

CUSTOM DYE GUIDE

by [AstralSprout](#)

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TOOLS AND RESOURCES

TOOLS YOU'LL NEED:

- Latest version of [lslib](#)¹
- Latest version of [BG3 Modder's Multitool](#)²
- A text editing program that can read XML, like [VSCode](#) or [Notepad++](#).
- [Mod Fixer](#). Yes, you need this or [ScriptExtender](#) for your mod to work.

BG3 uses sRGB (0-1) colour values, so here are two helpful resources for that:

- [Online Colour Converter](#) (set the conversion to sRGB (0-1)!))
- [Padme's BG3 Mini Tool](#) (use the "Tools" button to open the colour tool!)

GREAT RESOURCES:

- Padme4000 has a download for a [sample dye template](#) that is VERY helpful! This guide may be redundant because of it, but I'm writing this up for anyone who may be intimidated or confused by walls of code, or for anyone who needs a little more of a broken down explanation. You can use this guide along with her template if you don't wish to create all the folders and files yourself, though a lot of what I'm covering here will likely be in the notes of their template as well.
- [Colour Reference Dye](#) by EngelsXIII³. Useful for seeing how each colour parameter affects which parts of different armours. Download includes the .pak file. Buy this dye from:
 - Tutorial Chest on the Nautiloid
 - Act 1: Dammon, Arron, Derryth
 - Act 2: Dammon, Gith Trader
 - Act 3: Dammon
- For generating UUIDs, you can use the BG3 Modder's Multitool. (I'll explain UUIDs later on don't worry)

01. SETTING UP THE FOLDER STRUCTURE

If you've downloaded Padme's Dye Template, then everything should be set up properly and you can likely skip over this section unless you'd like an explanation of the folders/files.

- ★ **Note:** There are other folders and files used when creating mods, but I am only going over the ones necessary for creating custom dyes!
- ★ Keep in mind, all folders and files are **case sensitive**. They must be **exactly** the same in every instance or your mod will not work!!

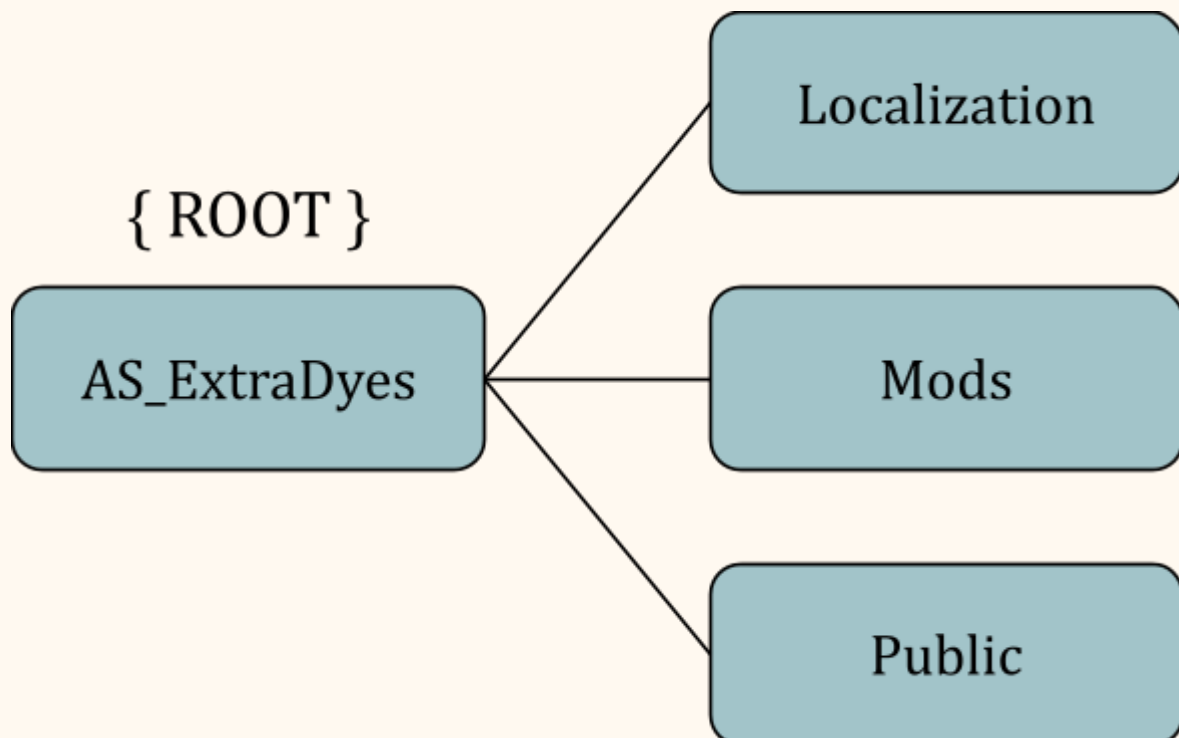
Your main mod folder is your **root folder**. Everything will go inside this folder. Give it the name of your mod.

For example, my root folder is named AS_ExtraDyes. "AS" being short for AstralSprout.

Inside your root folder, you'll want to add three new folders.

- Localization
- Mods
- Public

Your folder structure so far should look like this:



LOCALIZATION: This is where the text for your mod is stored, in the language(s) of your choice.

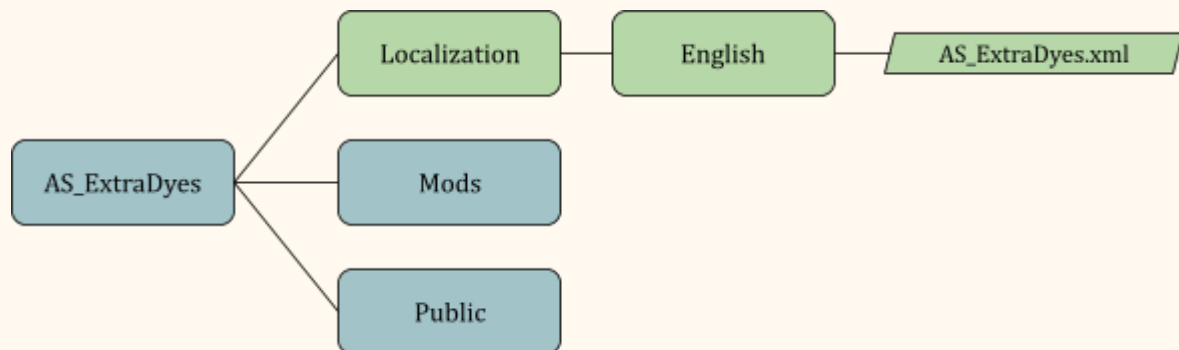
MODS: This will contain your mod's information in a meta.lsx file.

PUBLIC: This is where your mod's files will be stored.

Inside **Localization**, add a language folder. For example, English.

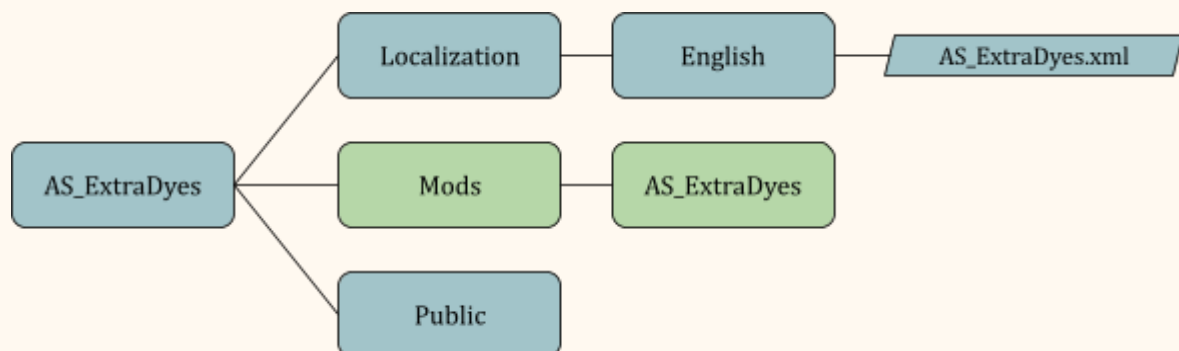
Then, inside the English folder, we're going to create a text file using your text editor of choice and save it as .xml. Name it the same as the root folder to keep things consistent.

So using my examples, we should have:



Next, open the **Mods** folder and create a folder with your mod name. For my example, that would be AS_ExtraDyes.

Inside that folder will be your meta.lsx. We'll come back to this later, so for now you should just have something like this:



Now for the **Public** folder. This will contain your mod's files.

First, we create a folder with your mod's name, similar to the previous step. For mine, that would be AS_ExtraDyes.

Inside that, we'll add three more folders:

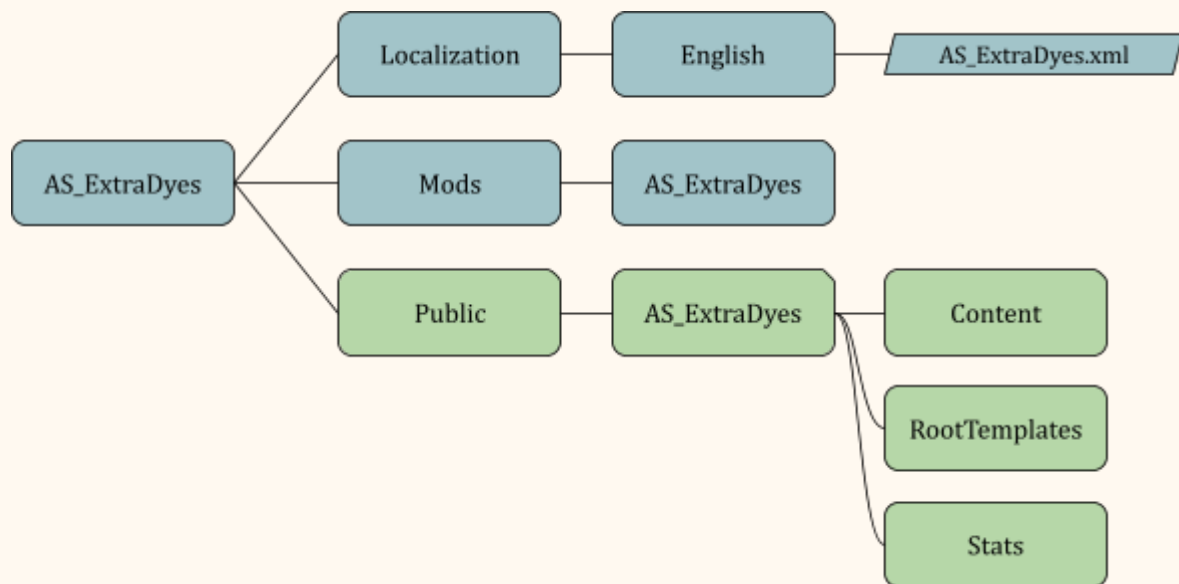
- Content
- RootTemplates
- Stats

CONTENT: This branch will contain each dye's colour information as a ColorPreset.

ROOTTEMPLATES: This is where you'll set up your dyes as actual items in the game.

STATS: This branch will contain information that will allow your dyes to show up and be used, and where they can be found, along with some other bits of information about them.

So far we should have this:



Here's where it'll get a little lengthy.

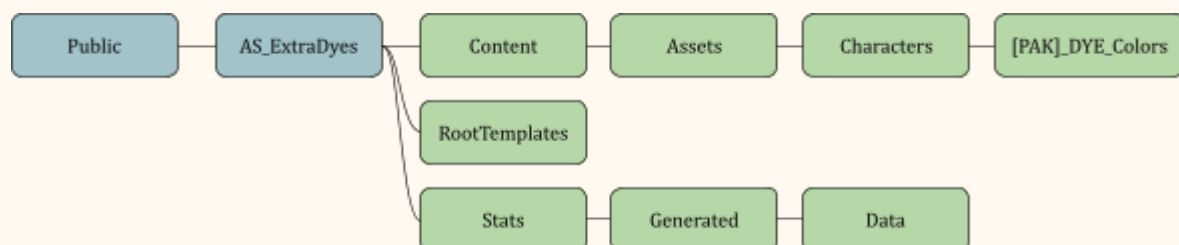
Inside the Content folder, you're going to create these folders:

```
Assets > Characters > [PAK]_DYE_Colors
```

Inside the Stats folder, you're going to create:

```
Generated > Data
```

Looking at the Public branch only, our folder structure should look like this now:



As far as our folder structure goes, we've finished! Whoohoo!

Now, we'll look at individual files.

02. FILE STRUCTURE AND CONTENT

LOCALIZATION

First up, we're going to jump back to our **Localization** folder. Open the English folder (or whatever language you chose), and then open the .xml file. For me, that's AS_ExtraDyes.xml.

Inside, the code should follow this structure:

```
<?xml version="1.0" encoding="utf-8"?>
<contentList>

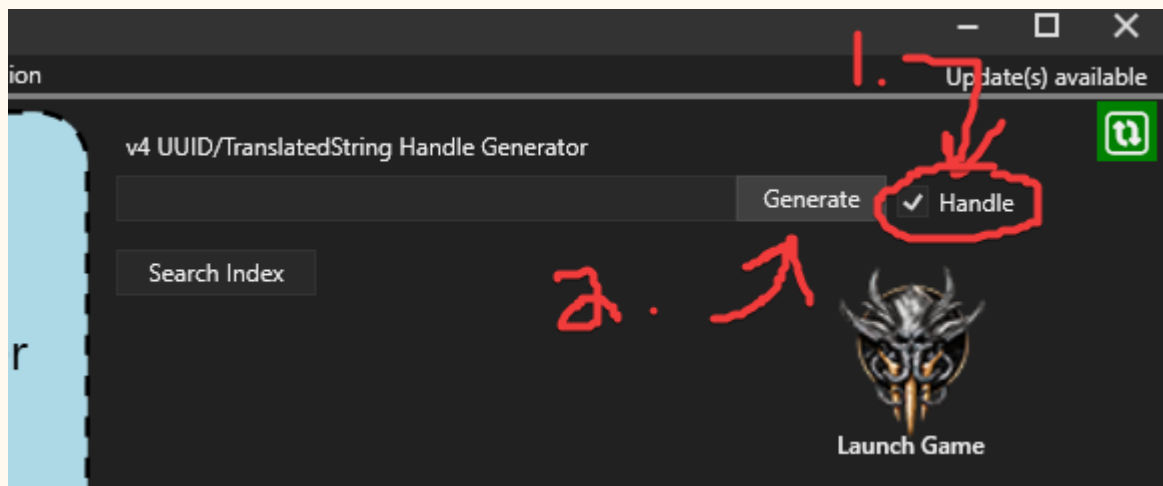
    <content contentuid="UID" version="1">Dye_Name</content>
    <content contentuid="UID" version="1">Description</content>

</contentList>
```

If you're creating this from scratch, you can copy+paste this piece of code into your file!

Each dye you create will need a unique ID for both the name and description. None of these strings should be the same or the text will not work properly!

To create unique IDs, simply use the BG3 Multitool:



Step 1. For localization files, make sure to check the "Handle" box.

Step 2. Click "Generate" to generate a UID!

Step 3. Repeat for every <content> string.

Here's a snippet of my AS_ExtraDyes.xml for reference:

```
<contentList date="21/08/2023 00:00">
  <content contentuid="h0baf74f9gf7c8g48b8gbc00g9c189104d6ab" version="1">Dye Bundle</content>
  <content contentuid="h2a97a3eeg2010g480ag9729g1e051fd9695f" version="1">Bundle of Dyes for the Fashionable Folk of Faerun</content>
  <content contentuid="h4a150eaeg8c8eg47b6gb747gac6b8b8276db" version="1">Bundle of AstralSprout's Dyes</content>

  <content contentuid="h86adbe56gfd55g43e6ga2fbg3426dfeaf96f" version="1">Drow Black Dye</content>
  <content contentuid="hd929bdfdg0335g47e5g95f8g4219f97b0d2d" version="1">A deeper black dye suited for the Spidersilk Armour.</content>

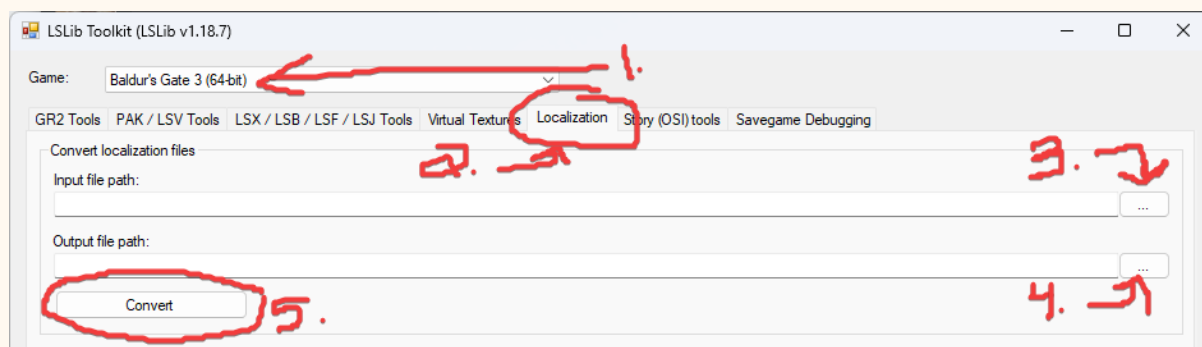
  <content contentuid="h55c8fcdegd82g45c4g819ag3441e9b5094a" version="1">Night Black Dye</content>
  <content contentuid="h4d913129ga2d0g4e87g9373g66f9518e45fc" version="1">Deep dark blacks for all your edgy armour needs.</content>

  <content contentuid="h9f8e1e5dgm187g4b75g86c6gc0b80bf36c77" version="1">Practically Pure White Dye</content>
  <content contentuid="hef3d4a53g25fag4b05gb0b5g9519d6c4f44a" version="1">Great for those who like to wear the blood of their enemies.</content>

  <content contentuid="h05474d25gbdca945fagb62eg6ec632b12f91" version="1">Gilded Guardian White Dye</content>
  <content contentuid="h54ba530bgea41g437fgb933gc4ab18de6024" version="1">White and gold for all those heavenly types.</content>
```

Once you've finished, save and exit.

Next, you're going to open the lslib ConverterApp.



Step 1. Make sure Baldur's Gate 3 is selected from the dropdown list.

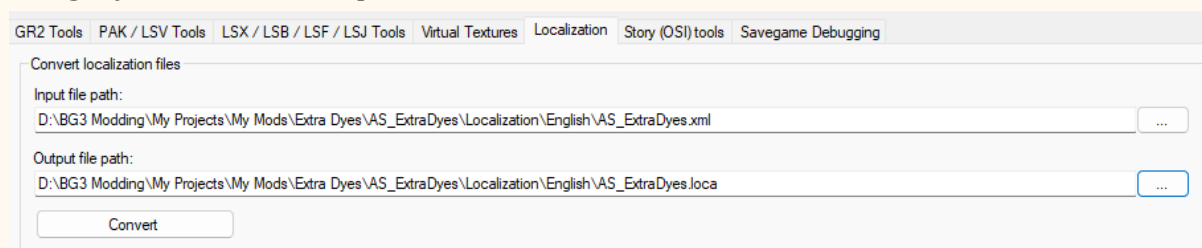
Step 2. Go to the Localization tab.

Step 3. Select your .xml file. Using my example, the path would be:

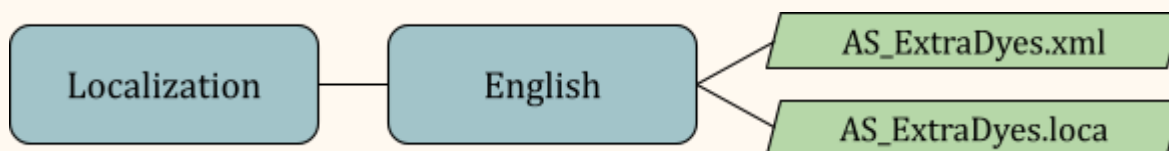
```
\AS_ExtraDyes\Localization\English\AS_ExtraDyes.xml
```

Step 4. The output file path will be the same as the input file path with **one difference**: the output file should be a .loca file.

Using my mod as an example, it should look similar to this:



Step 5. Click convert! Your Localization folder should now look like this:



Mods

Next, we'll go back to the Mods folder. Open the folder we created inside the Mods folder. This is where your meta.lsx will go.

```
Mods\AS_ExtraDyes\meta.lsx
```

Now, you can either create the meta.lsx yourself OR let the BG3 Multitool generate it for you. It's a bit easier to let the tool auto-generate it, but if you're using Padme's dye template, make sure to fill these attributes out:

AUTHOR = Your name/username.

```
<attribute id="Author" type="LSWString" value="Mod creator name here"/>
```

DESCRIPTION = Your mod description.

```
<attribute id="Description" type="LSWString" value="mod description here"/>
```

FOLDER = The name of your mod's folder. For simplicity, I use the mod name for all folders. For my mod, this is AS_ExtraDyes.

```
<attribute id="Folder" type="LSWString" value="Dyes_Template"/>
```

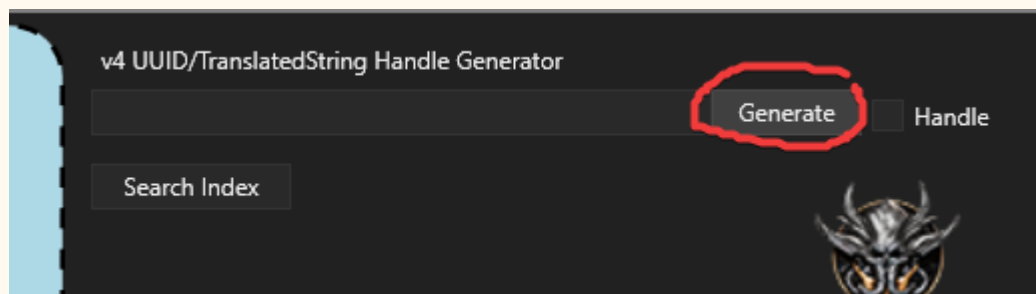
NAME = Your mod's name, same as the root folder. For my mod, this is AS_ExtraDyes.

```
<attribute id="Name" type="FixedString" value="Dyes_Template"/>
```

UUID = A UUID for your mod as a whole. Make sure to erase the entire alphanumeric string listed here, and add your own unique string.

```
<attribute id="UUID" type="FixedString" value="852b9a5b-54b3-47cb-abd4-1d80231f0fd4"/>
```

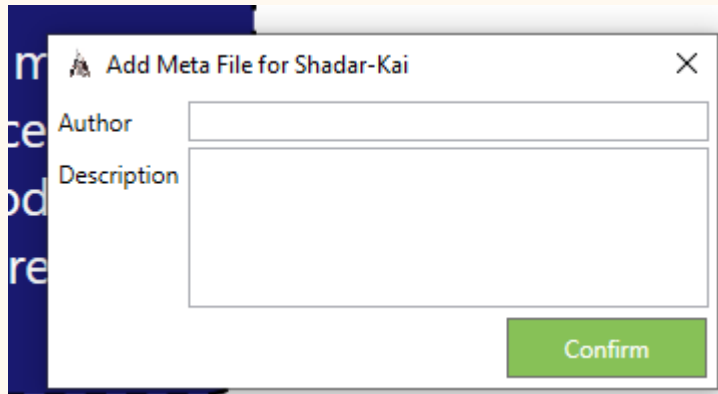
To generate your own string, use the BG3 Modder's Multitool:



Make sure to **uncheck the "Handle" box**! An easy way to check if you've created a UUID vs. a TranslatedString Handle, is to check for dashes. A UUID will have dashes.

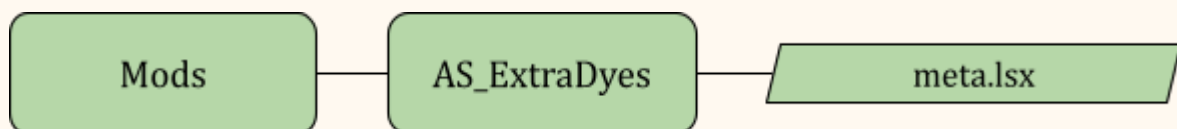
- (UUIDs are unique alphanumeric strings that act as an identifier for different attributes in a code. This is so that nothing overwrites anything else, which is likely to happen when using generic names/identifiers.)

If you're using the BG3 Multitool, the meta.lsx will be generated at the very end, when you are using the tool to pack your mod. If there is no meta.lsx, the tool will prompt you to enter the following information, then create the meta.lsx for you!



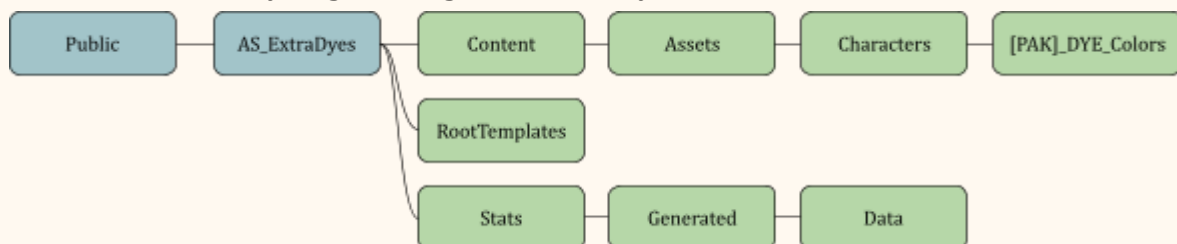
(image from the BG3 Multitool Documentation)

Whether you generate the meta.lsx using the Multitool or make it yourself/using Padme's template, at the end your folder structure for the Mods folder should look like this:



PUBLIC

Lastly, we'll go through the **Public** folder. There is a lot going on within this folder, so bear with me! I'll try to go through this as easily as I can.



Let's start off with the **[PAK]_DYE_Colors** folder. Inside, you'll create a _merged.lsx file. I think you can potentially use a different name, as I've named mine "AS_ExtraDyes_ColorPresets.lsx" for my own sanity, but using the proper name for the file is probably better. For the purpose of this guide, I will be using "_merged.lsx."

This _merged.lsx file is where you'll be creating your dye colours!

If you're not using Padme's template, you can copy and paste the code snippet [here](#).

Quick aside before I go into the coding specifics—I find it useful to have an extra note open that contains the information that will need to be used in several files.

We'll add onto this as we go along.

```
[Dye_Name]
Name: Dye Name [UID]
Description: Description [UID]
ColorPreset UUID: [UUID]
RootTemplate: [MapKey UUID]
```

Since we've already finished the Localization, we can add the information from that. Let's use my Drow Black Dye for the example.

```
[Dye_Name]
Name: Drow Black Dye [h86adbe56gfd55g43e6ga2fbg3426dfeaf96f]
Description: A deeper black dye suited for the Spidersilk Armour.
[hd929bdfdg0335g47e5g95f8g4219f97b0d2d]
ColorPreset UUID: [UUID]
RootTemplate: [MapKey UUID]
```

In the **_merged.lsx** file:

Each dye will be contained between a "Resource" node.

```
<node id="Resource">
...
</node>
```

Let's start with the UUID and dye name:

```
<attribute id="ID" type="FixedString" value="ColorPreset UUID" />
<attribute id="Name" type="LSString" value="Dye_Name" />
```

Generate a new UUID using the BG3 Multitool as we did before for the meta.lsx. Then, pick a name for your dye. Use "_" in place of spaces.

My dyes all follow the same format to make it easier on me: AS_Dye_ColourName.

With my Drow Black Dye as an example, you get:

```
<attribute id="ID" type="FixedString"
value="07928e80-43a5-4812-9145-7241dc16a7a5" />
<attribute id="Name" type="LSString" value="AS_Dye_DrowBlack" />
```

Let's add this information to our reference note as well:

```
AS_Dye_DrowBlack 
Name: Drow Black Dye [h86adbe56gfd55g43e6ga2fbg3426dfeaf96f]
Description: A deeper black dye suited for the Spidersilk Armour.
```

```
[hd929bdfdg0335g47e5g95f8g4219f97b0d2d]  
ColorPreset UUID: [07928e80-43a5-4812-9145-7241dc16a7a5]   
RootTemplate: [MapKey UUID]
```

Now, we can move on to adding the colours! This will be the most tedious process.

The colour parameters the game uses are as follows:

- Cloth Primary
- Cloth Secondary
- Cloth Tertiary
- Leather Primary
- Leather Secondary
- Leather Tertiary
- Metal Primary
- Metal Secondary
- Metal Tertiary
- Custom 1
- Custom 2
- Color 1
- Color 2
- Color 3

Some are more self-explanatory than others, but these parameters can at times be inconsistent across different armours. That's where Engels' Colour Reference Dye comes in handy! Otherwise you're blindly assuming, or like me, wind up spending hours looking through the armour textures trying to figure it out (but it's fine and valid if you prefer those methods).

SOME SMALL NOTES:

- From my own experience, Cloth and Leather Tertiary parameters often (but not exclusively!) apply to the main colour of pants and shoes.
- Color 1, Color 2, and Color 3 mostly apply to underwear, I think. When this isn't the case, underwear uses Cloth, Leather, and Metal Secondary parameters.
- Custom 1 and 2 are used rarely, but I think Custom 2 is used more often. From what I can tell, they're used as extra colours in accessories.

IMPORTANT NOTES:

- ★ Keep in mind that the colour in-game will show up lighter/brighter than whatever colour you insert into the code. There's no way to preview the colours, so you may need to do a lot of tweaking to get the colour you want.

★ While some colour parameters are rarely used, it's a good idea to assign a colour to all of them. Otherwise, other colours will show through and give your dye an inconsistent look on some equipment.

- For example, say you leave out "Custom_2" in a purple and silver dye, then dye armour that has a golden accessory with a blue gem. The accessory might turn silver while the gem stays blue, rather than changing to purple.

With all of that in mind, let's get back to the **_merged.lsx file!**

The parts of the code you're looking for in order to add a colour look like this:

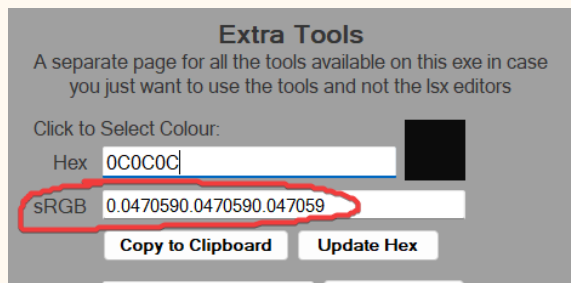
```
<attribute id="Parameter" type="FixedString" value="Cloth_Primary"/>
<attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
```

There will be a "Parameter" and "Value" for each of the 14 colour parameters the game uses.

I like to figure out the HEX values of each one ahead of time so I can tell if my colour scheme is cohesive or not. However you decide on the colours, you'll then need to convert them to sRGB (0-1) using your choice of method.

If using Padme's Mini Tool, make sure to separate the sRGB value into **three** number strings after pasting it to your _merged.lsx file, as the tool will smush the value into one number string and you'll get an error.

This should be: "0.047059 0.047059 0.047059"



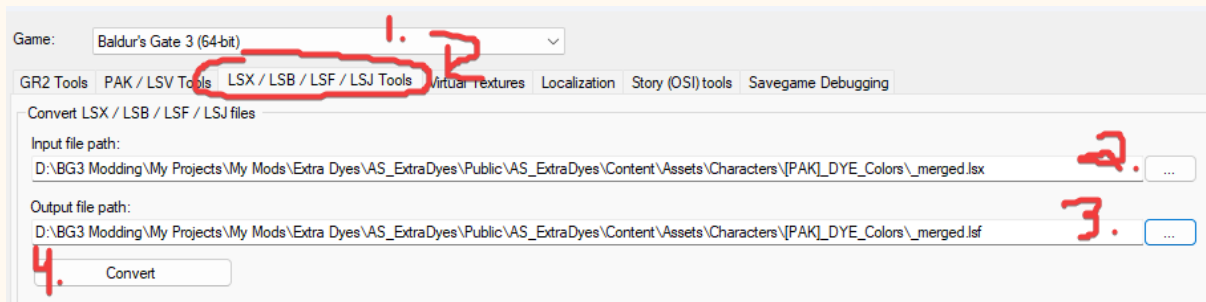
(You can tell where to place the spaces, as each number will usually be **less than 1**)

Repeat this for every colour parameter. Once you've done all 14, you're done with the _merged.lsx file! Sweet freedom!

Save and exit.

Last step before we finish with the Public folder branch. We're going to convert this .lsx file into .lsf using lslib ConverterApp, so get that program out again.

This is going to be very similar to what we did with the Localization files.



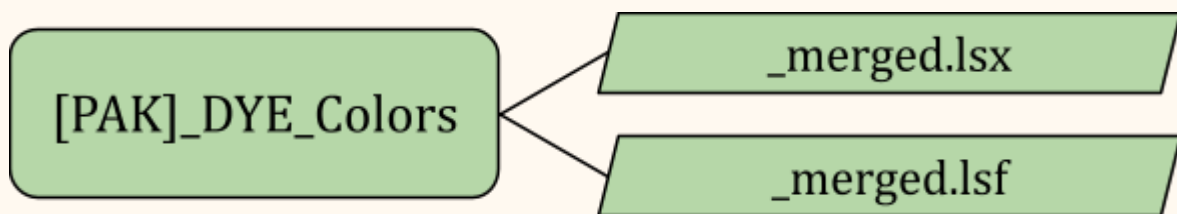
Step 1. Go to the LSX/LSB/LSF/LSJ Tools tab.

Step 2. In the input file path, select your _merged.lsx file. The file path should be something like:

```
\AS_ExtraDyes\Public\AS_ExtraDyes\Content\Assets\Characters\[PAK]_DYE_Colors\_merged.lsx
```

Step 3. Again, the output file path will be the same as the input file path with **one difference**: the output file should be an .lsf file.

Step 4. Convert! You should now have two "_merged" files.



That was a lot, but hopefully it made sense.

Now, we move on to the **RootTemplates** folder, which is where your reference note is going to come in handy.

Inside the RootTemplates folder, you'll need another .lsx file where you'll define each dye as an actual item. Name this something unique, but relevant.

For my mod, I used AS_ExtraDyes_Dyes.lsx.

If you're not using Padme's template, you can copy and paste the code snippet [here](#).

I'll break this down into pieces that are easier to digest.

Let's first look at these two attributes:

```
<attribute id="DisplayName" type="TranslatedString" handle="Name
UID" version="1" />
<attribute id="Description" type="TranslatedString"
handle="Description UID" version="1" />
```

The "DisplayName" and "Description" UIDs will be the strings you generated for the Localization.

If you're using a reference note like I suggested, you can easily grab the UUIDs from there.

```
AS_Dye_DrowBlack
Name: Drow Black Dye [h86adbe56gfd55g43e6ga2fbg3426dfeaf96f]
Description: A deeper black dye suited for the Spidersilk Armour.
[hd929bdfdg0335g47e5g95f8g4219f97b0d2d]
ColorPreset UUID: [07928e80-43a5-4812-9145-7241dc16a7a5]
RootTemplate: [MapKey UUID]
```

Next, we have:

```
<attribute id="Icon" type="FixedString" value="Icon_Image" />
```

This one may be tricky if you haven't unpacked the game's files. SO, to make it easier for everyone, I decided to gather all the dye icons from the game, convert them, then add them [here](#).

Copy the name of the icon you want to use from the link above and replace "Icon_Image" in your file with the icon name you copied.

```
<attribute id="MapKey" type="FixedString" value="MapKey UUID" />
```

For the MapKey, generate a new UUID with the BG3 Multitool.

This will also be the last thing we need to add to our reference note!

```
AS_Dye_DrowBlack
Name: Drow Black Dye [h86adbe56gfd55g43e6ga2fbg3426dfeaf96f]
Description: A deeper black dye suited for the Spidersilk Armour.
[hd929bdfdg0335g47e5g95f8g4219f97b0d2d]
ColorPreset UUID: [07928e80-43a5-4812-9145-7241dc16a7a5]
RootTemplate: [75256bd4-866e-45a0-884a-9cd97f379f2c]
```

These values should be self-explanatory:

```
<attribute id="Name" type="LSString" value="Dye_Name" />
<attribute id="Stats" type="FixedString" value="Dye_Name" />
```

Using my Drow Black Dye as an example again, both of these values should be "AS_Dye_DrowBlack".

For this, you can pull out your reference note again:

```
<attribute id="ColorPreset" type="guid" value="ColorPreset UUID" />
```

Plug the ColorPreset UUID you generated for the _merged.lsx file into the value here.

Here's the full example using my Drow Black Dye:

```

<?xml version="1.0" encoding="utf-8"?>
<save>
  <version major="4" minor="0" revision="9" build="331"/>
  <region id="Templates">
    <node id="Templates">
      <children>
        <node id="GameObjects"> Draw Black
          <attribute id="DisplayName" type="TranslatedString" handle="h86adbe56gfd55g43e6ga2fbg3426dfeaf96f" version="1" />
          <attribute id="Description" type="TranslatedString" handle="hd929bdfdg0335g47e5g95f8g4219f97b0d2d" version="1" />
          <attribute id="Icon" type="FixedString" value="Item_LOOT_Dye_BlackPink_01" />
          <attribute id="MapKey" type="FixedString" value="75256bd4-866e-45a0-884a-9cd97f379f2c" />
          <attribute id="Name" type="LSString" value="AS_Dye_DrowBlack" />
          <attribute id="Stats" type="FixedString" value="AS_Dye_DrowBlack" />
          <attribute id="ColorPreset" type="guid" value="07928e80-43a5-4812-9145-7241dc16a7a5" /> AS_Dye_DrowBlack
          <attribute id="ParentTemplateId" type="FixedString" value="1a750a66-e5c2-40be-9f62-0a4bf3ddb403" /> Dye Parent ID
          <attribute id="Type" type="FixedString" value="item" />
        </node>
      </children>
    </node>
  </region>
</save>

```

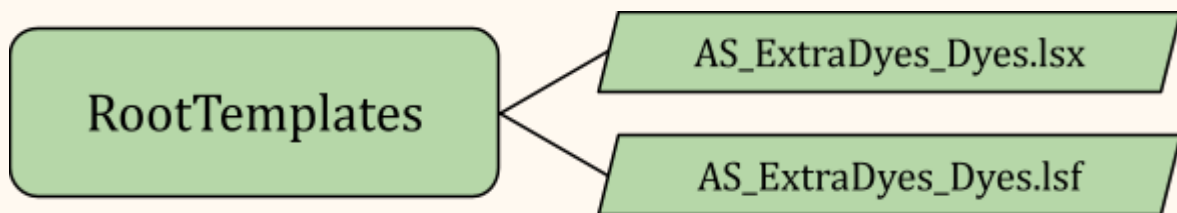
The last step is to convert the file from .lsx to .lsf like we did with the _merged.lsx file! It will follow the same steps as the previous conversion, except the file paths will be different. For mine, the input is:

```
\AS_ExtraDyes\Public\AS_ExtraDyes\RootTemplates\AS_ExtraDyes_Dyes.lsx
```

and the output is:

```
\AS_ExtraDyes\Public\AS_ExtraDyes\RootTemplates\AS_ExtraDyes_Dyes.lsf
```

Then convert! You should now have:



Now we're ready to move on to the **Stats** folder!

Keep your reference note handy for this part.

Inside the Generated folder, you'll need two .txt files:

- ItemCombos.txt
- TreasureTable.txt

ItemCombos: this is basically where we'll tell the game how our dyes work.

TreasureTable: this is where we'll tell the game where to put the dyes.

Let's start with **ItemCombos.txt**:

```

new ItemCombination "Dye_Name"
data "Type 1" "Object"
data "Object 1" "Dye_Name"
data "Transform 1" "None"

```

```
data "Type 2" "Category"
data "Object 2" "DyableArmor"
data "Transform 2" "Dye"
data "DyeColorPresetResource" "ColorPreset UUID"

new ItemCombinationResult "Dye_Name_1"
data "ResultAmount 1" "1"
```

Replace the **red text** with the appropriate information.

★ **Important:** do not remove the "_1" from the "ItemCombinationResult"!!

This bit determines whether your dye has infinite uses or is consumed after one use:

```
data "Transform 1" "None"
```

"None" = infinite uses

"Consume" = consumed after 1 use

My Drow Black Dye in the ItemCombos.txt as an example:

```
new ItemCombination "AS_Dye_DrowBlack"
data "Type 1" "Object"
data "Object 1" "AS_Dye_DrowBlack"
data "Transform 1" "None"
data "Type 2" "Category"
data "Object 2" "DyableArmor"
data "Transform 2" "Dye"
data "DyeColorPresetResource" "07928e80-43a5-4812-9145-7241dc16a7a5"

new ItemCombinationResult "AS_Dye_DrowBlack_1"
data "ResultAmount 1" "1"
```

Next, we have **TreasureTable.txt**. This one can get a bit tricky, depending on how you want the dyes to appear in the game.

If you've unpacked the game's files, I was able to find all the vendors I use in this file:

```
\UnpackedData\Gustav\Public\GustavDev\Stats\Generated\TreasureTable.txt
```

Other good resources I've found:

- [Developer Resource - Object List - Items Characters Traders](#) (by Liareth)
- [Treasure Table Spreadsheet](#) (by majakale)

Note on TreasureTable naming conventions:

Each treasure table has a prefix that tells you where in the game they're found! Knowing the prefixes can help you find them easier, so I'll list some of them here.

```
"TUT_" = Nautiloid ("Tutorial")
"DEN_" = Emerald Grove
"GOB_" = Goblin Camp
"UND_" = Underdark
"CRE_" = Gith Creche
"HAV_" = Last Light Inn ("Haven")
"MOO_" = Moonrise
"WYR_" = Wyrms Crossing
"LOW_" = Lower City
```

It's also good to note, that if you use a vendor that appears throughout different acts (assuming they're still alive), they'll stock your dyes in each act!

With that out of the way, I'm going to use the Tutorial Chest for my example.

So to start, you'll add this to your **TreasureTable.txt**:

```
new treasuretable "TUT_Chest_Potions"
CanMerge 1
```

Next, we're going to add our dye!

Add these two lines beneath the previous two, and change the **red text**:

```
new subtable "1,1"
object category "I_Dye_Name",1,0,0,0,0,0,0,0
```

★ Make sure to prefix your Dye_Name with "I_"! Don't erase that part!

For anyone curious what the numbers mean, I'll go over it [here](#). Just to keep this from getting derailed.

To add more dyes to the Tutorial Chest (or whatever vendor), repeat those two lines.

Here's an example, where I've added three of my dyes to both the Tutorial Chest and the vendor Arron:

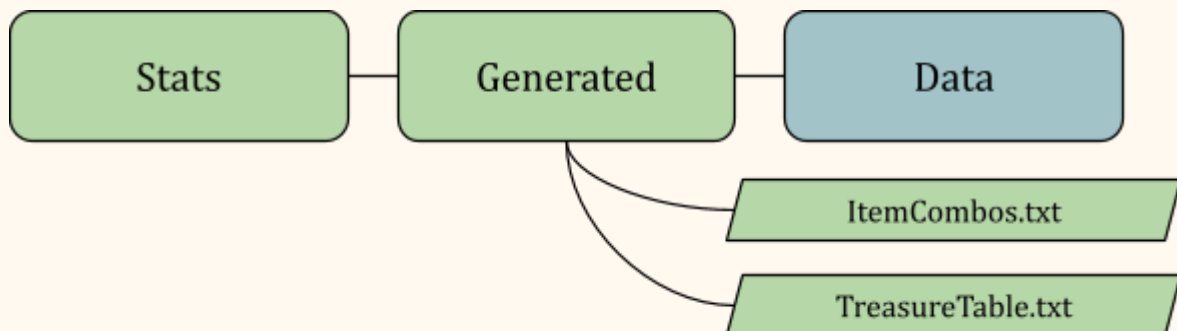
```
new treasuretable "TUT_Chest_Potions"
CanMerge 1
new subtable "1,1"
object category "I_AS_Dye_DrowBlack",1,0,0,0,0,0,0,0
new subtable "1,1"
object category "I_AS_Dye_NightBlack",1,0,0,0,0,0,0,0
new subtable "1,1"
object category "I_AS_Dye_PureWhite",1,0,0,0,0,0,0,0
```

```

new treasuretable "DEN_Entrance_Trade"
CanMerge 1
new subtable "1,1"
object category "I_AS_Dye_DrowBlack",1,0,0,0,0,0,0,0
new subtable "1,1"
object category "I_AS_Dye_NightBlack",1,0,0,0,0,0,0,0
new subtable "1,1"
object category "I_AS_Dye_PureWhite",1,0,0,0,0,0,0,0

```

Once you've finished, save and exit TreasureTable.txt! Your Stats folder branch should look like this now:



Next, we'll open that **Data** folder.

In the Data folder, create **Object.txt**.

This is where you'll define your Dye as an item and assign its rarity.

```

new entry "Dye_Name"
type "Object"
using "_Dyes"
data "RootTemplate" "MapKey UUID"
data "Priority" "1"

```

Replace the **red text** with the appropriate information from the reference note, if you're using one.

The **orange text** will define the rarity, so we have a couple options: use the game's set dye rarities, or create our own.

The dye rarities coded into the base game are:

- "_Dyes" = Uncommon
- "_Dye_Rare" = Rare
- "_Dye_VeryRare" = Very Rare
-

To use any other rarity for our dyes, you'll need to create your own entry, like I've done here:

```

new entry "AS_Dyes"
using "_Dyes"
data "ValueOverride" "1"
data "Weight" "0.01"
data "Rarity" "Legendary"

```

For your own, create a unique entry, otherwise you risk overriding others' code. For my entry format, I used "**Username_Dyes**".

I set the **Rarity** to Legendary, but you can choose whatever you feel is appropriate.

- Common
- Uncommon
- Rare
- Very Rare
- Legendary

The **ValueOverride** property allows you to override the cost, so that your item does not use the rarity to determine the cost.

Using my Drow Black Dye as an example again, this is what my Object.txt would look like:

```

new entry "AS_Dyes"
using "_Dyes"
data "ValueOverride" "1"
data "Weight" "0.01"
data "Rarity" "Legendary"

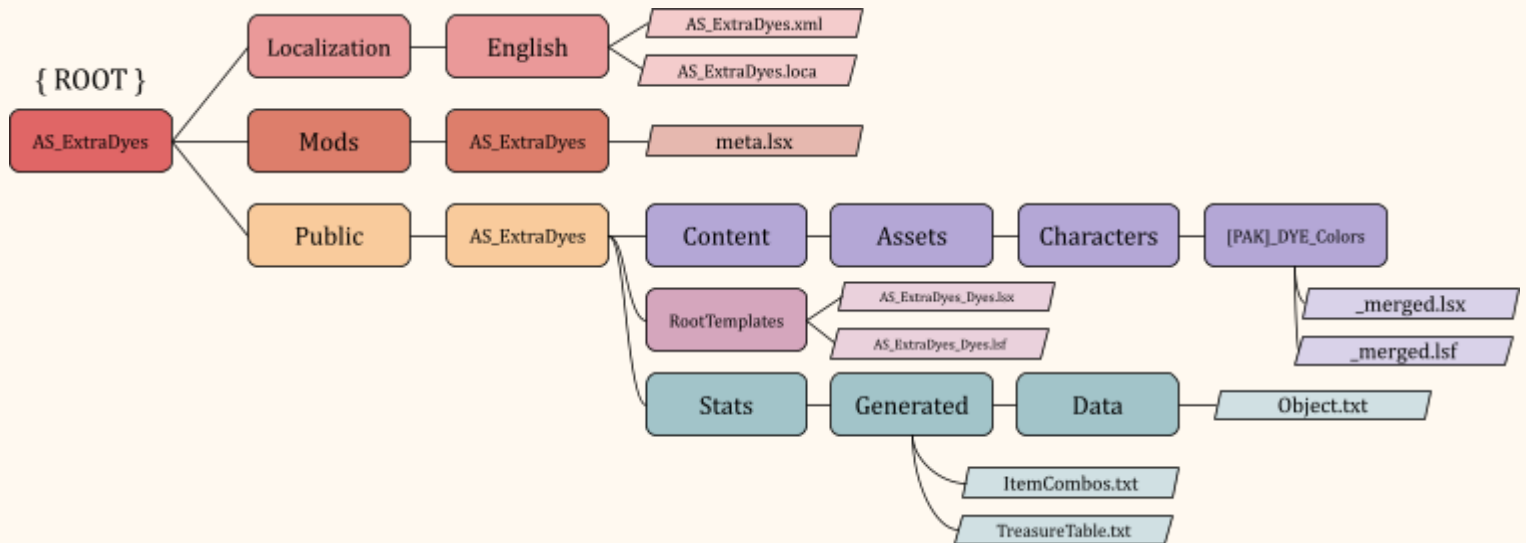
new entry "AS_Dye_DrowBlack"
type "Object"
using "AS_Dyes"
data "RootTemplate" "75256bd4-866e-45a0-884a-9cd97f379f2c"
data "Priority" "1"

```

And that's it! Save and exit once you're finished.

Congrats, you've finished all the coding of your dye mod!!!

Your folder and file structure should now look similar to this:

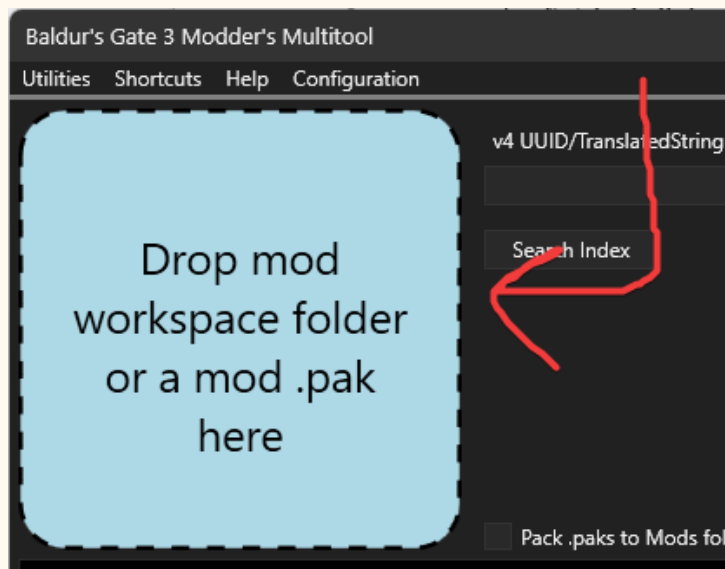


Now, for the final step!

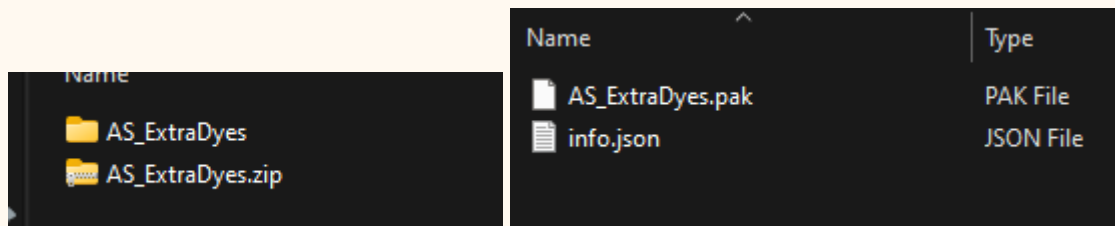
03. PACKING YOUR MOD

This part is fairly easy, don't worry.

For this, all you need to do is drag your **root folder** to the blue square in the BG3 Multitool:



Once it's finished packing your mod, you should have a .zip file of it. Inside the .zip will be your mod in .pak format!



Now all that's left to do is install your mod into your game and test it out!
You may need to edit your `_merged.lsx` if the colours are not to your liking. Make sure to convert `_merged.lsx` to `_merged.lsf` again before re-packing the mod.

And... that's it! You should now be able to create your own dye mod!!
Hopefully this was helpful!

(This guide may be updated to refine formatting and clear up any confusing explanations in the future)

MY LINKS:

[NexusMods Profile](#)

[Ko-Fi](#)

REFERENCE SECTION

_merged.lsx file easy copy + paste

```
<?xml version="1.0" encoding="utf-8"?>
<save>
  <version major="4" minor="0" revision="9" build="0" />
  <region id="MaterialPresetBank">
    <node id="MaterialPresetBank">
      <children>

        <!--> I separate each dye by putting the name here <-->

      <!--> START <-->

      <node id="Resource">
        <attribute id="ID" type="FixedString" value="ColorPreset UUID" />
        <attribute id="Name" type="LSString" value="Dye_Name" />
        <children>
          <node id="Presets">
            <attribute id="MaterialResource" type="FixedString" value="" />
            <children>
              <node id="ColorPreset">
                <attribute id="ForcePresetValues" type="bool" value="False" />
                <attribute id="GroupName" type="FixedString" value="" />
                <attribute id="MaterialPresetResource" type="FixedString" value="" />
              </node>
              <node id="MaterialPresets" />
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Cloth_Primary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Cloth_Secondary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Cloth_Tertiary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Leather_Primary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Leather_Secondary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Leather_Tertiary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
                <attribute id="Parameter" type="FixedString" value="Metal_Primary" />
                <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
              </node>
              <node id="Vector3Parameters">
                <attribute id="Color" type="bool" value="True" />
                <attribute id="Custom" type="bool" value="False" />
                <attribute id="Enabled" type="bool" value="True" />
              </node>
            </children>
          </node>
        </children>
      </node>
    </children>
  </node>
</region>
</save>
```

```

        <attribute id="Parameter" type="FixedString" value="Metal_Secondary" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Metal_Tertiary" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Accent_Color" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Color_01" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Color_02" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Color_03" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Custom_1" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
    <node id="Vector3Parameters">
        <attribute id="Color" type="bool" value="True" />
        <attribute id="Custom" type="bool" value="False" />
        <attribute id="Enabled" type="bool" value="True" />
        <attribute id="Parameter" type="FixedString" value="Custom_2" />
        <attribute id="Value" type="fvec3" value="0.05 0.05 0.05" />
    </node>
</children>
</node>
</children>
</node>
<!--> END <-->

    <!--> Copy code between START and END, then paste here to add another dye. Rinse and repeat for however many dyes you want to make. <-->

</children>
</node>
</region>
</save>

```

RootTemplates *.lsx easy copy + paste

```
<?xml version="1.0" encoding="utf-8"?>
<save>
  <version major="4" minor="0" revision="9" build="331"/>
  <region id="Templates">
    <node id="Templates">
      <children>

        <node id="GameObjects"> I put the Dye_Name here for easy reference
          <attribute id="DisplayName" type="TranslatedString" handle="Name UUID" version="1" />
          <attribute id="Description" type="TranslatedString" handle="Description UUID" version="1" />
          <attribute id="Icon" type="FixedString" value="Icon_Image" />
          <attribute id="MapKey" type="FixedString" value="MapKey UUID" />
          <attribute id="Name" type="LocalizedString" value="Dye_Name" />
          <attribute id="Stats" type="FixedString" value="Dye_Name" />
          <attribute id="ColorPreset" type="guid" value="ColorPreset UUID" />
          <attribute id="ParentTemplateId" type="FixedString" value="1a750a66-e5c2-40be-9f62-0a4bf3ddb403" /> This references the Base Dye ID. Don't
change this!!
          <attribute id="Type" type="FixedString" value="item" />
        </node>

        <!--> Copy code from <node id="GameObjects"> to the closing </node>, then paste here to add another dye. Rinse and repeat for however many dyes you
want to make. <-->

      </children>
    </node>
  </region>
</save>
```

TREASURE TABLE DEMONSTRATION

To explain how treasure tables work, I'm going to use generic items to make it easier to follow.

Let's say our **TreasureTable.txt** looks like this:

```
new treasuretable "TUT_Chest_Potions"
CanMerge 1
new subtable "1,1"
object category "I_Sword",1,0,0,0,0,0,0,0
new subtable "-1"
object category "I_Armour",1,0,0,0,0,0,0,0
new subtable "10,1;5,2;0,2"
object category "I_Gold",2,0,0,0,0,0,0,0
object category "I_Food",1,0,0,0,0,0,0,0
```

subtable uses an x,y format, where

- x = quantity of [item]
- y = chance of dropping x [item(s)]

object category defines the [item] and the frequency, where

- frequency determines the chance of the object category being selected within the subtable group

Using our example, this is how the game would process the roll upon opening the Tutorial Chest:

- 1 Sword will always spawn. ("1,1": amount is 1, chance is 1 out of 1)
- Armour will always spawn, regardless of level restrictions. ("-1" forces the game to spawn this item)
- 1 out of 5 chance to drop 10 Gold or Food, a 2 out of 5 chance to drop 5 Gold or Food, or a 2 out of 5 chance to drop 0 Gold or Food.
 - x: 10, 5, and 0 are the quantities.
 - y: add the y values. 1 + 2 + 2 = 5, for a total of 5 chances.
 - Looking at frequency, Gold has a higher chance to drop than Food. Gold has a 2 out of 3 chance, while Food has a 1 out of 3 chance.

So if we use this for our dye:

```
new treasuretable "TUT_Chest_Potions"
CanMerge 1
new subtable "1,1"
object category "I_Dye_Name",1,0,0,0,0,0,0,0
```

It will spawn 1 Dye, and has a 100% (1 out of 1) chance of spawning it.

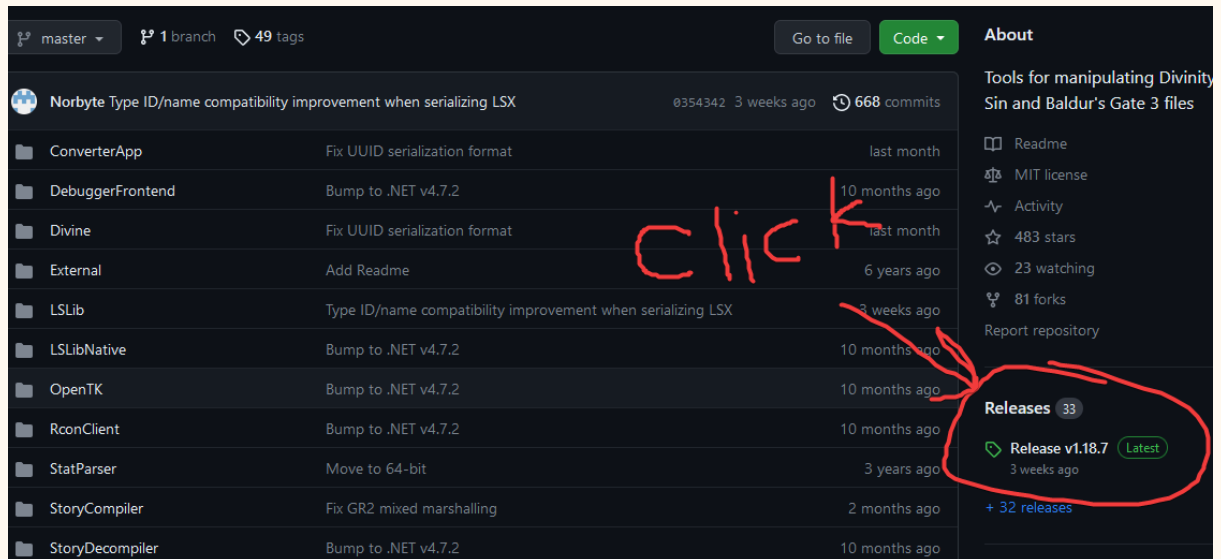
DYE ICONS AND NAMES

				
Item_LOOT_Dye_Azure_01	Item_LOOT_Dye_BlackBlue_01	Item_LOOT_Dye_BlackGreen_01	Item_LOOT_Dye_BlackPink_01	Item_LOOT_Dye_BlackRed_01
				
Item_LOOT_Dye_BlackTeal_01	Item_LOOT_Dye_Blue_01	Item_LOOT_Dye_BlueGreen_01	Item_LOOT_Dye_BluePurple_01	Item_LOOT_Dye_BlueYellow_01
				
Item_LOOT_Dye_BlueYellow_02	Item_LOOT_Dye_Golden_01	Item_LOOT_Dye_Green_01	Item_LOOT_Dye_Green_02	Item_LOOT_Dye_GreenPink_01
				
Item_LOOT_Dye_GreenSage_01	Item_LOOT_Dye_GreenSwamp_01	Item_LOOT_Dye_IceCream_01	Item_LOOT_Dye_IceCream_02	Item_LOOT_Dye_IceCream_03
				
Item_LOOT_Dye_IceCream_04	Item_LOOT_Dye_Maroon_01	Item_LOOT_Dye_Ocean_01	Item_LOOT_Dye_Orange_01	Item_LOOT_Dye_OrangeBlue_01

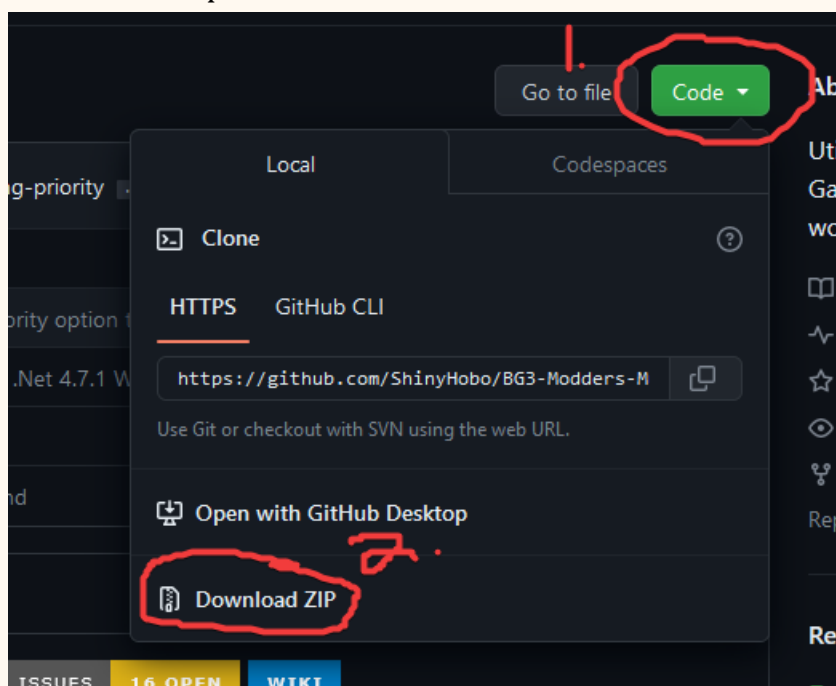
				
Item_LOOT_Dye_Pink_01	Item_LOOT_Dye_Purple_01	Item_LOOT_Dye_Purple_02	Item_LOOT_Dye_Purple_03	Item_LOOT_Dye_Purple_04
				
Item_LOOT_Dye_PurpleRed_01	Item_LOOT_Dye_Red	Item_LOOT_Dye_RedBrown_01	Item_LOOT_Dye_RedWhite_01	Item_LOOT_Dye_RichRed_01
				
Item_LOOT_Dye_RoyalBlue_01	Item_LOOT_Dye_Teal_01	Item_LOOT_Dye_WhiteBlack_01	Item_LOOT_Dye_WhiteBrown_01	Item_LOOT_Dye_WhiteRed_01

RESOURCE REFERENCES

¹: Latest release can be found here. As of writing this, the current version is v1.18.7, but may be different for you depending on when you're using this guide!



²: Download .zip from here



3: Engels' Colour Reference Dye:

Color Reference Dye

Legendary

Combine this dye with an equipment item to alter the colours of fabric, leather and even metal.

- Red = Cloth_Primary
- Orange = Cloth_Secondary
- Yellow = Cloth_Tertiary
- Green = Color_01
- Teal = Color_02
- Blue = Color_03
- Indigo = Custom_1
- Purple = Custom_2
- Magenta = Leather_Primary
- Dark Red = Leather_Secondary
- Dark Yellow Green = Leather_Tertiary
- Dark Brown = Metal_Primary
- White = Metal_Secondary
- Dark Blue Green = Metal_Tertiary
- Periwinkle = Accent_Color

0
1
II

Elegant Robe

⚡ A draped robe made with lightweight fabric. Made for adoration rather than battle.

Dress of the Ocean Queen 1A

Rare

⚡ This dress belongs to the Dravid Ocean Queen - Visage for Maelaine and Fennice. Humans, Elven, Trolls, Straws, Half-Orcs.

Shadowheart Pants with Lae'zel Bra

Rare

⚡ The pants seem given to give up.

Bright Flare Leather Outfit

⚡ A minimalist leather binding get-up that clings to the skin and cracks just the slightest bit when you move.

Exposed Death Mage Robes

Rare

⚡ These exposed robes belong to a perverse Death Mage - Visage for Maelaine and Fennice. Humans, Elven, Trolls, Straws, Half-Orcs.

Elven Bikini Armor 1A

Rare

⚡ Closer Elven craftsmanship means that even this armor offers proper protection from damage - Visage for Maelaine and Fennice.

Luminous Armour

Uncommon Medium Armour

15 Armour Class

Adamantine Splint Armour

Very Rare Heavy Armour

18 Armour Class

Garb of The Land and Sky

Rare Clothing

10 Armour Class

Black Leather Armor 1A

Rare

⚡ Equipped by Engels

⚡ A leather armor made from black leather.

Bloodguzzler Garb

Uncommon Clothing

10 Armour Class

Gortash Robes

Rare

⚡ They say that imitation is the sincerest form of flattery. I wonder what that says about...

