

2D  
REF  
OS

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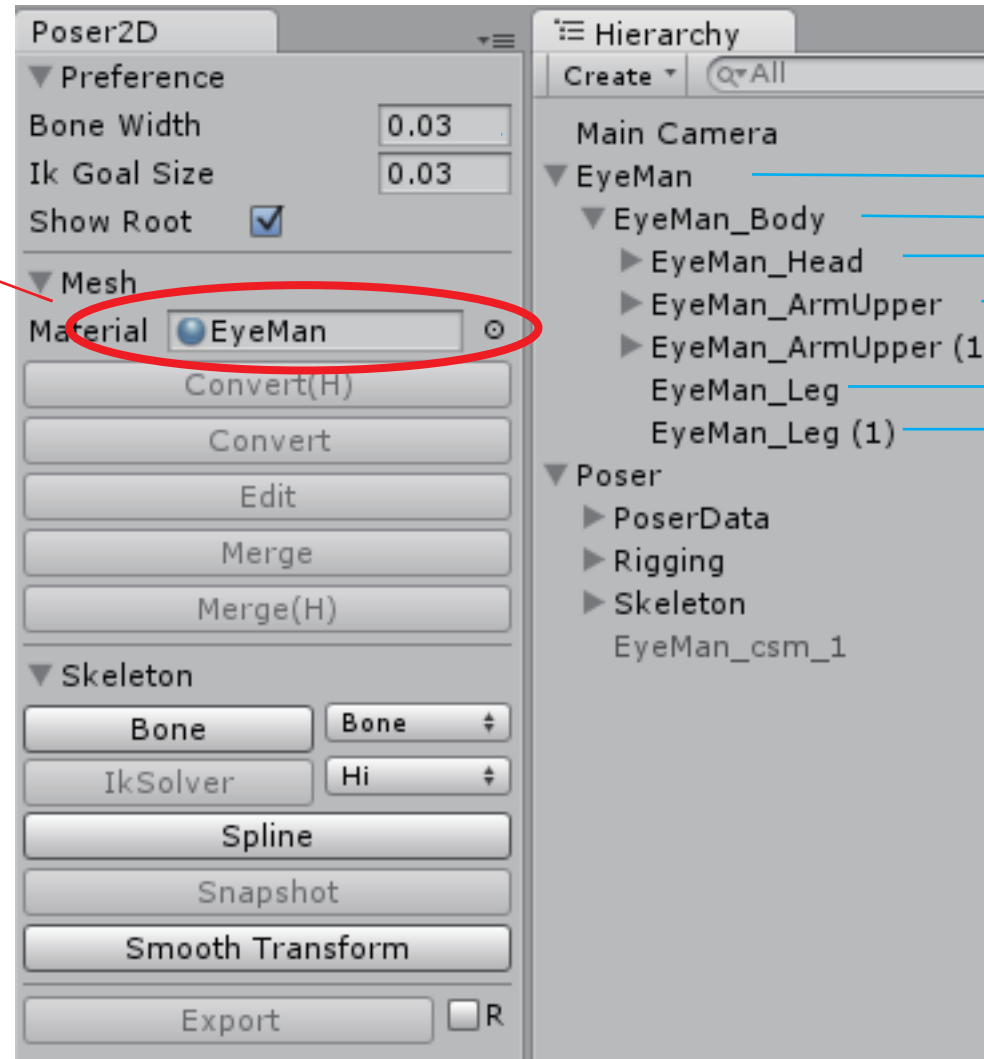
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# Poser2D Window

bone width for creation	▶	Poser2D	▼ Preference	Bone Width	0.03	
goal size of iksolver for creation	▶			Ik Goal Size	0.03	
show cross of poser root	▶			Show Root	<input checked="" type="checkbox"/>	
material for mesh operation	▶		▼ Mesh	Material	EyeMan	
convert sprites to meshes by root of hierarchy	▶			Convert(H)		
convert sprites to meshes by selections	▶			Convert		
edit last selected mesh	▶			Edit		
merge meshes of seletions to single one	▶			Merge		
merge meshes to single one by root of hierarchy	▶			Merge(H)		
create bone	▶		▼ Skeleton	Bone	Bone	▶ change type of bone
create iksolver	▶			IkSolver	Hi	▶ change type of iksolver
create spline	▶			Spline	Hi	
open the last selected poser to snapshot window	▶			Snapshot		
change transform smooth	▶			Smooth Transform		
export the last selected poser	▶			Export	<input type="checkbox"/> R	▶ replace old export animations

# Mesh

convert or merge mesh need a material for a operation

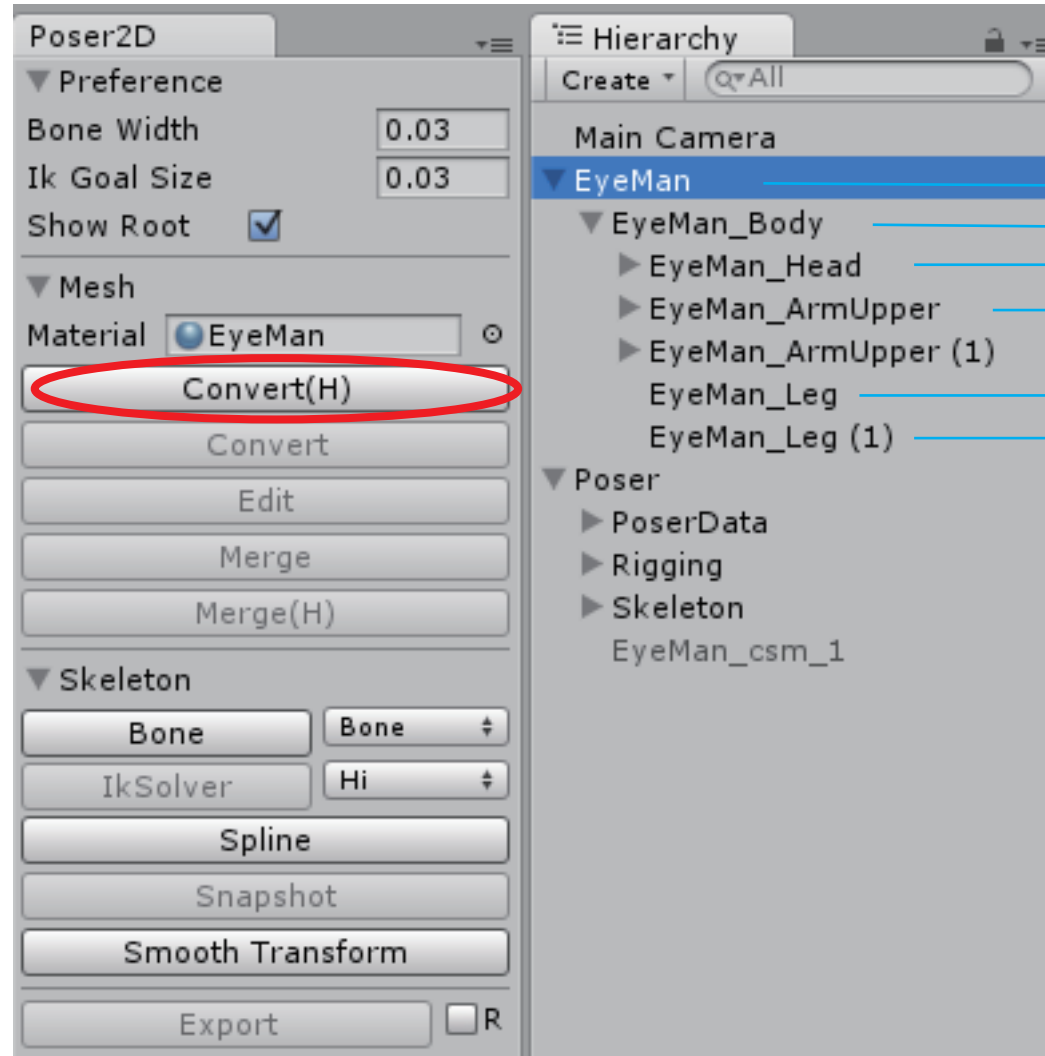


no sprite  
sprite  
sprite  
sprite  
sprite  
sprite  
sprite

# Mesh - Covert(H)

active button

there is at least one sprite in the last selection or children



no sprite

sprite

sprite

sprite

sprite

sprite

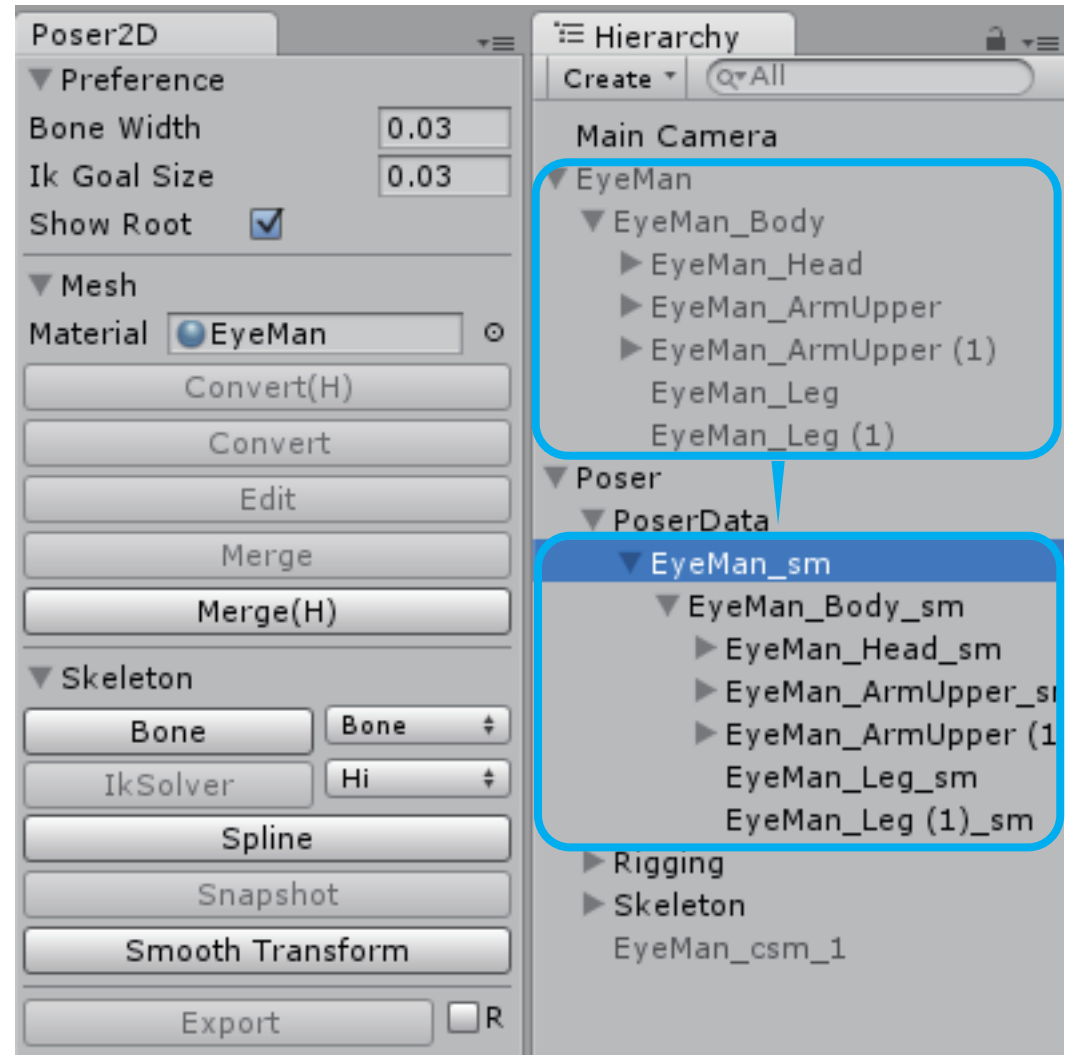
sprite

sprite

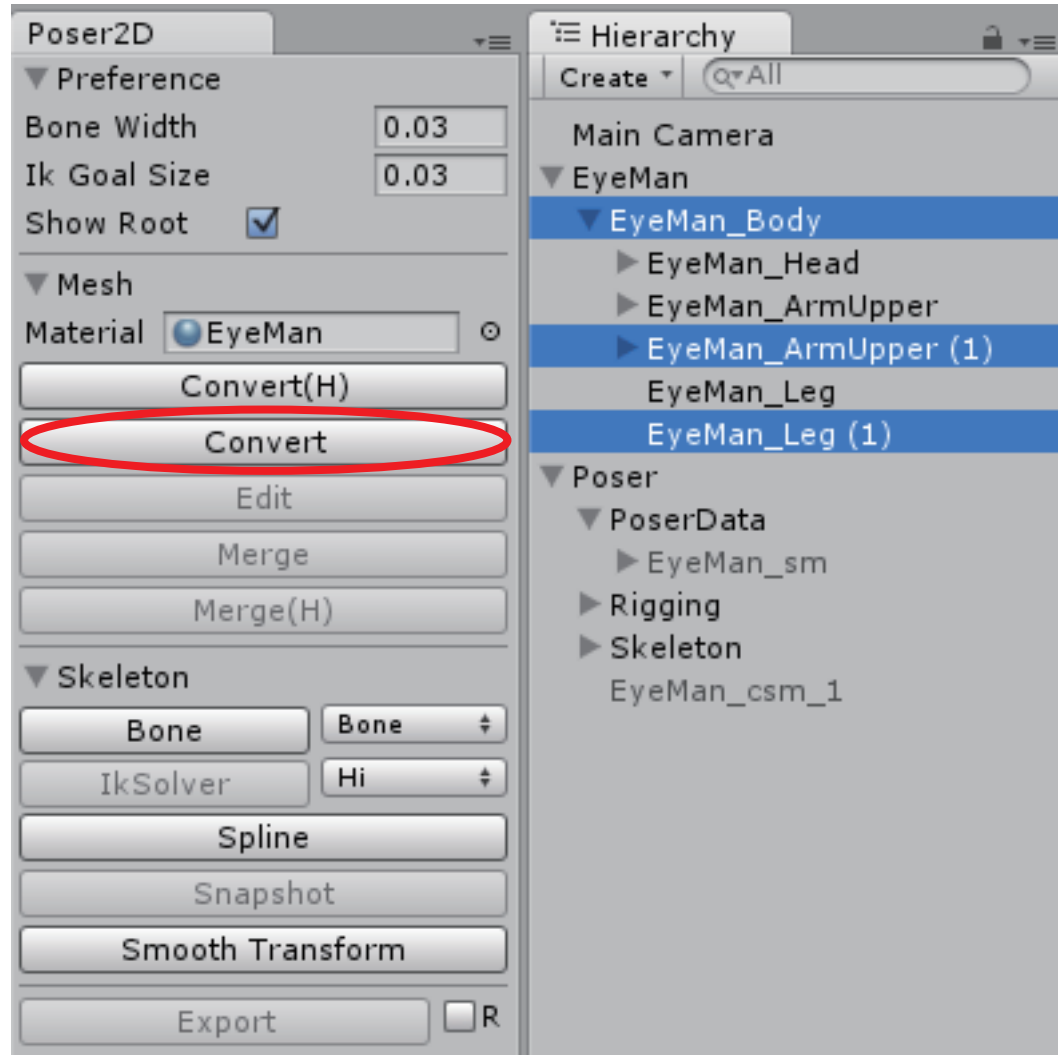
# Mesh - Covert(H)

click button

convert all sprites to meshes by hierarchy  
and attach to PoserData



# Mesh - Covert



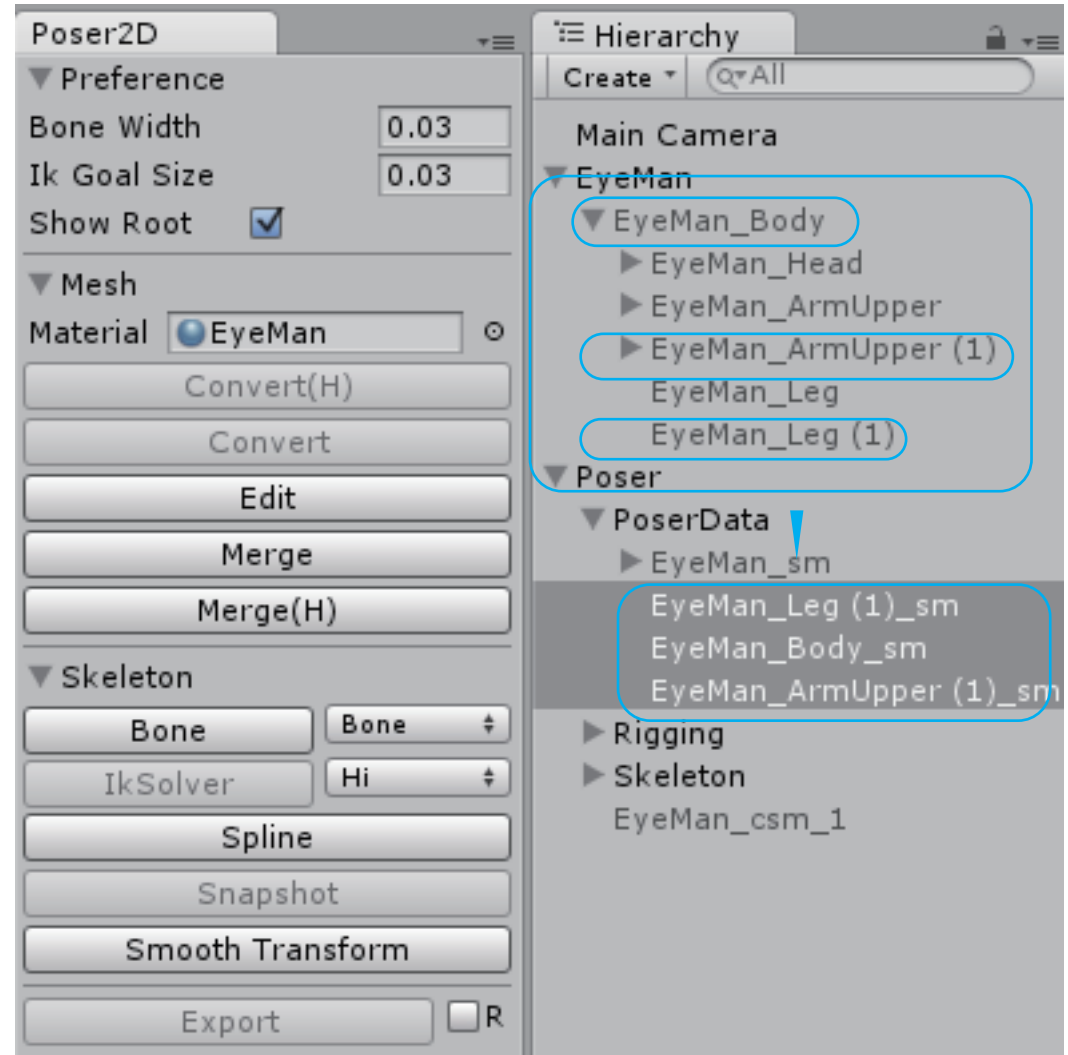
active button

there is at least one sprite in selections

# Mesh - Covert

click button

create meshes from sprites of selections  
and attach to PoserData

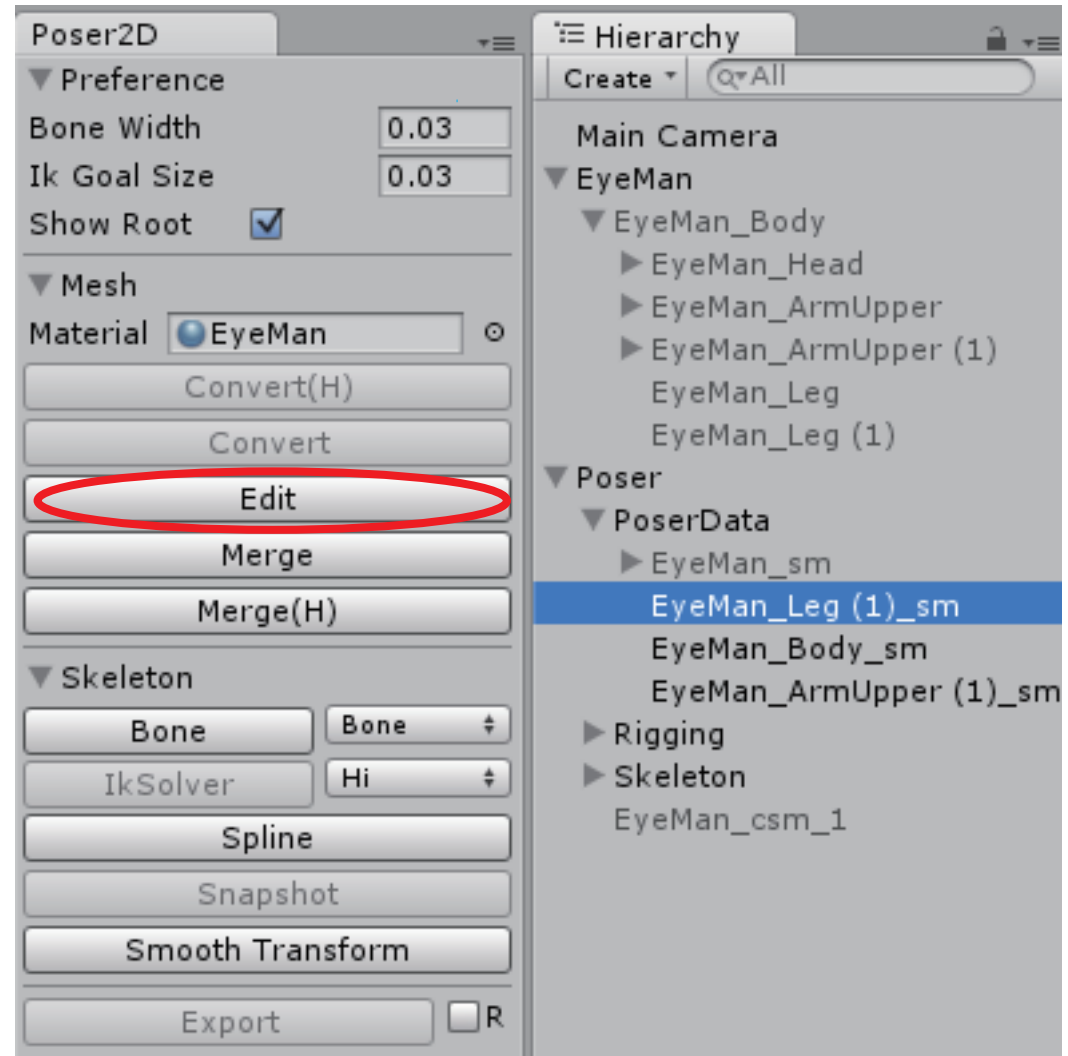




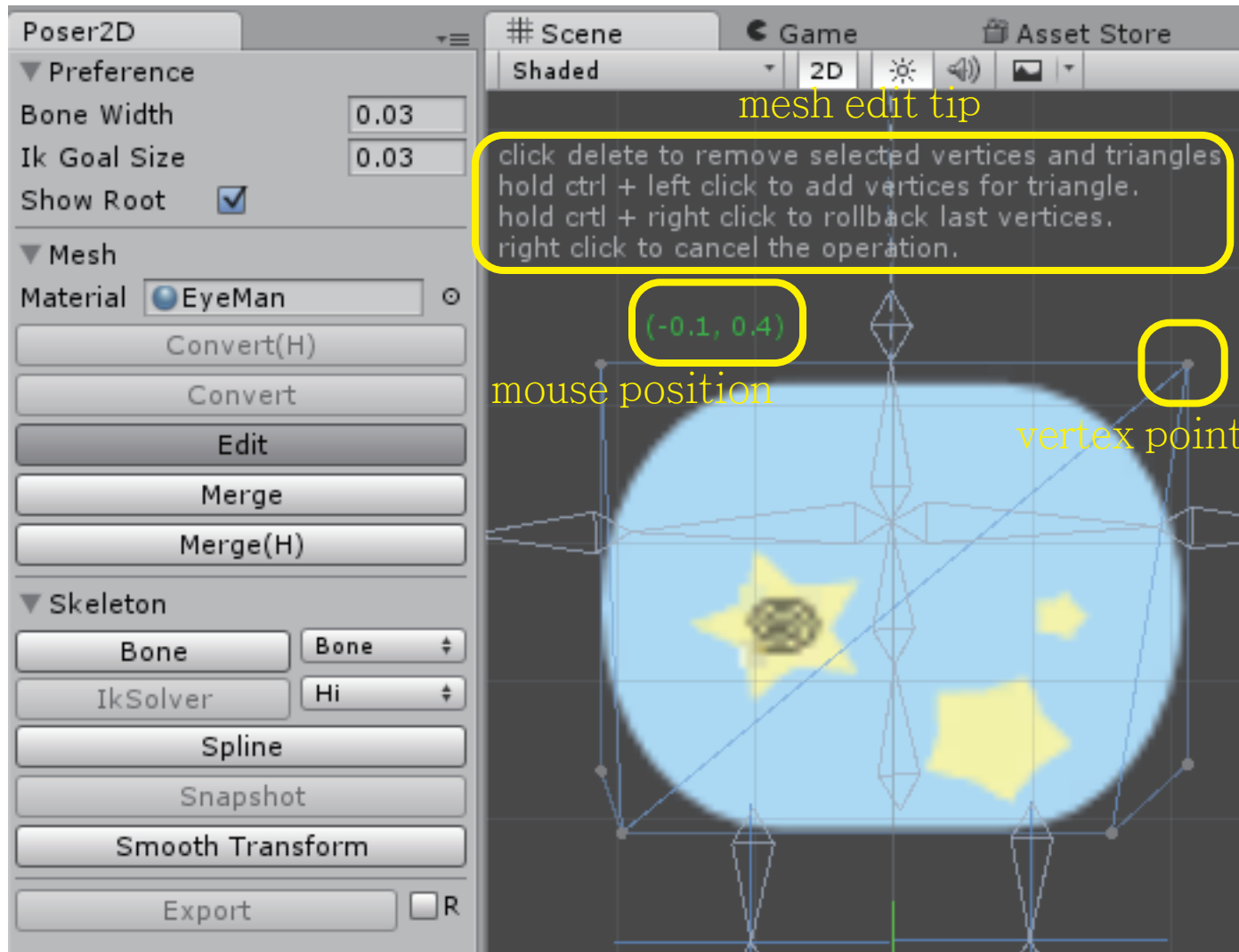
# Mesh - Edit

active button

there is a SkinBoneWeights in the last selection



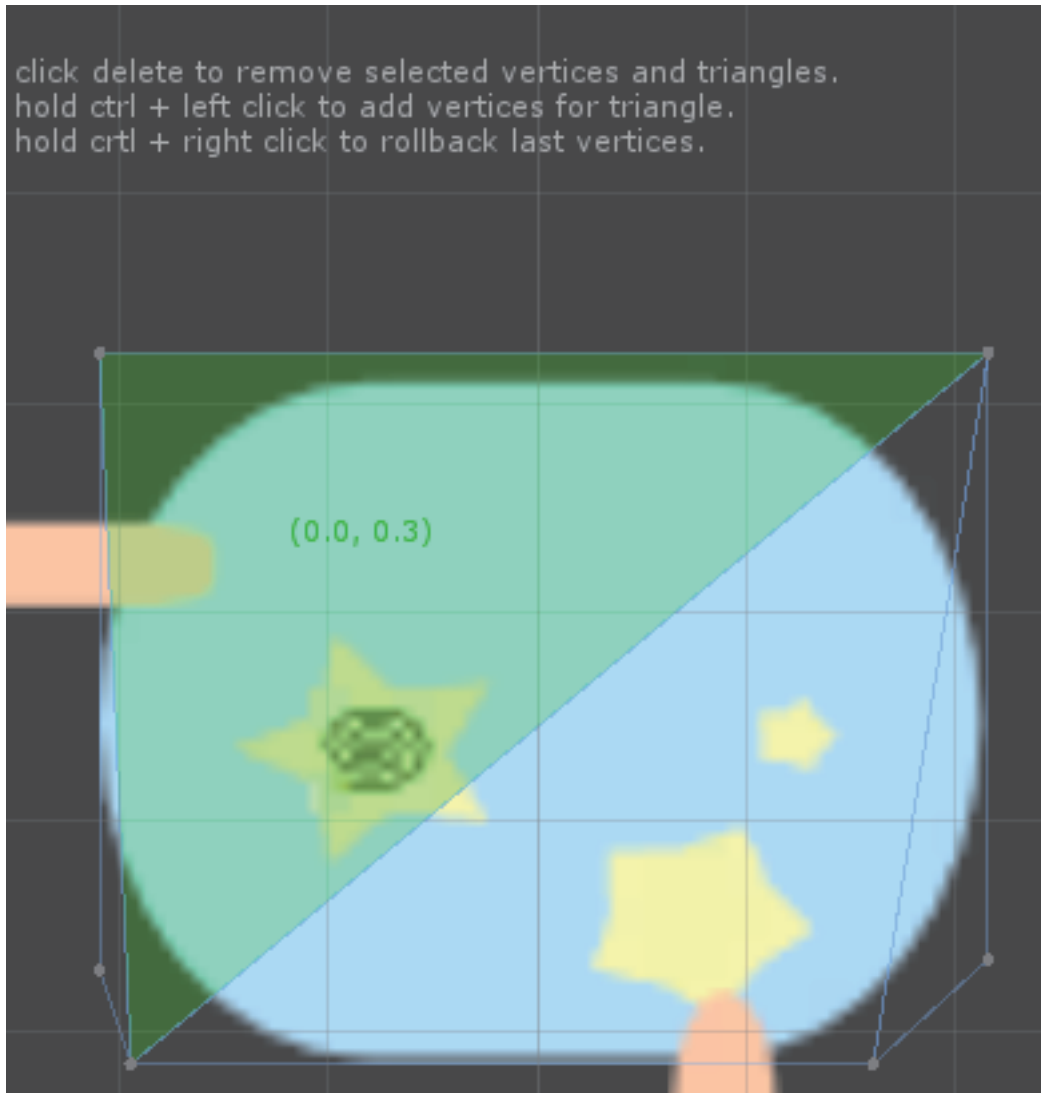
# Mesh - Edit



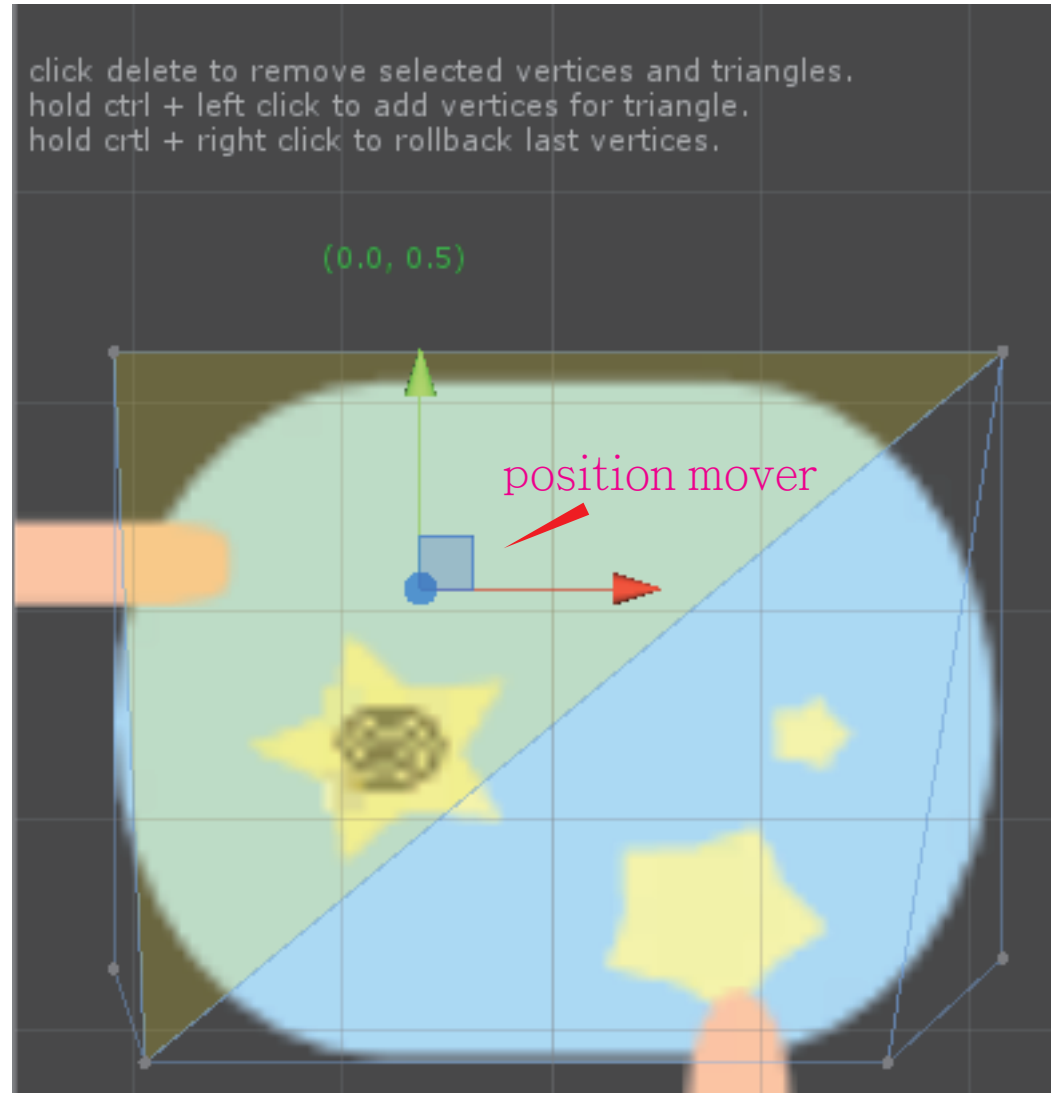
# Mesh - Edit

selected triangle could be moved by position mover.  
press delete button to remove the selected triangle from mesh

mouse hover triangle



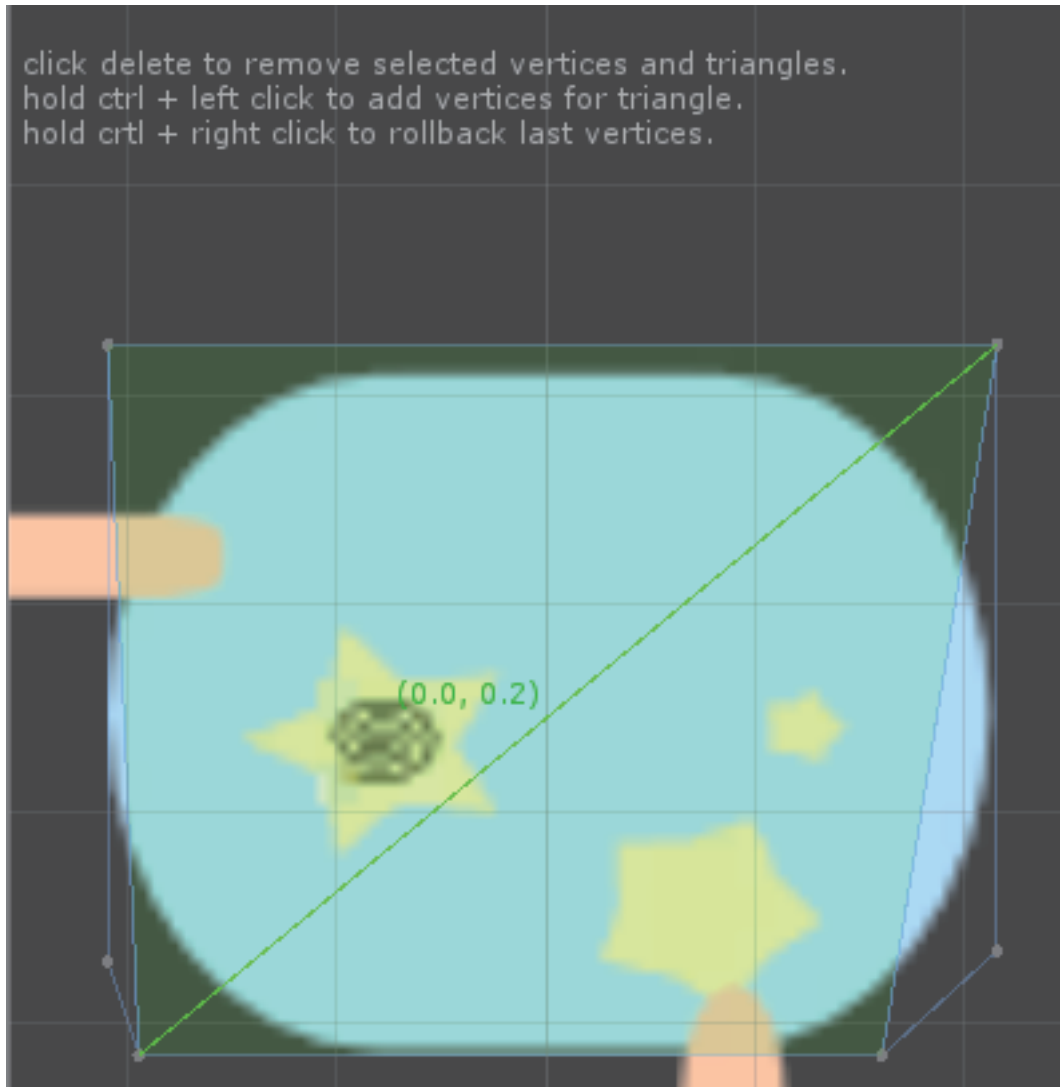
triangle be selected



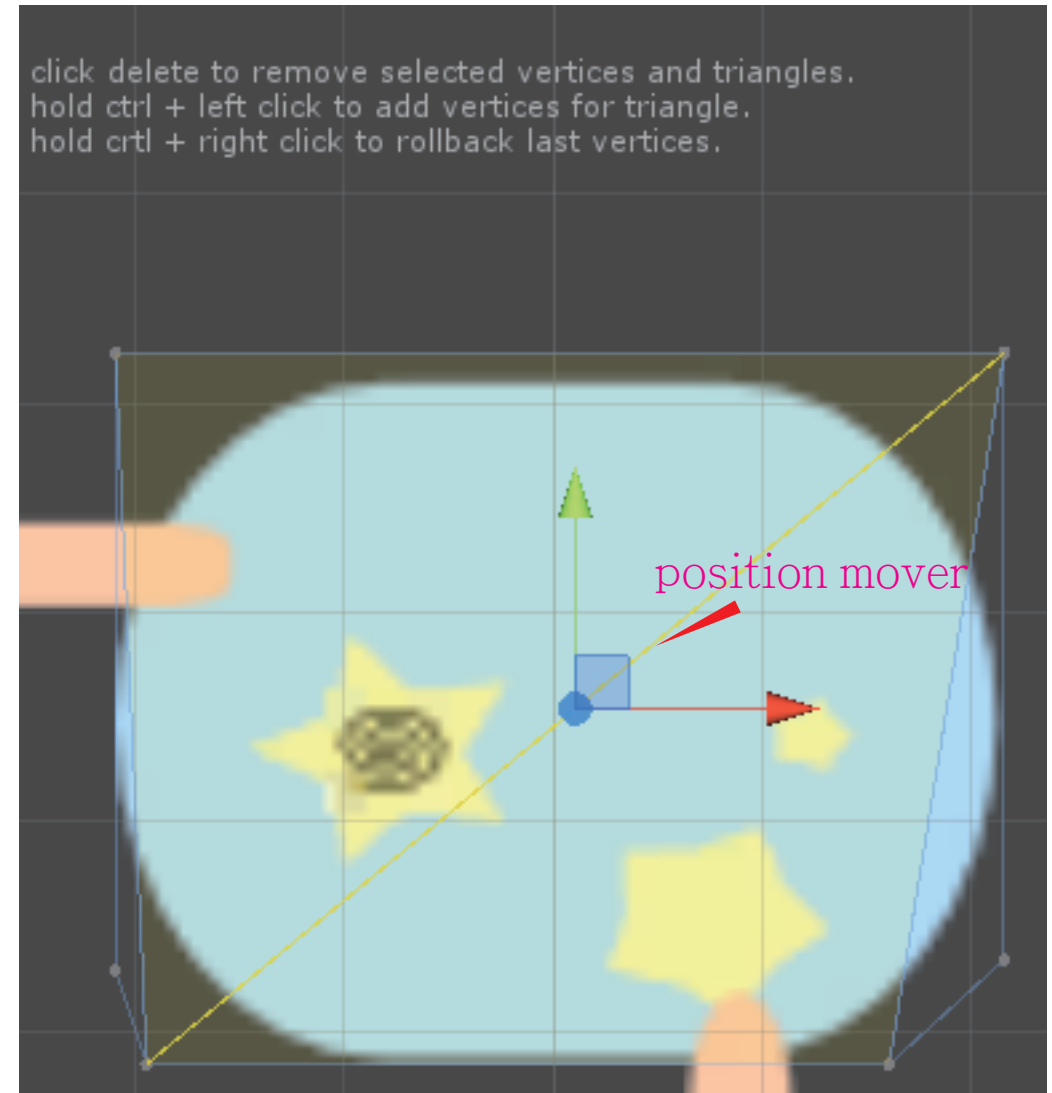
# Mesh - Edit

selected line could be moved by position mover.  
press delete button to remove the selected line from mesh

mouse hover line



line be selected

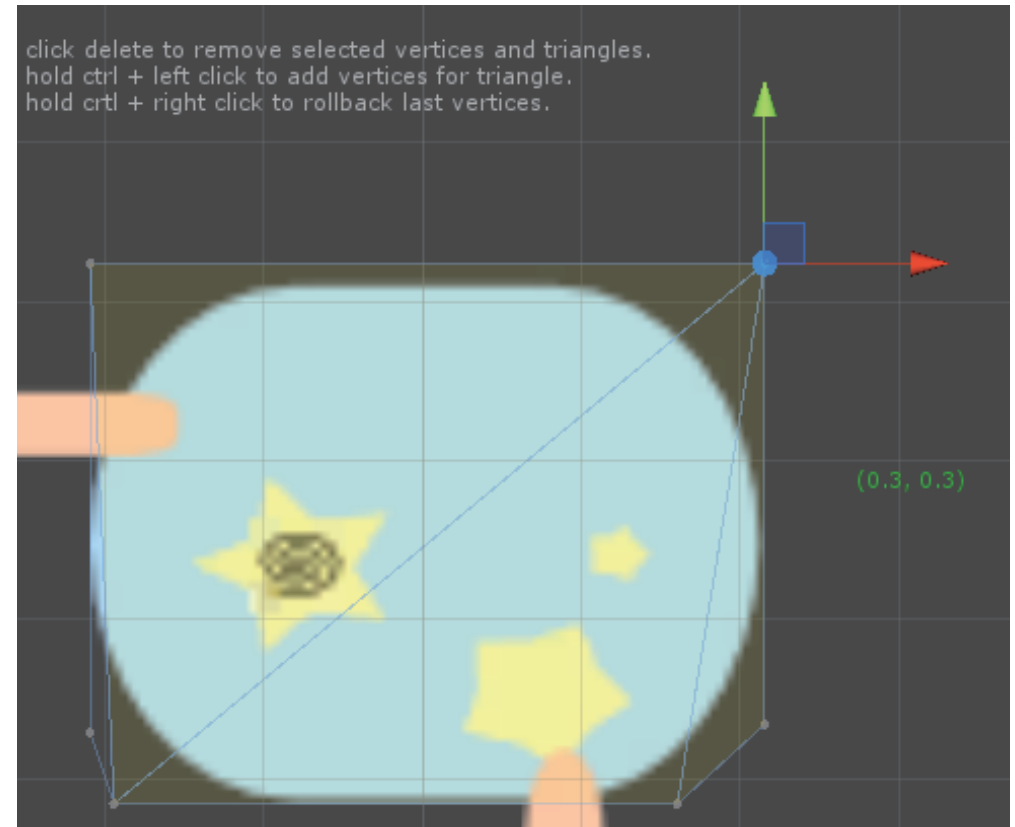
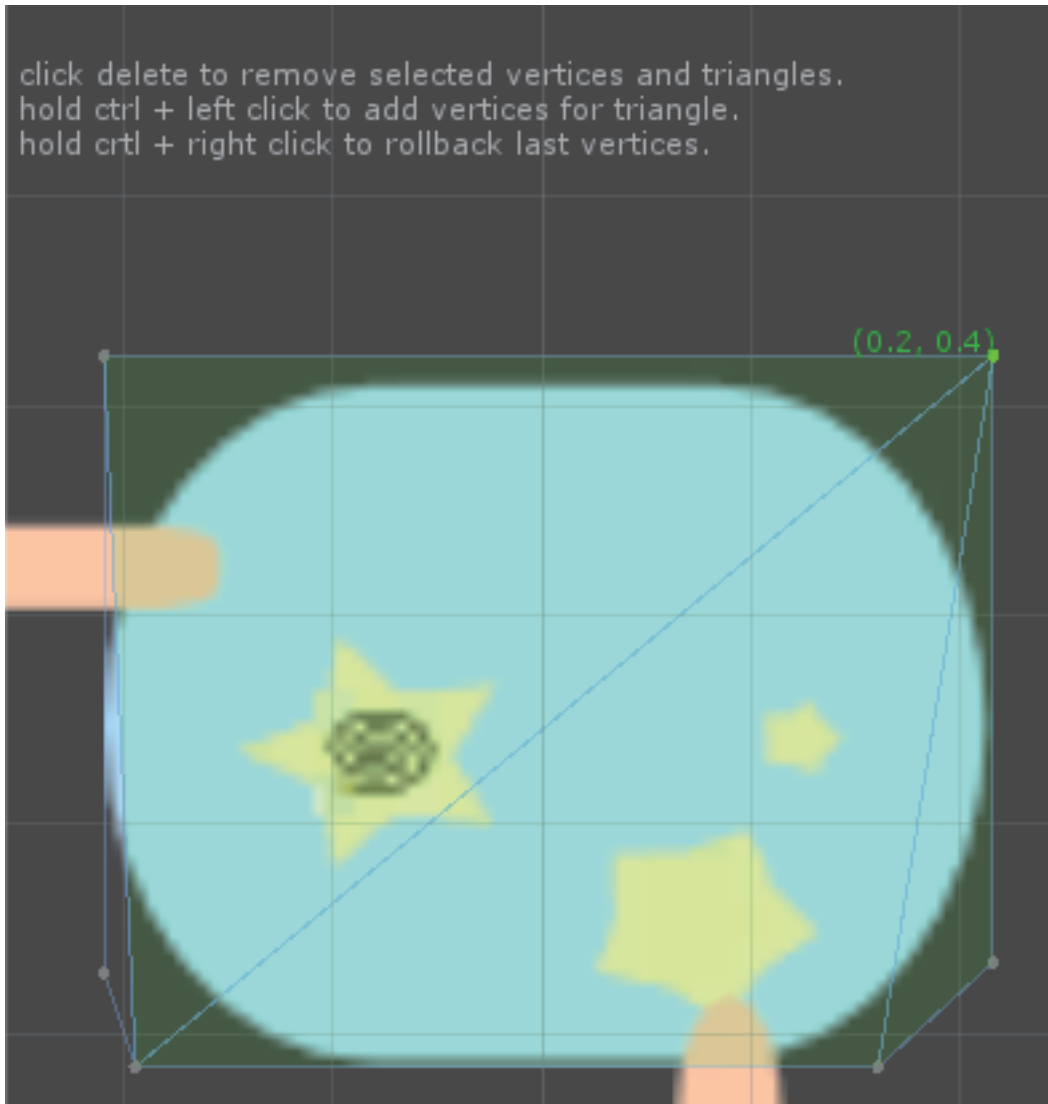


# Mesh - Edit

selected vertex could be moved by position mover.  
press delete button to remove the selected vertex from mesh

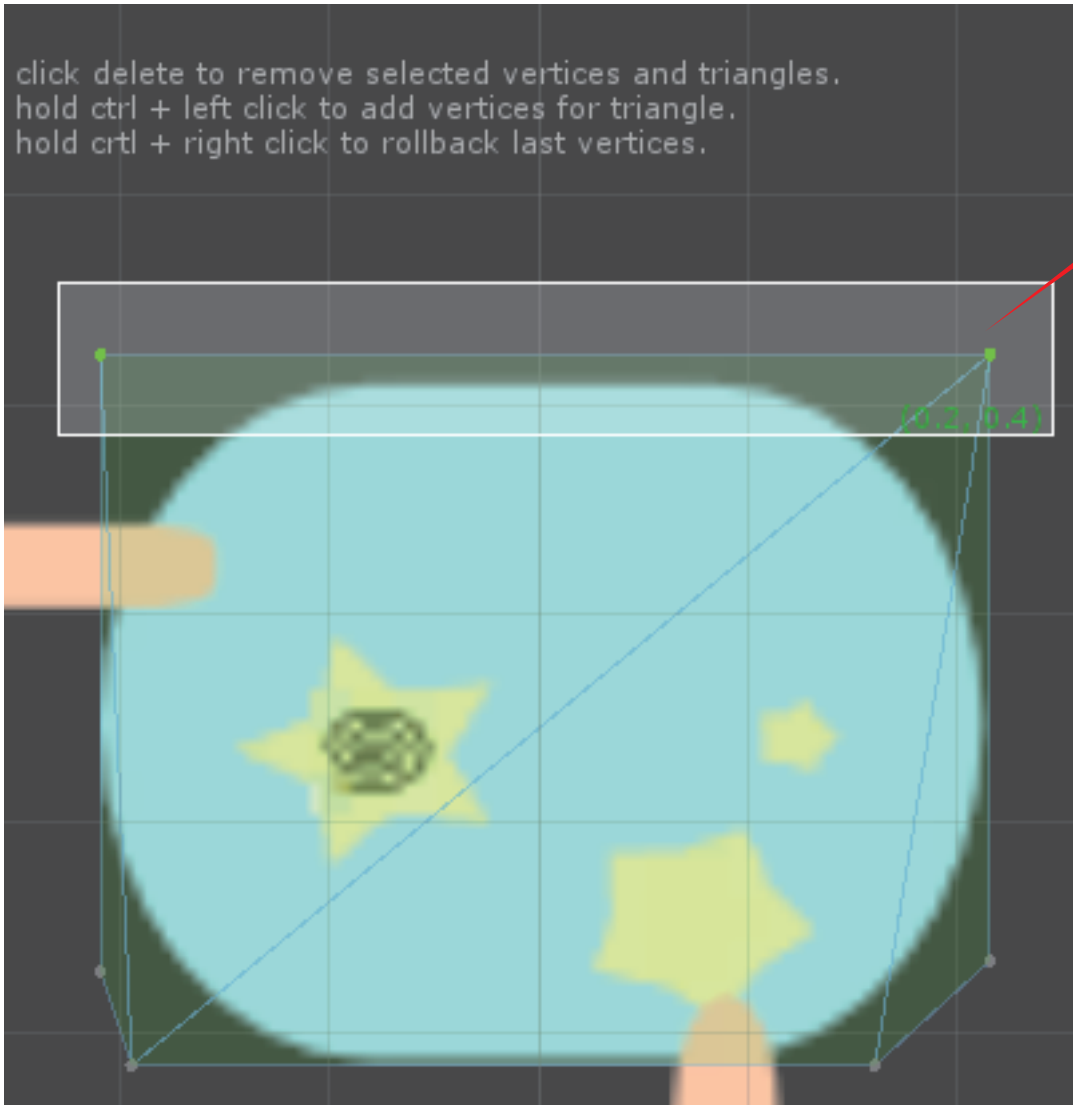
mouse hover vertex

vertex be selected



# Mesh - Edit

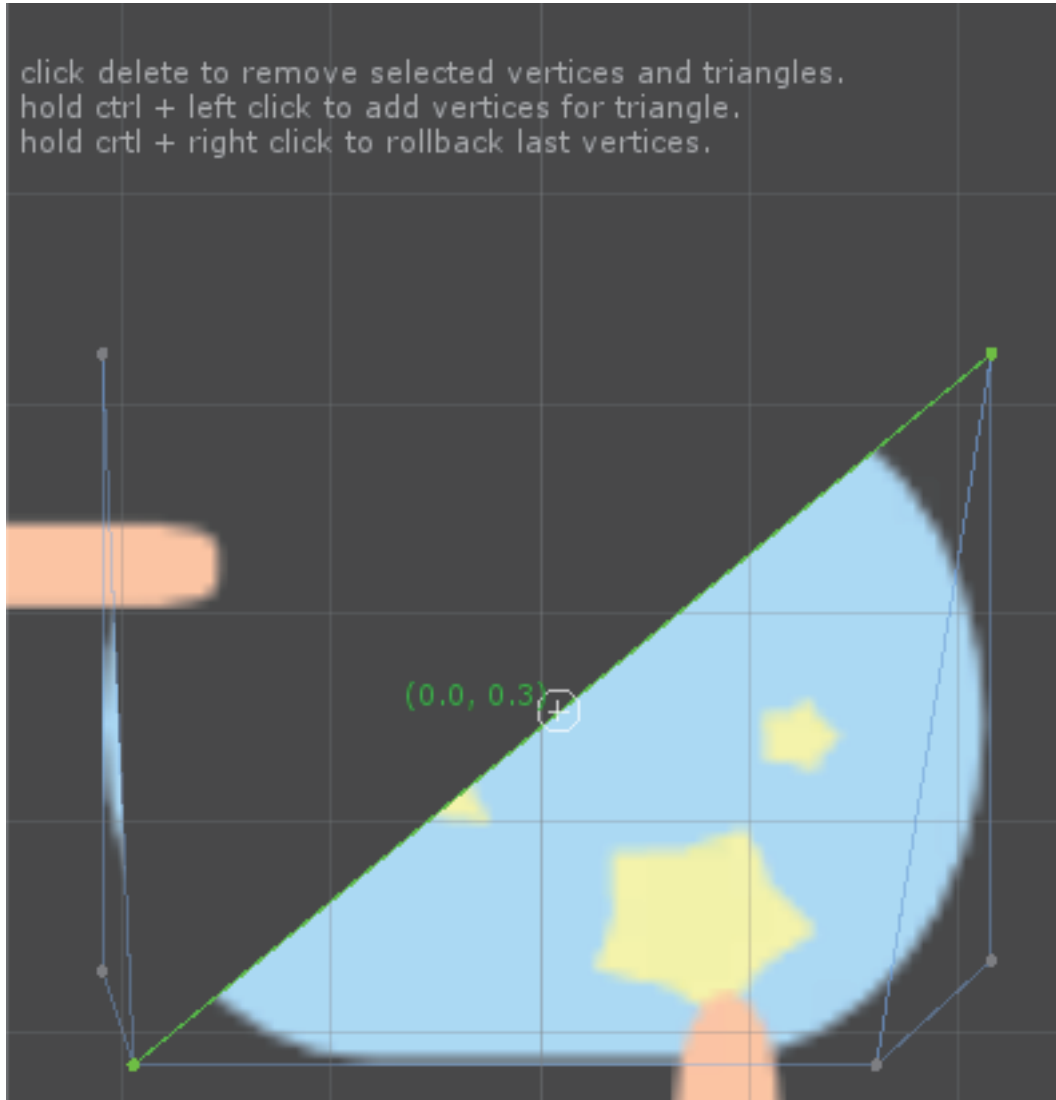
click delete to remove selected vertices and triangles.  
hold ctrl + left click to add vertices for triangle.  
hold ctrl + right click to rollback last vertices.



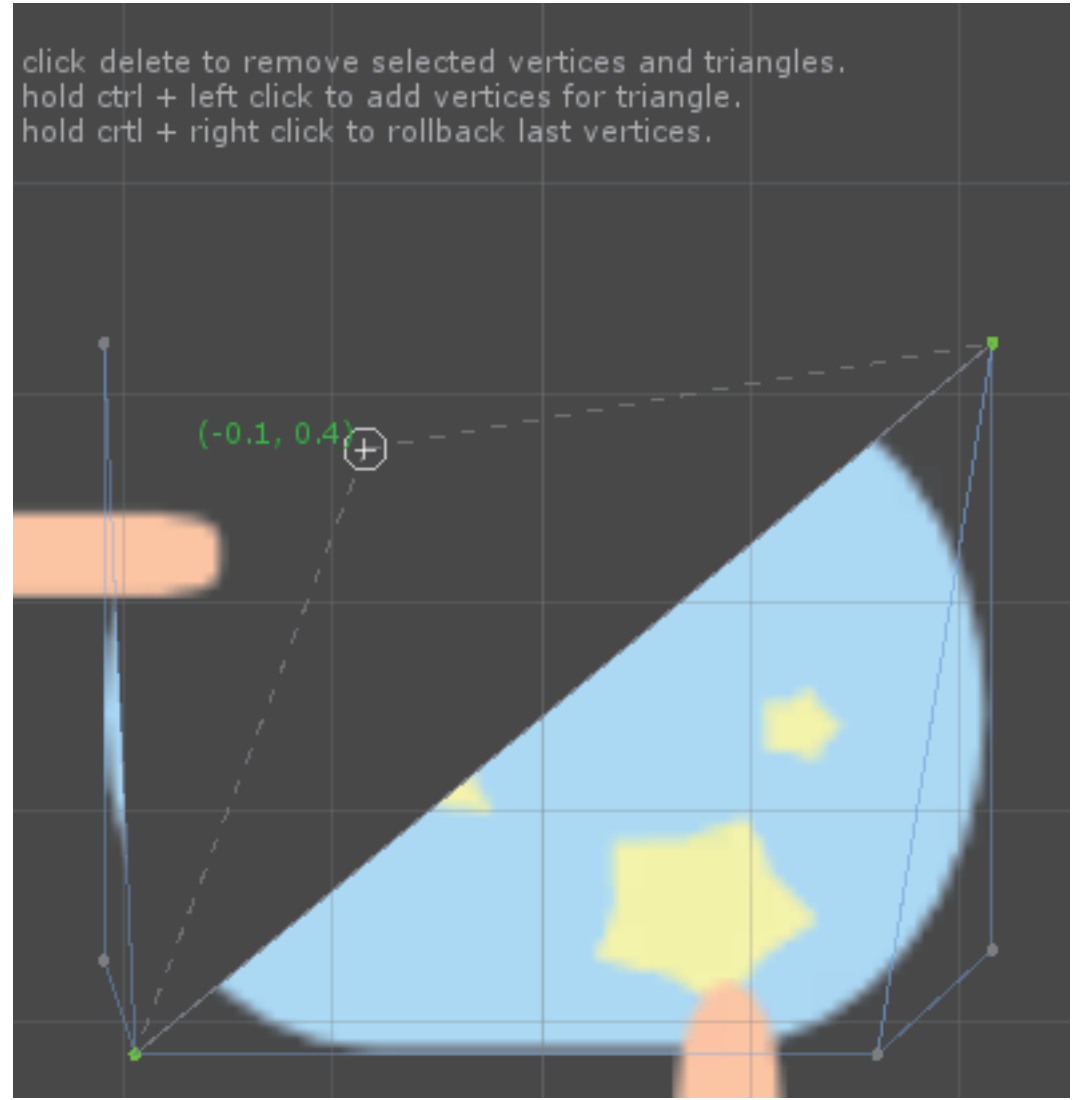
drag a rect to select multi vertices

# Mesh - Edit - Add Triangle (Hold Ctrl)

click to select line

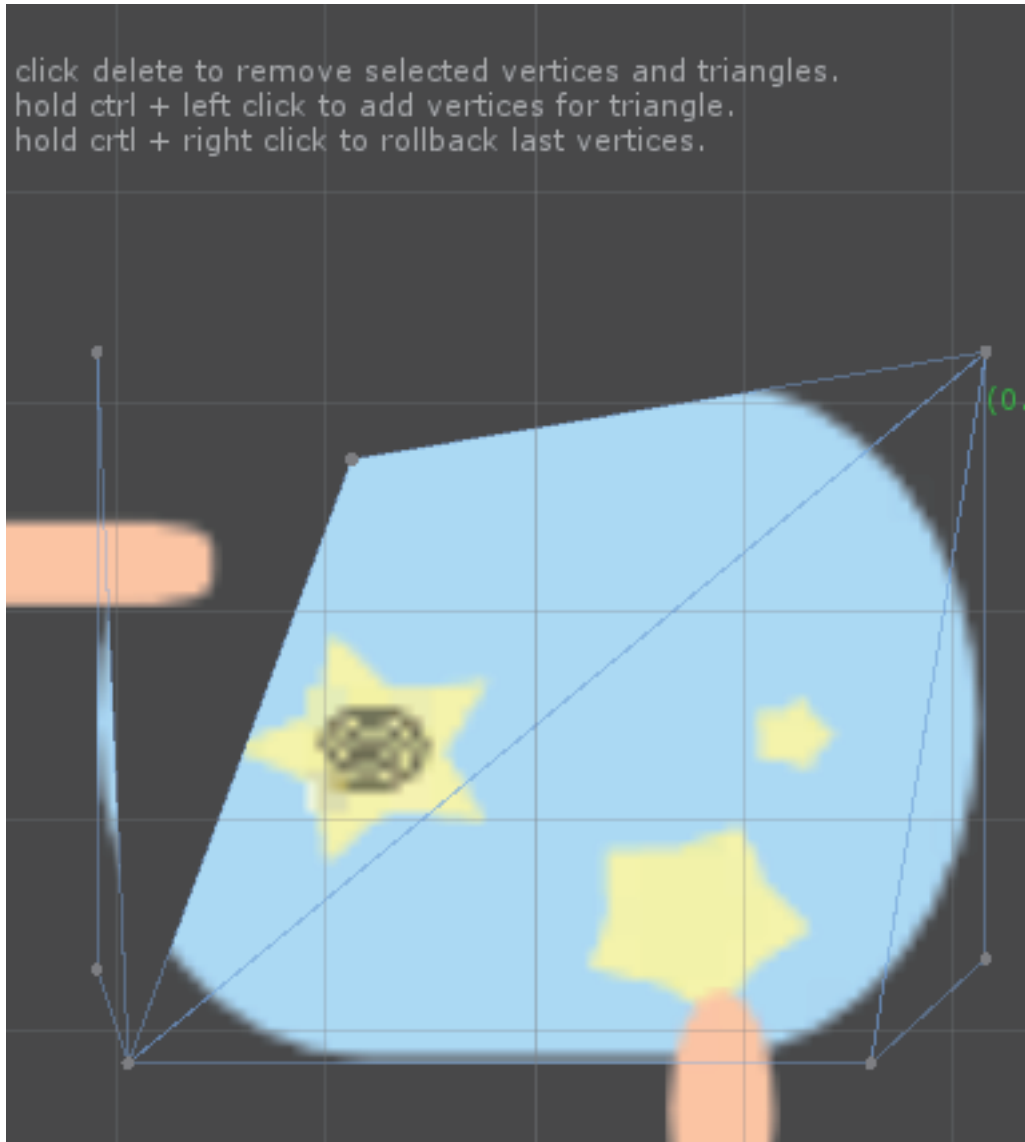


drag out to third point



# Mesh - Edit - Add Triangle (Hold Ctrl)

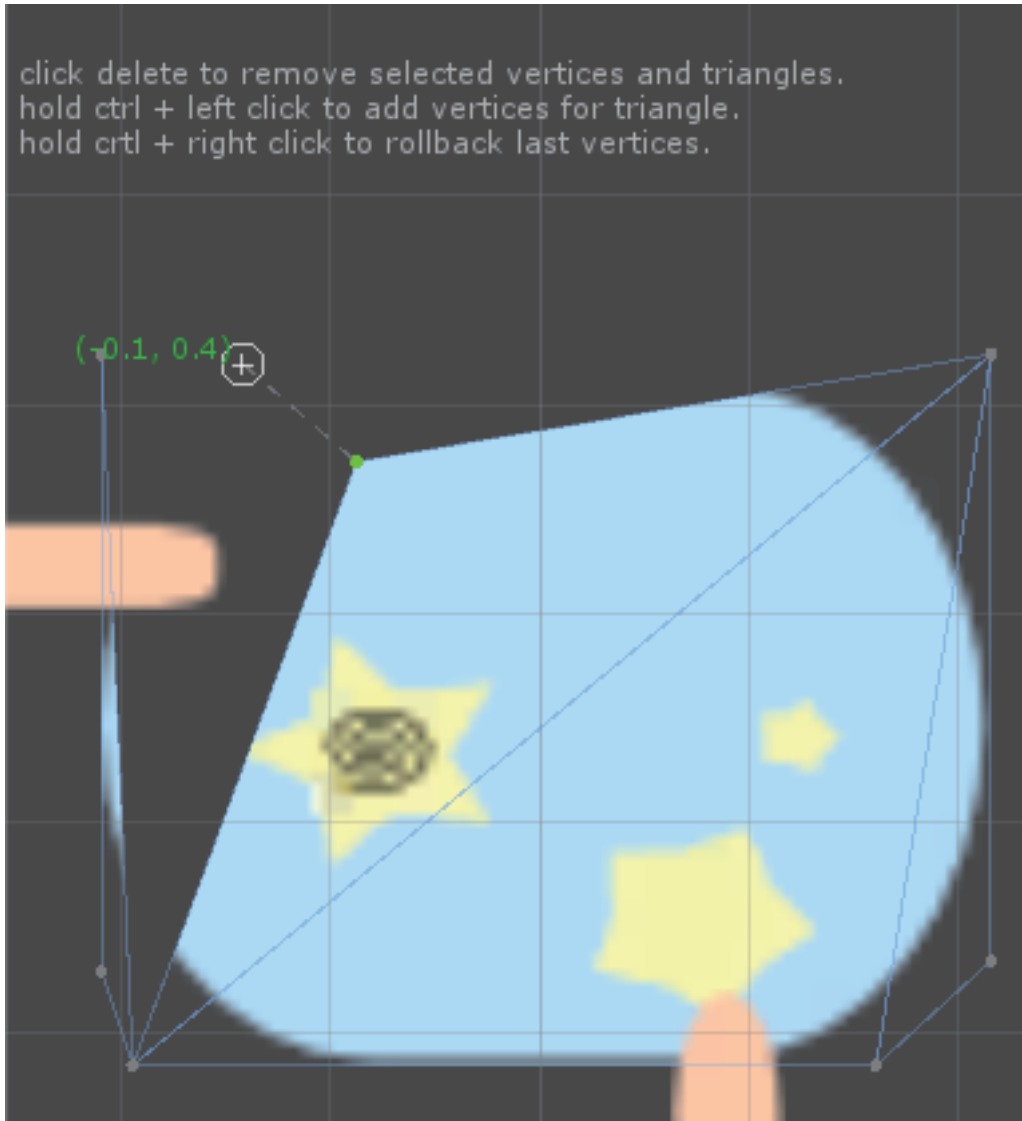
click to create a triangle



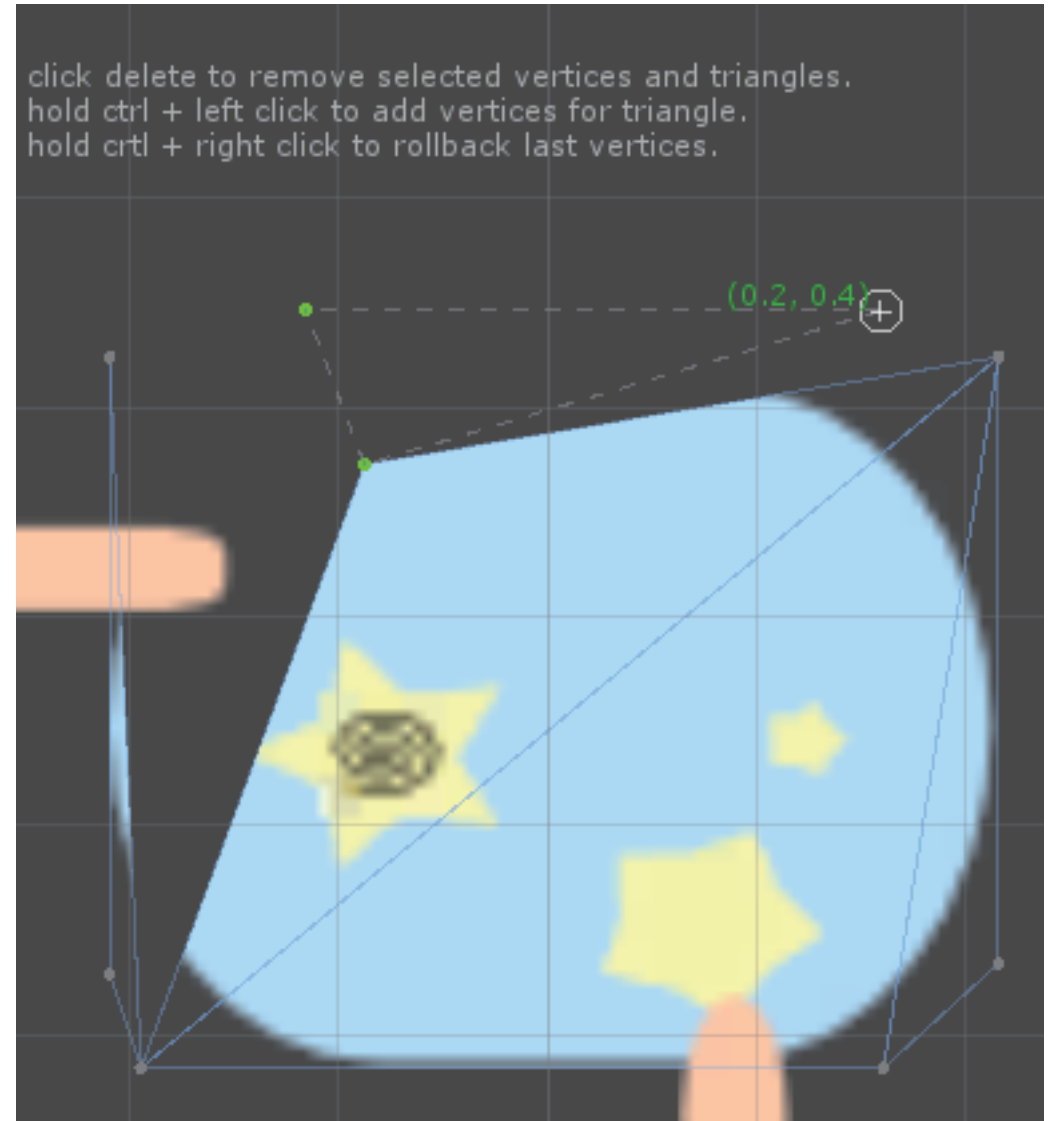


# Mesh - Edit - Add Triangle (Hold Ctrl)

click first point then moving to second point

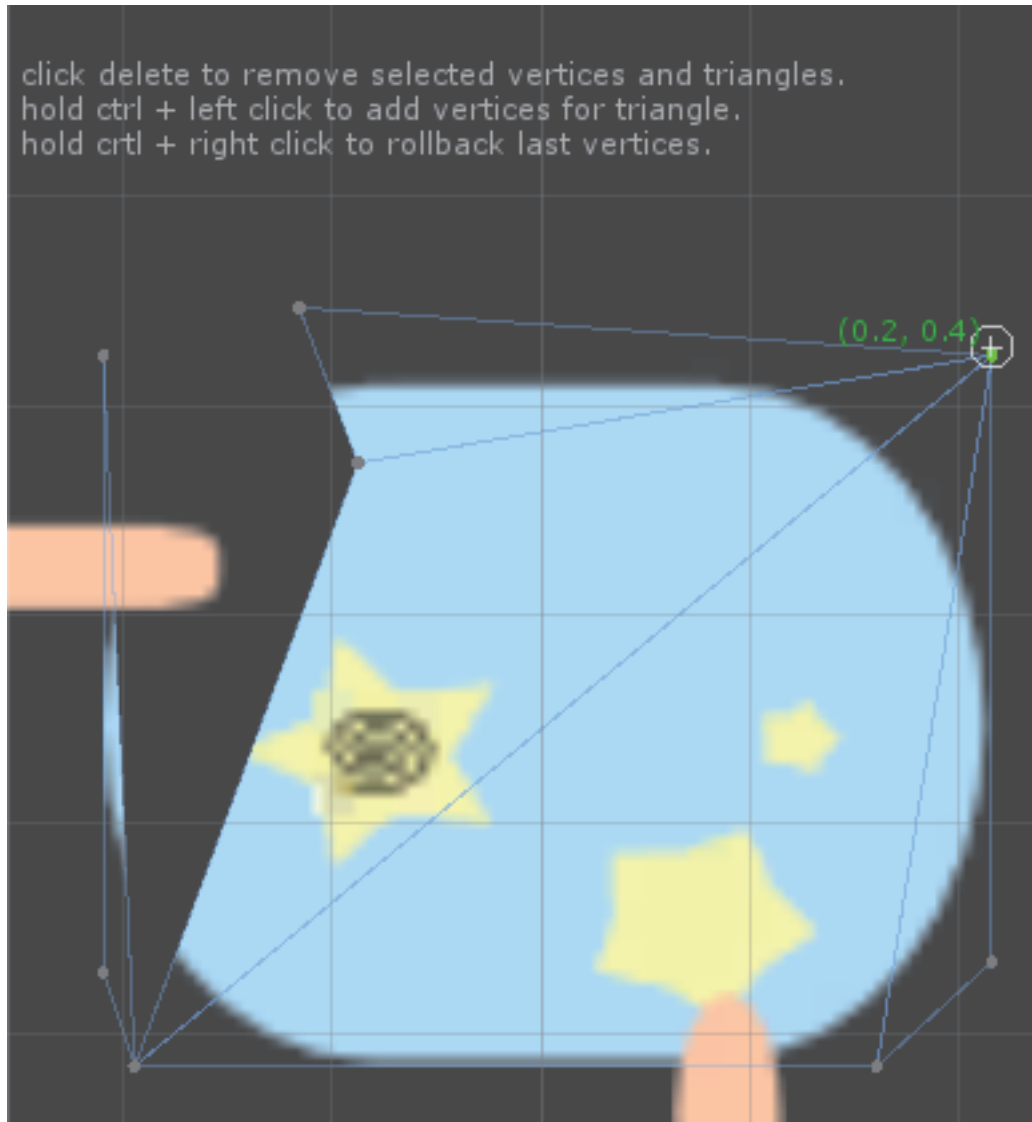


click second point then moving to third point



# Mesh - Edit - Add Triangle (Hold Ctrl)

click at third point to create a triangle



# Mesh - Merge

## Merge - active button

there is at least one SkinBoneWeights in the selections.

## Merge(H) - active button

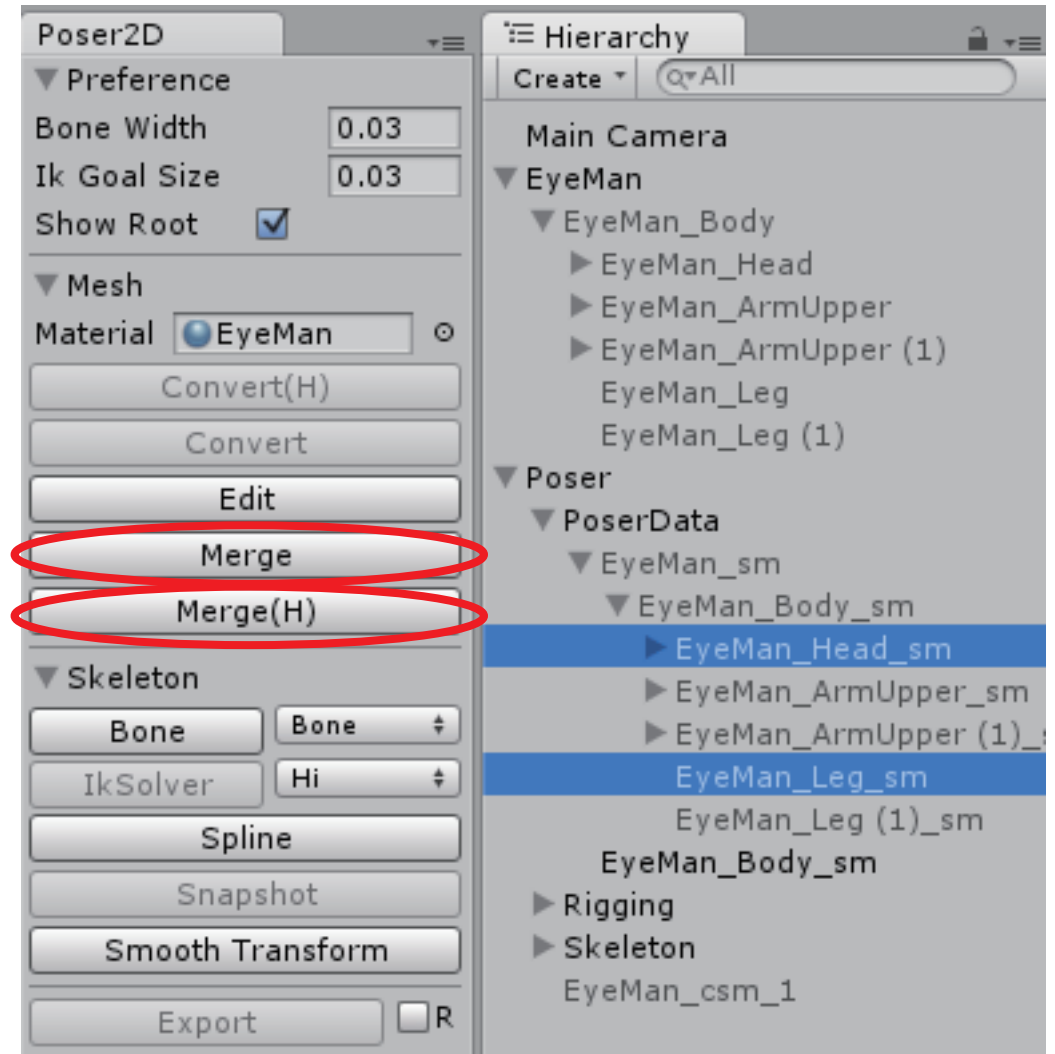
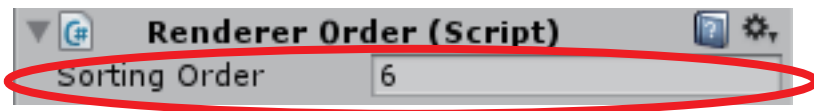
there is at least one SkinBoneWeights in the last selection or children

## click button

if there is not any Bone, warning will be displayed.

Choice the file path to save merged mesh

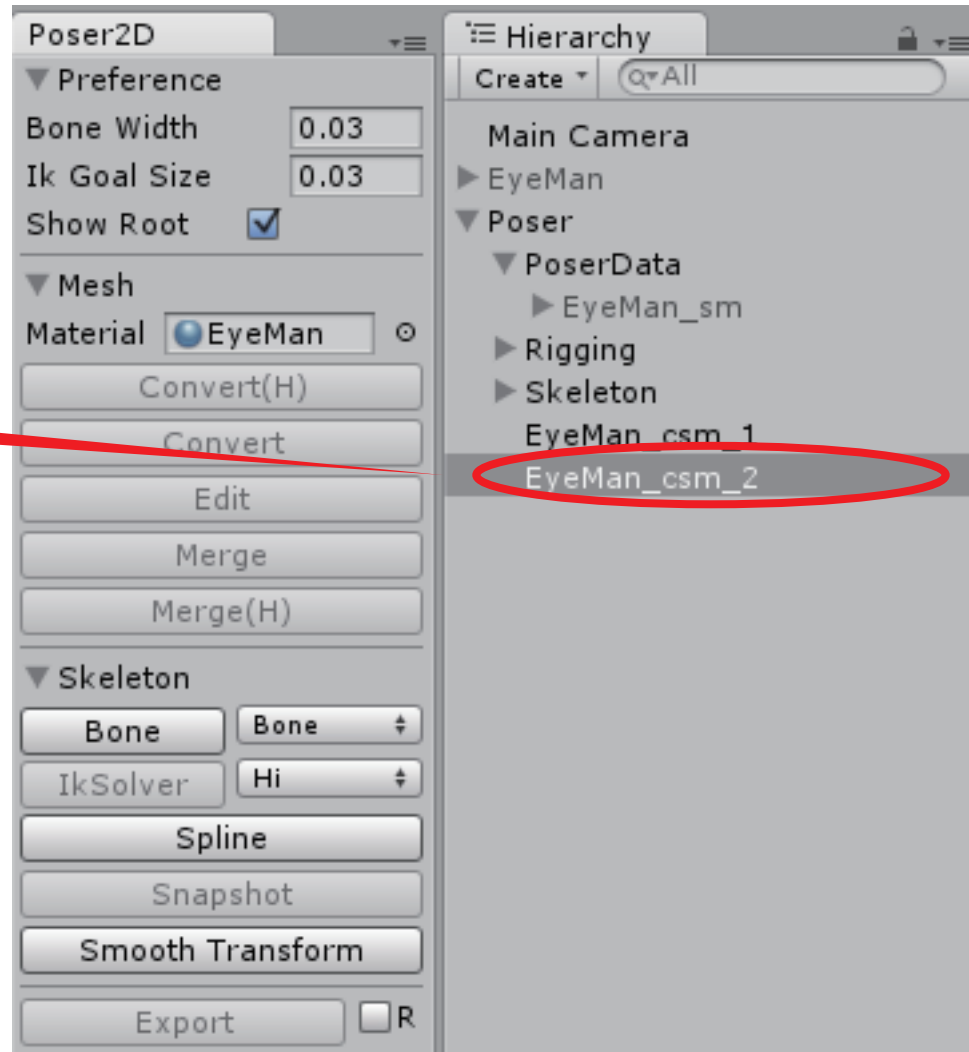
merge order depend by sortingOrder



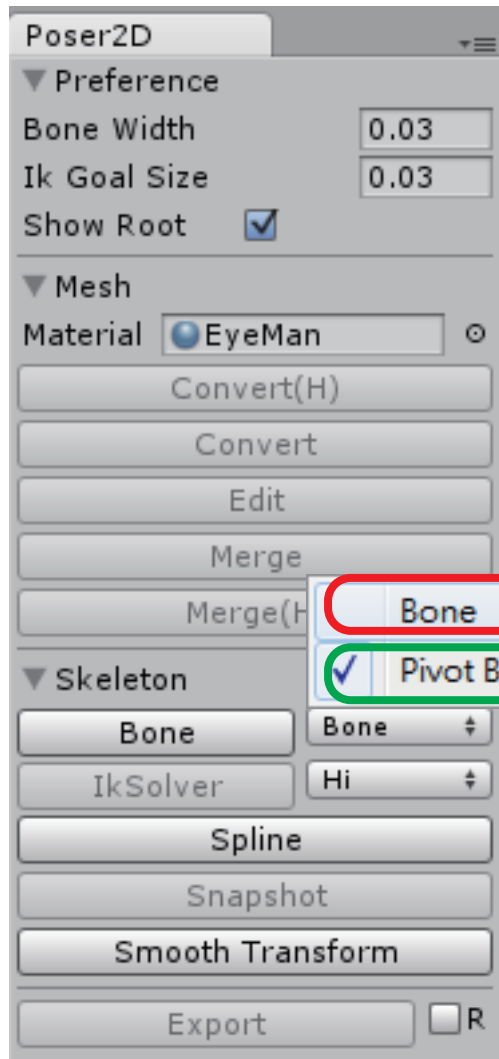
# Mesh - Merge

click Merge/Merge(H) button

select a saving path for merged mesh  
then merged mesh will be selected



# Skeleton - Bone



**Bone** - A child of **Bone** will influence rotation of parent **Bone**. Every time changed parent will recalculate relation to parent of **Bone**

**Pivot Bone** - A child of **Pivot Bone** will not influence rotation of parent of **Bone**

# Skeleton - Bone - Bone

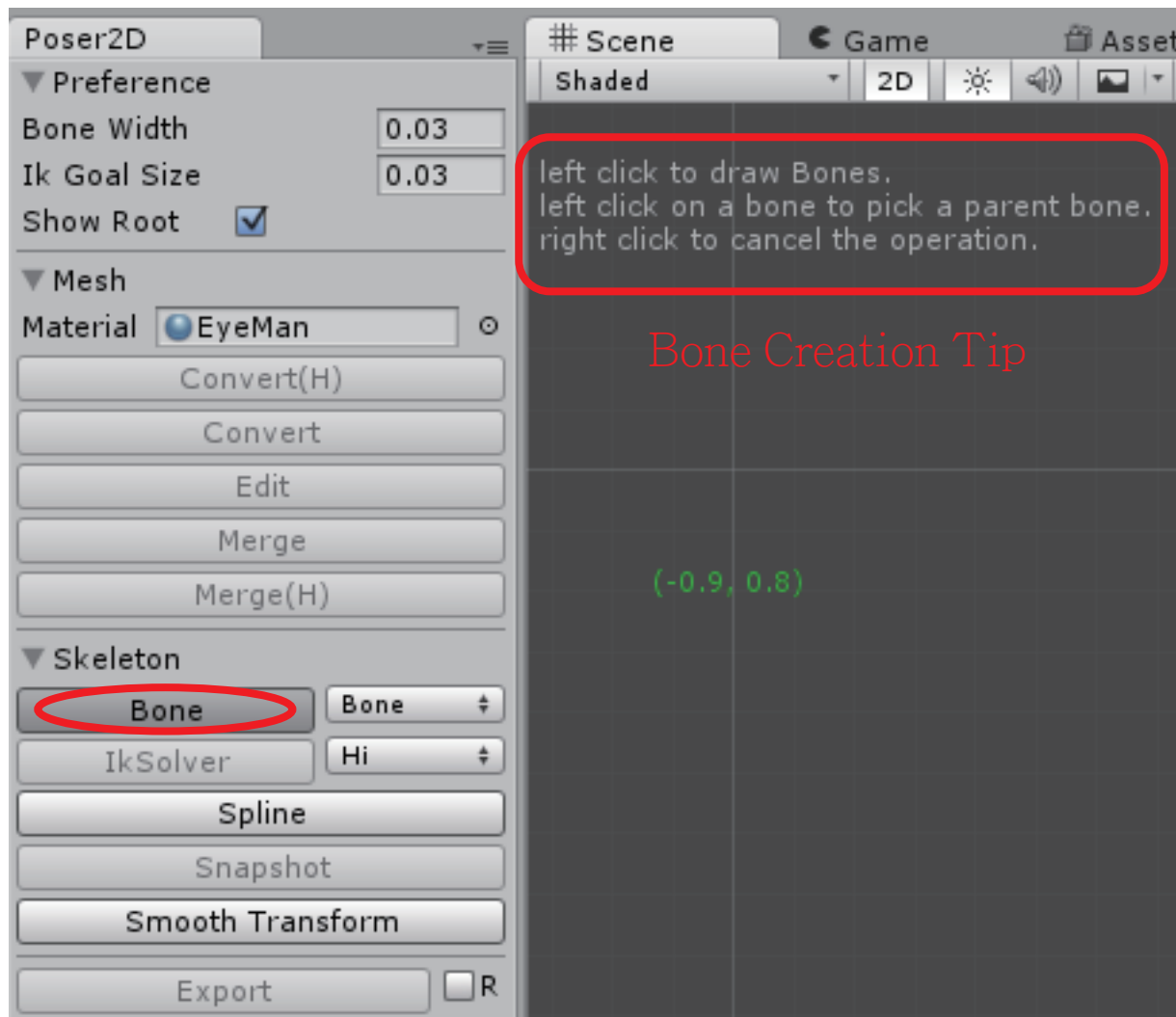
click button

bone creation mode

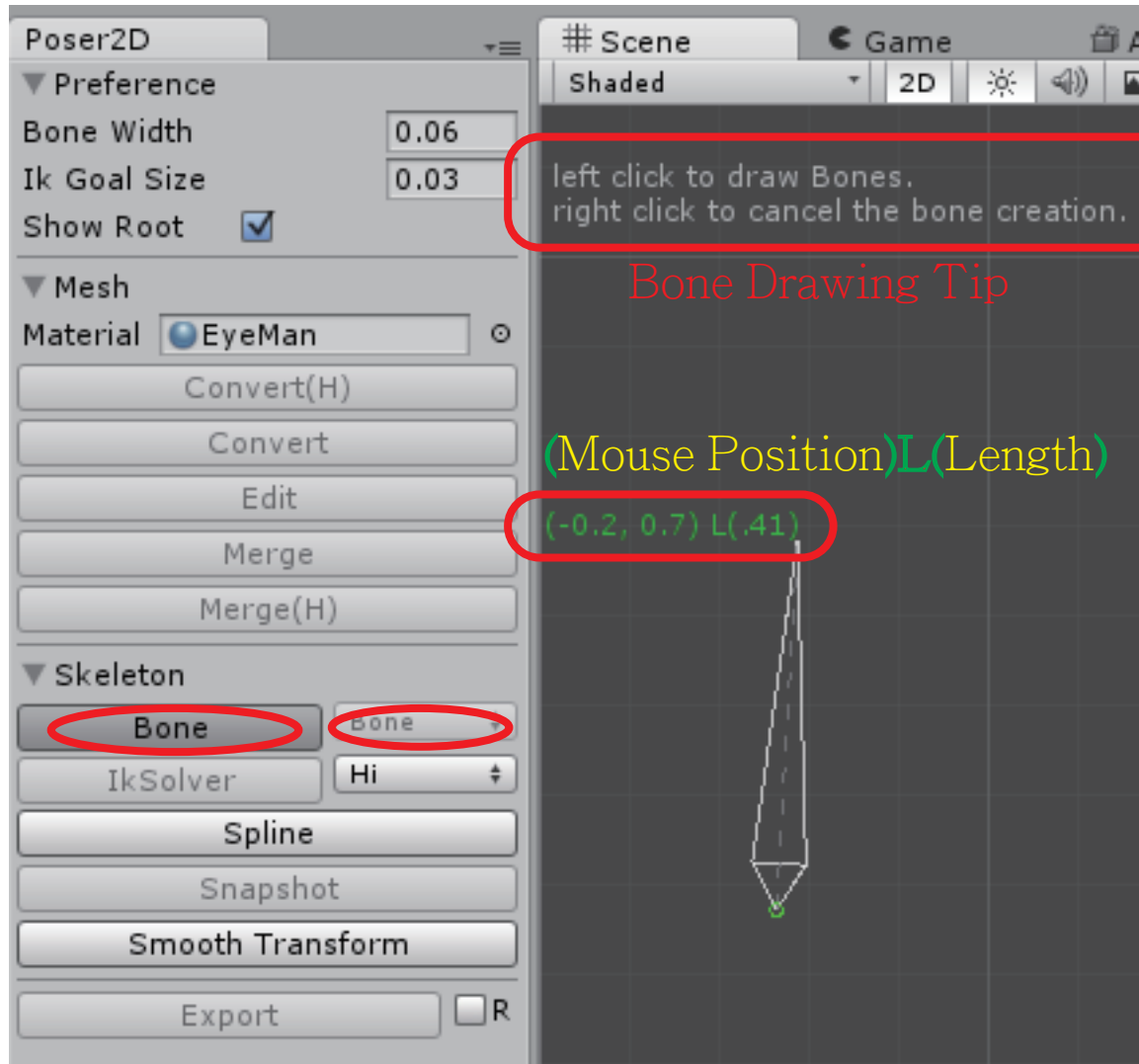
===== Important =====

Bone.transform.lossyScale.x must equal  
Bone.transform.lossyScale.y,  
lossyScale value must be positive  
(for IkSolver Calculation)

PivotBone could use different scale, but  
this cant be parent of Bone.

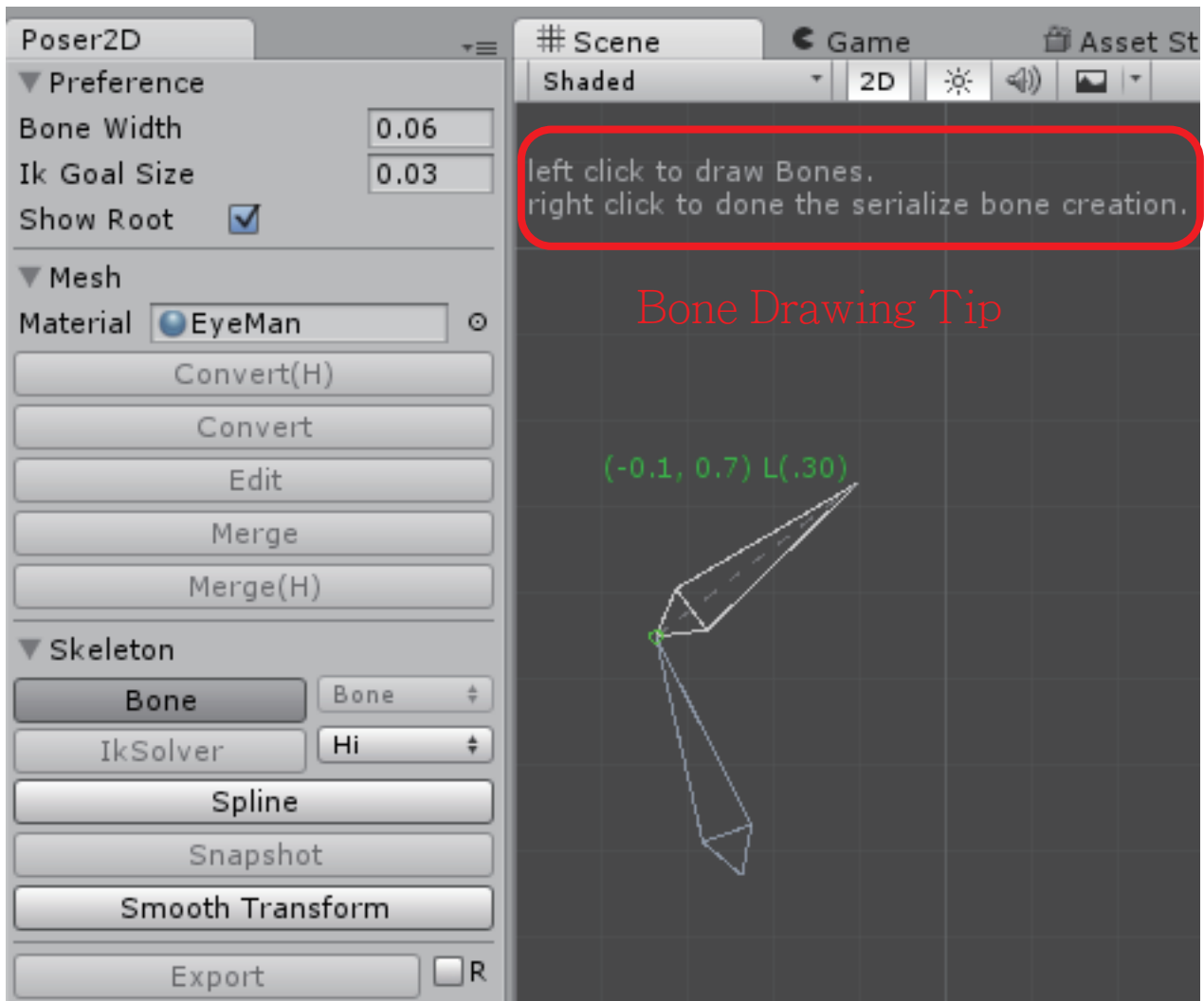


# Skeleton - Bone - Bone - 1



left click then moving out to draw a bone

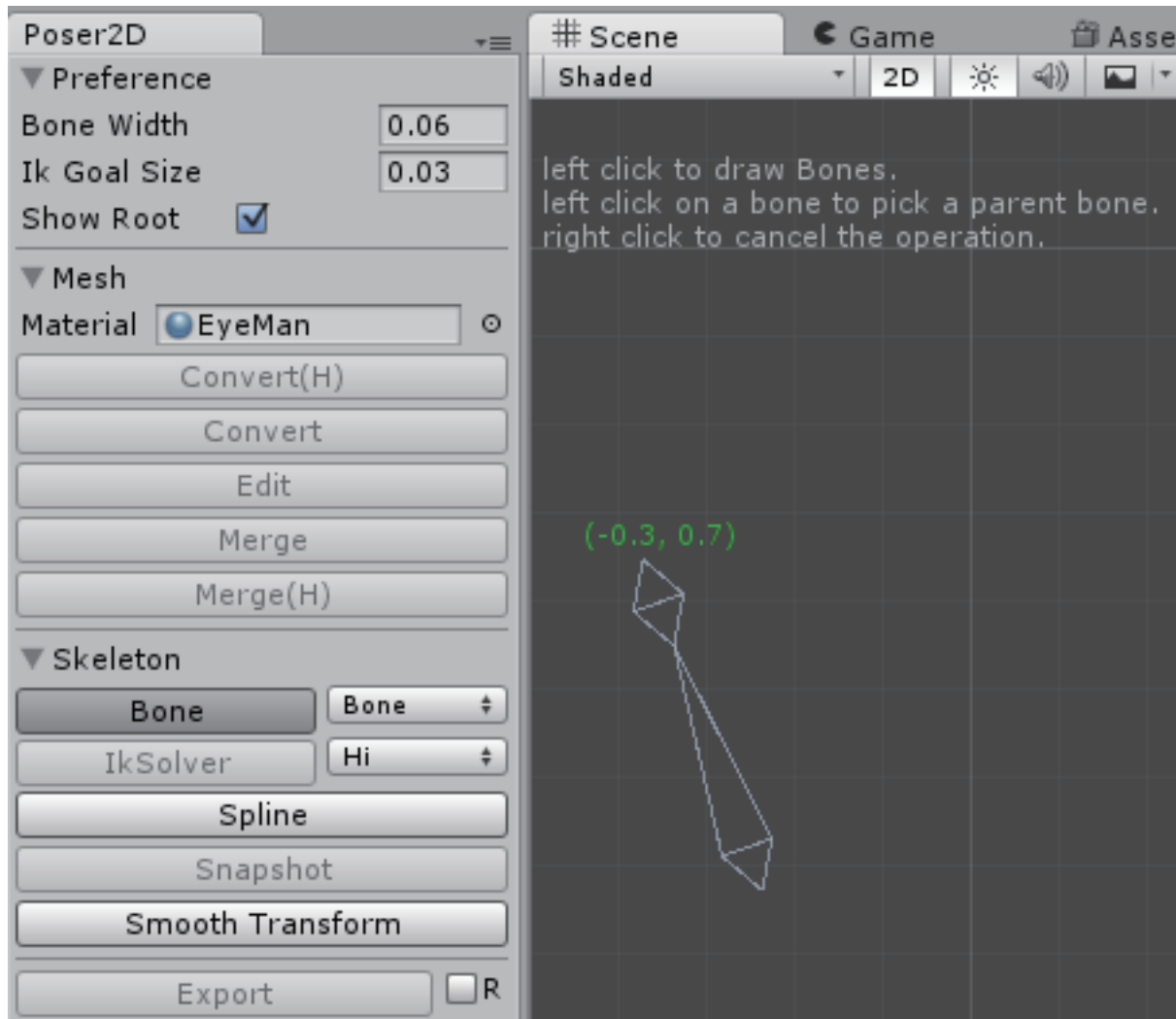
# Skeleton - Bone - Bone - 2



left click to created a bone then moving out to draw next child bone

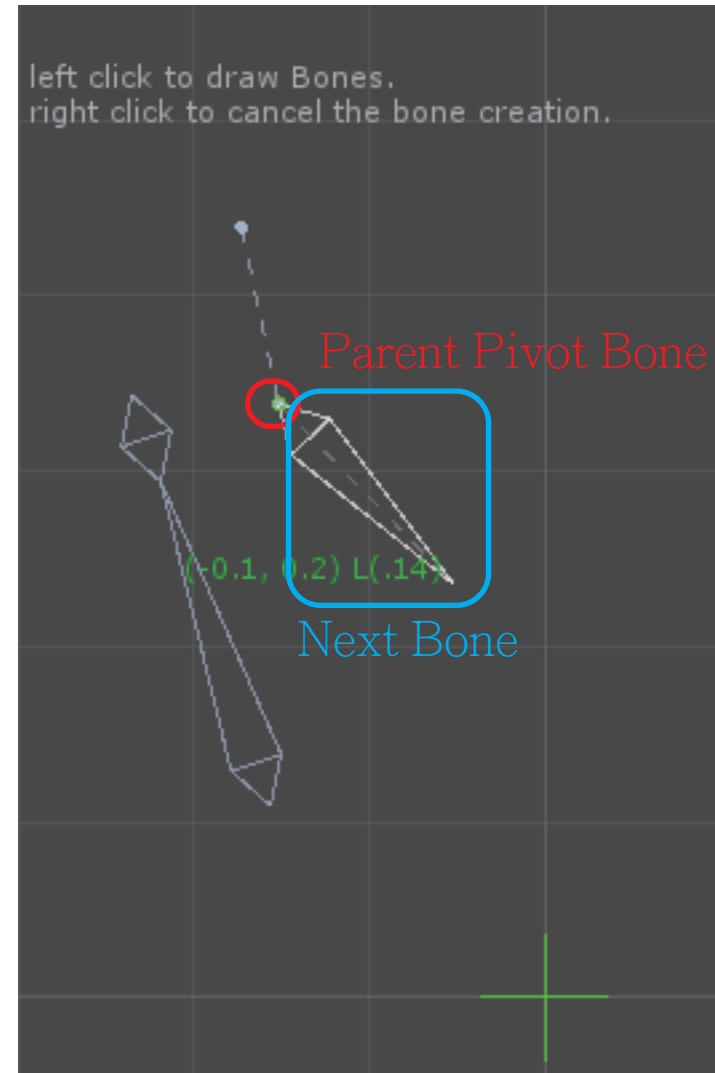
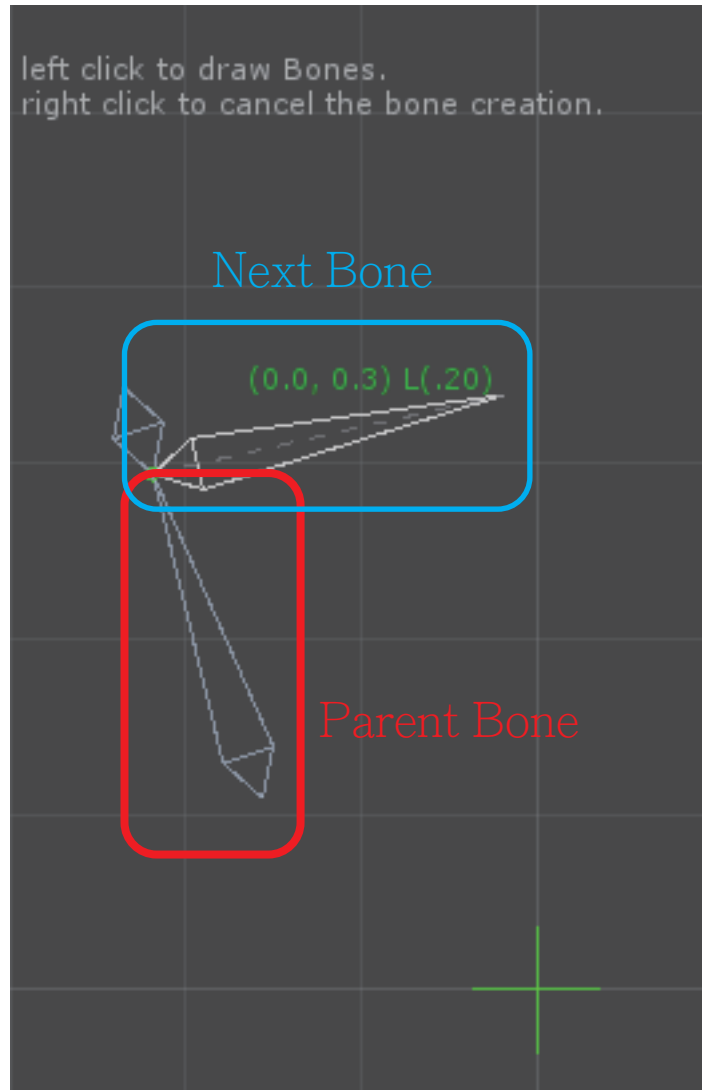


# Skeleton - Bone - Bone - 3

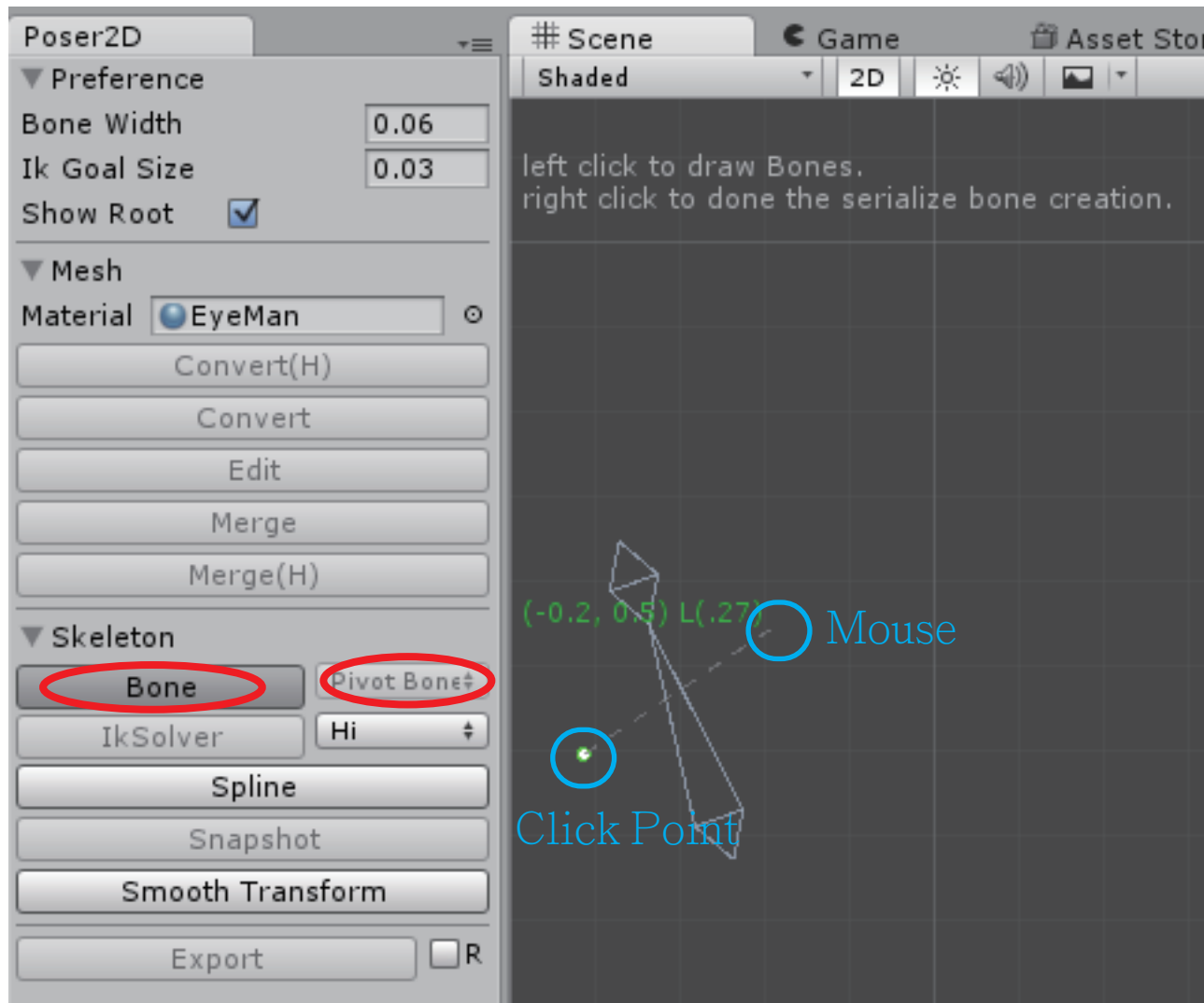


right click to created a bone then  
finish the bone creation

# Skeleton - Bone - Bone - PickParent

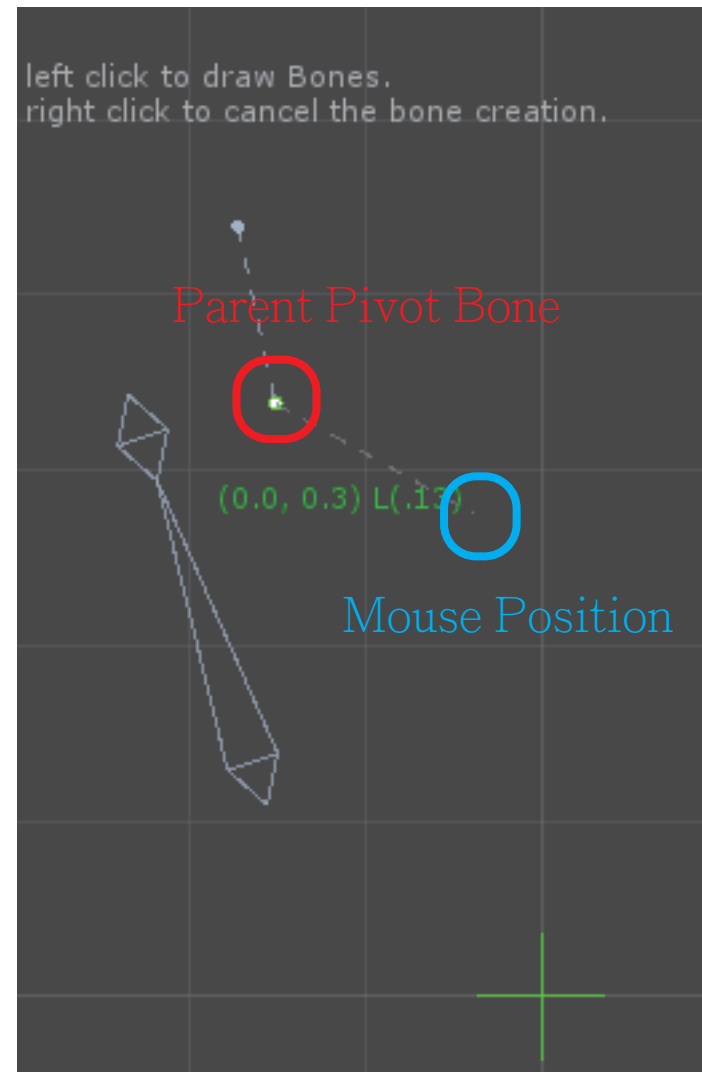
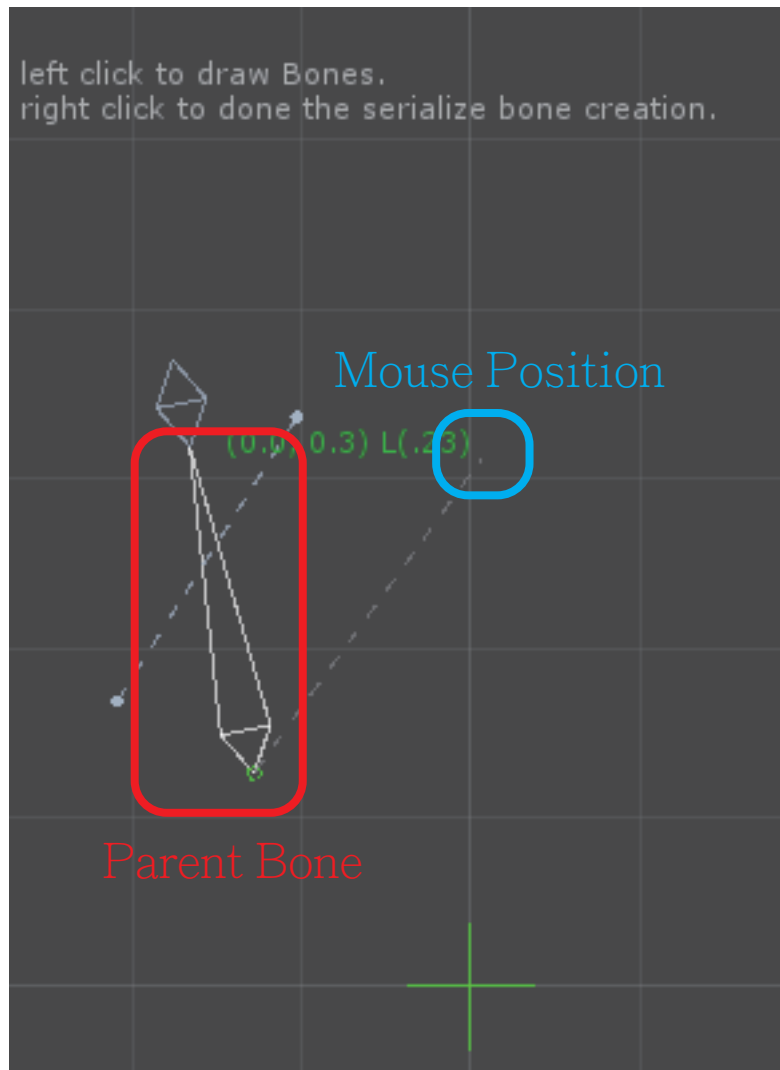


# Skeleton - Bone - PivotBone



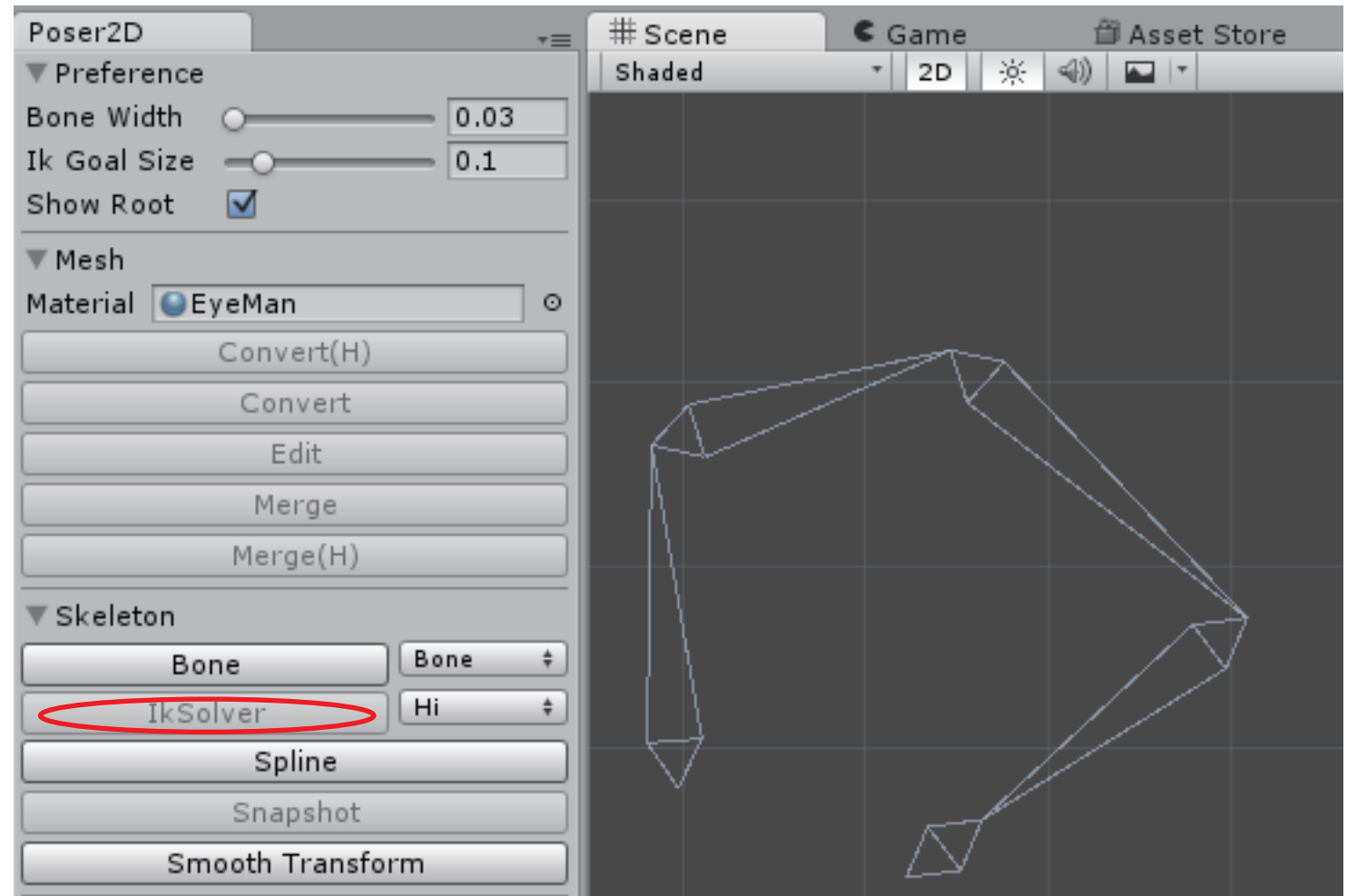
left click to create a pivot bone then moving out to create next one.

# Skeleton - Bone - PivotBone - PickParent

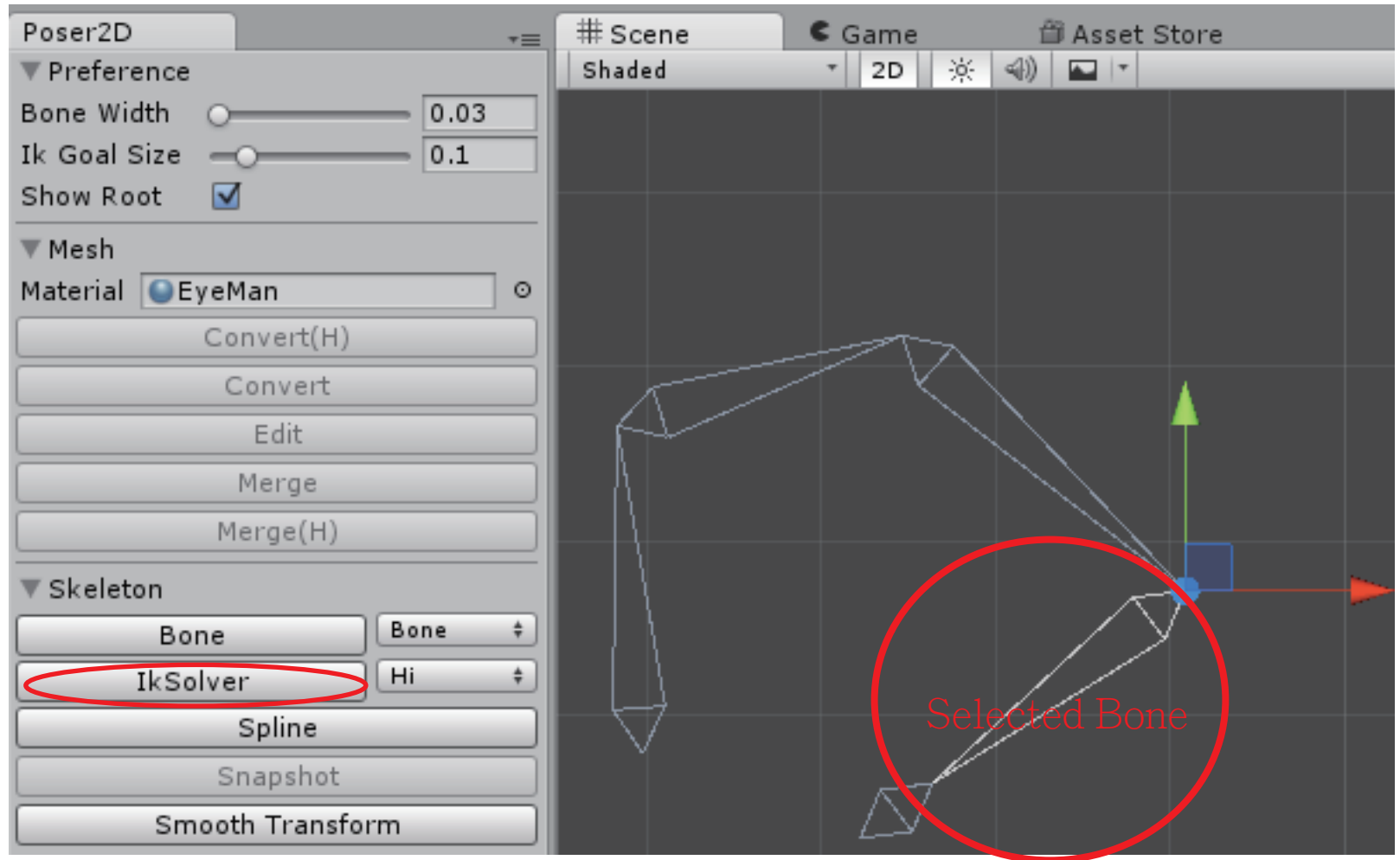


# Skeleton - IkSolver - Unactive

select a **Bone** to active  
IkSolver button



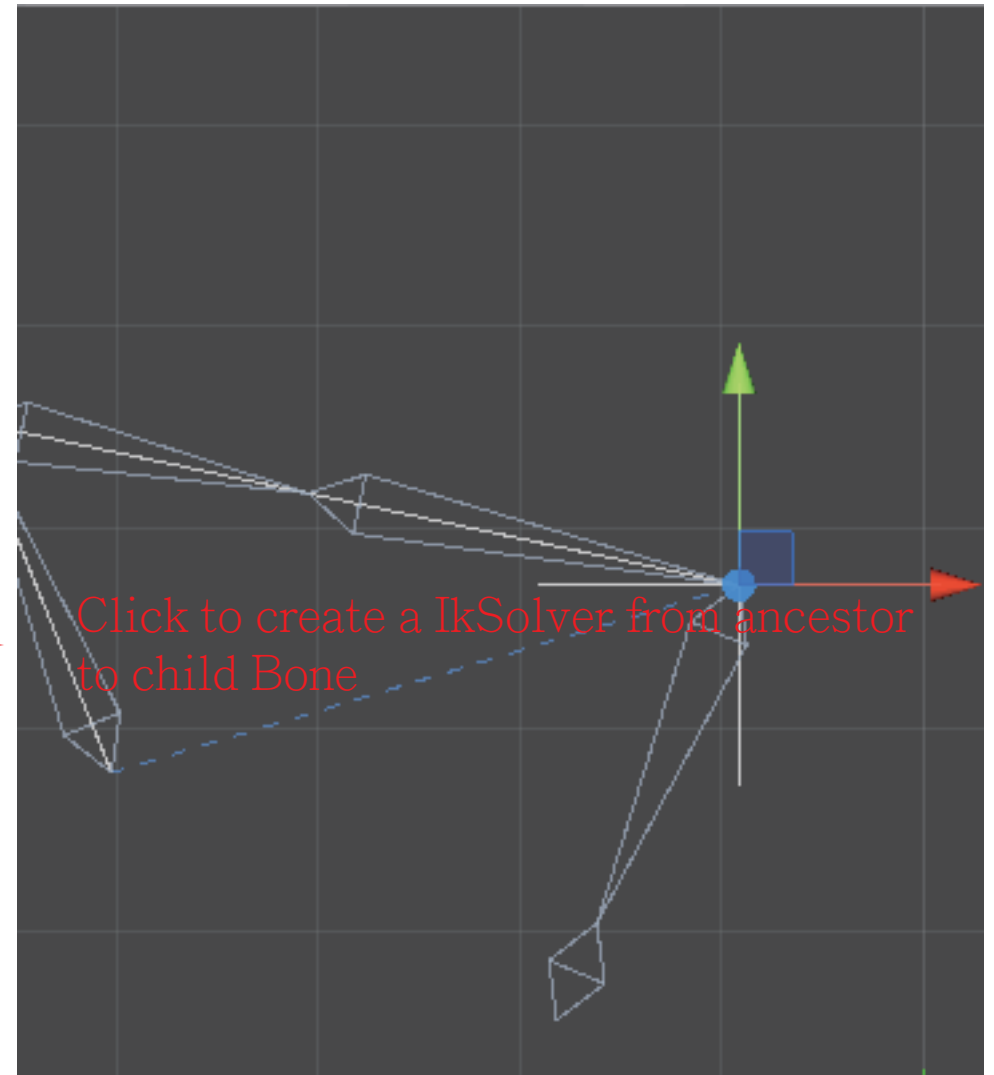
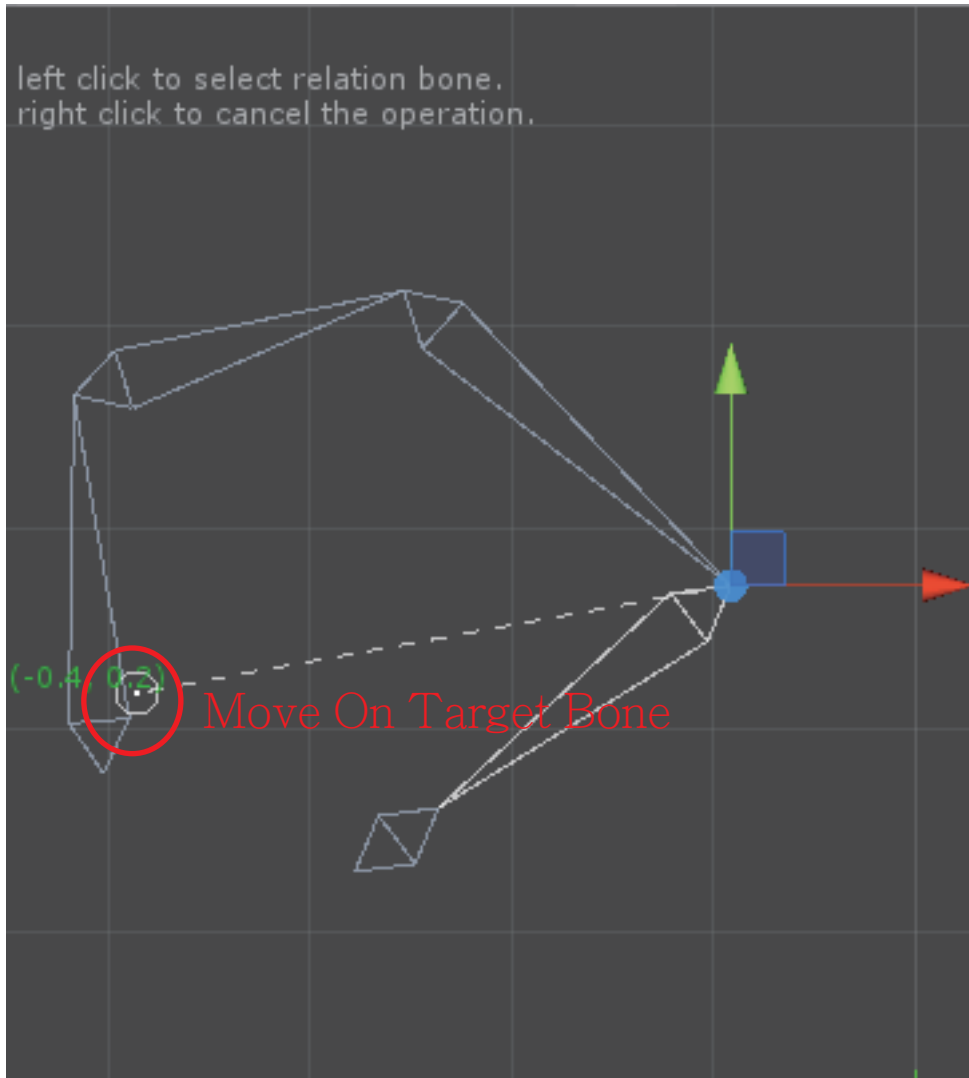
# Skeleton - IkSolver - Active



Click IkSolver button to create a IkSolver.

# Skeleton - IkSolver - Creation

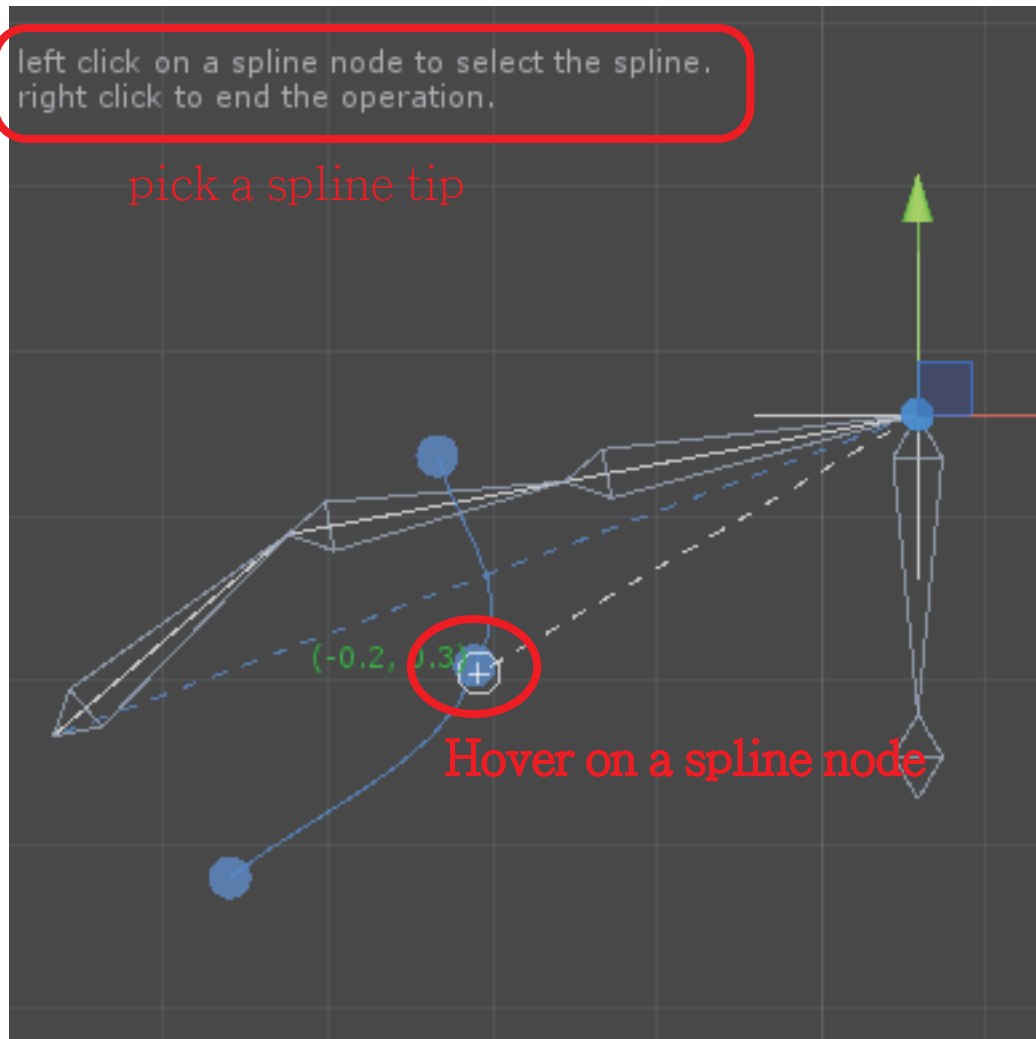
IkSolver Limb is only from ancestor to child bone with max 2 levels



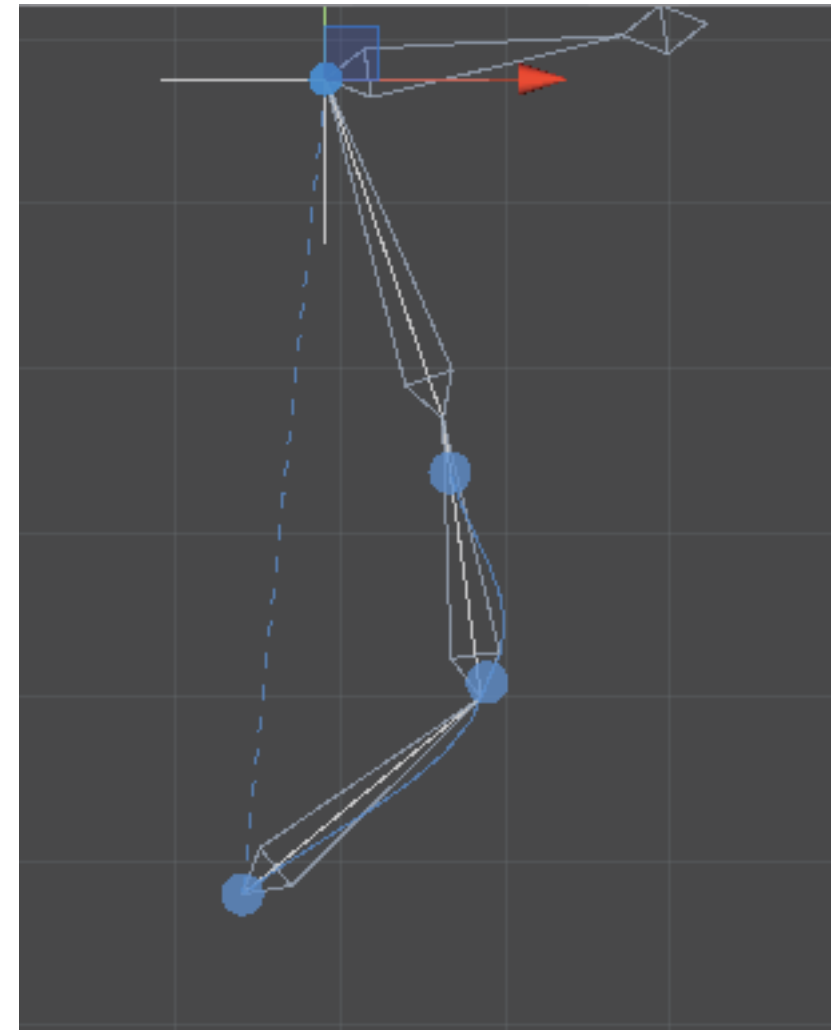
# Skeleton - IkSolver - Creation - Spline

after created IkSolverSpline, you could assign a spline to IkSolverSpline

before left click on the spline node

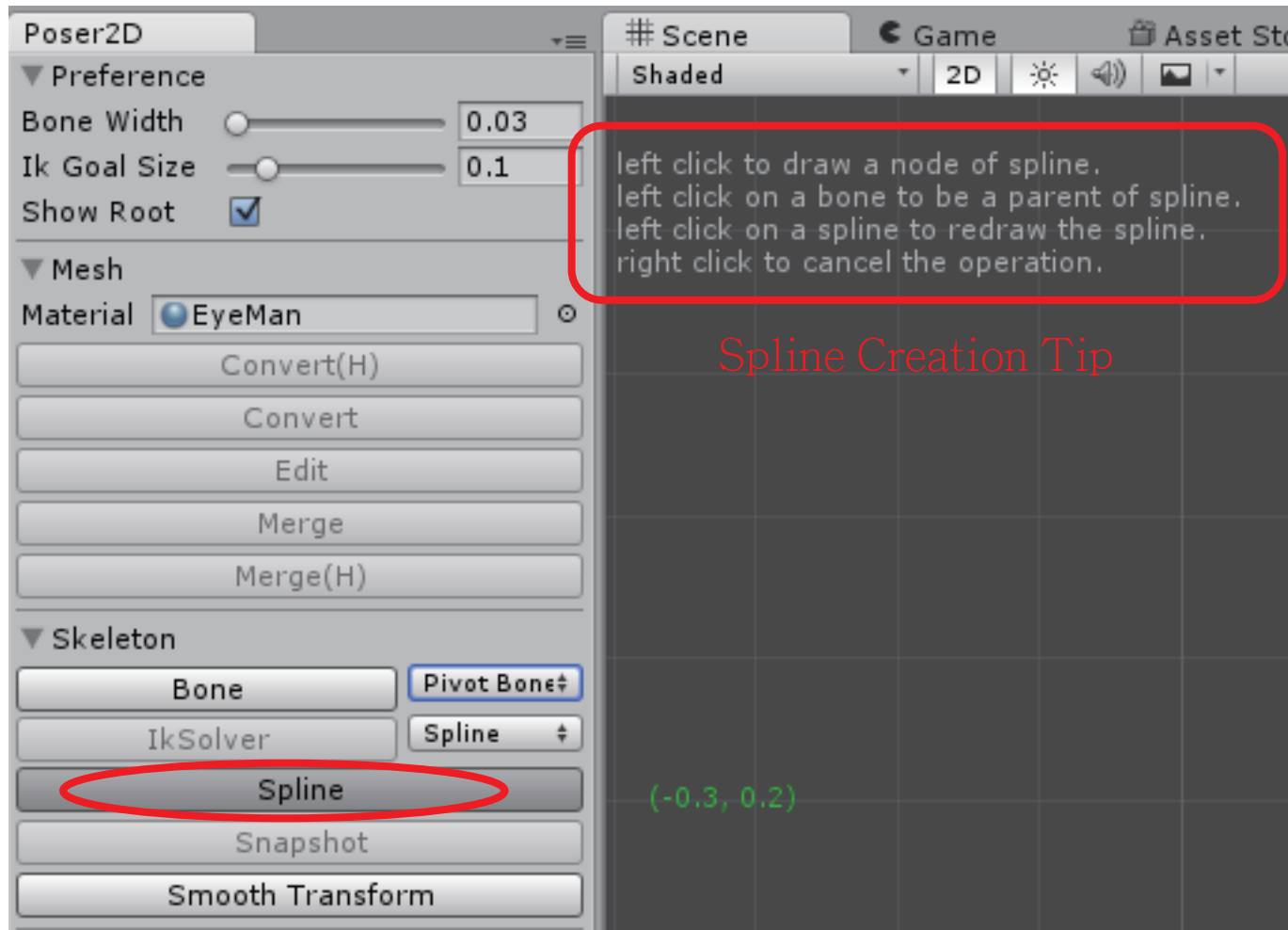


after left click on the spline node





# Skeleton - Spline - Creation

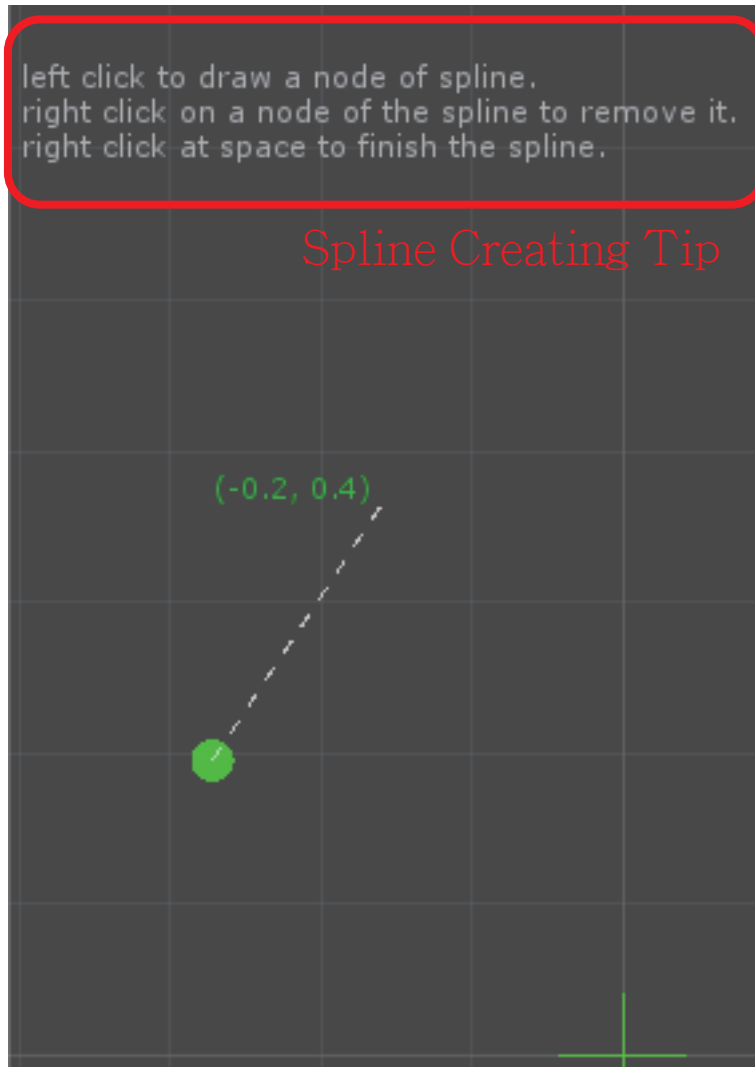


— Bone or PivotBone

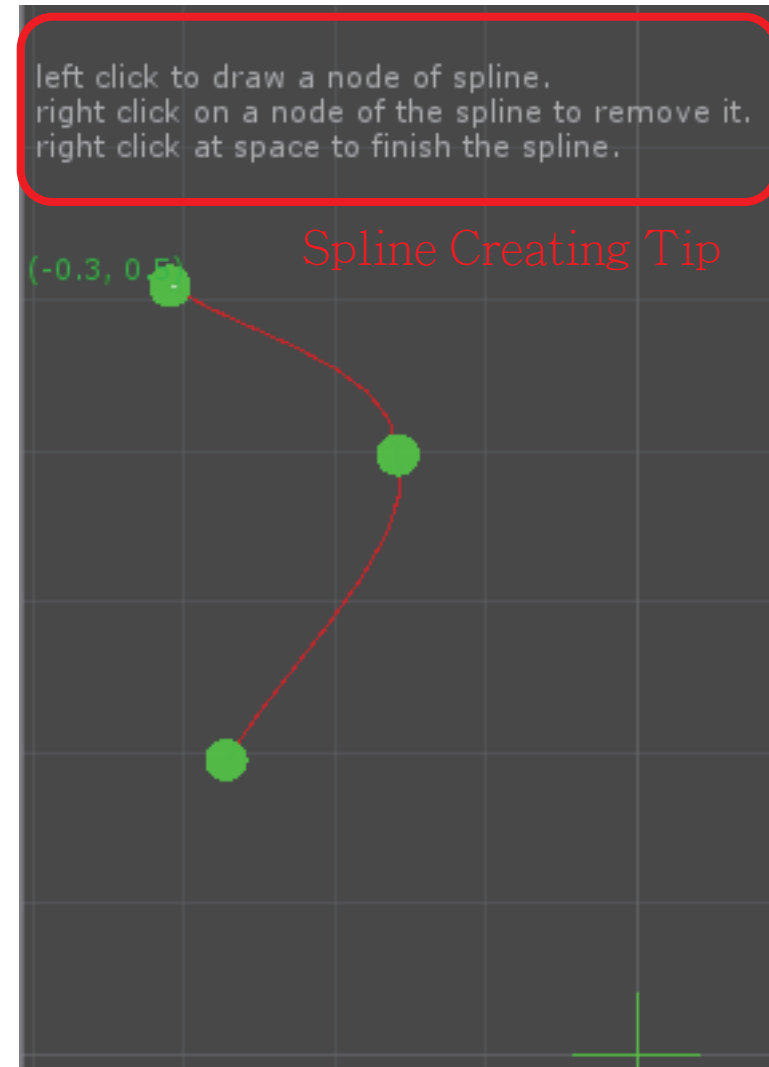
# Skeleton - Spline - Creation

Step1: left click and move mouse  
Step2: left click and move mouse  
Step3: right click at space to finish

Step1

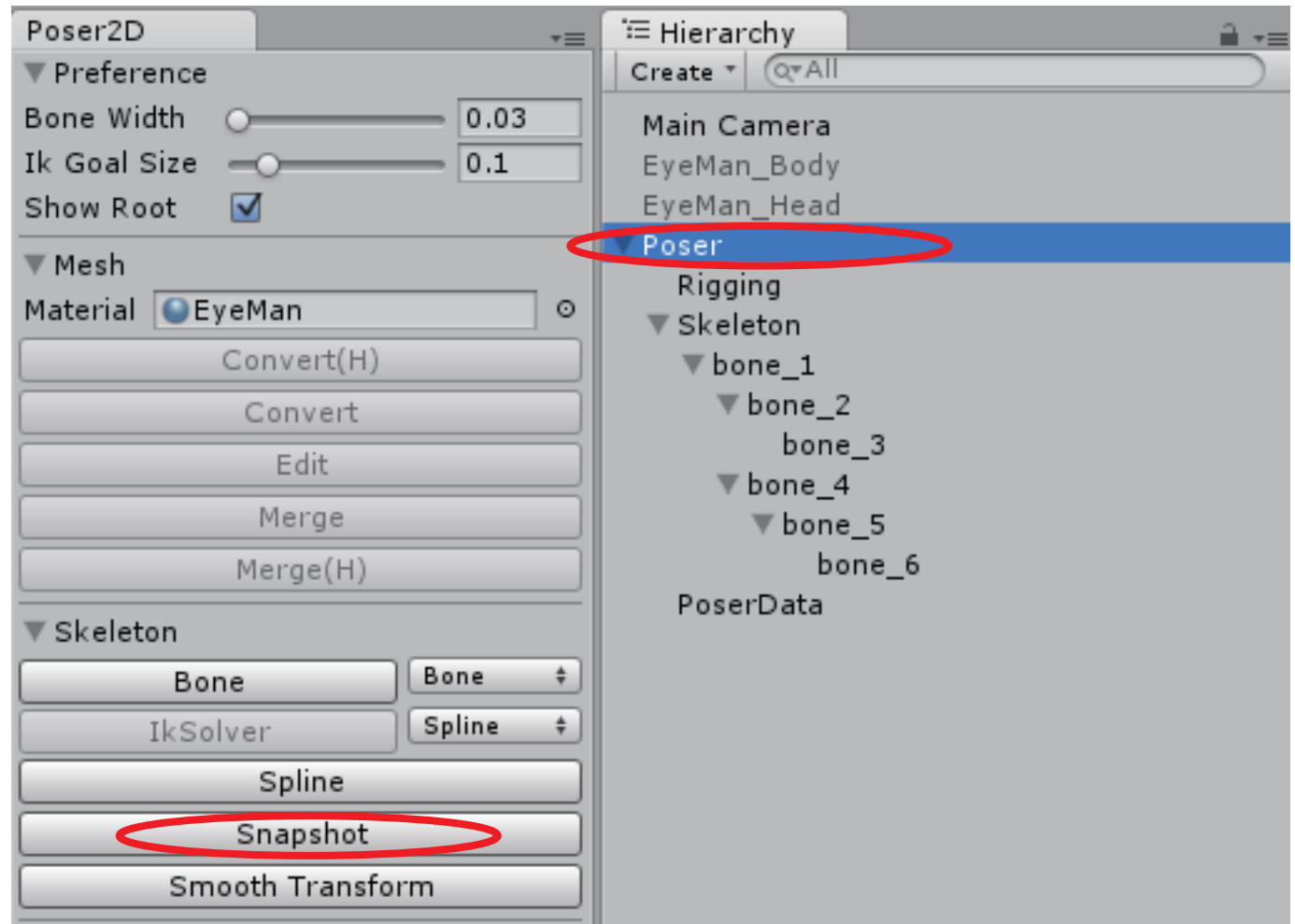


Step2



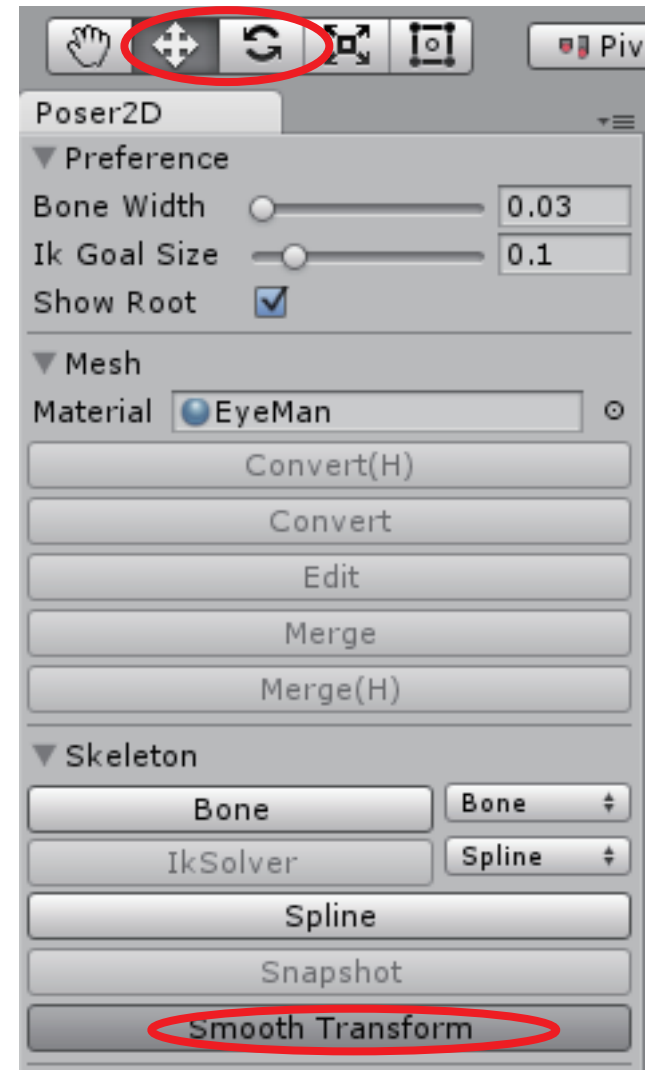
# Skeleton - Snapshot

active button  
select a Poser.  
click it to open snapshot window



# Skeleton - Smooth Transform

smooth transform mode can use move and rotation in tools.  
let **Bone** move smooth to influence his parent **Bone**.  
it is only effect in the last selected transform.



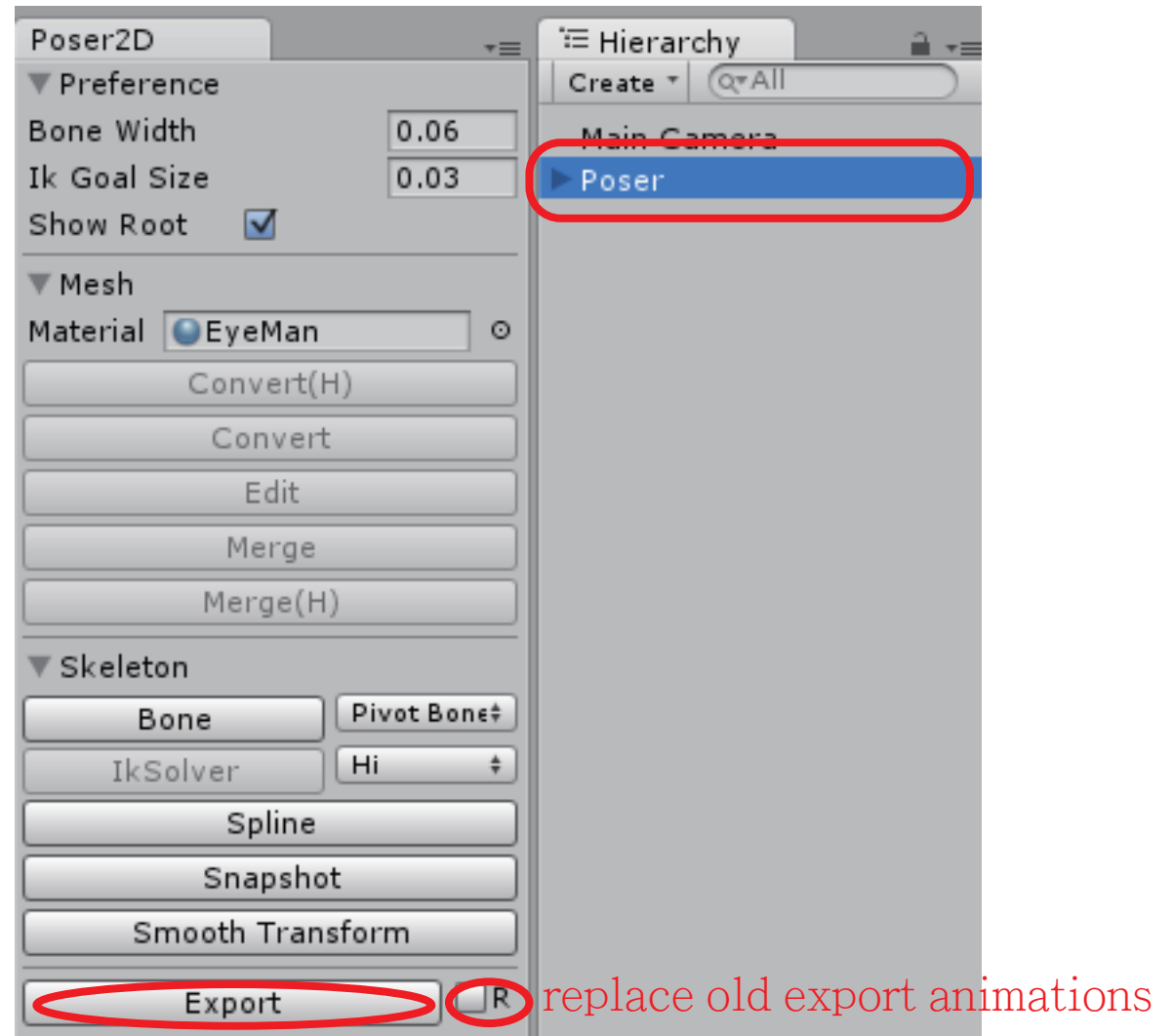
# Export

active button:

the poser of the last selection

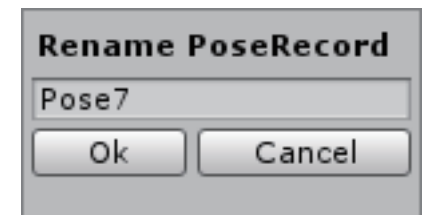
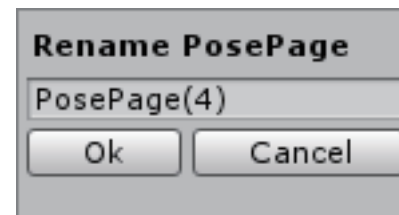
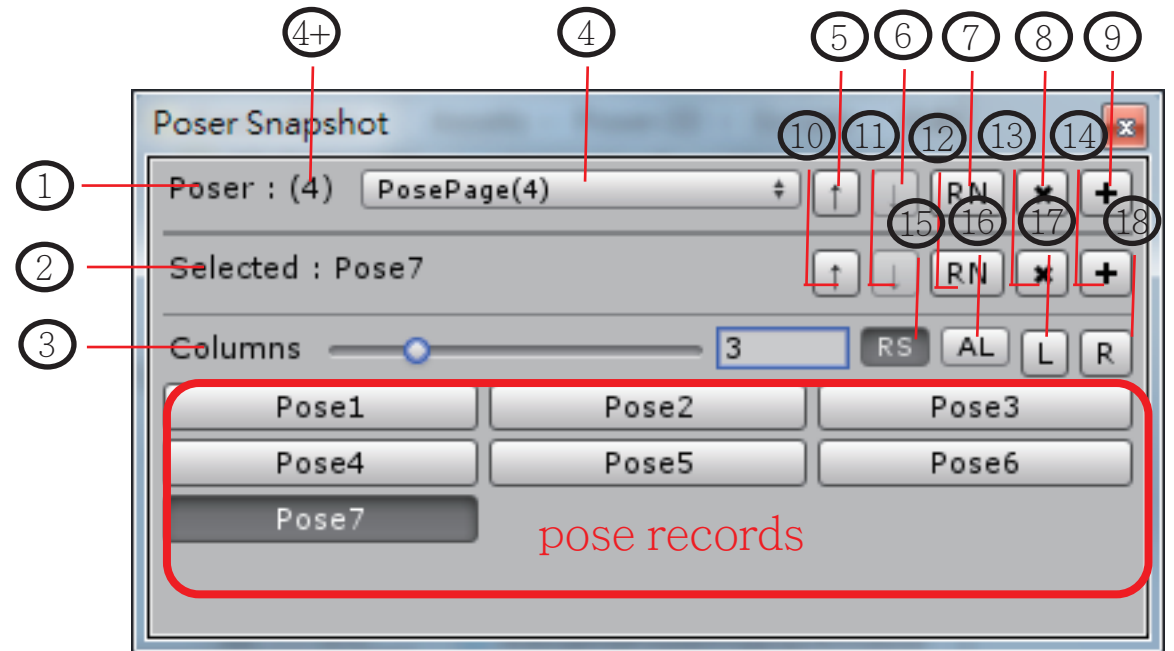
click button:

create a prefab from the poser  
and export all animations (strip  
all edit data) in the same folder



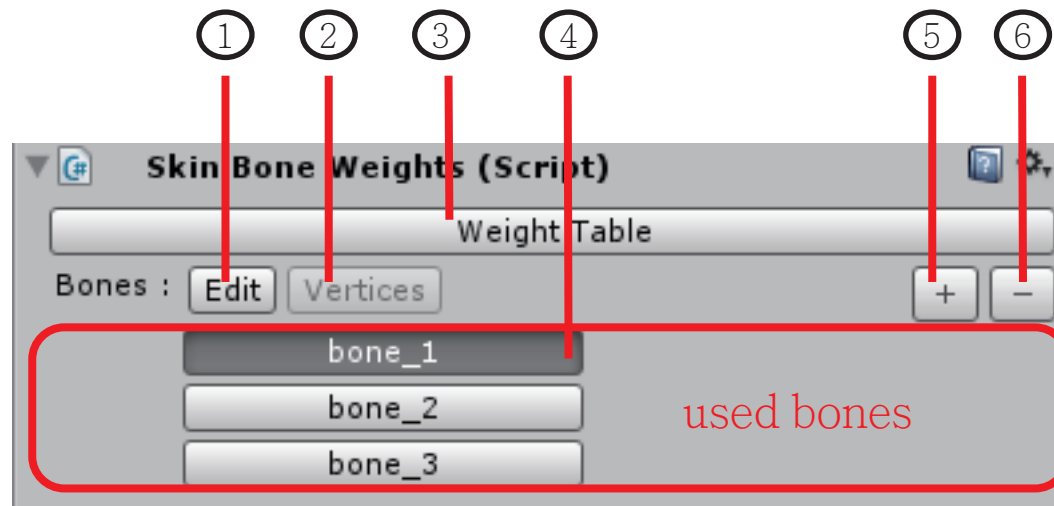
# Snapshot Window

- 1 - name of the selected Poser
- 2 - the selected pose record
- 3 - column number of pose records
- 4 - popup of pose pages
- 4+ - index of the selected pose page
- 5 - move up the selected pose page
- 6 - move down the selected pose page
- 7 - rename the selected pose page
- 8 - remove the selected pose page
- 9 - add pose page
- 10 - move up the selected pose record
- 11 - move down the selected pose record
- 12 - rename the selected pose record
- 13 - remove the selected pose record
- 14 - add pose record
- 15 - add or reset pose record from selections
- 16 - auto load selected pose record
- 17 - load selected pose record
- 18 - reset pose record



# SkinBoneWeights

- 1 - edit bone data button
- 2 - show vertices button (relation with selected bone)
- 3 - open bone weight table
- 4 - selected bone for edit
- 5 - open bone picker window
- 6 - remove selected bone



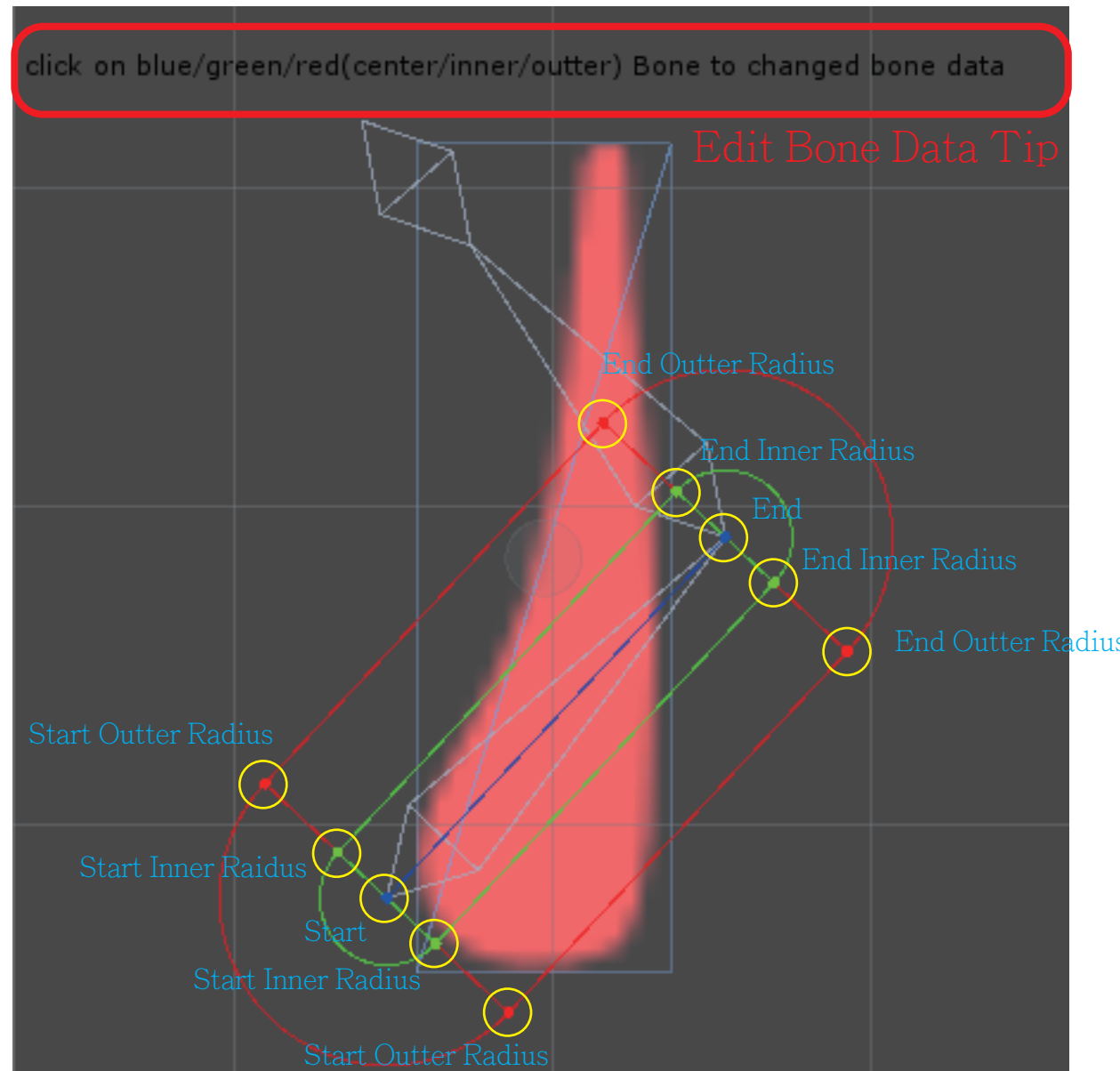
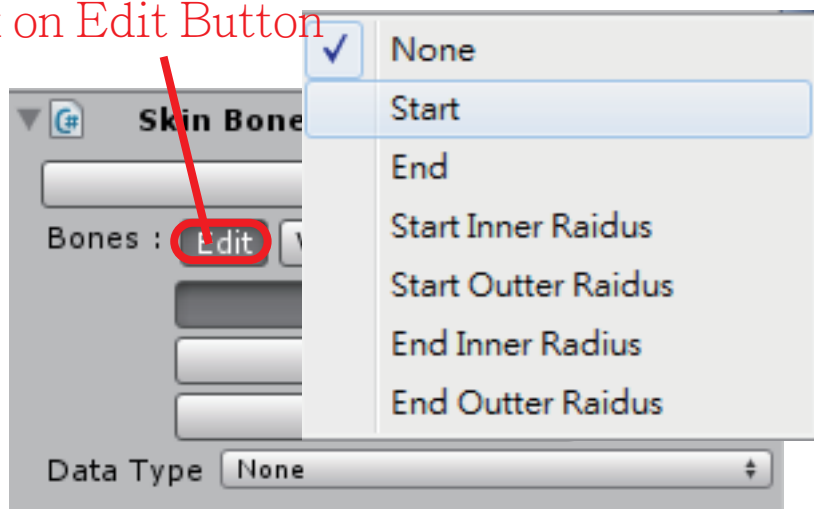
# SkinBoneWeights - Edit Bone Data

click on yellow circle to select data type to change.

Bone Data Type:

- 1 - Start
- 2 - End
- 3 - Start Inner Radius
- 4 - Start Outer Radius
- 5 - End Inner Radius
- 6 - End Outer Radius

Click on Edit Button

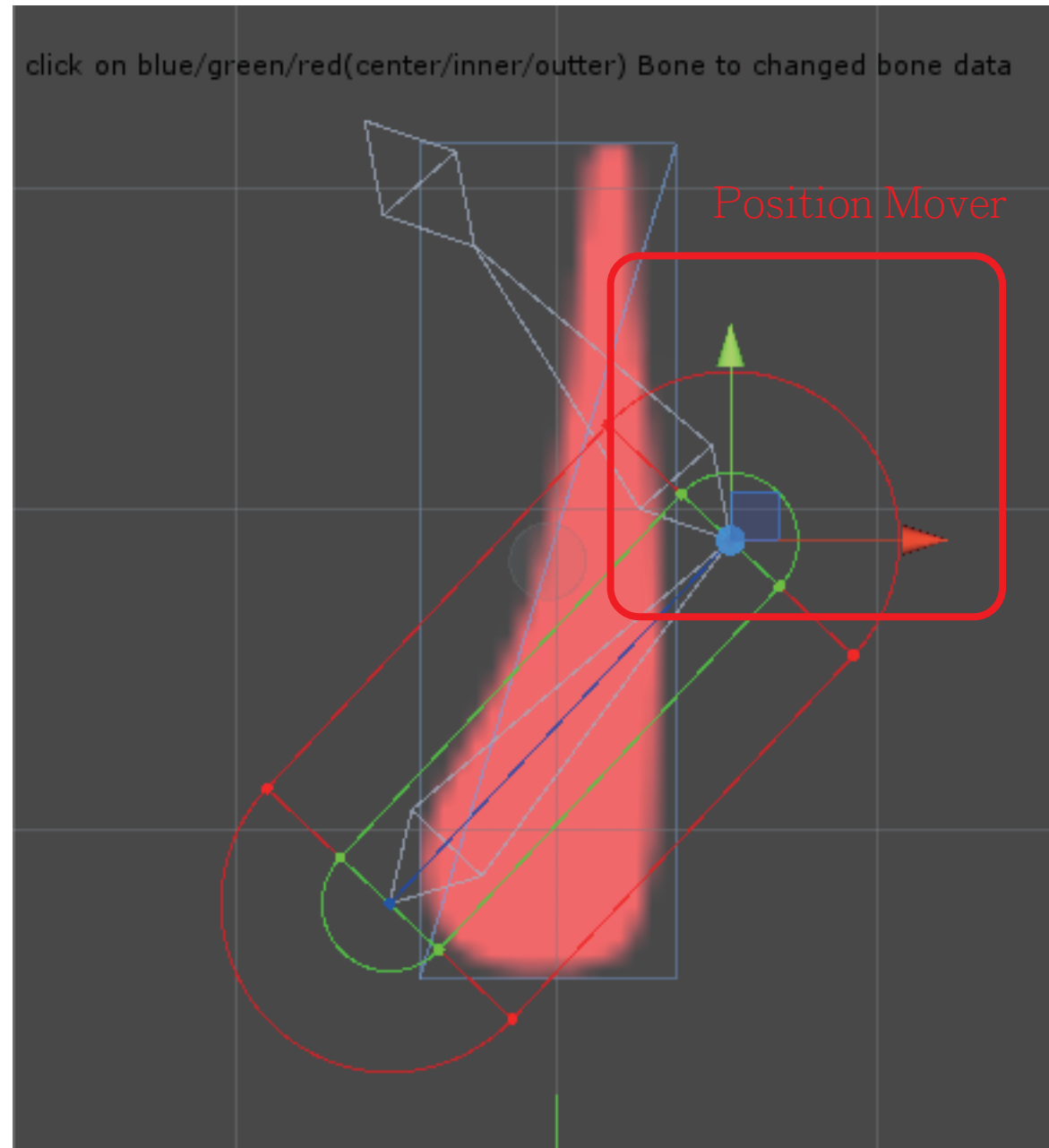
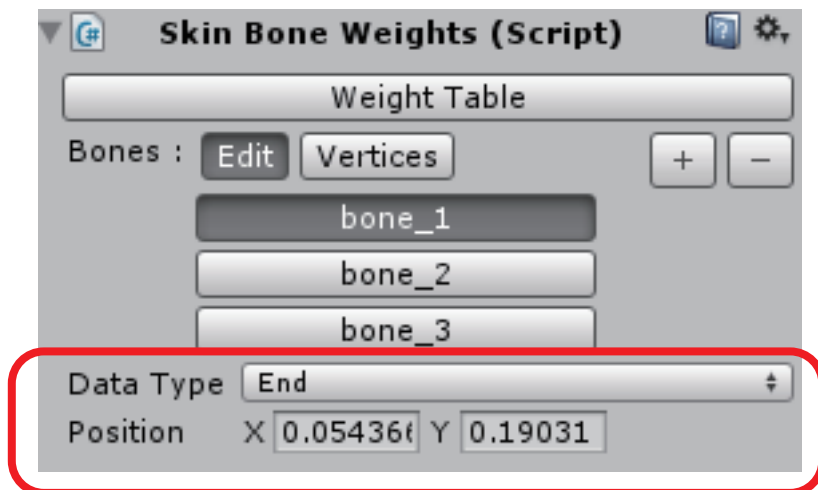




# SkinBoneWeights - Edit BoneData - Start / End

Start  
End

drag **Position mover** to move position  
or modify position value in inspector

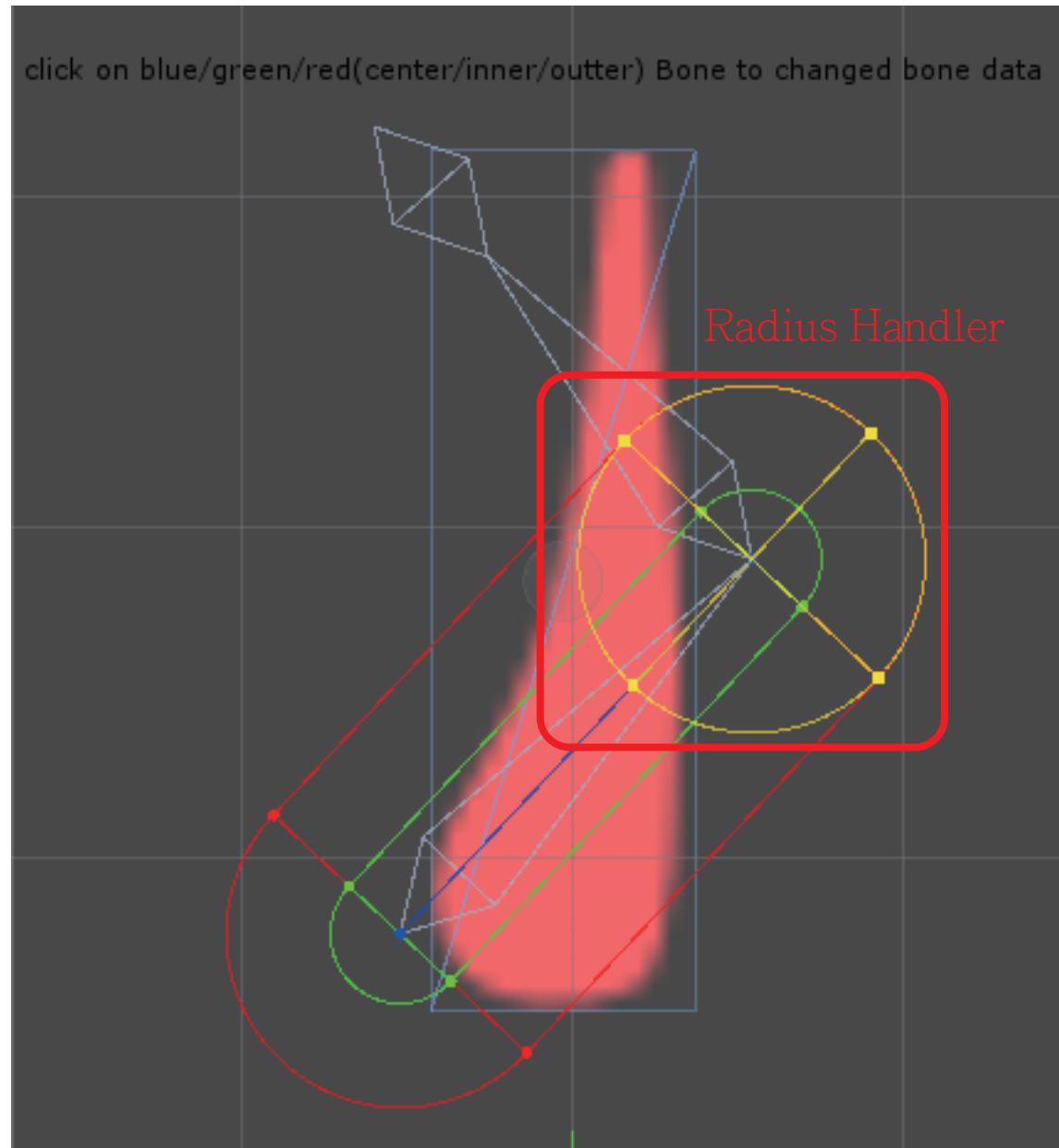
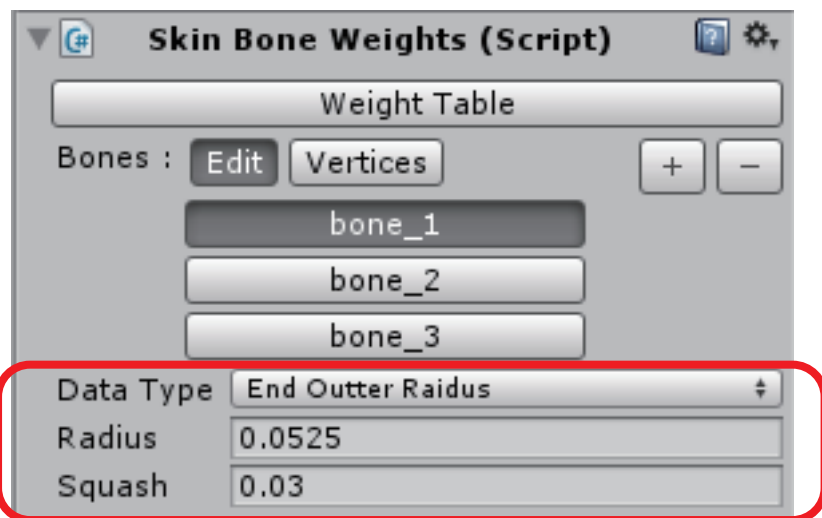


# SkinBoneWeights - Edit BoneData - Radius

Start Inner Radius  
Start Outer Radius  
End Inner Radius  
End Outer Radius

drag **Radius Handler** to change radius  
or modify radius value in inspector

squash to push radius value when inner  
and outer too closed



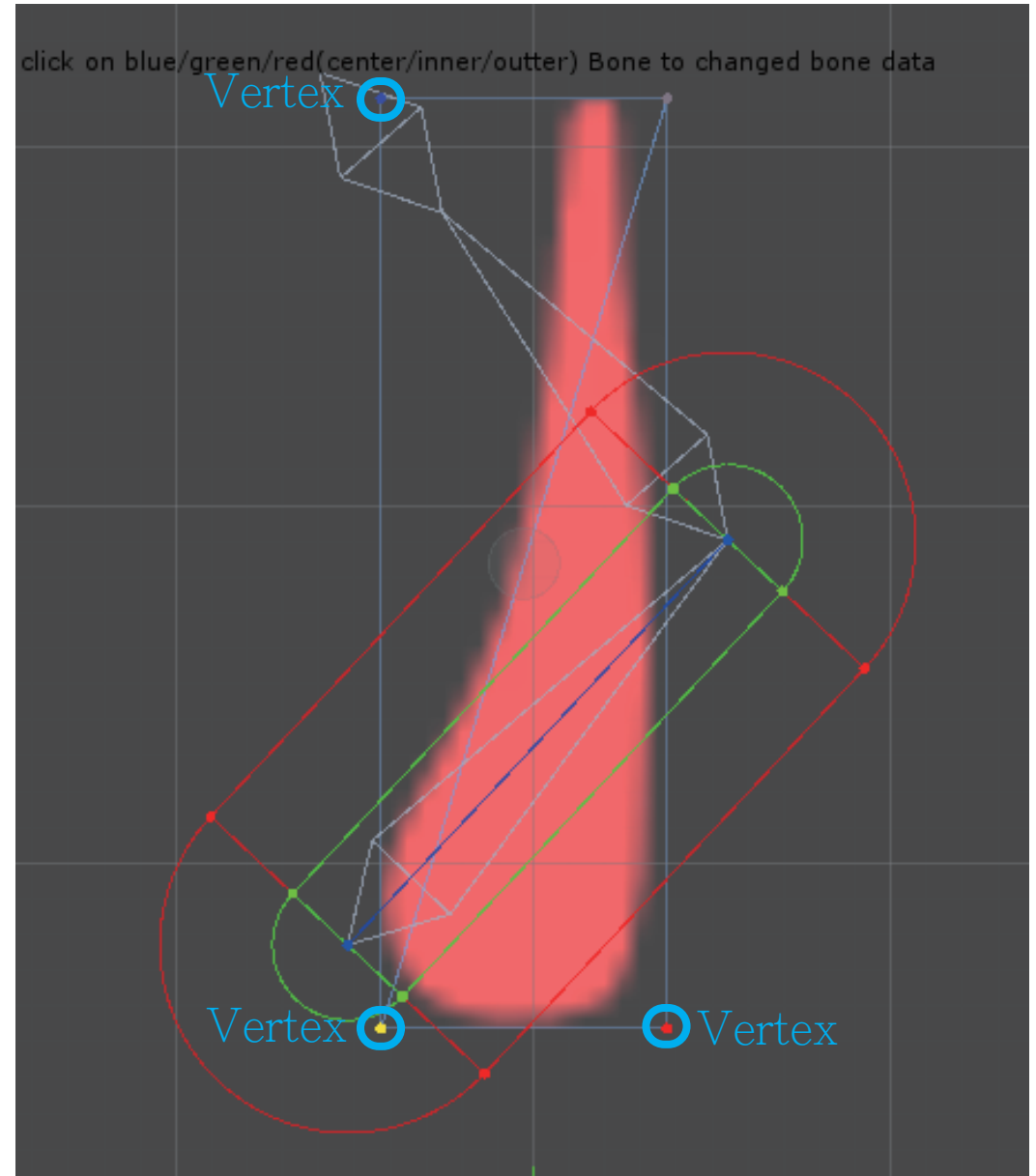
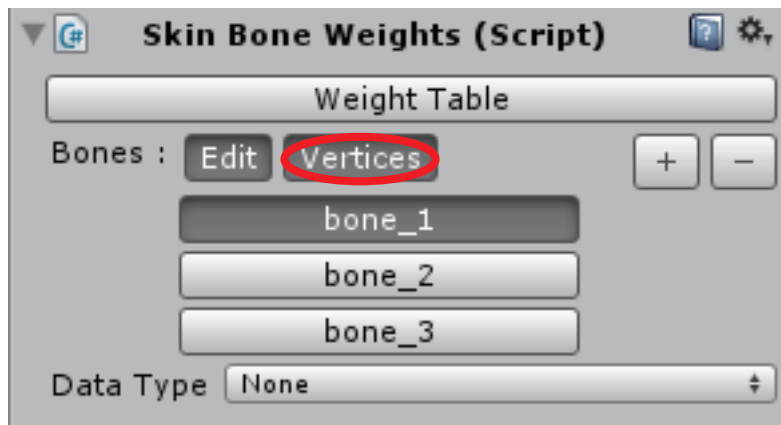
# SkinBoneWeights - EditBoneData - Vertices

click on **Vertices Button** to show vertices of relation of the selected bone

Weight Color of Vertex

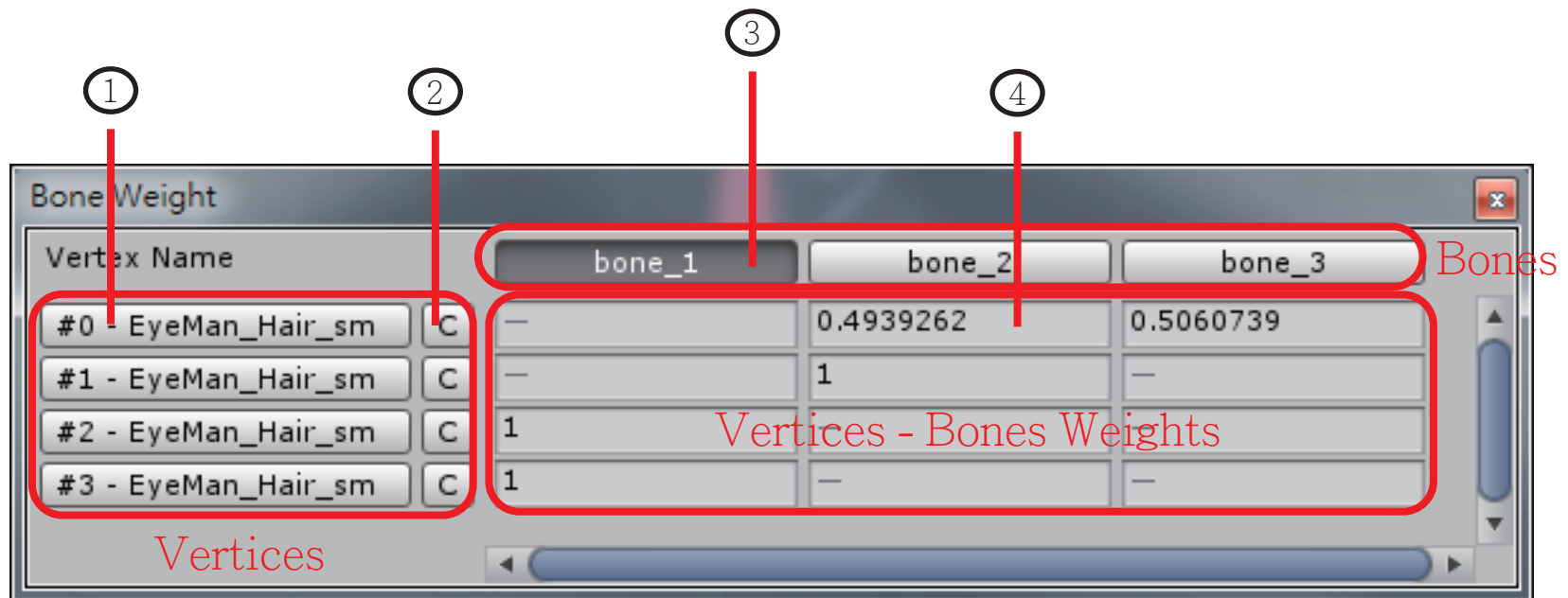


1 0.5 0



# SkinBoneWeights - Bone Weight Table

- 1 - vertex toggle, pressed will be displayed when editing bone data in SkinBoneWeights
- 2 - weight custom toggle, pressed will not auto updated bone weight of the vertex when changed bone data (add bone or remove bone will auto untoggle).
- 3 - bone mutex toggle, pressed will changed the selected bone in SkinBoneWeights.
- 4 - weight of the column bone and the row vertex



# SkinBoneWeights - Bone Picker

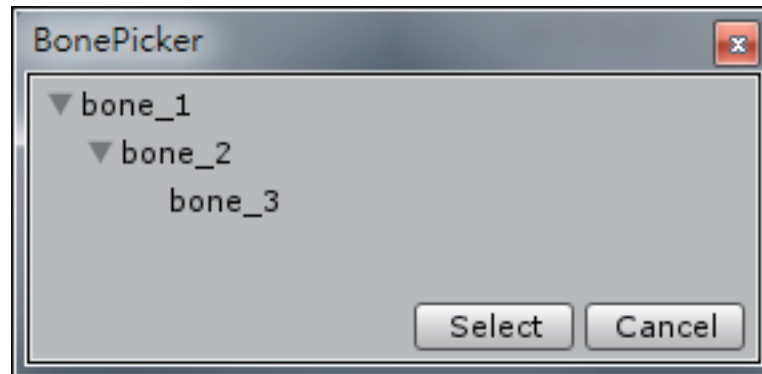
left click to select a bone.

ctrl + left click to add a selected bone.

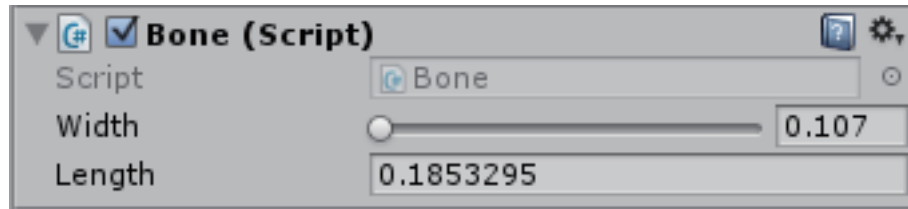
shift + left click to select bones from last selected bone to click bone.

click Select button to add selected bones to SkinBoneWeights.

click Cancel to cancel this operation.

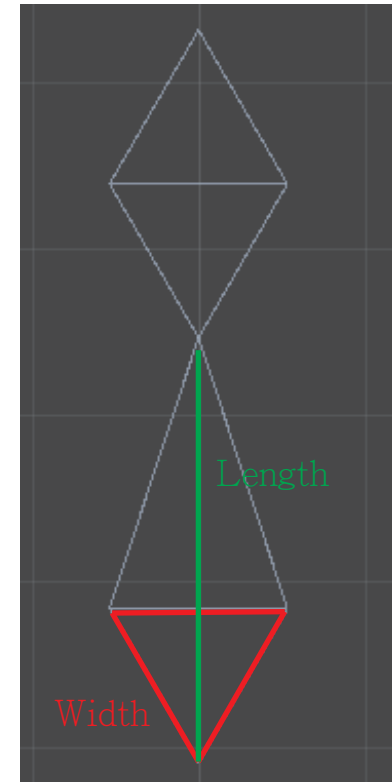


# Bone

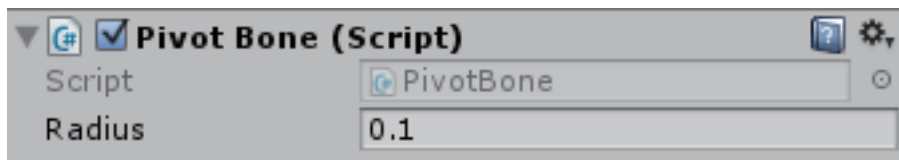


Width : used when bind bones to mesh to initial bone data.

Length : used when bind bones to mesh to initial bone data  
or caculate position for creating a child bone



# Pivot Bone



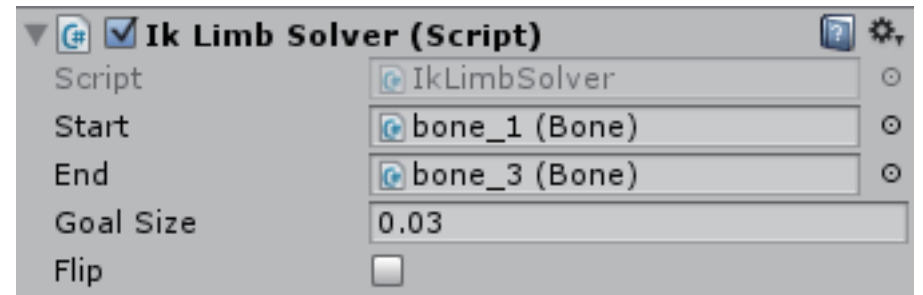
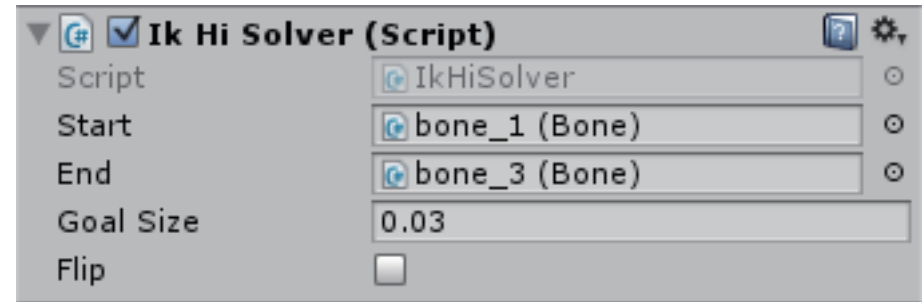
Radius : used when bind bones to mesh to initial bone data.

bone data is in SkinBoneWeights for caculation of bone weight of vertex

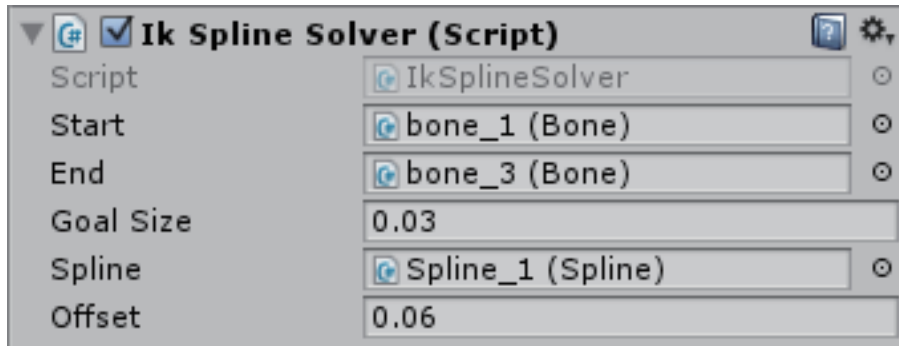
# IkHiSolver, IkLimbSolver



Start : first ancestor Bone node  
End : last posterity Bone node  
Goal Size : size of visual IkSolver for pick  
Flip : flip caculation of IkSolver



# IkSplineSolver

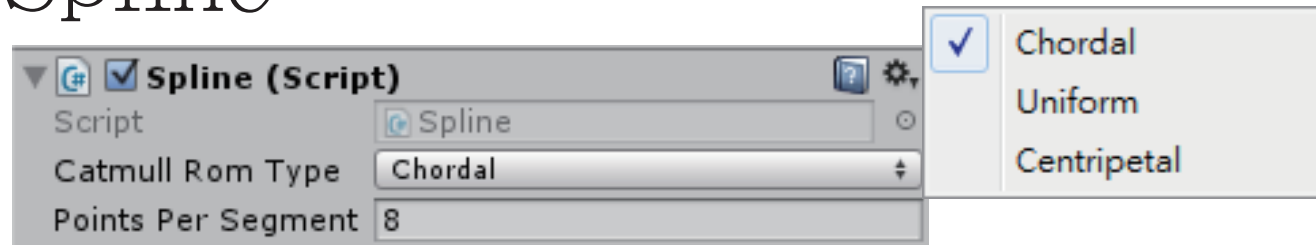


Start, End, Goal Size are same as IkHiSolver

Spline : used spline for IkSplineSolver

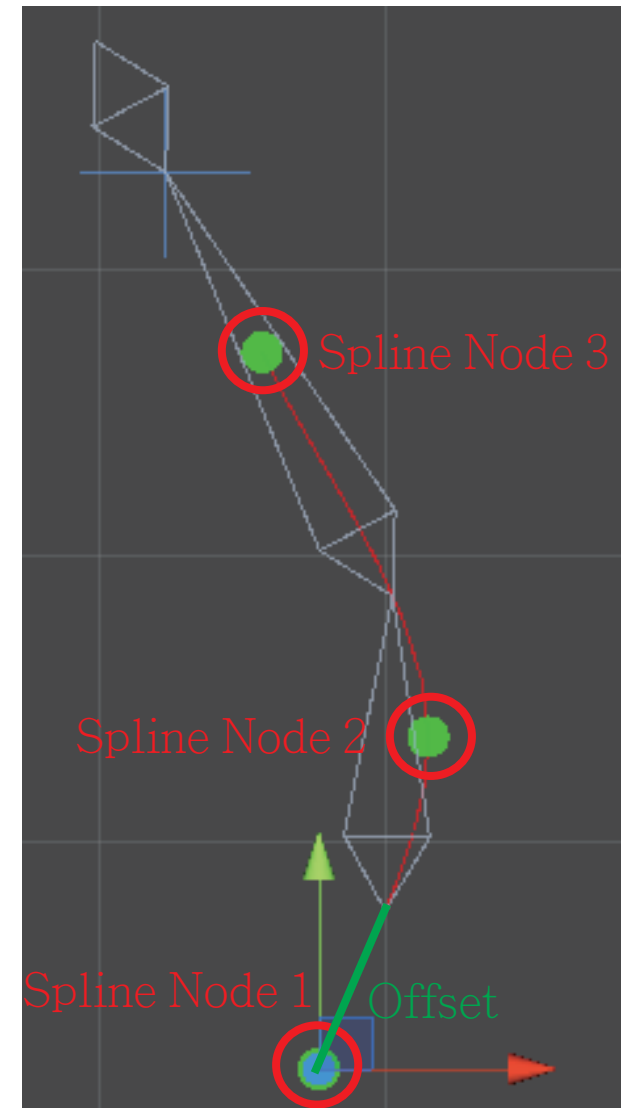
Offset : distance to Spline Node1

# Spline



Catmull Rom Type : calculation type for curve of spline(show difference at next page)

Points Per Segment : points amount between 2 nodes of spline





# Catmull Rom Type

[http://www.cemyuksel.com/research/catmullrom\\_param/catmullrom.pdf](http://www.cemyuksel.com/research/catmullrom_param/catmullrom.pdf)  
url is more detail about Catmull Rom Type

