Live Shapes

Package

Introduction

This package is designed to create shapes using Bezier curves. It allows you to quickly create the necessary shapes and 2D objects. You can convert the created shapes to the following available formats:

- .png
- .svg
- .mesh
- .ls ("Live Shapes" format)

As a result, this package allows you to create the necessary objects for a 2D project or interface directly in Unity. For example, shapes created with this package can be used as interface elements in SVG format. In this case, you will need a vector graphics package "Vector Graphics", which you can download in the Package Manager.

When creating a shape, it is possible to edit UV coordinates and overlay the following on the shape:

- color
- texture
- texture + color
- gradient (linear, radial, angle, diamond)
- custom material

Coloring is done using optimized shaders, which are also included in the editor.

There are also additional settings for optimizing mesh generation, which allows you to flexibly adjust the mesh quality.
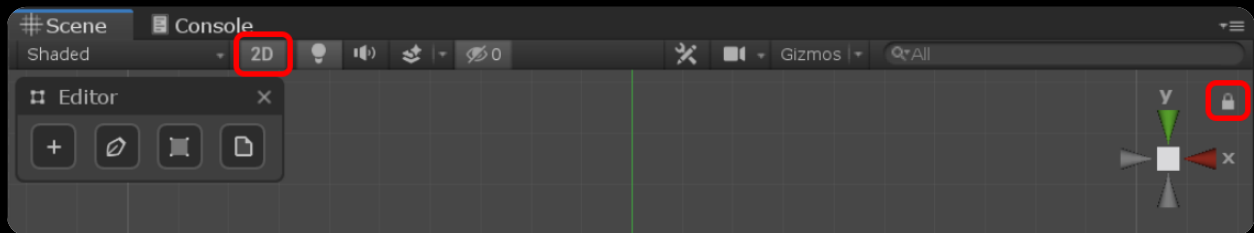
If the created form was saved in the .ls format, then it can be loaded into the editor and edited again.

The process of creating shapes

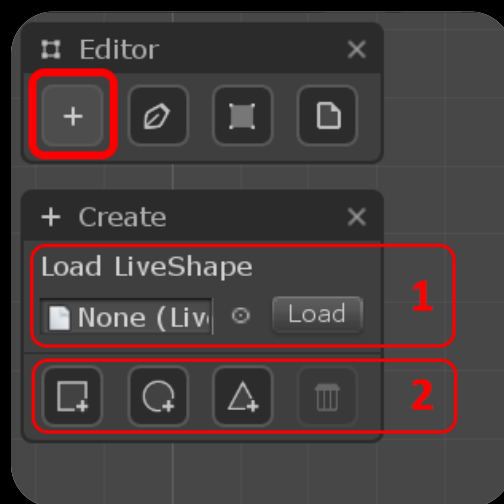1. First you need to open the Live Shapes editor.
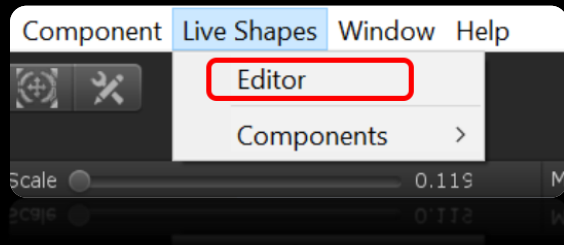
A panel in the scene window will open and the scene will be locked.

2. In the main panel there are 4 additional ones.

To create a new shape, open the creation panel. You can move panels around the scene by holding down the upper title part of it (except for the main panel).


Number **1** denotes the part of panel where you can load the previously created shape. Number **2** denotes a part of the panel where you can create a primitive

shape or delete an editable one. To create a primitive shape, select one of those available on the panel and left-click on the scene and drag to form the shape.
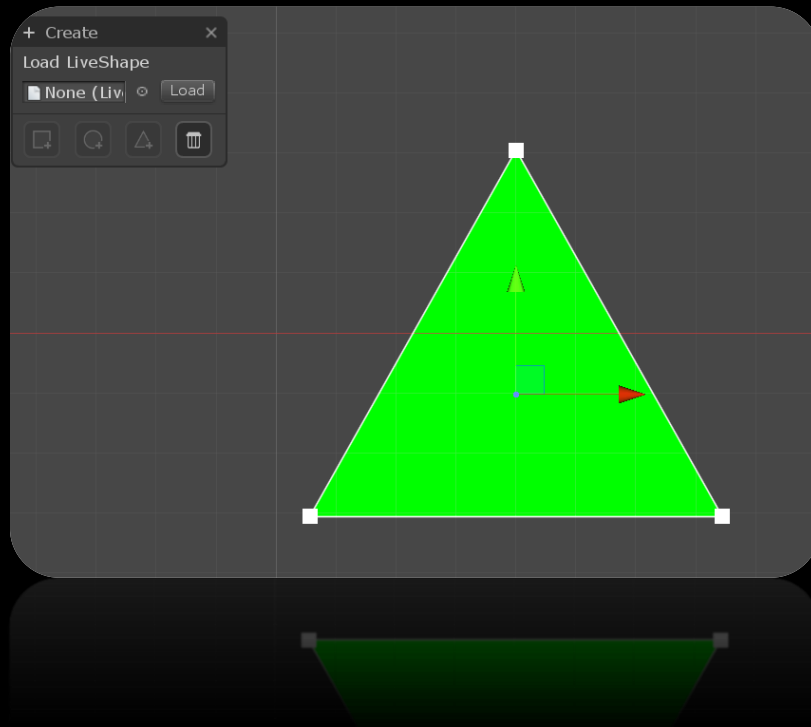
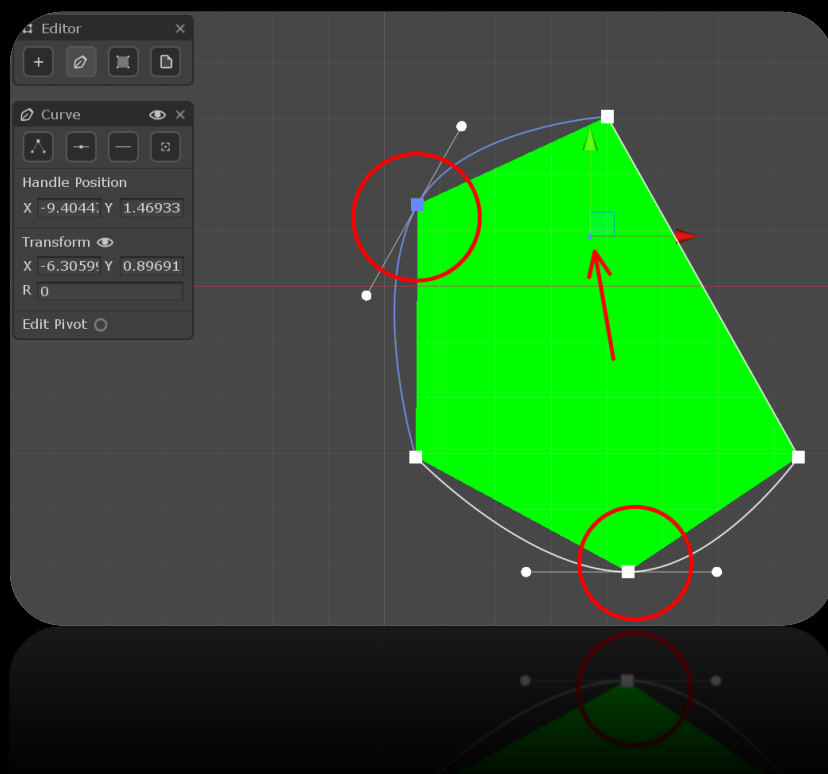3. Edit the created form. The curve editing panel will help you with this.
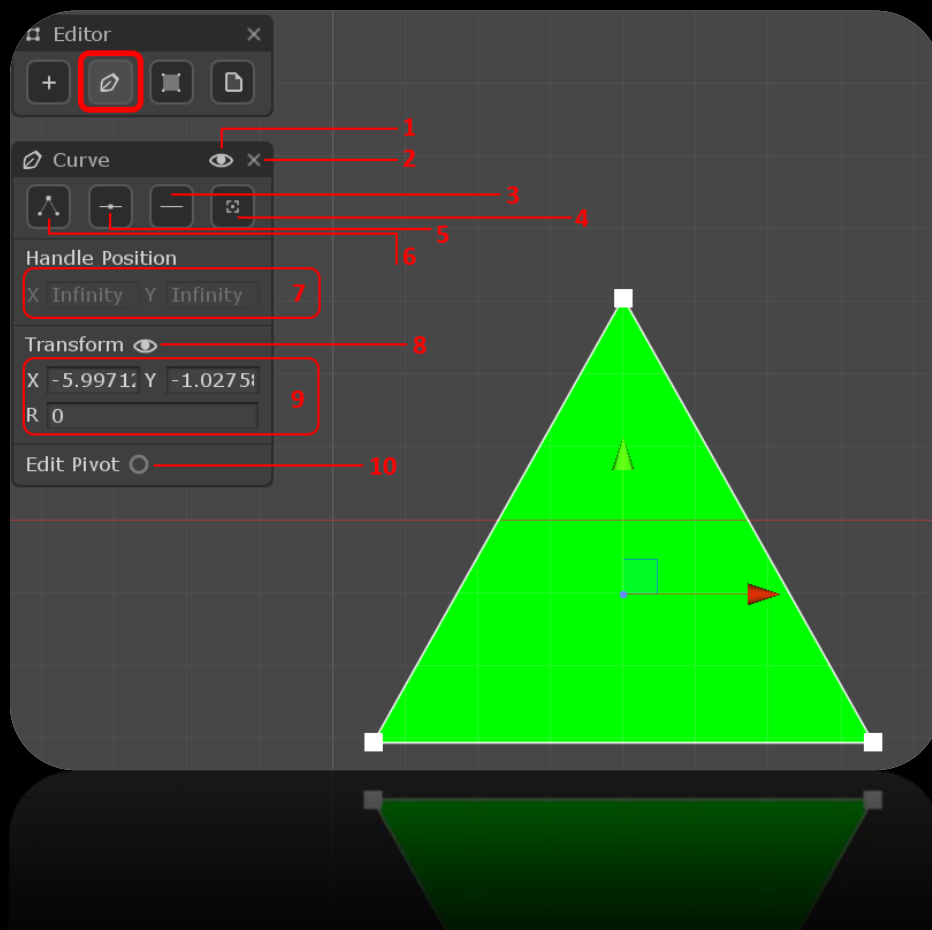
Number **1** denotes a button with which you can completely hide the curve. Number **2** denotes a button with which you can close this panel. Number **3** denotes a button with which you can hide all points of the curve (only the curve will be displayed). Number **4** denotes a button with which you can focus the scene view on the shape being edited. Number **5** denotes a button with which you can hide only additional points of the curve (only the curve and base points will be displayed). Number **6** denotes a button with which you can edit or remove additional points for the curve. Number **7** denotes a field where you can change the coordinates of the selected point. Number **8** denotes a button with which you can show or hide the pivot of the shape (only move and rotate is available). The number **9** denotes the fields where you can manually change the position and rotation of the edited shape. The number **10** denotes a button that activates the pivot editing mode. In this case, you can move and rotate the pivot of the shape separately from the shape itself.

To add a base point, click on the curve while holding down the **ctrl** key.

To delete a base point, click on the curve or the desired base point while holding down the **shift** key.

For stable mesh generation, you should to edit the curve so that it doesn't intersect with itself. Otherwise, mesh artifacts are possible.

While editing a curve, you can undo any changes with the keyboard shortcut **ctrl + z**.

4. The next important part is setting up the mesh generation, as well as setting up its rendering. To do this, switch to the mesh panel.
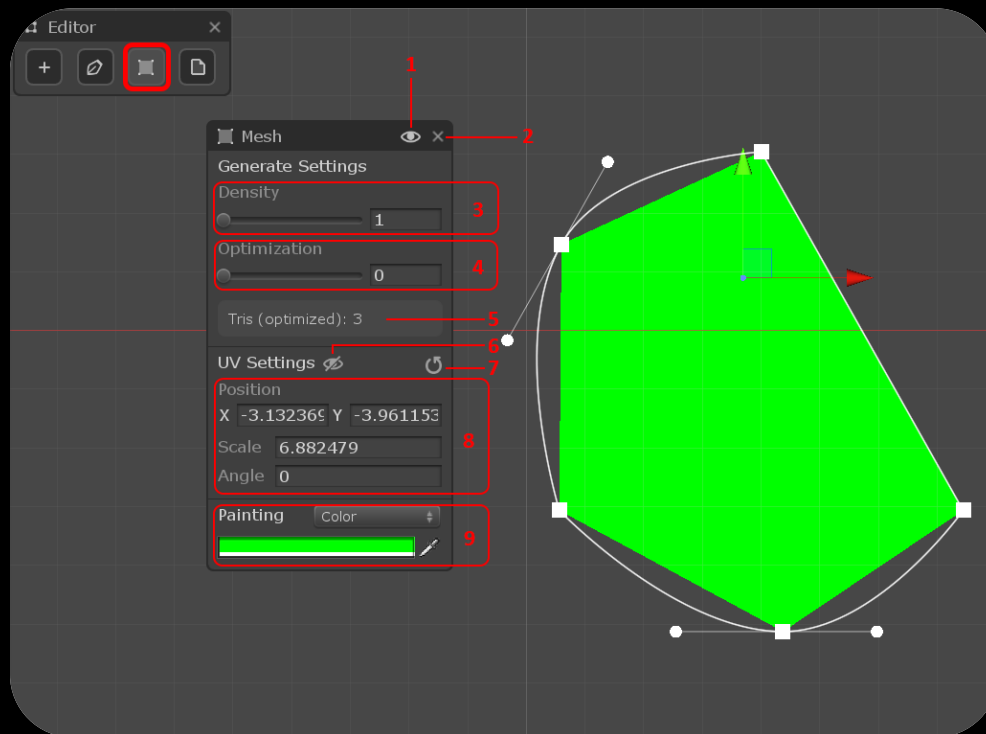

Number **1** denotes a button with which you can completely disable mesh generation (Hint: disable mesh generation when editing a shape with a lot of triangles. Generating on the fly can reduce the speed and convenience of curve editing). Number **2** denotes a button with which you can close this panel. Number **3** denotes a parameter with which you can adjust the density of the mesh vertices (this parameter determines the number of curve splits). Number **4** denotes a parameter with which you can optimize the density of the mesh's vertices. (unnecessary vertices will be cut off). Number **5** denotes a field where you can see the number of generated triangles. Number **6** denotes a button with which you can turn on the setting of UV coordinates. Number **7** denotes a button with which you can reset the UV coordinates. The number **8** denotes parameters with which you can adjust the coordinates using values. The number **9** denotes the parameters with which you can customize the rendering of the mesh.
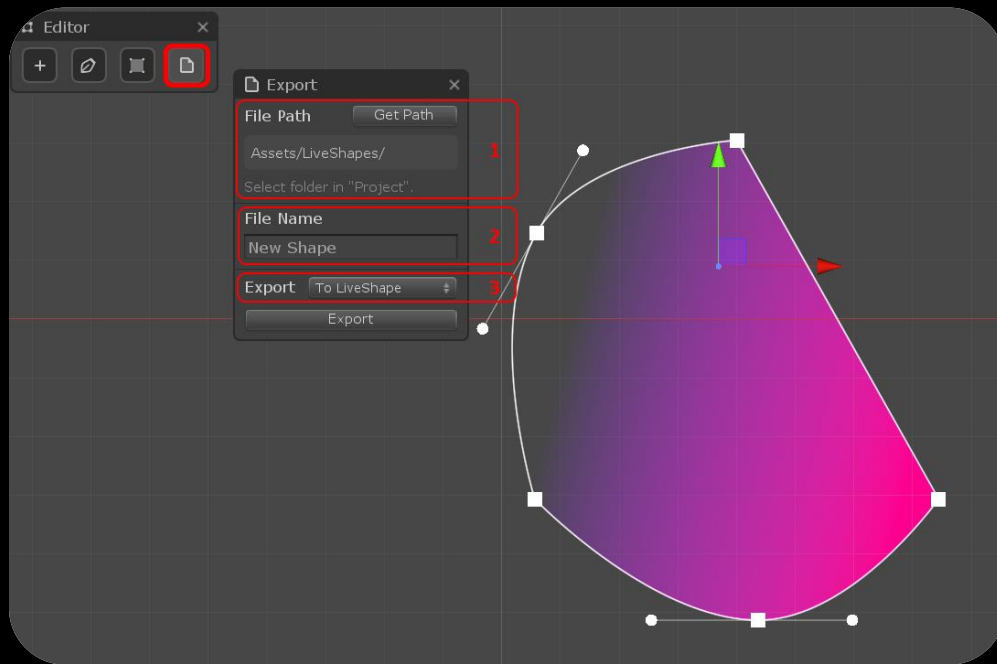
Editing UV coordinates
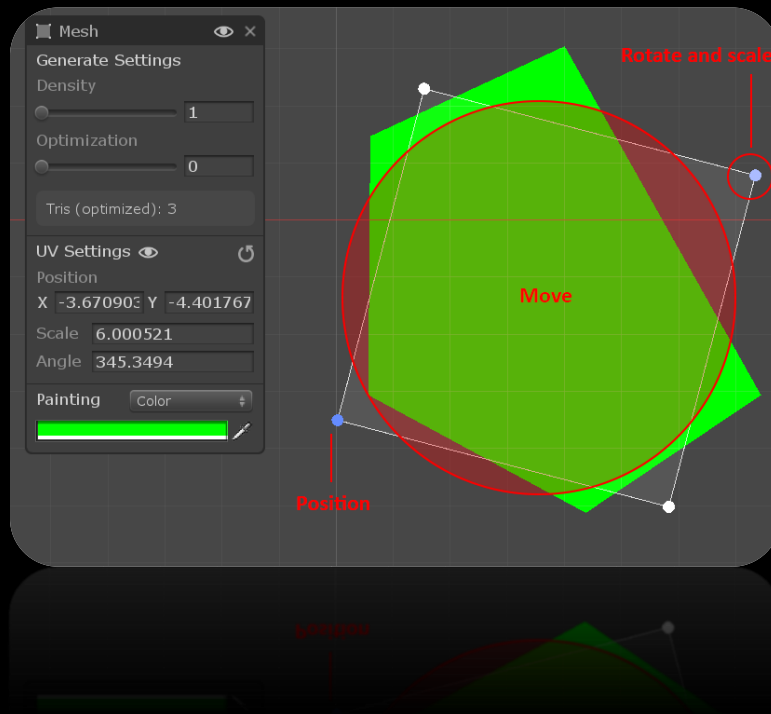
# Updated mesh generation and rendering options
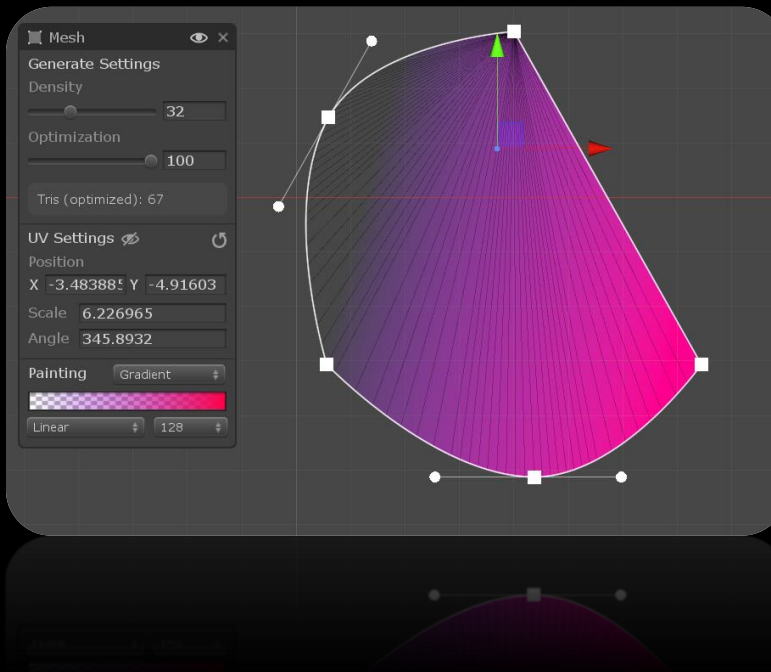
5. Now you can export the shape in the format you want. To do this, you need to open the export panel.

Number **1** denotes the part where you can select a place in the project to save the finished shape (select a folder or file in the Project window and click "Get Path". If you select a previously exported shape, this window will repeat the settings of this shape: format and name). Number **2** denotes the field where you can assign a name of the exported file. The number **3** denotes the format settings (Live Shape, Png, Svg, Mesh).

As an example, an export figure in Svg format is presented.
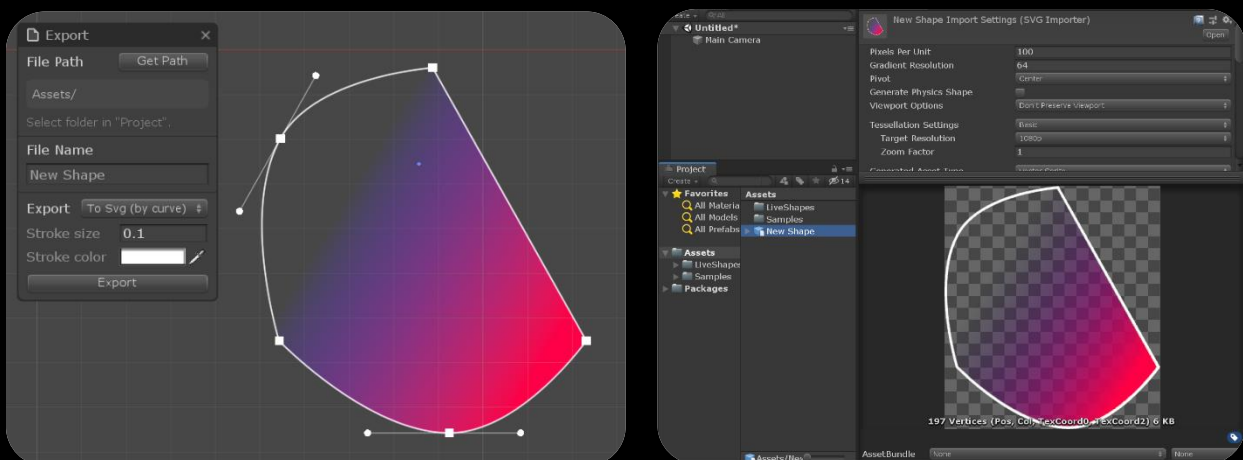
6. Shape import process.

In this case, the shape must be saved in **Live Shape** format. From the project window in the selected shape, you need to drag the data file to create panel for import this shape. Then you need to click the **load** button.
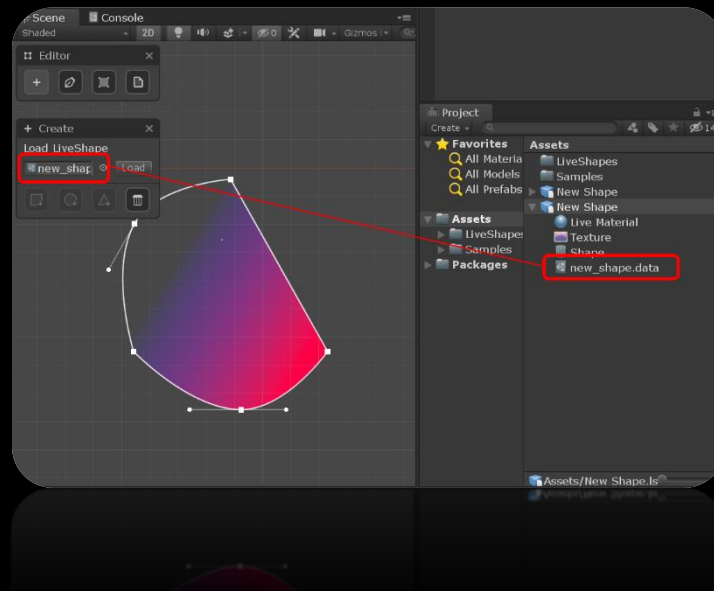
7. You can also generate a 2D polygon collider based on the created shape.
To do this, add the "Live Polygon Collider 2D" component to the object.

You will need to drag the data file from the live shape into the "Data" field and click the "Recalculate" button.

Here you can also adjust the density of the mesh of the collider generation.

Contacts

Author: Andrew Oleynik

Email: andrew.olenk@gmail.com

For any questions or cooperation, please contact me.

The title image was made with this package.