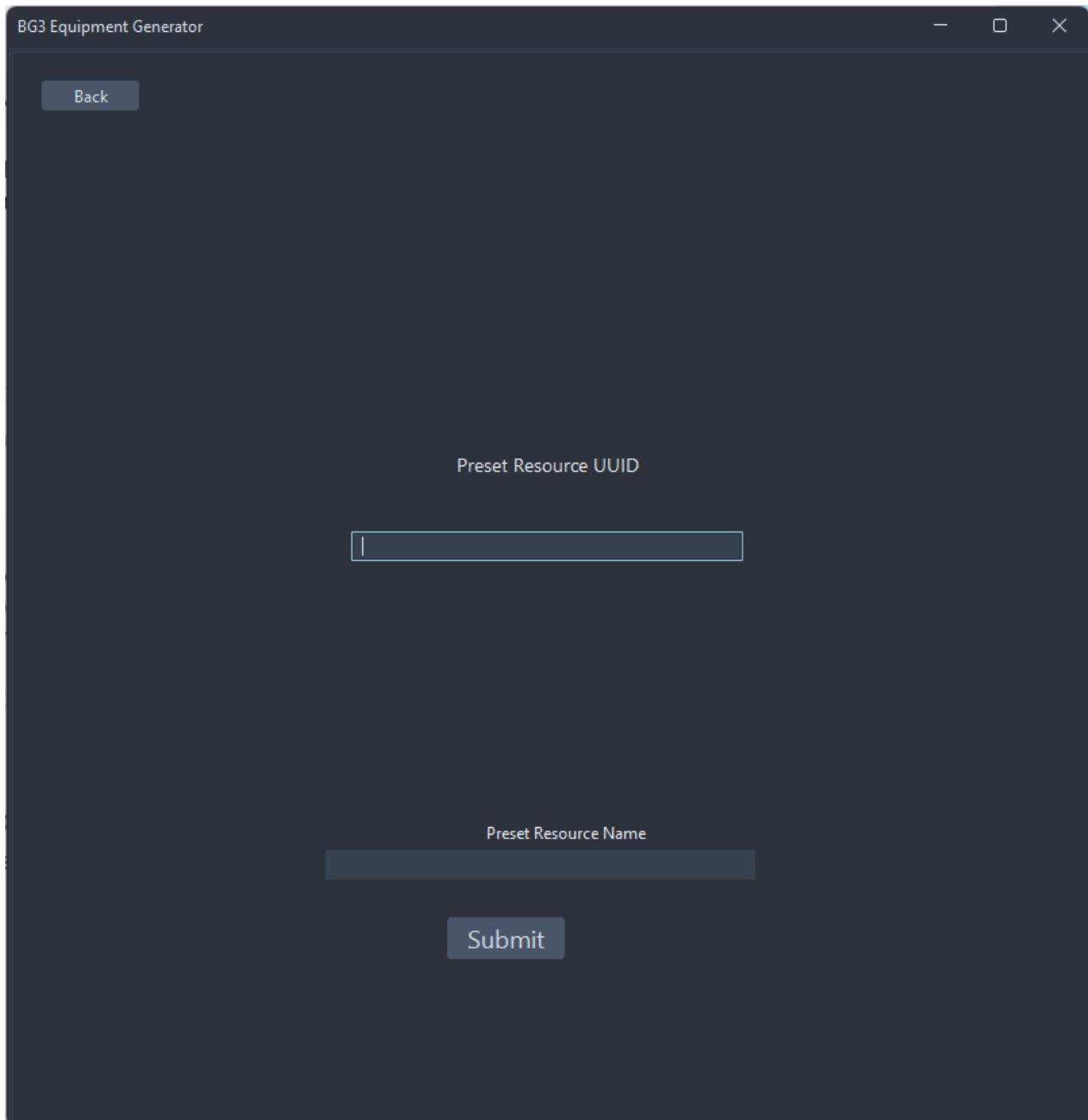
The preset hair can be found using **Filter by Race and Gender**, or **Filter by Search**.

The **Filter by Race and Gender** allows you to find a hair based on the race and gender most closely associated with the hair preset you are looking for. **Some hairs have the same name, but different UUIDs for different races.** If you want to find a hair preset that will work on a specific race, the **Filter by Race and Gender** method will work for you.

The **Filter by Search** allows you to find a hair preset by typing in the **display name**, the **hair ID**, or the **UUID** of the hair.

Choosing Hair via UUID Toggle

If you can't find the hair you're looking for, you can use the **UUID** toggle button to manually enter a UUID.



The screenshot shows a web application window titled "BG3 Equipment Generator". In the top-left corner, there is a "Back" button. The main content area is dark-themed. In the center, there is a label "Preset Resource UUID" above a text input field. Below this, there is a label "Preset Resource Name" above another text input field. At the bottom center, there is a "Submit" button.

Enter the UUID in the text field under the words **Preset Resource UUID**. Enter a preset name in the **Preset Resource Name** text field. **This name can be anything you choose; it doesn't have to match the actual mesh name linked to the UUID.**

After you've typed in your UUID and name, click the **Submit** button.

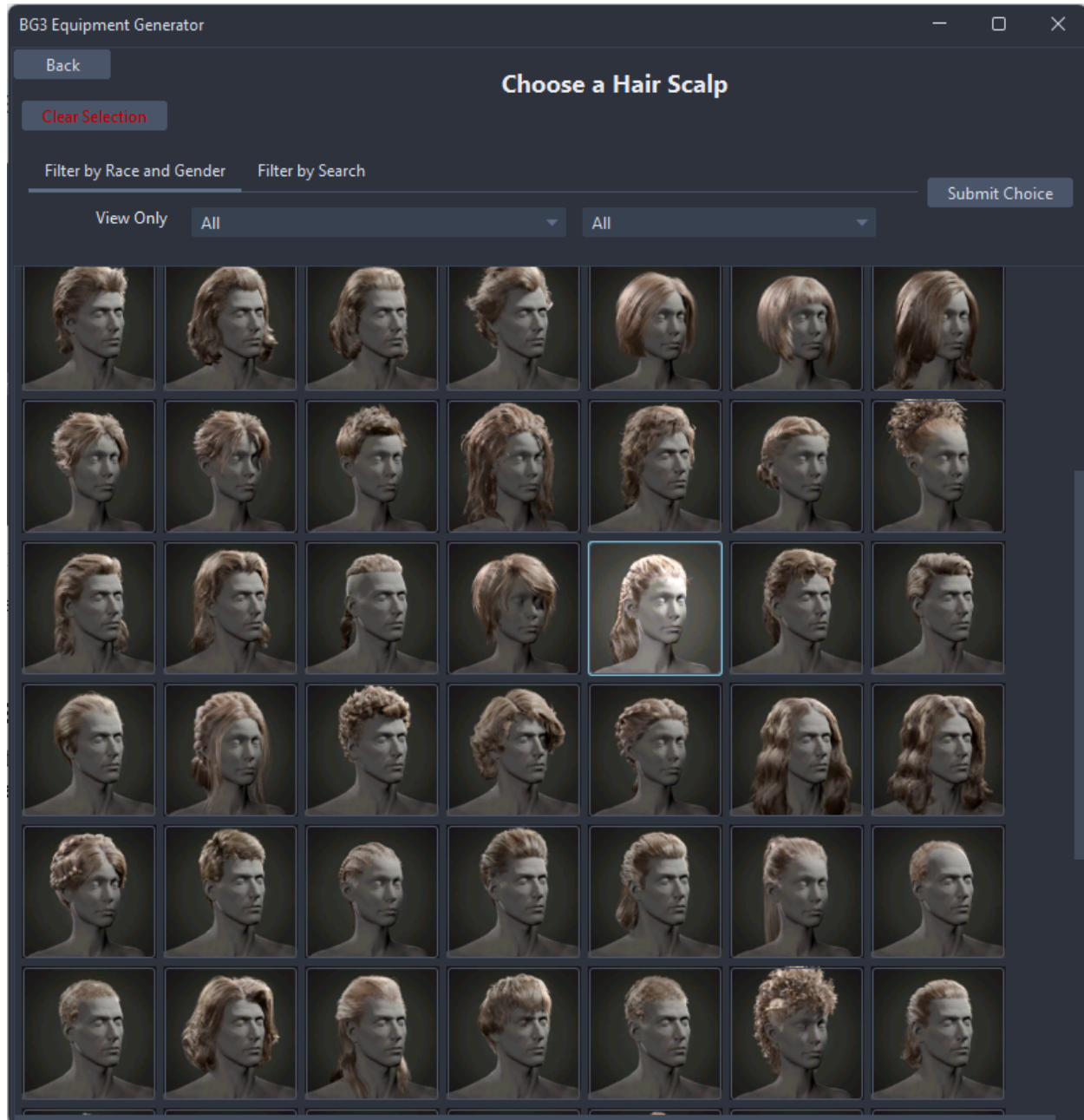
Submitting a Preset Resource Choice

After choosing a preset resource, click the **Submit Choice** button to submit the choice. The name of the chosen preset resource will show up in **green** next to the button.

The screenshot shows the 'BG3 Equipment Generator' application window. At the top left is a 'Back' button. The main interface has three input fields: 'Hair Name' with the value 'Windswept Crown', 'Hair Icon' with the file path 'ssories\mnm\windsweptCrownicon.png' and a file selection icon, and 'Hair Slot' with a dropdown menu set to 'Hair'. To the right of these fields is a preview image of a white hood with a gold crown. Below the input fields are four buttons: 'Choose Preset Hair', 'Choose Scalp', 'Add Mesh', and 'Choose Skeleton Resource'. To the right of the 'Choose Preset Hair' button, the word 'Windswept' is displayed in green. At the bottom of the window is a 'Submit' button. A modal window is open in the foreground with two tabs: 'Material' and 'Warning'. The 'Material' tab is active, and the 'Warning' tab is visible. The modal window is empty.

Choosing a Scalp Preset

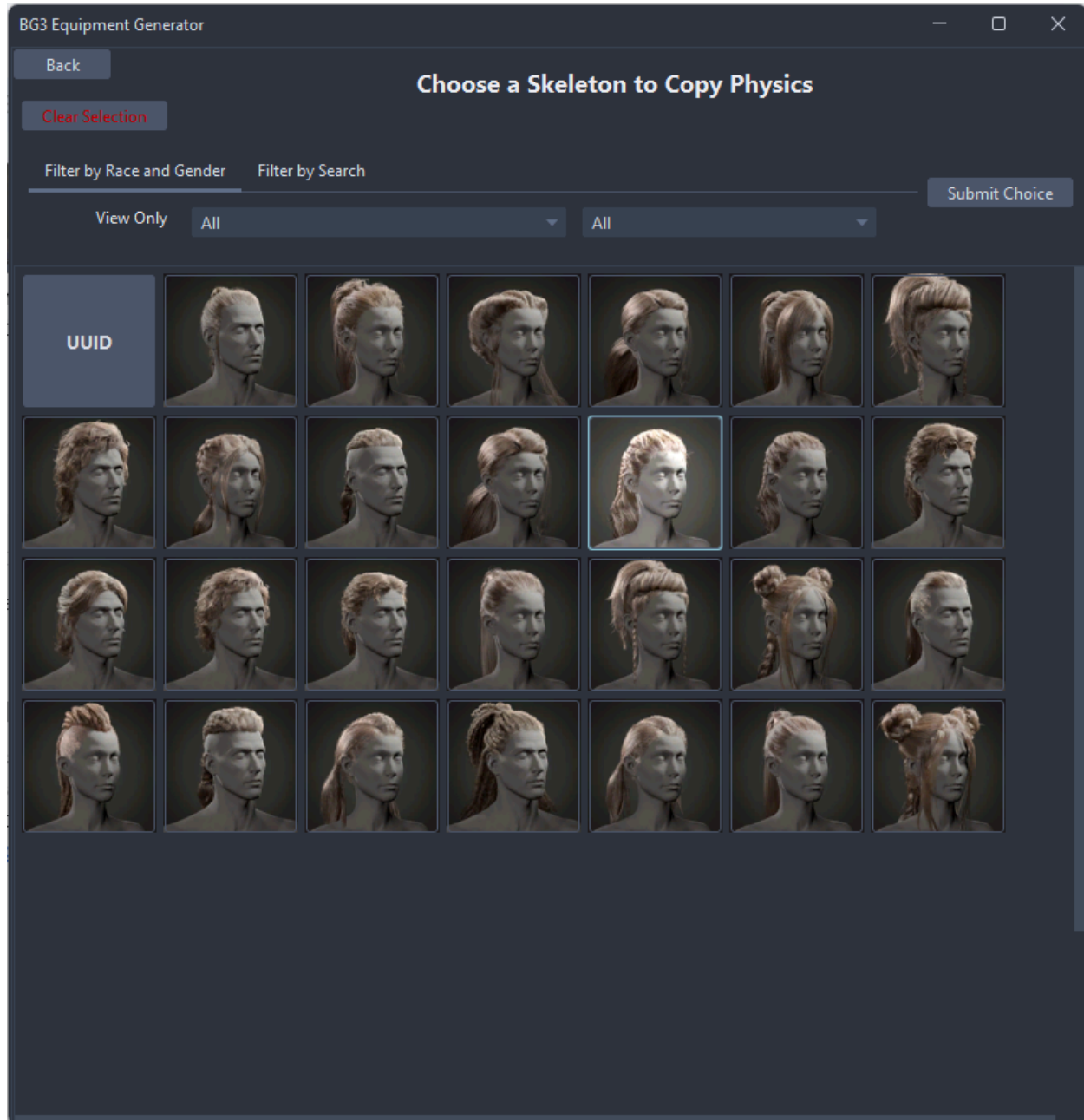
A **scalp preset** is a hair that has a scalp that most closely matches your mesh. To choose a scalp preset, click the **Choose Scalp** button. The process is the same as [choosing a preset hair](#).



To submit the scalp choice, click the **Submit Choice** button. The name of the scalp preset will appear in **green** next to the **Choose Scalp** button.

Choosing a Skeleton Resource

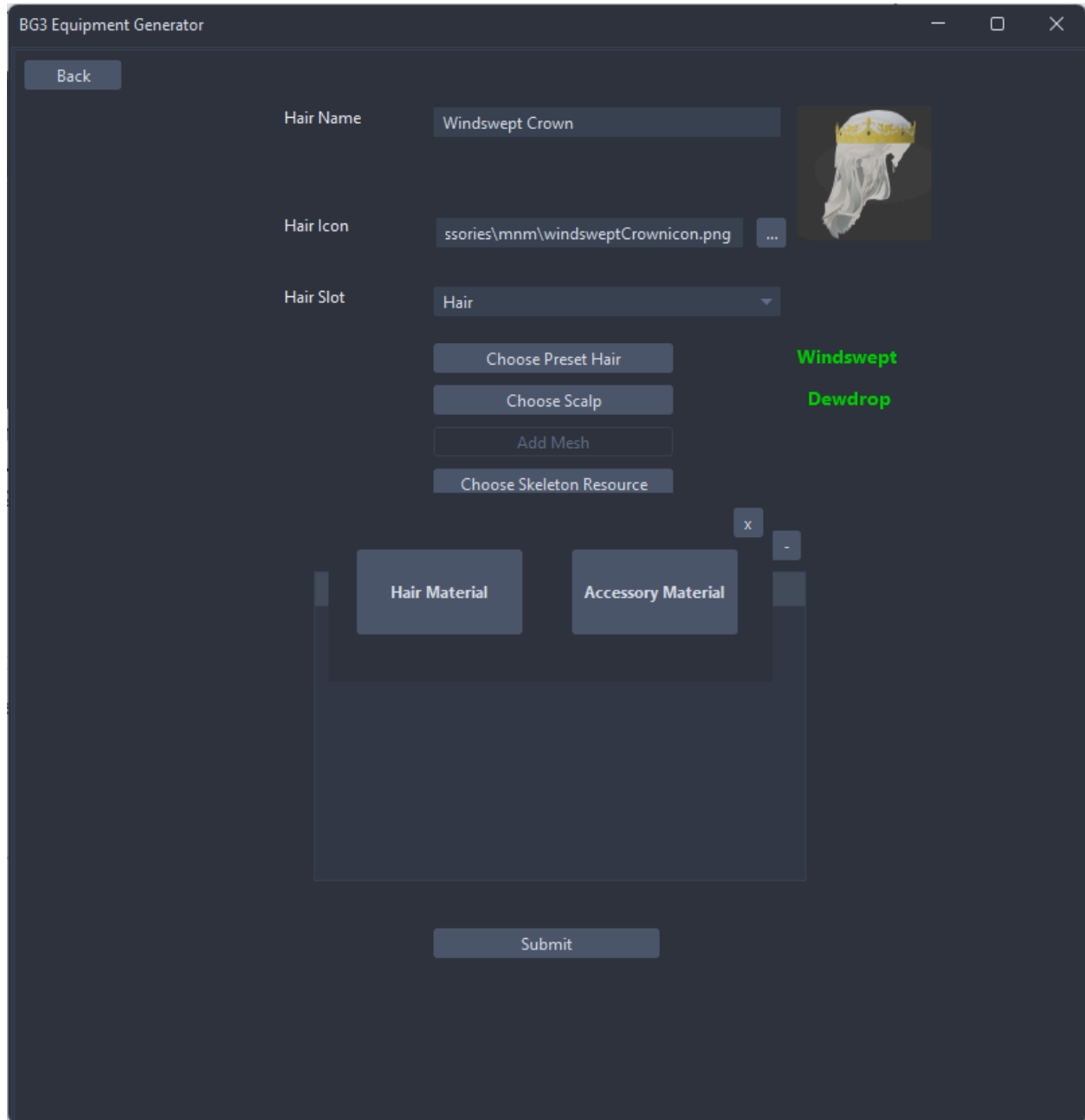
The skeleton resource only needs to be chosen if your mesh is using physics. It is a hair that has physical properties similar to those in your mesh. It serves as a reference for defining the physics behavior in your mesh. Choosing a skeleton resource is the same process as [choosing a preset hair](#).



To submit the choice, click the **Submit Choice** button. The name of the mesh will appear in **green** next to the **Choose Skeleton Resource** button. The mesh I made does not have physics, so I will not be choosing a skeleton resource.

Adding a Hair Material

To add a new hair material, click the [+] button above the **materials** table. A window will pop up asking if this is a **Hair Material** or an **Accessory Material**. Click the **Hair Material** button.

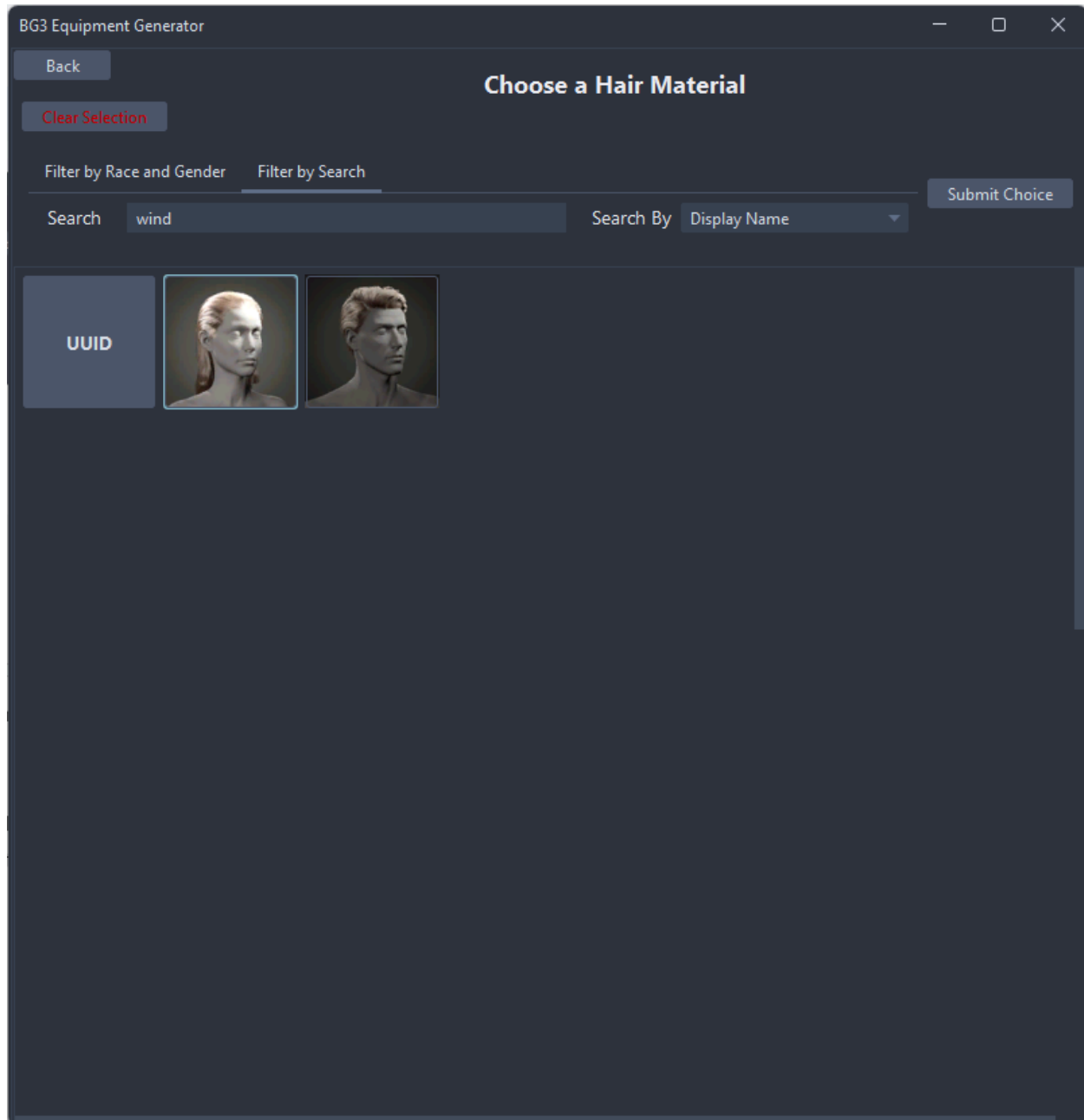


The screenshot shows the 'BG3 Equipment Generator' application window. At the top left is a 'Back' button. The form contains the following fields and controls:

- Hair Name:** A text input field containing 'Windswept Crown'.
- Hair Icon:** A text input field containing 'ssories\mnm\windsweptCrownicon.png' with a file selection icon (three dots) to its right. To the right of the text field is a preview image of a white crown with a yellow band.
- Hair Slot:** A dropdown menu currently set to 'Hair'.
- Buttons:** Below the dropdown are four buttons: 'Choose Preset Hair', 'Choose Scalp', 'Add Mesh', and 'Choose Skeleton Resource'.
- Material Selection:** A modal dialog box is open, showing two buttons: 'Hair Material' and 'Accessory Material'. The 'Hair Material' button is highlighted.
- Submit:** A 'Submit' button is located at the bottom center of the form.
- Labels:** To the right of the 'Choose Preset Hair' and 'Choose Scalp' buttons, the words 'Windswept' and 'Dewdrop' are displayed in green text.

Choosing a Hair Material from the Game

Choosing a hair material from the game is the same process as [choosing a preset hair](#). You can find hair material by searching the toggle buttons, or by filling out the **UUID** toggle button. Once you find a suitable material, click the **Submit Choice** button to add it to the **materials** table.



Creating a Custom Hair Material

To create a custom hair material, click the **Custom** toggle button. It will open a window that will allow you to fill out custom hair material information.

The screenshot shows a window titled "BG3 Equipment Generator" with a "Create Custom Material" dialog. The dialog has a "Back" button and a "Submit Choice" button. It contains three input fields: "Material Name", "Hair Type", and "Shader". The "Shader" dropdown is set to "/Materials/Characters/CHAR_Hair.ls". Below these fields is a "Search Parameters" input field. A list of material parameters is displayed, each with an "Enabled" checkbox and a text field:

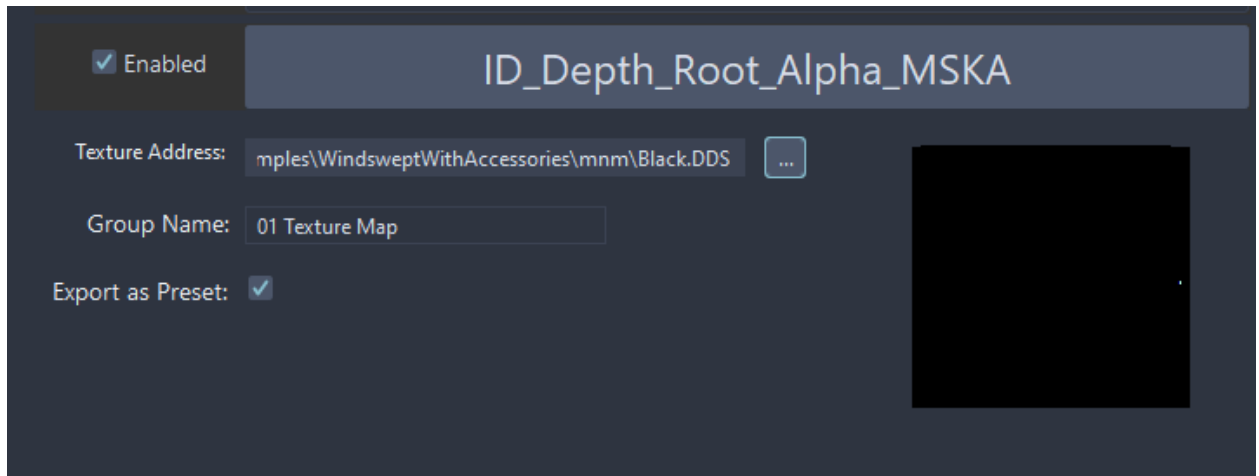
Enabled	Parameter Name
<input type="checkbox"/>	BaseColorVarMSK
<input checked="" type="checkbox"/>	ID_Depth_Root_Alpha_MSKA
<input type="checkbox"/>	Hair_Graying_Color
<input type="checkbox"/>	Highlight_Color
<input type="checkbox"/>	Hair_Color
<input type="checkbox"/>	HairSoupleness
<input type="checkbox"/>	BaseColorVar
<input type="checkbox"/>	_OpacityFade
<input type="checkbox"/>	Graying_Intensity
<input type="checkbox"/>	Roughness

Put the name of your material in the **Material Name** text field. The **Hair Type** is a number representing the hair type. There are many different hair types, but I've been entering **18**. The **Shader** dropdown box is where the shader path goes. **If the shader you need isn't available in the editable dropdown menu, you can manually enter the shader's path.**

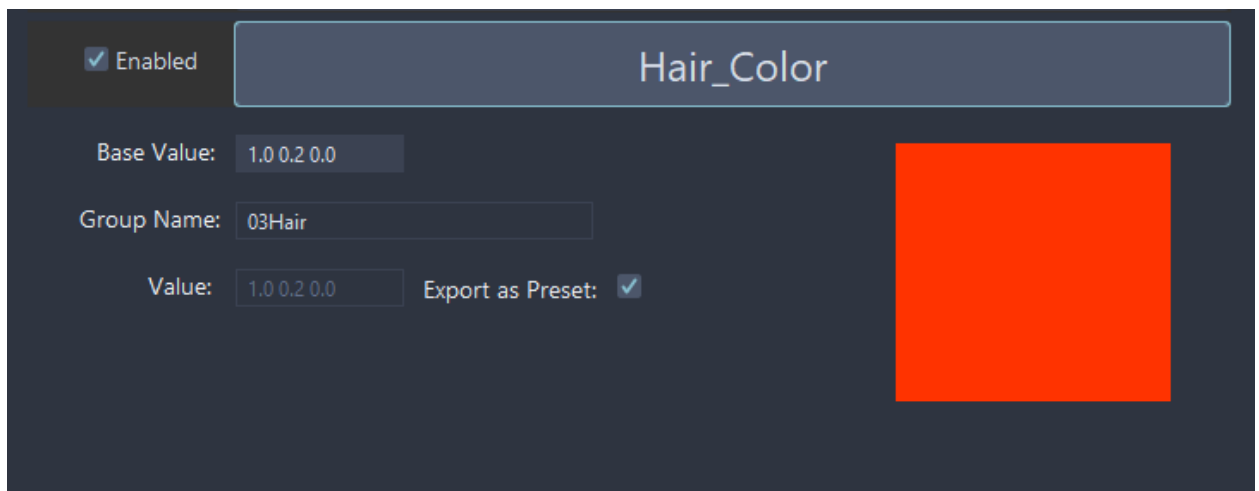
The scroll panel below the main information contains **hair material parameters**. To **enable** or **disable** a parameter, click the **Enable** check box next to the desired parameter. To change the parameter, click the associated button to open a panel with the relevant information.

There are three kinds of parameters:

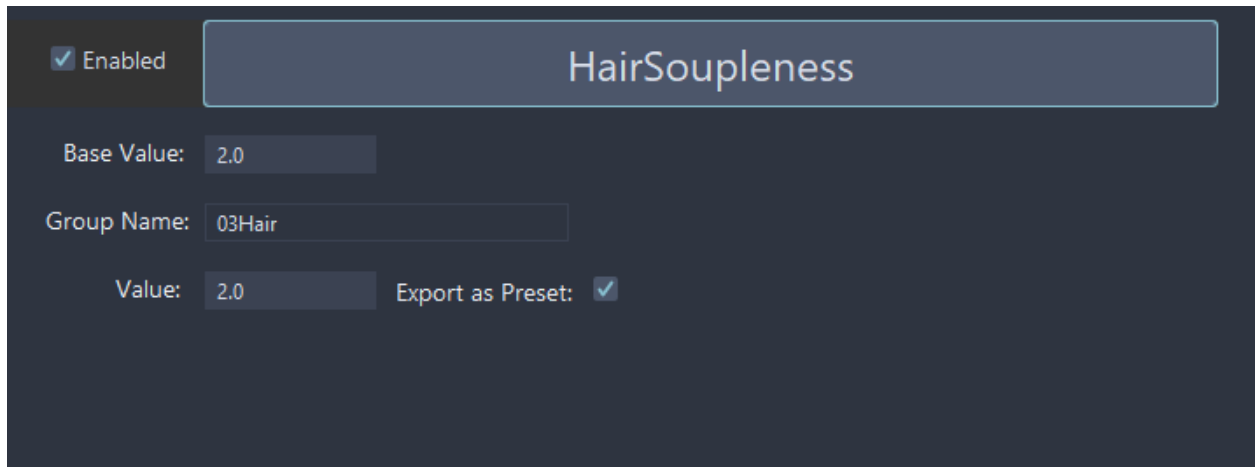
1. Texture Parameter - This parameter takes a URL to a texture.



2. Color Parameter - To set this parameter, you need to provide color information. You can do this in one of two ways: either by manually adjusting the numerical values associated with the parameter or by clicking the color box to open a color picker and selecting a color.



3. Scalar Parameter - These parameters adjust aspects of the material like hair frizz or hair suppleness.



The screenshot shows a dark-themed user interface for configuring a material property. At the top left, there is a toggle switch labeled "Enabled" which is currently turned on. To the right of this is a large, light-blue header box containing the text "HairSoupleness". Below the header, there are three input fields: "Base Value:" with a value of "2.0", "Group Name:" with a value of "03Hair", and "Value:" with a value of "2.0". To the right of the "Value:" field is a checkbox labeled "Export as Preset:" which is also checked.

Property	Value
Enabled	<input checked="" type="checkbox"/>
Base Value	2.0
Group Name	03Hair
Value	2.0
Export as Preset	<input checked="" type="checkbox"/>

After entering the information for the custom material, click the **Submit Choice** button on both the **Custom Material** page and the following **Hair Material** page.

Adding an Accessory Material

Sometimes you have an accessory as part of the hair mesh. If you don't want this accessory's material to be affected by the changing colors of the hair, then you'll want to make an **accessory material** instead of a **hair material**. To create an **accessory material**, click the [+] button above the **materials** table. When the window pops up asking if you want to create a hair material or an accessory material, choose the **Accessory Material** button. This will take you to the **Accessory Material** page.

The screenshot shows the 'Create Custom Material' window in the BG3 Equipment Generator. The window has a title bar with the text 'BG3 Equipment Generator' and standard window controls. Inside, there's a 'Back' button in the top left. The main title is 'Create Custom Material'. Below this, there are three input fields: 'Material Name' with the value 'Crown Material', 'Hair Type' with the value '18', and 'Shader' with a dropdown menu showing '.haracters/CHAR_BASE_AlphaTest.lsf'. A 'Submit Choice' button is in the top right. Below these fields is a 'Search Parameters' input field. The main content area is divided into two sections. The first section has an 'Enabled' checkbox (unchecked), a label 'MSKColor', and a 'Texture Address' field with the value 'WindsweptWithAccessories\mnm\Material_NM.png'. Below this is a 'Group Name' field with the value '01 Texture Map' and an 'Export as Preset' checkbox (checked). To the right of these fields is a small preview image showing a blue and white pattern. The second section has an 'Enabled' checkbox (checked), a label 'physicalmap', and a 'Texture Address' field with the value 'WindsweptWithAccessories\mnm\Material_PM.png'. Below this is a 'Group Name' field with the value '01 Texture Map' and an 'Export as Preset' checkbox (checked). To the right of these fields is a small preview image showing a red and white pattern.

Material Name: Crown Material

Hair Type: 18

Shader: .haracters/CHAR_BASE_AlphaTest.lsf

Search Parameters

Enabled MSKColor

Texture Address: WindsweptWithAccessories\mnm\Material_NM.png

Group Name: 01 Texture Map

Export as Preset: ☒

Enabled physicalmap

Texture Address: WindsweptWithAccessories\mnm\Material_PM.png

Group Name: 01 Texture Map

Export as Preset: ☒

Fill out the **Material Name** and **Hair Type** information. The hair type does not matter in this case. Choose a shader from the **Shader** dropdown. **If the shader you need isn't available in the editable dropdown menu, you can manually enter the shader's path.**

For most **Accessory Materials**, you would need three **Texture Parameters** enabled:

1. basecolor - The color of your accessory.
2. normalmap - A normal map makes flat surfaces look bumpy and detailed.
3. physicalmap - The physical map determines things like shine and ambient occlusion.

A detailed explanation of these maps can be found here:

https://bg3.wiki/wiki/Modding:Colour_map

Instructions on creating them can be found here:

https://bg3.wiki/wiki/Modding:Texture_formatting

Once you have filled out your **Accessory Material** information, click the **Submit Choice** button to add it to the **materials** table.

Editing a Material

To edit a material, **double click** on the desired material in the **materials** table. A window will open up to allow you to edit that material.

Adding a Mesh

After adding a material, the **Add Mesh** button should now be enabled. Click this button to start the process of adding a mesh.

Choosing Body Types

The first page shown after clicking the **Add Mesh** button, is the **Body Types** tab. In this section, you can select which races and genders your hairstyle will be visible for.

Race	Masc	Masc Strong	Fem	Fem Strong
Human	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tiefling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Elf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Drow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Half Elf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dwarf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Halfling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gnome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Githyanki	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Half Orc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Filling out Mesh File Information

To upload your .GR2 mesh file, select the **Upload Mesh** tab. Enter the **Name** of your mesh into the **Name** text field. To search for your mesh .GR2 file, click the [...] button next to the **Address** text field.

Once you have selected your mesh file and entered your mesh name, click the **Upload** button to automatically fill out the **bounds** and **submesh** information.

Back

Clear Mesh

Submit Finished Hair Mesh

Body Types Upload Mesh

Name Windswept Crown Mesh

Address ples\WindsweptWithAccessories\mnm\WindsweptCrown.GR2 ...

Upload Mesh

Min -0.1 0 -0.09

Max 0.1 1.94 0.16

Center -0 0.97 0.03

Radius 0.98

Auto Snap ☒

Windswept Apply to All

Submesh	LOD	Material
Mesh	0	Windswept
HAIR_HUM_F_Straight_Short_K_Mesh	0	Crown Material

If your mesh uses **Auto Snap**, click the **Auto Snap** checkbox.

In the **Submesh Table**, you can choose **Materials** for your mesh. If you have multiple objects in your mesh, you can select a different material for each mesh. You can also choose one material at the top and apply it to all the objects below. These objects in the list are the objects that make up your mesh.

The **LOD**, or Level of Detail, is using simpler shapes for things that are farther away. The closer and more detailed an object is, the lower the **LOD** number. I only have one **LOD** for my object, so I have a 0 in the **LOD** section, the lowest it can be.

If you want to create automatic **LOD**, there is a blender addon by Padme4000 at: <https://www.nexusmods.com/baldursgate3/mods/346?tab=files> as well as a number of other useful tools.

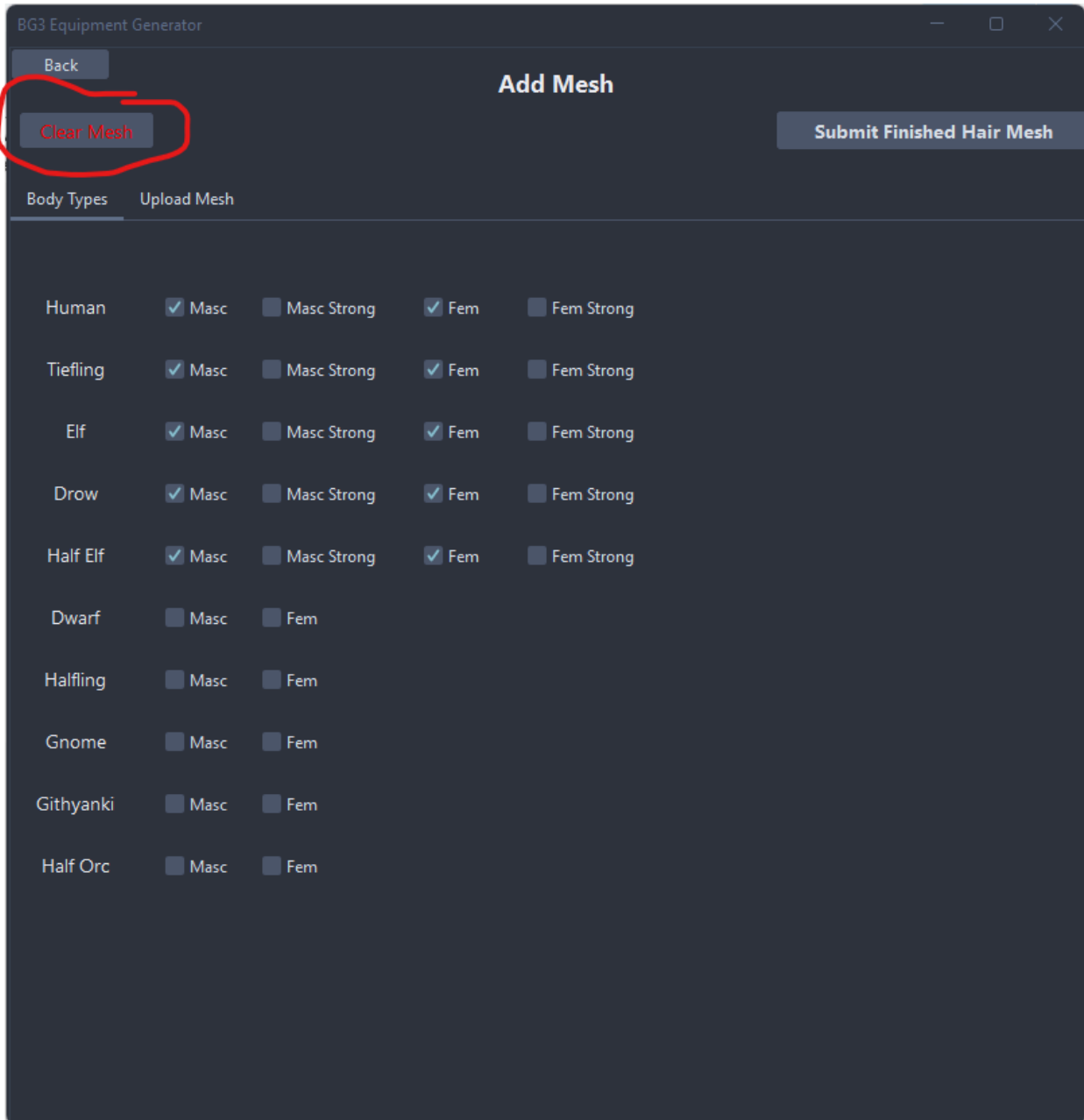
To submit your mesh, click the **Submit Finished Hair Mesh** button at the top right of the page. Your mesh name will appear in **green** next to the **Add Mesh** button. Because there is a mesh submitted, the **Add Mesh** button will change to **Edit Mesh**.

The screenshot shows the BG3 Equipment Generator interface. At the top left is a 'Back' button. The main configuration area includes:

- Hair Name:** Windswept Crown
- Hair Icon:** A file path 'ssories\mnm\windsweptCrownicon.png' with a selection button '...' and a preview image of a crown.
- Hair Slot:** A dropdown menu set to 'Hair'.
- Buttons:** 'Choose Preset Hair', 'Choose Scalp', 'Edit Mesh', and 'Choose Skeleton Resource'.
- Mesh Name:** 'Windswept Crown Mesh' displayed in green text.
- Material Table:** A table with two columns: 'Material' and 'Warning'. It contains one row: 'Windswept Crown Material'.
- Submit Button:** A 'Submit' button at the bottom.

Clearing a Mesh

To remove/clear a mesh, click the **Edit Mesh** button. This will open the screen with the mesh information. At the top left corner of the page, click the **Clear Mesh** button. This will clear all mesh information.

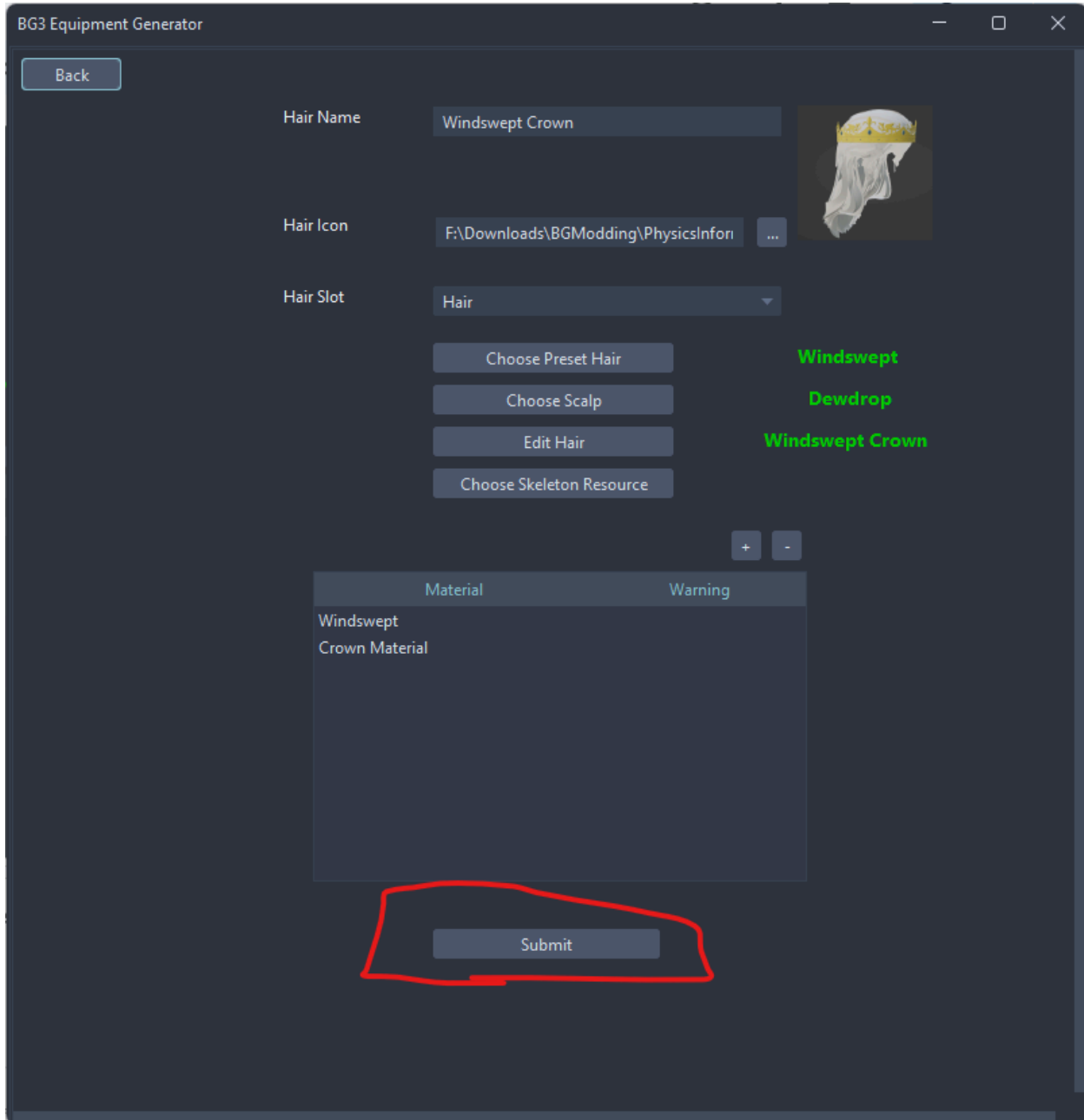


The screenshot shows the 'BG3 Equipment Generator' application window. The title bar includes standard window controls. The main header area contains a 'Back' button, the title 'Add Mesh', and a 'Submit Finished Hair Mesh' button. Below the header, there are two tabs: 'Body Types' (selected) and 'Upload Mesh'. The 'Body Types' tab displays a list of character races with checkboxes for gender and build options.

Body Type	Masc	Masc Strong	Fem	Fem Strong
Human	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tiefling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Elf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Drow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Half Elf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dwarf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Halfling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gnome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Githyanki	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Half Orc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Submitting Hair Information

After filling out all the hair information, click the **Submit** button at the bottom of the screen. This will add the hair to the **Hair Table**.

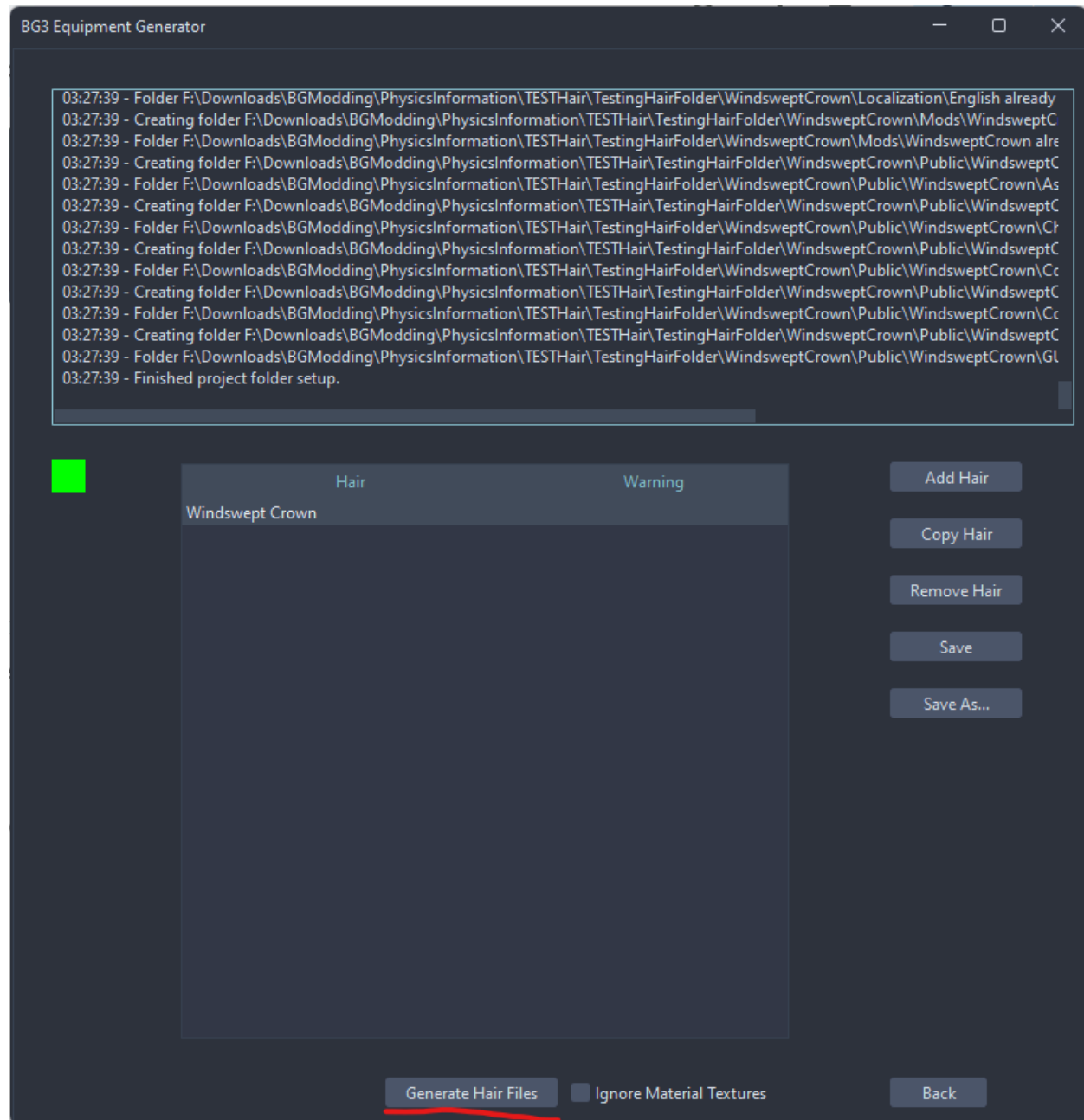


The screenshot shows the BG3 Equipment Generator interface. The window title is "BG3 Equipment Generator". The interface includes a "Back" button in the top left. The main form has the following fields and buttons:

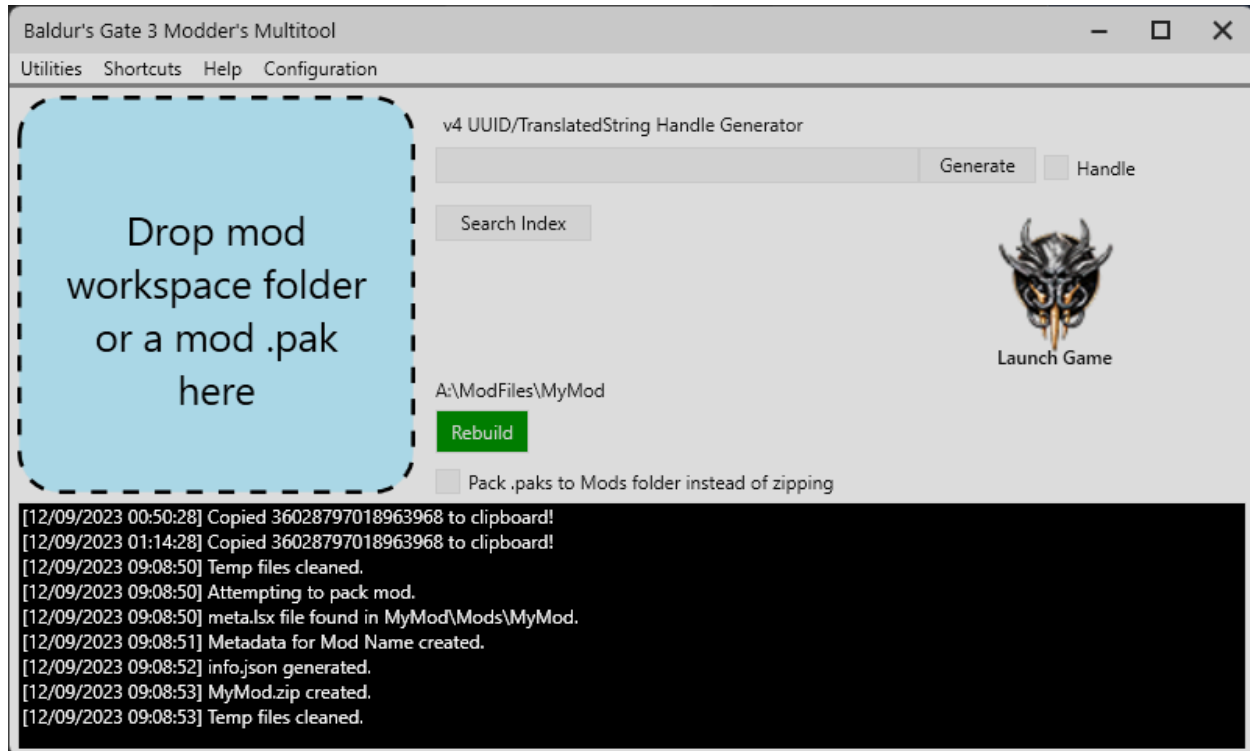
- Hair Name:** A text input field containing "Windswept Crown".
- Hair Icon:** A text input field containing "F:\Downloads\BGModding\PhysicsInfor" and a file selection button "...".
- Hair Slot:** A dropdown menu currently set to "Hair".
- Buttons:** "Choose Preset Hair", "Choose Scalp", "Edit Hair", and "Choose Skeleton Resource".
- Preview:** A small image of a crown on a head, and three green text labels: "Windswept", "Dewdrop", and "Windswept Crown".
- Table:** A table with two columns: "Material" and "Warning". It contains one row: "Windswept Crown Material".
- Submit Button:** A button labeled "Submit" at the bottom, which is highlighted with a red hand-drawn box.

Generating Hair Files

Once you have created the hairs and added them to the table, click the **Generate Hair Files** button to generate the hair mod.



Packing the Mod Folder



After the files are done generating, navigate to your project folder and look for the created mod folder. With the **Baldur's Gate 3 Modder's Multitool** open, drag the folder and drop it onto the blue square that says "**Drop mod workspace folder or a mod .pak here.**" The mod will automatically be zipped to be used in the mod manager of your choice.