

## Documentation Part 4:

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## 10-4 Combine mesh

A combiner mesh script is included in this asset.

Assets → AP → Assets → Script → MeshCombiner → Meshcombinervtwo

Combiner mesh script combine all the meshes that have the same material on a single new mesh. This a good solution to **drastically reduce drawcalls and reduce lightmaps precomputed time**.

### 1 Open scene Graphics\_Tuto\_03

Assets → AP → Assets → Scenes → Tutos → Tuto\_Graphics

### 2 Create 2 Empty Group

### 3 Rename it for example Combine\_01 and Combine\_02

### 4 Select Combine\_01

### 5 From project tab drag and drop

Meshcombinervtwo script to Combine\_01 group

Assets → AP → Assets → Script → MeshCombiner

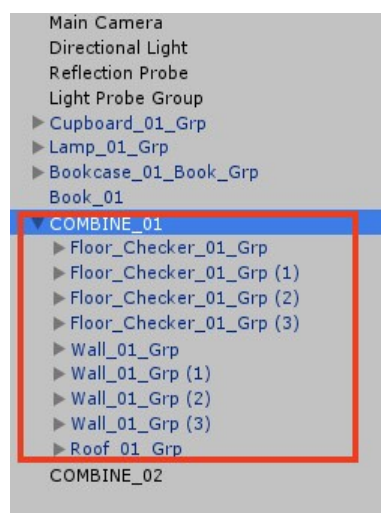
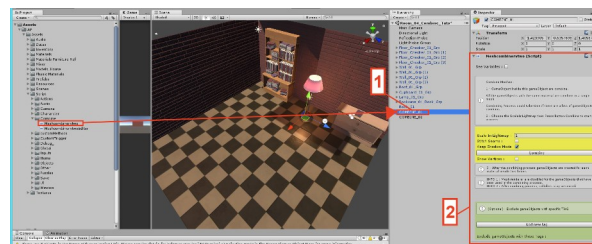
Mesh combiner script is added to Combine\_01 (spot 2)

Do step 4 and 5 with Combine\_02 group

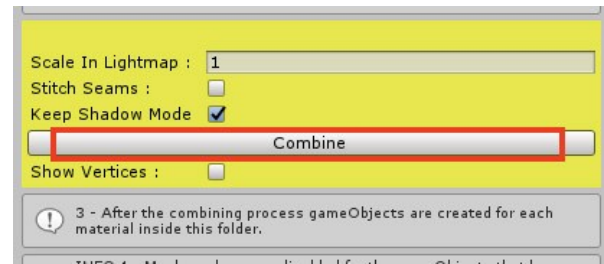
### 6 Put the following objects in the group Combine\_01:

Floor\_Checker\_01\_Grp  
Floor\_Checker\_01\_Grp(1)  
Floor\_Checker\_01\_Grp (2)  
Floor\_Checker\_01\_Grp (3)  
Wall\_01\_Grp  
Wall\_01\_Grp (1)  
Wall\_01\_Grp (2)  
Wall\_01\_Grp (3)  
Roof\_01\_Grp

### 7 Select Combine\_01

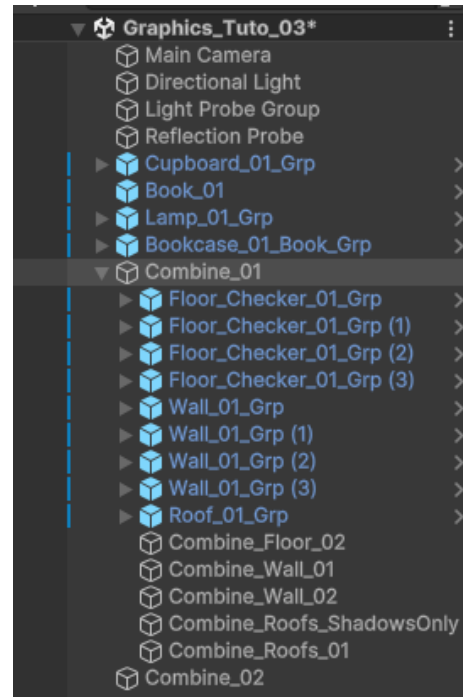


8 In Inspector tab press **Combine** button

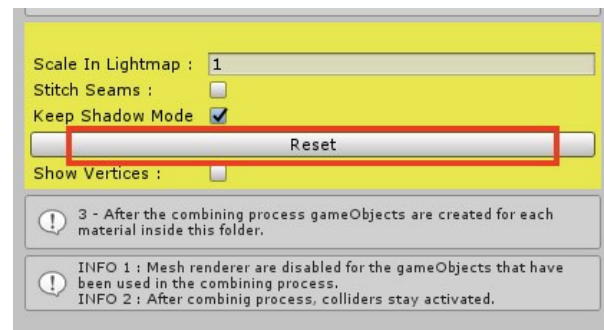


After the process new Combine gameObjects are created inside **Combine\_01** group (spot 1)

All other objects in the group are hide.



If you want to reverse the process press **Reset** button or **CTRL+Z**



## Options:

### Scale in lightmaps

Some objects, especially those with rounded edges require more lightmap definition.

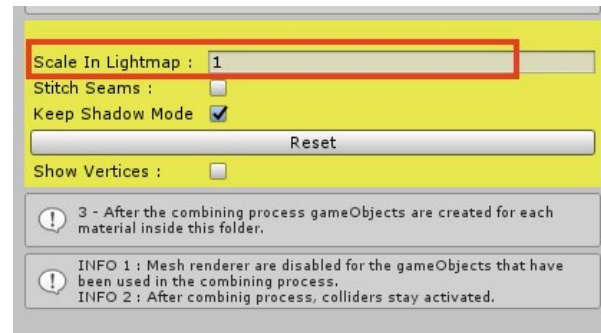
To increase the definition of these objects increase **Scale in lightmap value**.

**Tips:** Create combine group specially for round objects. Choose a higher **Scale In Lightmap** value for this combine group.

**Caution:** If you change the value after combining: you must decombine (reset) and then recombine the group (combine).

To increase the quality of lightmaps for the whole scene, increase **lightmap resolution** value in **lightings settings** tab.

On the other hand the size of the lightmaps will be larger and the lightmaps precomputing time too. So it's best to use a low value of **lightmap resolution** in **lightings settings** tab and choose a **scale in lightmap** value depending on the type of objects (smooth or sharp).

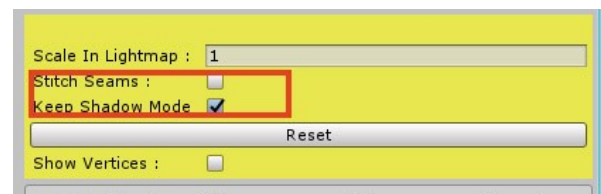


### Stitch seams

**Stitch seams** improves the quality of lightmaps

### Keep shadow Mode

**Keep shadow Mode** allows you to keep the shadows options after the combining process (for example cast shadow: off)

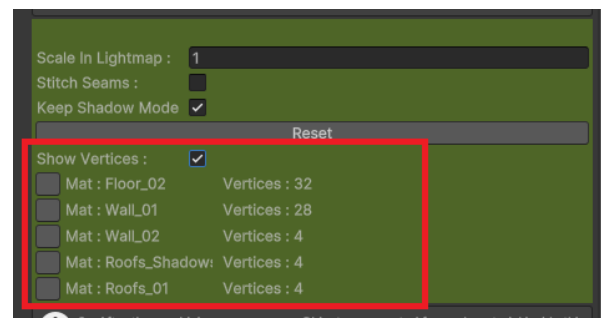


### Show vertices

Check **Show Vertices** box to see the number of vertices by material.

The number of vertices in a combined object must not exceed 65,000 vertices.

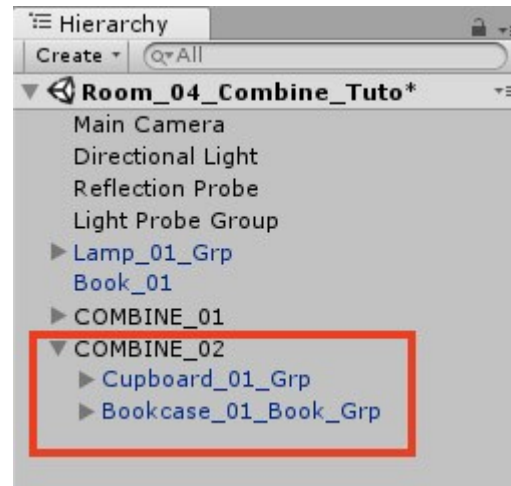
If there are too many vertices, split them into two groups.



9 Put the following objects in the group  
**Combine\_02**:

Cupboard\_01\_Grp

Bookcase\_01\_Book\_Grp



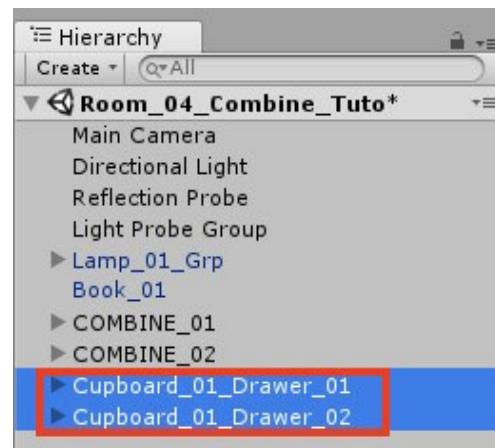
**You must not combine objects that move.**

That's why we are going to remove the drawers from the **Combine\_02** group

10 Remove from group **Combine\_02** the following objects:

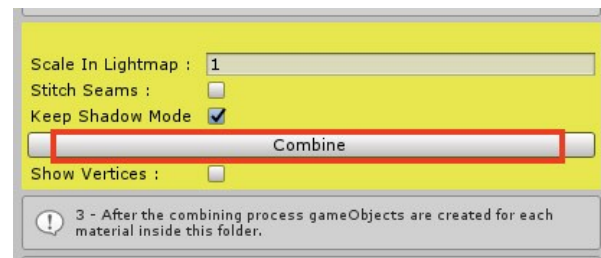
Cupboard\_01\_Drawer\_01

Cupboard\_01\_Drawer\_02



11 Select **Combine\_02**

12 In Inspector tab press **Combine** button



**Info:** To see the finished scene open Graphics\_Tuto\_04  
Assets → AP → Assets → Scenes → Tutos →  
Tuto\_Graphics

Learn more about object that can be combined or  
object that can not be combined. [\(more info\)](#)

## 10-5 Sprites and textures

### Paint on texture:

It can be useful to paint on textures (for example to create a new puzzle).

Some textures are provided with uvs layout layer (.Psd files)

*Assets → AP → Assets → Textures → Textures\_Mat → 01\_Uvs*

Example with Photoshop:

**1** In Project tab make a copy of **Uvs\_Floor\_Albedo**

*Assets → AP → Assets → Textures → Textures\_Mat → 01\_Uvs*

**2** Open **Uvs\_Floor\_Albedo 1** in your favorite drawing package .

**3** Show **Uvs** layer to see uvs layout.

**4** Paint on the picture

**5** Save the file

### Import sprite:

For puzzles it is possible to use objects but also sprites. You can use those included in the asset but also import yours.

**1** Create a sprite in your favorite drawing package

*The size of the sprites included in the asset is 256x256. It is not mandatory but the creation of the puzzle will be faster if you respect this size.*

**2** Import a sprite in your project (for example in Texture folder)

**3** In Project tab select your sprite

4 In inspector tab in **Texture Type** select **Sprite (2D and UI)** (spot1)

5 Press **Apply** button (spot 2)

