

ShapeOps

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ShapeOps

Unreal Engine Code Plugin

Description

ShapeOps is a 2D geometric shape drawing tool, which contains a lot of 2D geometric shapes, draw irregular 2D shapes through various operations and combinations, and generates meshes or alpha channel images from shapes.



Introduction

Features:

- Various basic geometric shapes and parametric drawing methods, including PolyPath, Polygon, Rectangle, Circular, etc.
- Various geometric shape edit tools, including copy, flip, PolyPath and Polygon interconversion, pivot translate, length measure, etc.
- Various geometric shape operations, including Union, Difference, Intersection, Offset, etc.
- Custom prefab shape library.
- Screenshot can output alpha channel and export mask image assets through geometric shapes.
- Custom shape prefab library, and easy reuse of edited shapes
- Export static mesh from shape asset or drag directly into viewports to generate mesh actor

Code Modules:

- KSHouseBuilder
- KSHouseBuilderEditor

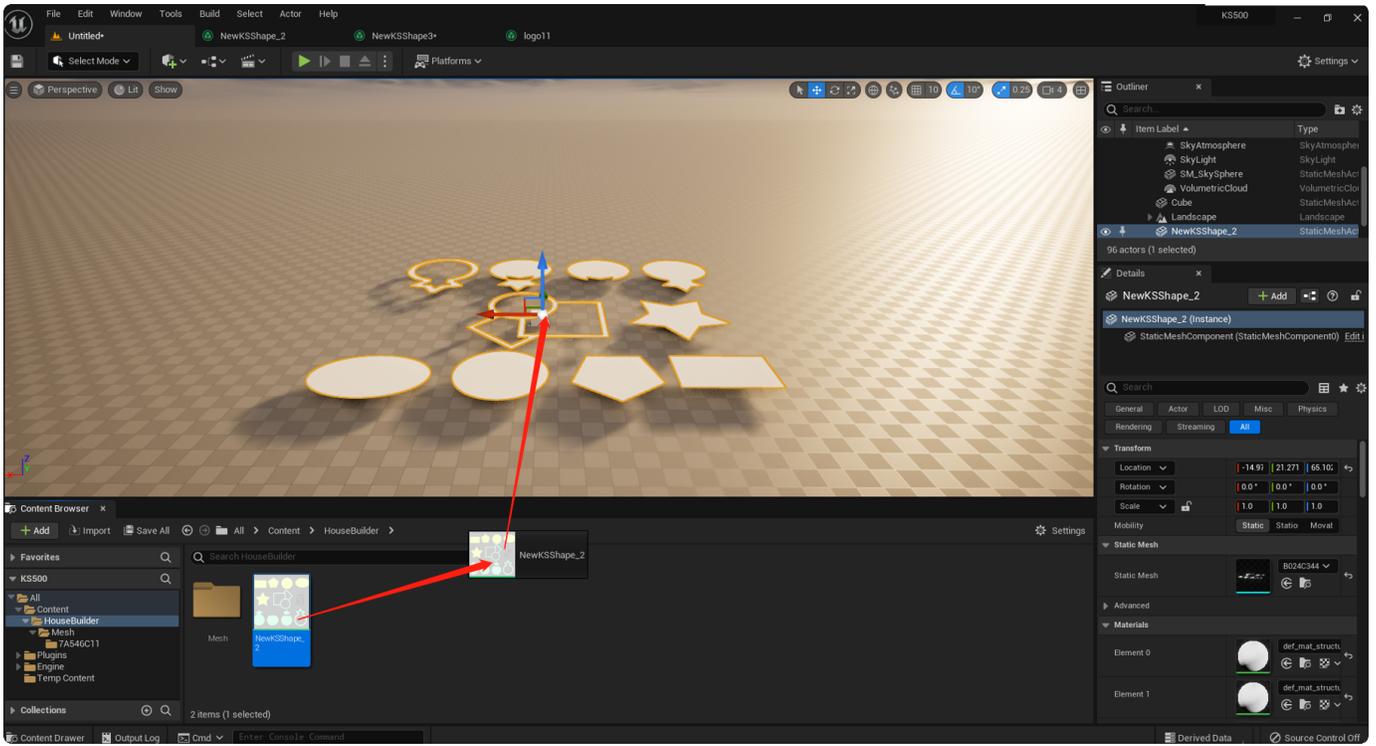
Documentation: [Document](#)

Important/Additional Notes:

Unit: millimeter

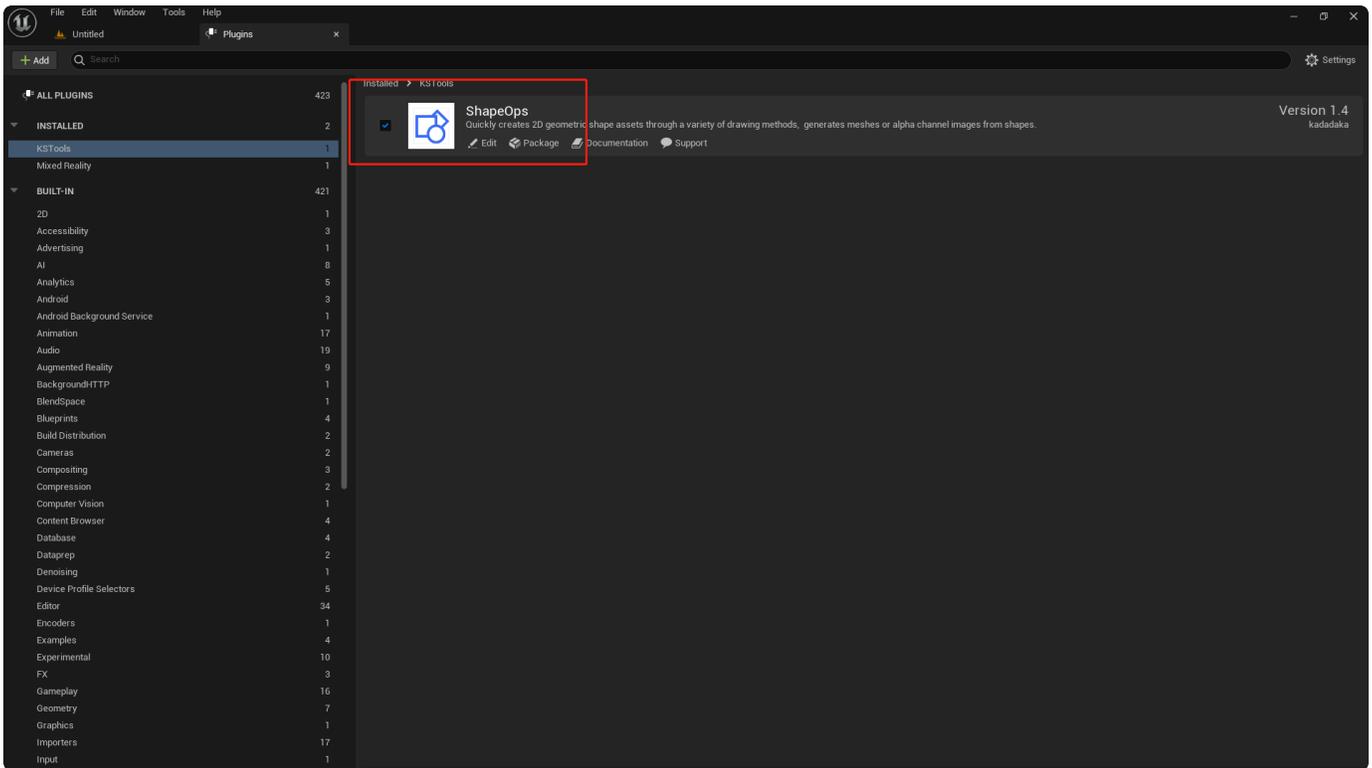
You can drag the shape asset to viewport directly, it can build the mesh automatically.

If you can't select the shape below, please modify the "ZOrde" in the property panel.



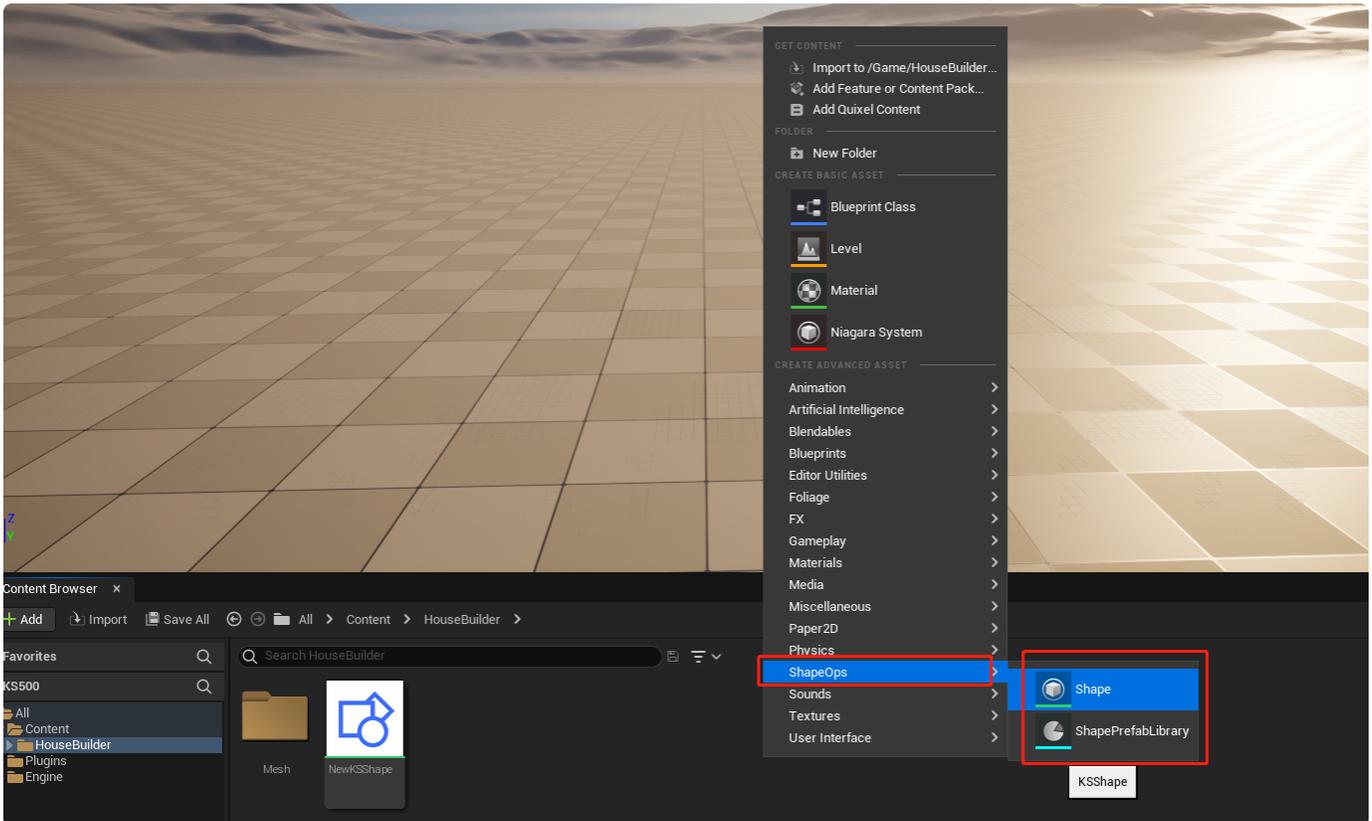
Start

Enable plugin



Create assets

You can create floor plan or simple shape assets through the right-click menu.



Operate

Mouse

Left Button

- Primitive selection.
- Click to draw polypath,polygon,rectangle...etc.

Right Button

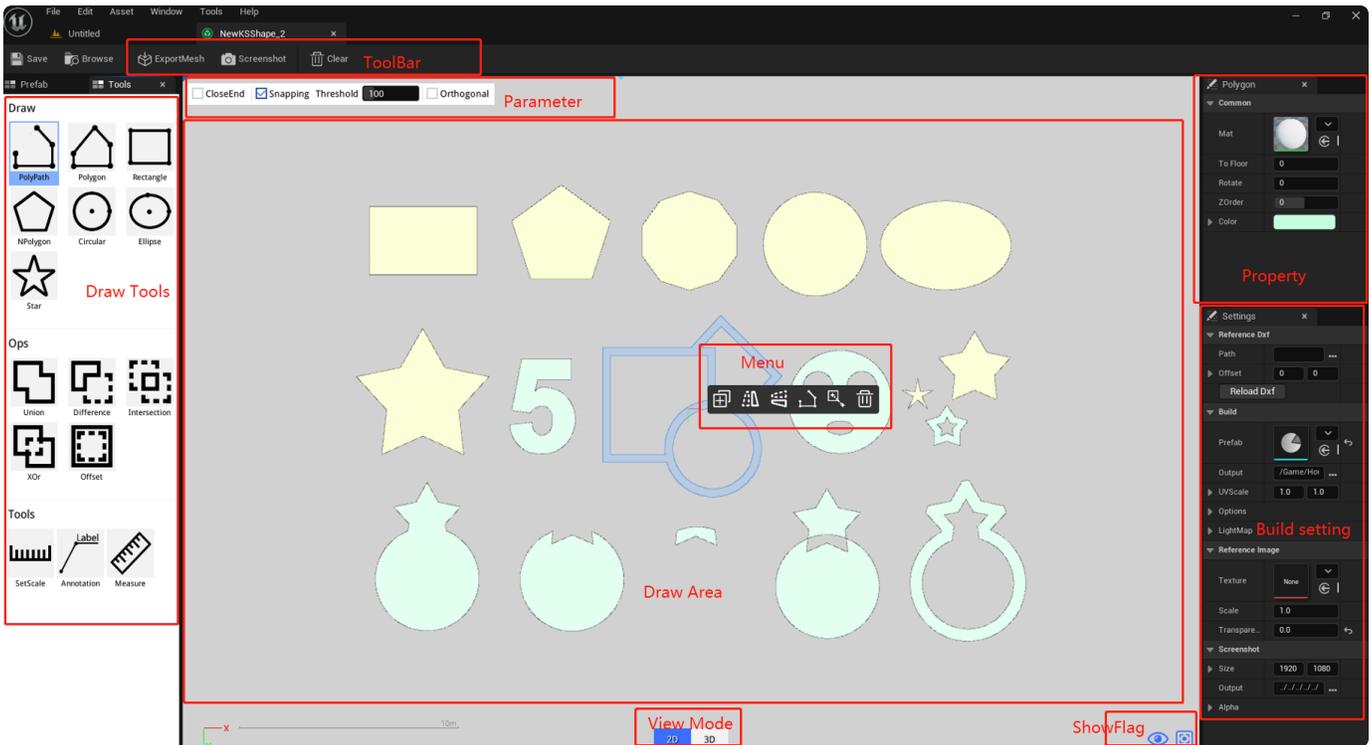
- Cancel command.
- Hold down and drag to pan the canvas.

Keyboard

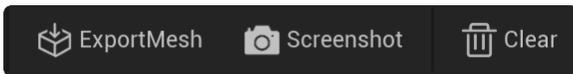
-
-

Shape



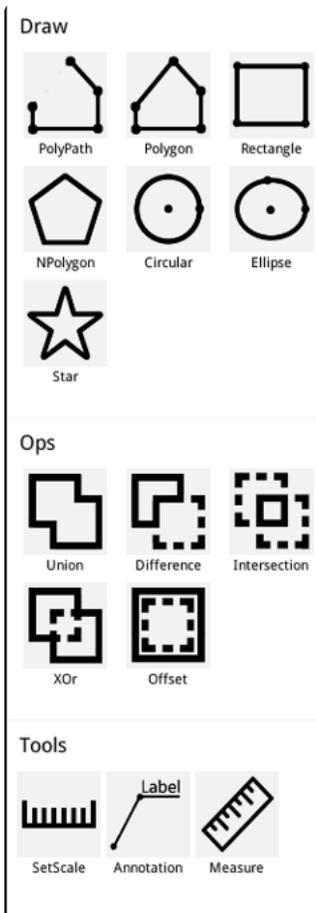


1.Toolbar



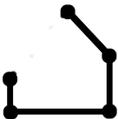
Icon	Name	Description
	ExportMesh	Export static mesh of the floor plan.
	ScreenShot	Take a screenshot of the viewport.
	Clear	Clear floor plan. Note:Can't recover once clear.

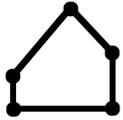
2.Draw Tools



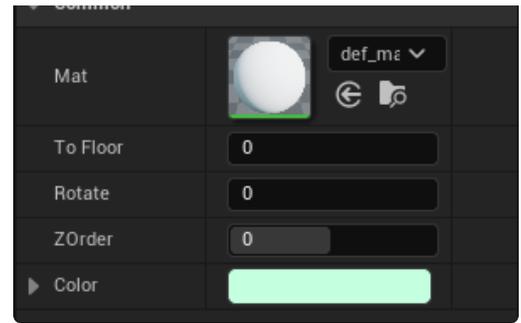
FreeDraw

Draw walls by segment or retangle.

Icon	Parameter	Proterty
 <p>PolyPath</p>	<div data-bbox="363 1339 924 1381"> <input type="checkbox"/> CloseEnd <input checked="" type="checkbox"/> Snapping Threshold <input type="text" value="100"/> <input type="checkbox"/> Orthogonal </div> <p>CloseEnd: Auto close end point.</p> <p>Snapping: Snap to the nearest point or line.</p> <p>Threshold: Snap threshold distance.</p> <p>Orthogonal: Draw wall horizontally or vertically.</p>	<div data-bbox="967 1320 1474 1535"> <p>▼ Common</p> <p>Rotate: <input type="text" value="0"/></p> <p>Closed: <input type="checkbox"/></p> <p>► Color: <input type="text"/></p> </div> <p>Rotate: The rotate degree base pivot.</p> <p>Closed: Wether close the end point.</p> <p>Color: 2D view fill color.</p>



Polygon



Mat:

3D mesh material.

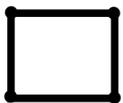
ToFloor:

Distance to the floor(z value is 0).

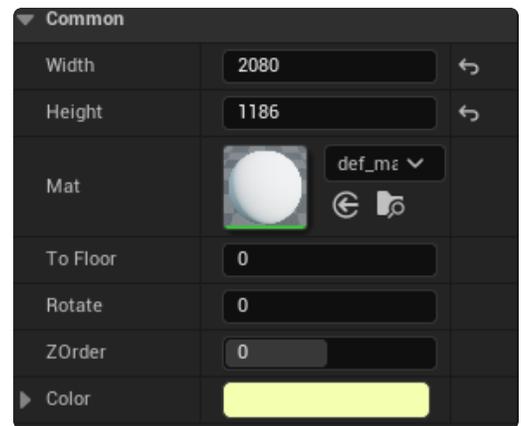
ZOrder:

Shape order by layer. The lower the value, the lower the layer.

If the lower level shape cannot be selected, please modify this value



Rectangle

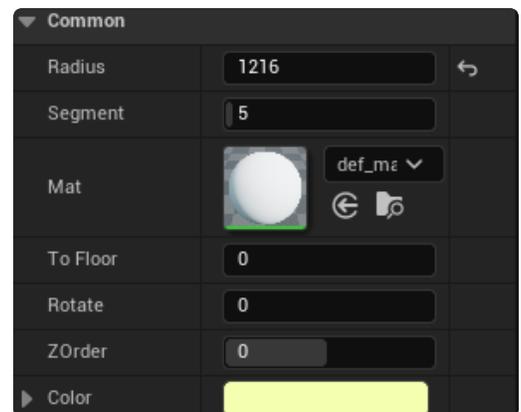


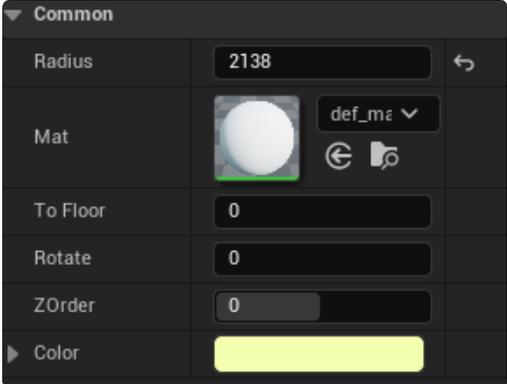
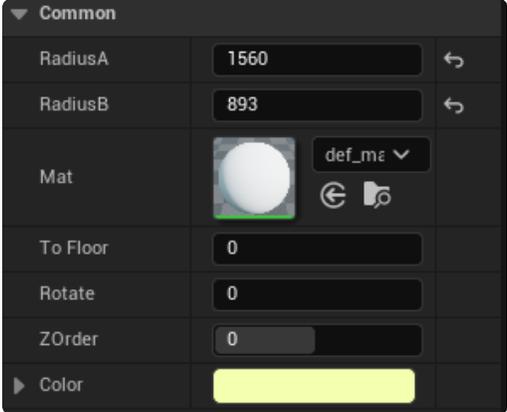
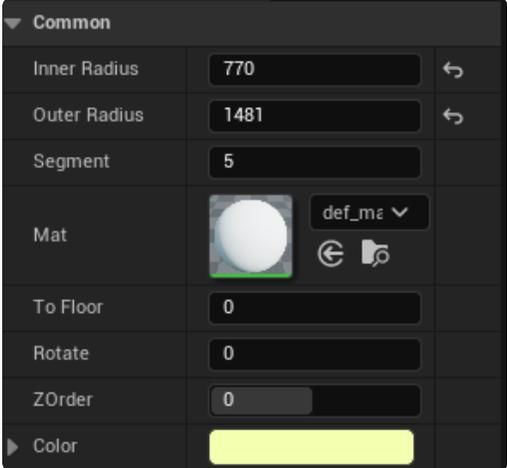
NPolygon

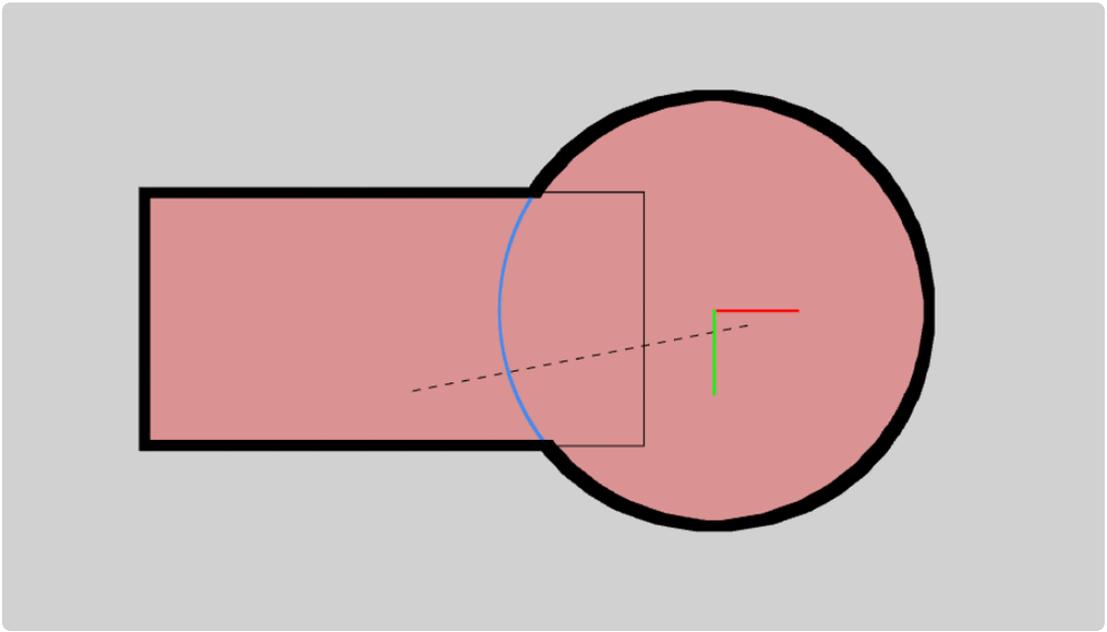
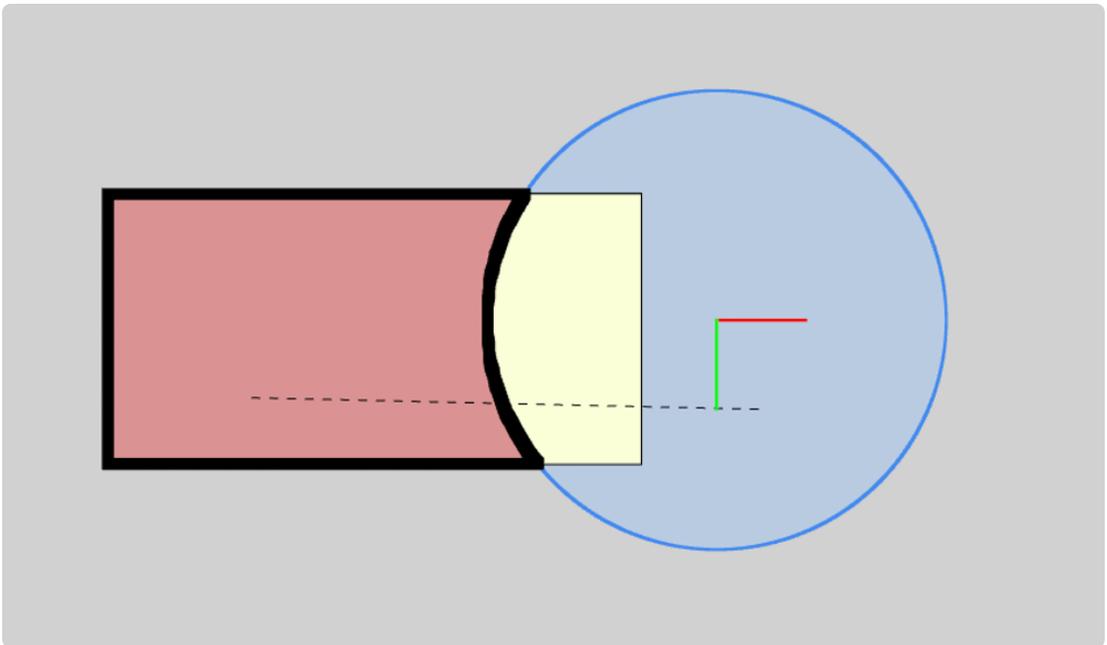
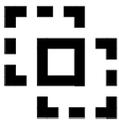
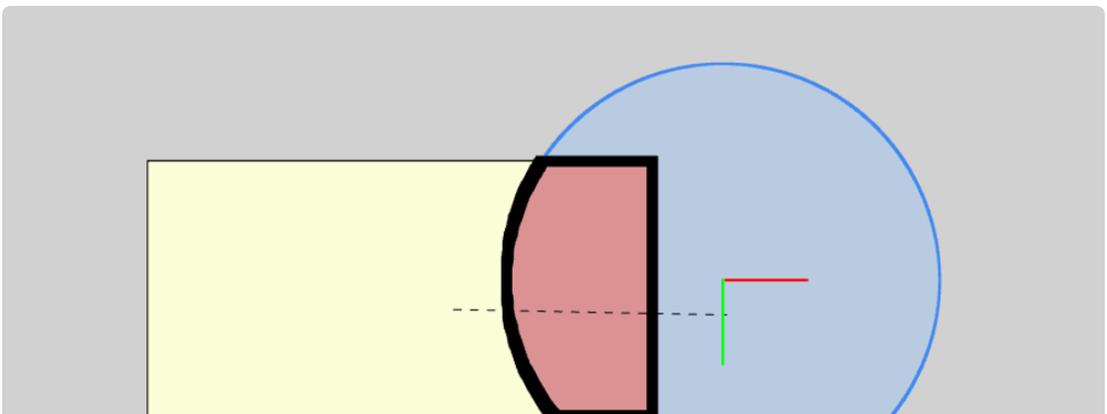


Segment:

The number of polygon side.

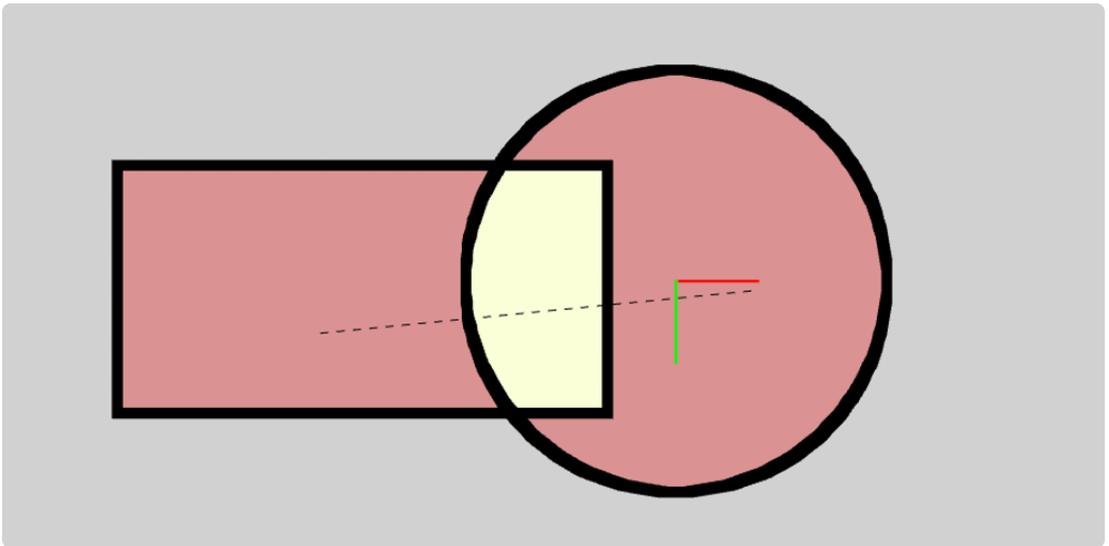


		<p>Radius:</p> <p>Circumcircle radius of the regular polygon.</p>
 <p>Circular</p>		
 <p>Ellipse</p>		 <p>RadiusA:</p> <p>Longer radius.</p> <p>RadiusB:</p> <p>Shorter radius.</p>
 <p>Star</p>	 <p>Segment:</p> <p>The numble of star side.</p>	

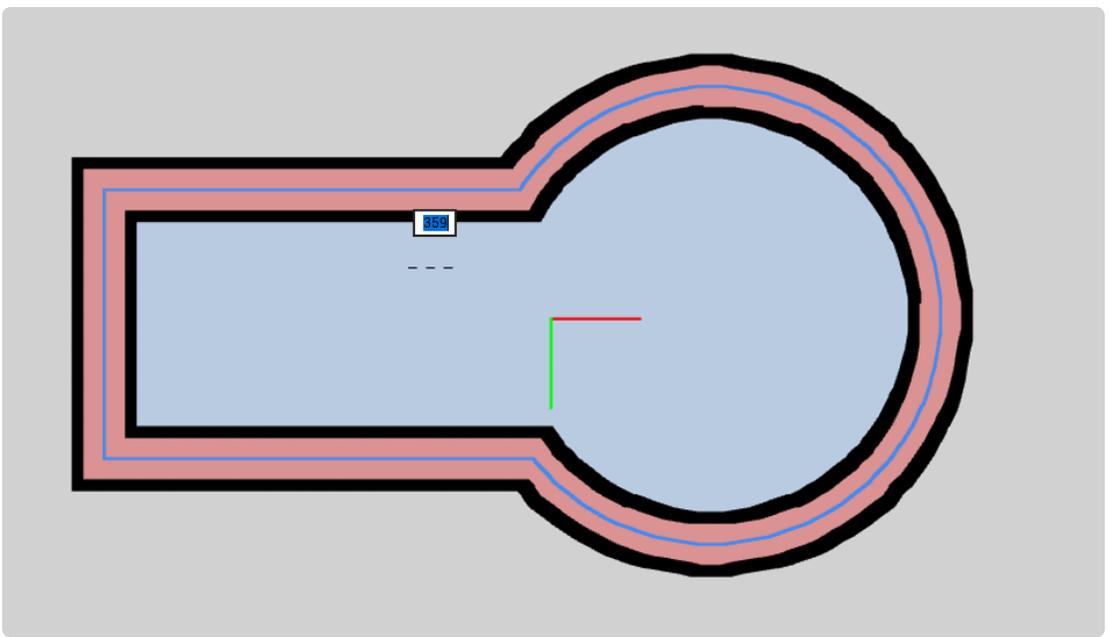
Icon	Sample
 <p data-bbox="196 642 282 674">Union</p>	
 <p data-bbox="167 1308 315 1339">Difference</p>	
 <p data-bbox="147 1948 302 1980">Intersection</p>	



XOr

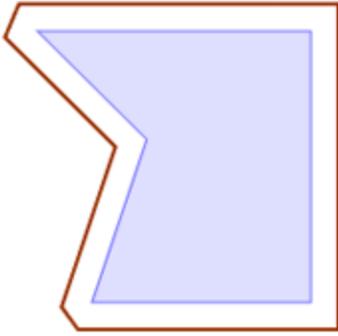


Offset

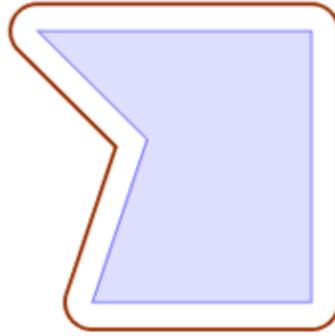


Offset Parameter

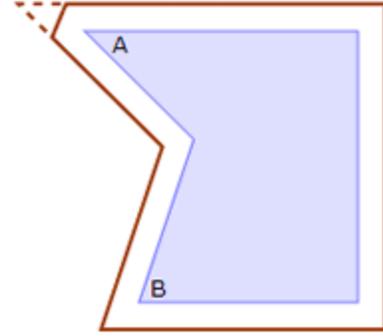
JoinType Miter ML 20 EndType Polygon ?



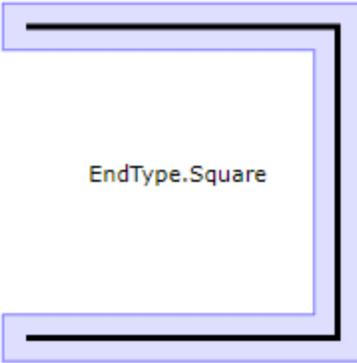
JoinType.Square



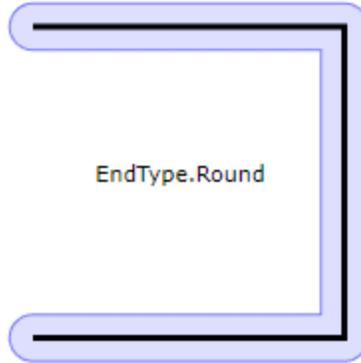
JoinType.Round



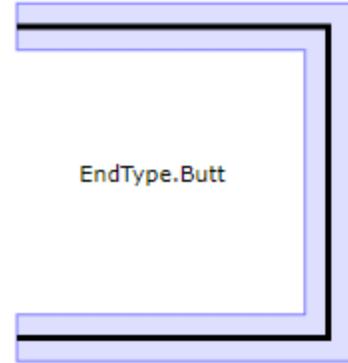
JoinType.Miter (ML: 2)



EndType.Square



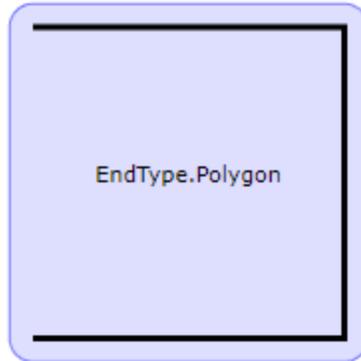
EndType.Round



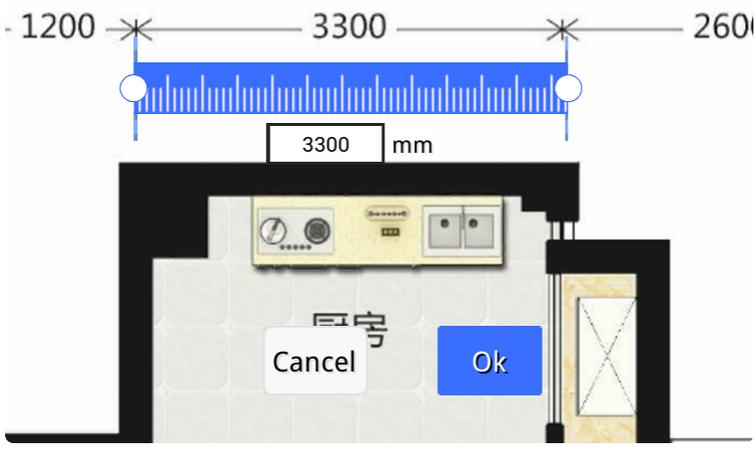
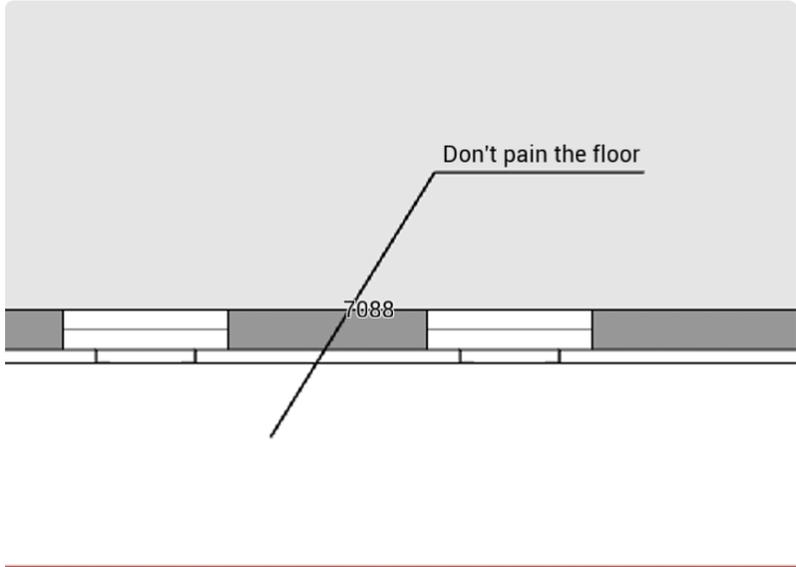
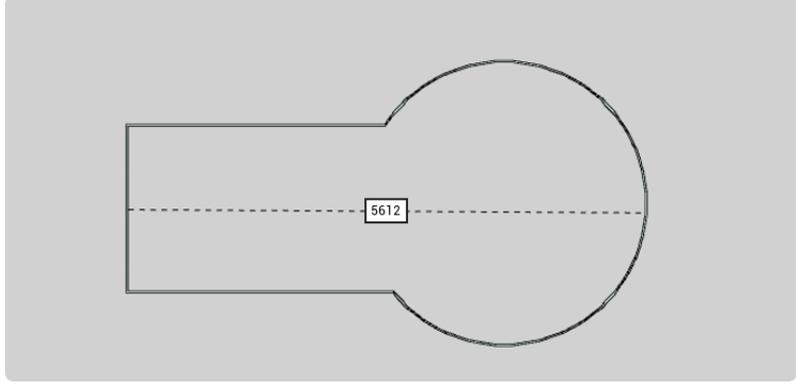
EndType.Butt



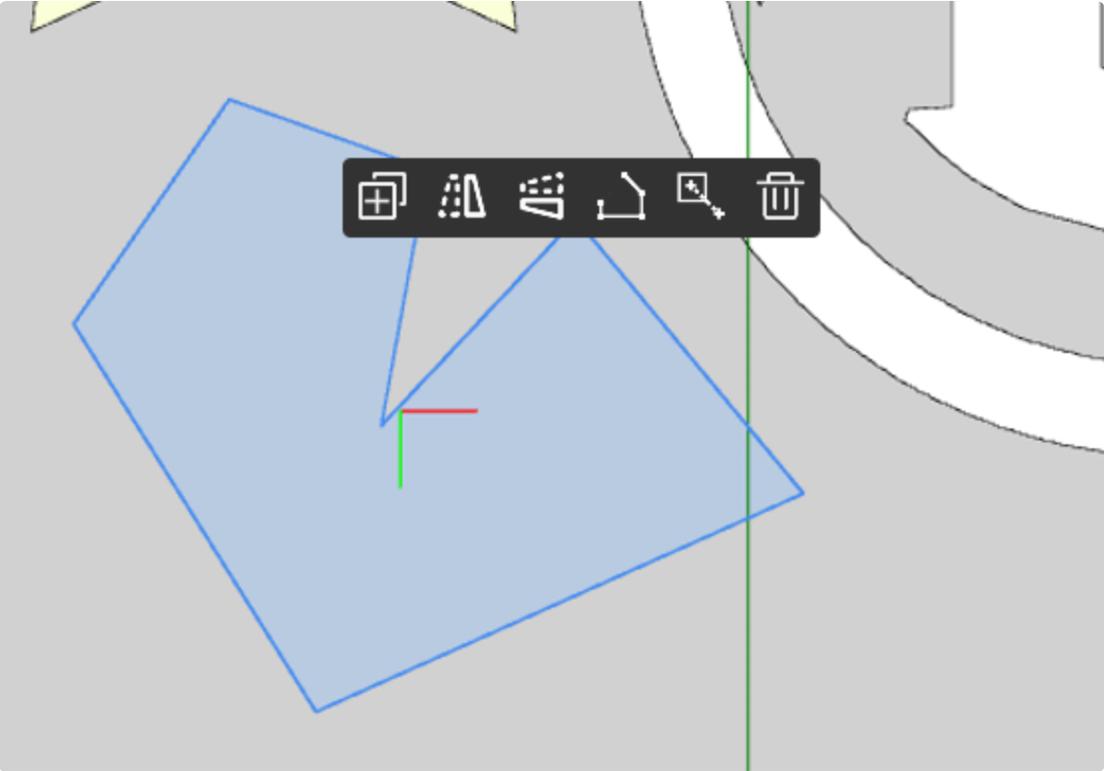
EndType.Join



EndType.Polygon

Icon	Description
 <p data-bbox="181 424 310 457">SetScale</p>	 <p data-bbox="381 724 820 756">Set scale of the reference image.</p>
 <p data-bbox="170 1033 321 1066">Annotation</p>	 <p data-bbox="722 1417 803 1444">Master</p>
 <p data-bbox="142 1711 267 1745">Measure</p>	

3.Selection Menu



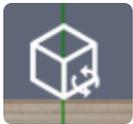
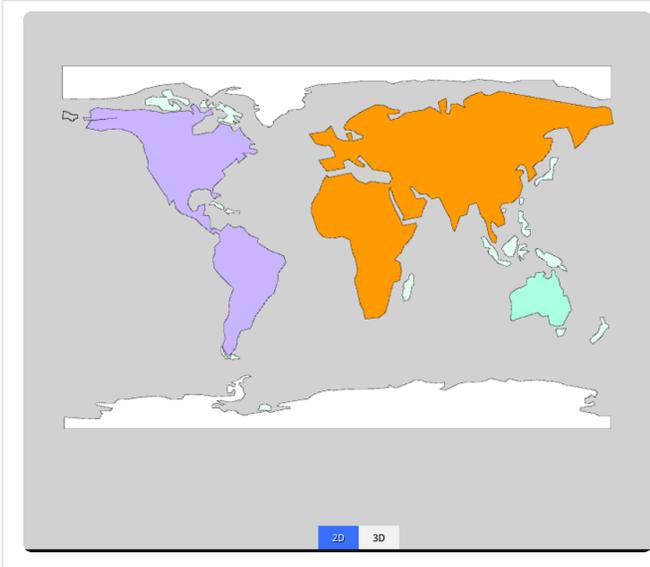
Icon	Description
 Copy	Copy the select shape
 Flip	Flip horizontal.
 Split	Flip vertical.
 ToPolyPath	Convert polygon to polypath
 ToPolygon	Convert polypath to polygon
 Pivot	Translate the pivot
 Delete	Delete the select shape.

4.View Mode

2D:Draw floor plan.

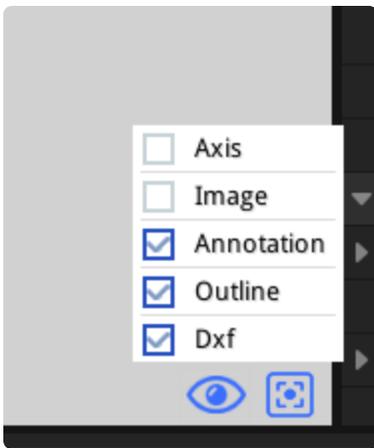
3D:Build and view the mesh.





Rebuild the mesh.

5.Show Flag



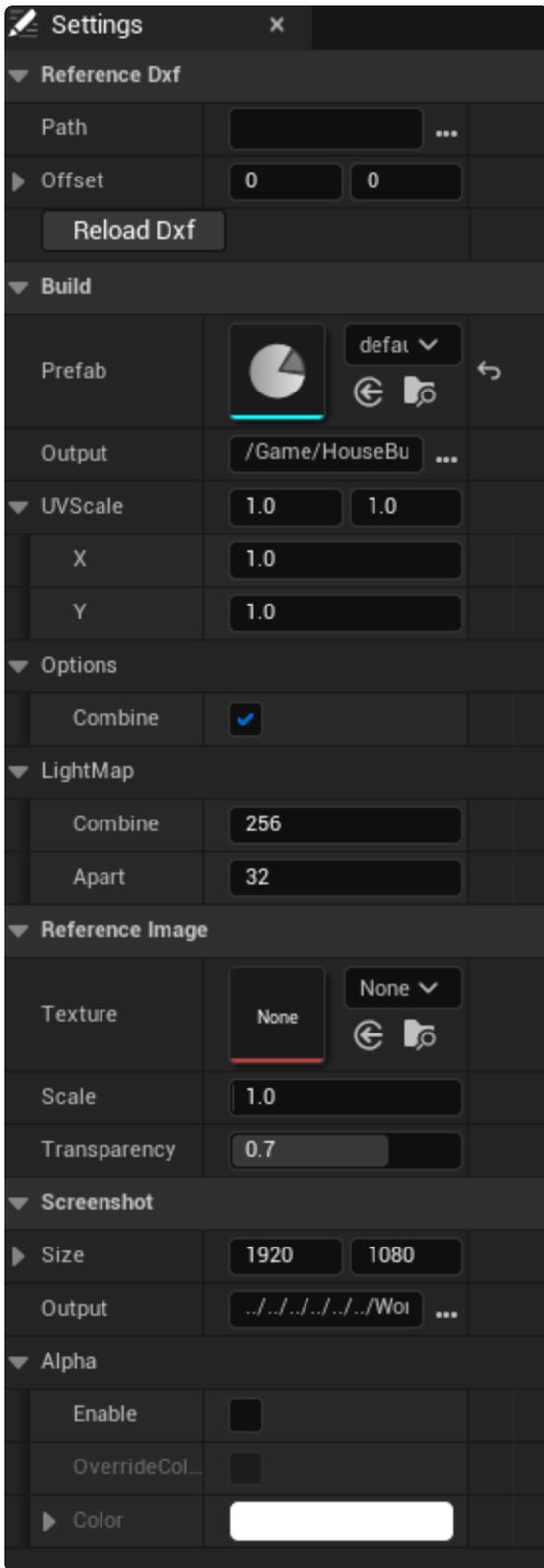
Focus the view to the center.



Show or hide.

Name	Room name.
Axis	Axis lines.
Image	Reference image.
Annotation	Annotation lable.
Outline	Polygon outline
Dxf	Refreence dxf.

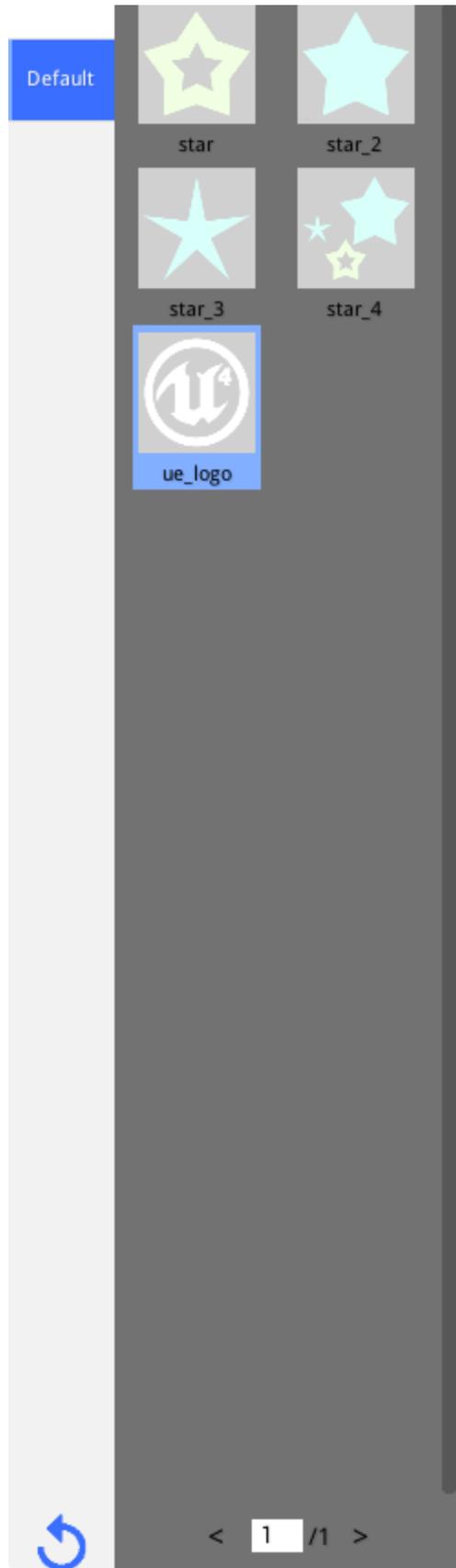
6.Build Setting



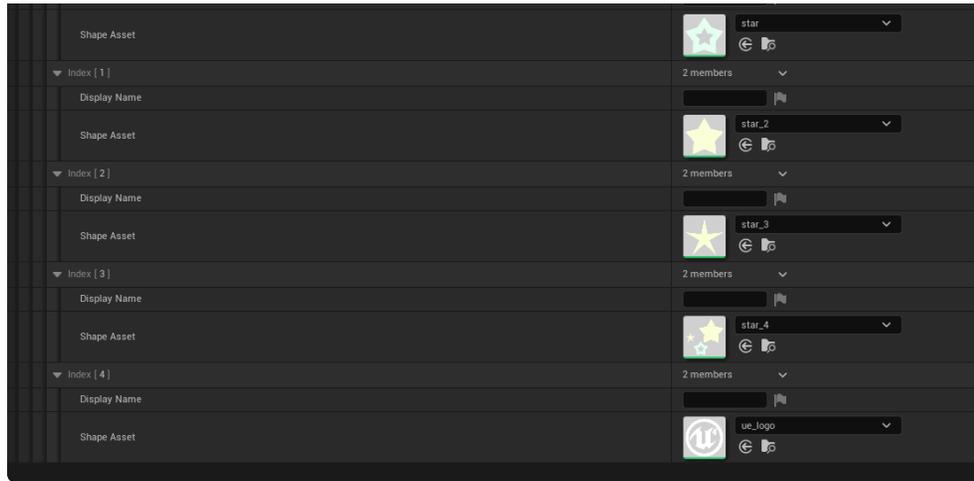
Build

Name	Description

Prefab



Shape Prefab Library	1 Array elements	🔄 🗑️
Shape Prefab Lists	2 members	▼
Index [0]	Default	🗑️
Category	5 Array elements	🔄 🗑️
Shape Prefabs	2 members	▼
Index [0]		
Display Name		

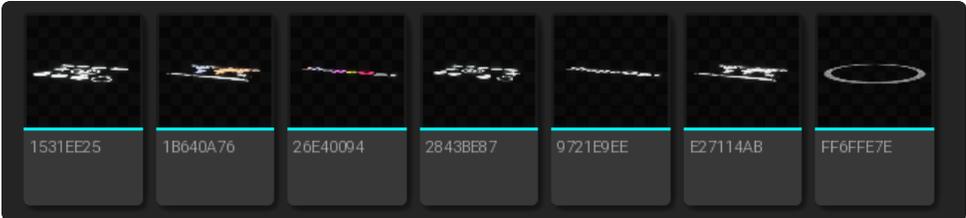


Custom shape prefab library.

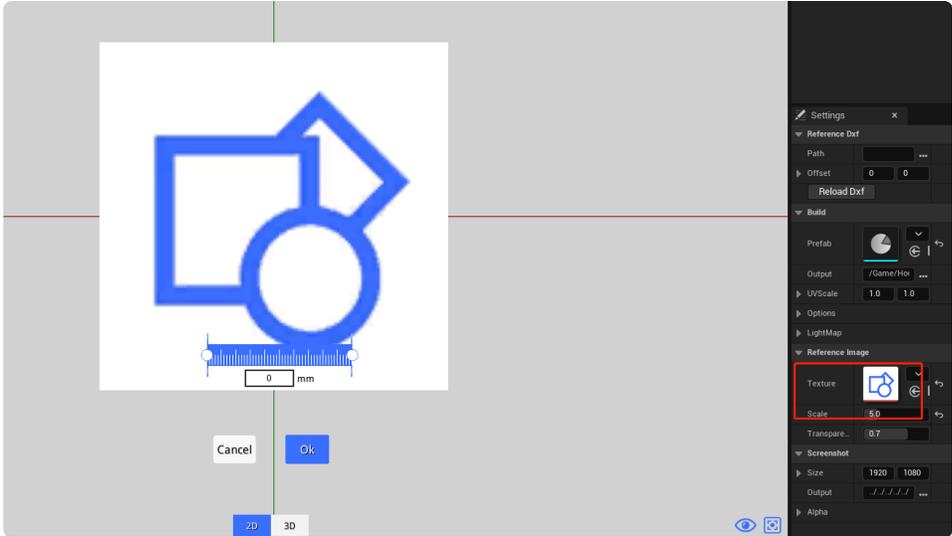
Output

Generated static mesh dictory.

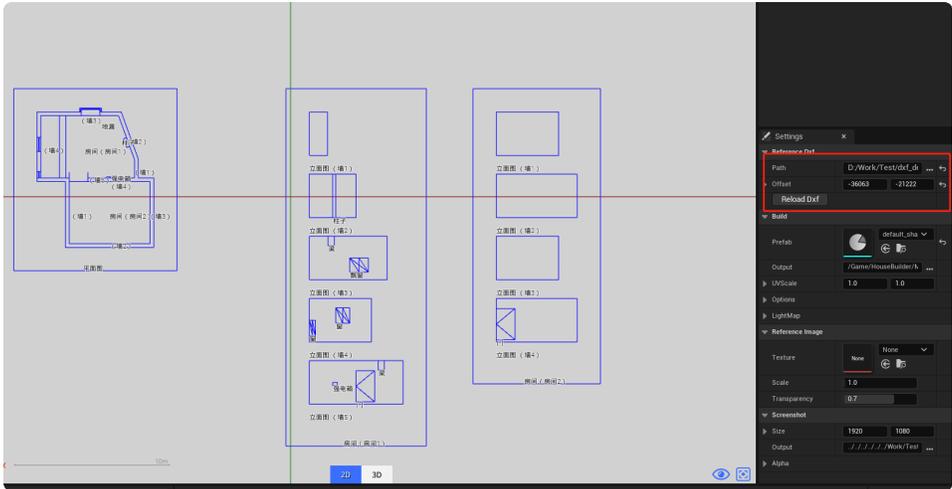
Options

Name	Description
Combine	<p>Build a single mesh or apart.</p> <p>Apart:</p>  <p>Single:</p> 

Reference Image

Name	Description
Texture	
Scale	Reference texture scale size,you can use  to measure the scale.
Transparency	Reference texture transparency.

Reference dxf

Name	Description
Texture	
Path	The path of the dxf file.
Offset	The dxf offset from center.
Reload Dxf	Reload the dxf file

