FIMPOSSIBLE
GAMES

TAIL ANIMATOR
USER MANUAL

INTRODUCTION:

TAIL ANIMATOR IS PACKAGE OF BEHAVIOURS SIMULATING ELASTIC TAIL MOVEMENT WITH PROCEDURAL ANIMATION GIVING MANY NEW CAPABILITIES TO YOU!

IT REACTS WITH CHANGES ON OBJECT'S POSITION / ROTATION / SCALE.
JUST ADD COMPONENT TO OBJECT YOU WANT TO ANIMATE ELASTIC, DEFINE START TRANSFORM (OR BONE) AND PLAY WITH PARAMETERS.

IF YOU WILL LIKE THIS PACKAGE PLEASE VISIT PAGE ON ASSET STORE AND RATE OR WRITE REVIEW :)
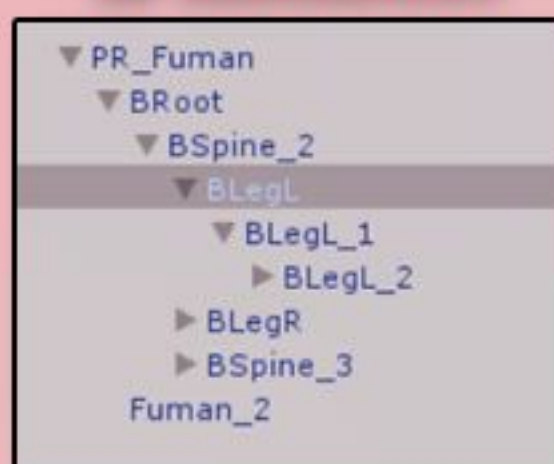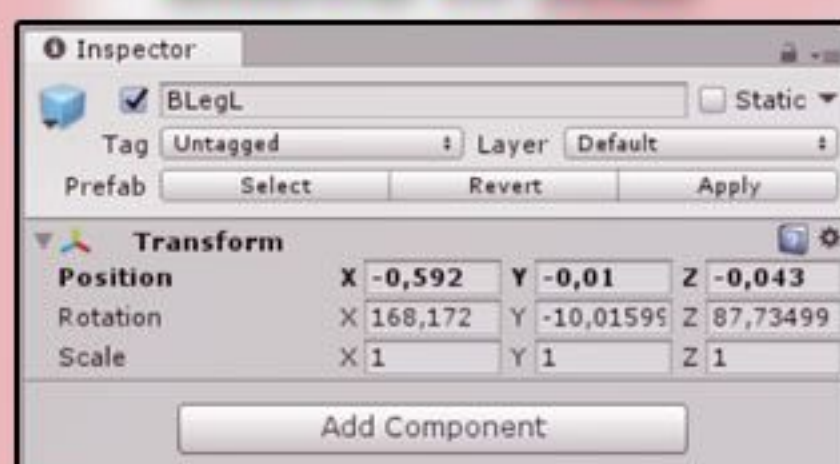
TAIL ANIMATOR
USER MANUAL

1 / 5 - BASE KNOWLEDGE:

TAIL ANIMATOR IS DEDICATED TO WORK ON MODEL'S BONES, BUT WHEN YOU IMPORT SKELETONAL MODEL TO UNITY, BONES ARE JUST SIMPLE TRANSFORMS (GAME OBJECTS)
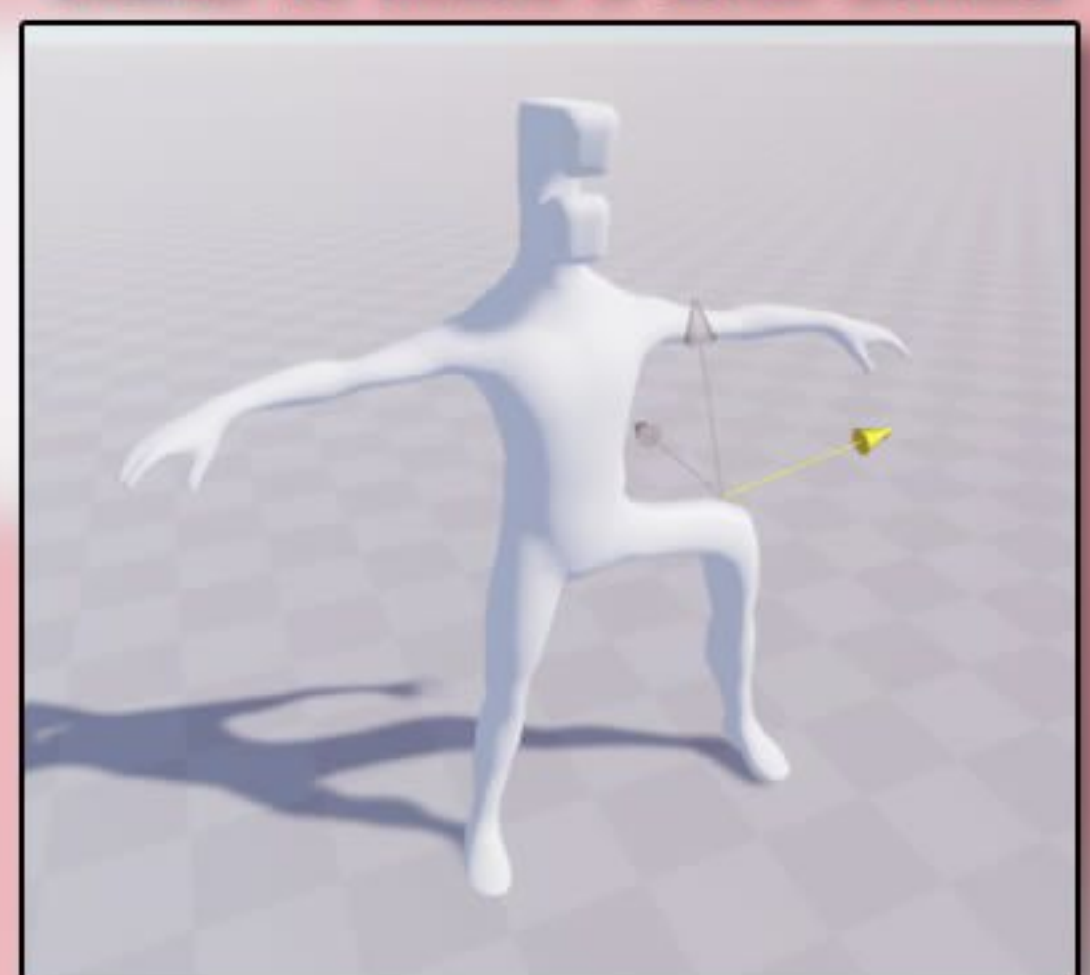
SKELETON BONES IN HIERARCHY

INSPECTOR WINDOW OF BONE

**MOVING BONE IN SCENE WINDOW IN ORDED TO CHECK IF BONE WORKS**

SO FINDING BONES YOU WANT TO USE IS PRETTY EASY.
THAT ALSO MEANS YOU CAN USE TAIL ANIMATOR ON GAME OBJECTS CHAIN, NO NEED FOR THEM TO BE BONES.

WHEN YOUR MODEL IS ANIMATED, YOU SHOULD KNOW FEW THINGS. UNITY'S ANIMATORS (Animator / Animation) ARE CHANGING BONES ROTATIONS **EVERY FRAME**, THAT'S WHY YOU CAN'T MOVE BONES IN PLAYMODE (▶ ❚❚)

TO CHANGE BONES POSITIONS YOU NEED TO USE **LATEUPDATE()** INSTEAD OF **UPDATE()** METHOD IN CODE.

SO YOU CAN ADD F Tail_Animator SET
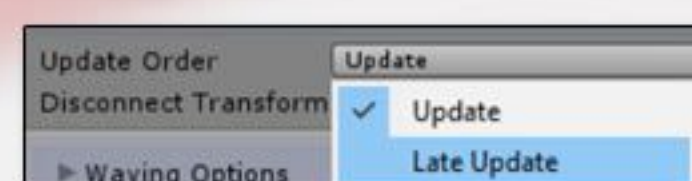
TO OVERRIDE UNITY'S ANIMATORS MOTION OR USE F Tail_Animator Blending WHICH WORKS ONLY ON **LATEUPDATE()** AND PROVIDE MORE POSSIBILITIES.

2 / 5 - USING TAIL AIMATOR

TO USE TAIL ANIMATOR FIND FIRST BONE OF GAMEOBJECTS CHAIN YOU WANT TO ANIMATE ADD AND HIT PLAY!

TAIL ANIMATOR WILL AUTOMATICALLY GET ALL CHILDREN BONES AND ANIMATE THEM

BE SURE YOU ADD COMPONENT ON TRUE FIRST BONE OF CHAIN, WHEN YOU ADD WRONG IT CAN PROVIDE ERRORS.

OF COURSE YOU CAN ADD TAIL ANIMATOR TO OTHER GAME OBJECT AND DEFINE FIRST BONE FROM IT, JUST CHECK INSPECTOR WINDOW
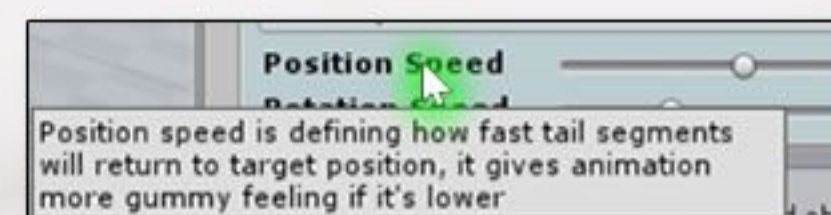
YOU CAN DEFINE TAIL CHAIN IN MANY WAYS AND INSPECTOR WILL GUIDE YOU WHAT WILL HAPPEN. IF YOU WANT TO BE SURE WHAT BONES WILL BE INCLUDED CLICK AUTO

TO TWEAK TAIL'S ELASTICITY BEHAVIOUR PLAY WITH THIS TWO CONTROLS

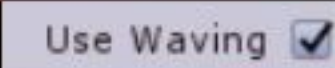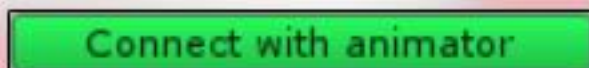IF YOU CAN'T FIGURE OUT WHAT VARIABLES ARE DOING JUST HOVER MOUSE OVER IT TO VIEW TOOLTIP (NOT WORKING IN PLAYMODE)

TO USE TAIL ANIMATOR WITH UI / 2D / ANIMATED MODELS CHOOSE CORRECT COMPONENT WHICH IS DEDICATED TO BEHAVIOUR YOU WANT TO ARCHIEVE.

3 / 5 - COOL FEATURES

[1] TAIL ANIMATOR BY DEFAULT ENABLES OPTION `Use Waving ☑` WHICH GIVES YOU SMOOTH WAVING ROTATION FOR FIRST BONE IN CHAIN, YOU CAN TWEAK IT TO YOUR NEEDS OR DISABLE IT AND USE OTHER OPTIONS.

[2] WHEN YOU HAVE ANIMATED MODEL `Connect with animator` CAN GIVE YOU COOL EFFECTS WHICH WILL COOPERATE WITH KEYFRAMED ANIMATION THIS OPTION CHANGES 3 VARIABLES (HOVER ON BUTTON FOR TOOLTIP) YOU CAN ADD IT EVEN TO ARMS OR SPINE OF YOUR MODEL, IT WILL MAKE ANIMATIONS MORE SMOOTH AND RESPONSIVE WITH ELASTICITY FOR OBJECT'S MOVEMENT AND ROTATIONS.
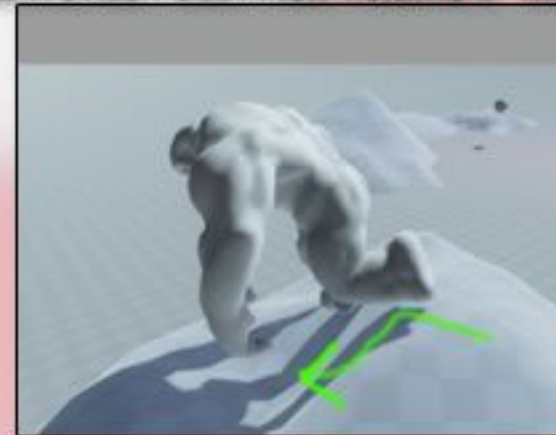
THIS 2 PRESENTATION MODELS ARE FROM PACKAGE "HEROIC FANTASY CREATURES FULL PACK Volume 1" MADE BY PROTOFACTOR, INC
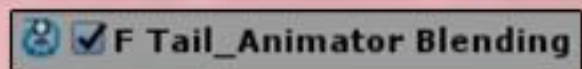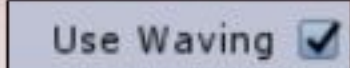
ROTATING OBJECT WITHOUT TAIL ANIMATOR

TAIL ANIMATOR AND 'CONNECTED' FEATURE

MASSIVE MODEL RUNNING ON UNEVEN FLOOR WITHOUT TAIL ANIMATOR

TAIL ANIMATOR ADDED TO UPPER ARMS AND SPINE WITH FULL BLEND ANIMATES LIKE CATCHING THE BALLANCE

[3] WHEN YOUR MODEL'S TAIL ISN'T ANIMATED OR YOU WANT FULLY REPLACE IT'S ANIMATION, YOU CAN JUST ADD `☑ F Tail_Animator Blending` AND TWEAK BEHAVIOUR WITH `Use Waving ☑`

[4] WHEN YOU WANT SAVE HOURS OF WORK ON KEYFRAMEING SMOOTH TAIL MOTION, SO YOU'LL WILL HAVE MORE TIME FOR POLISHING ANIMATION OVERALL, YOU CAN USE CHAIN BLENDING

WITH THIS FEATURE YOU CAN USE FIRST BONES' ROTATIONS TO DEFINE TAIL'S MOTION FOR EACH ANIMATION.

FOR EXAMPLE WITH THIS SETTING, FIRST TWO BONES WILL BE ANIMATED BY KEYFRAMED ANIMATION AND REST BY TAIL ANIMATOR!

`25% Source Animation Chain Blend`
`Blend Chain Value ——○—— 0,252`
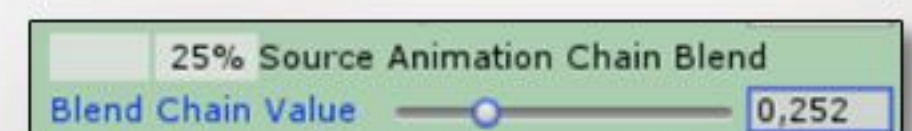
IT WORKS SIMILAR TO "USE WAVING" BUT SOMETIMES YOU'LL NEED DEDICATED TAIL MOTION ROTATIONS FOR CERTAIN ANIMATIONS.

4 / 5 - OTHER OPTIONS

[1] OPTION `Disconnect Transforms ☑` IS NOT RECOMMENDED TO USE BUT IT SOMETIMES HELPS MODELS TO ANIMATE CORRECTLY, CHECK CAPE AND BIG TENTACLES OF MEDUSA OBJECT INSIDE DEMO SCENE.

IT'S DISCONNECTING BONES TRANSFORMS FROM MAIN GAMEOBJECT MAKING IT'S UPDATE CLOCK INDEPENDENT FROM ROOT GAME OBJECT.

[2] OPTION `Add Tail References ☑` IS ADDING COMPONENT TO EACH TAIL SEGMENT AND THANKS TO THAT YOU CAN ACCESS MAIN TAIL COMPONENT FROM ANY TAIL'S TRANSFORM

▼ 🔧 F Tail_Reference (Script)	🗐 ✿,
Script	ⓒ FTail_Reference ⊙
Tail Reference	ⓒ PR_Fuman (FTail_Animat ⊙

IT'S USEFEFUL FOR EXAMPLE WHEN YOU ADD COLLIDERS TO TAIL SEGMENTS AND NEED TO ACCESS TAIL COMPONENT IN ORDER TO CHANGE VARIABLES THROUGH CODE.
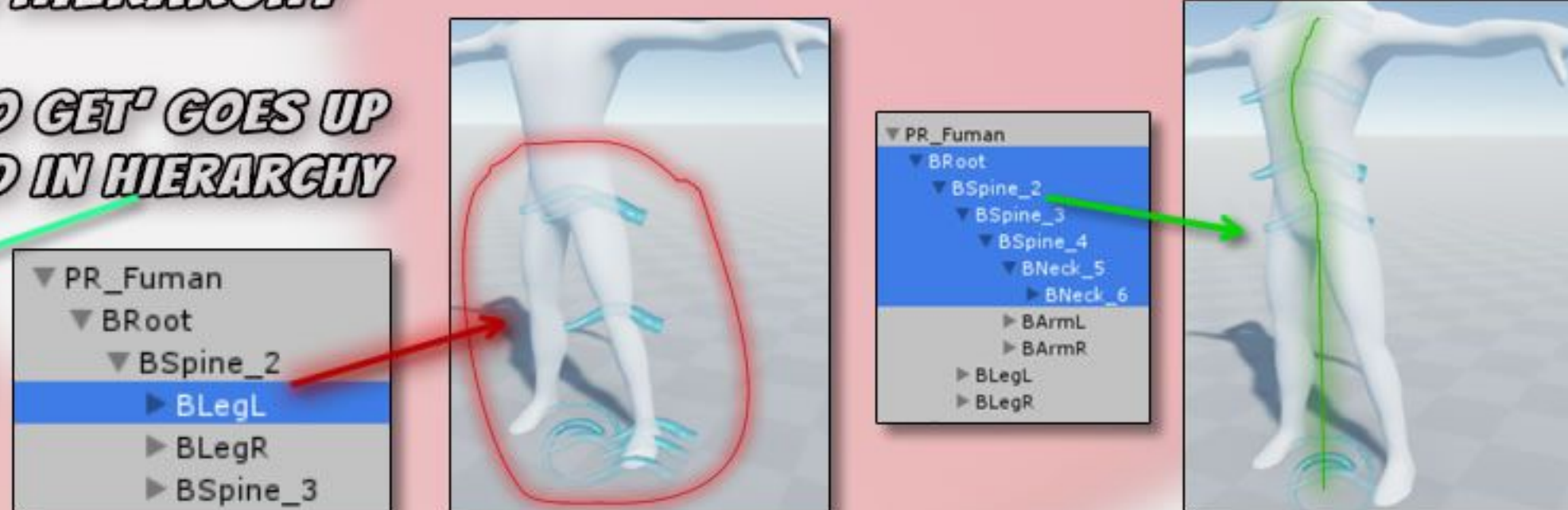
[3] `Positions Not Animated ☑` IS OPTION AVAIABLE IN `👤☑F Tail_Animator Blending`

IT'S ENABLED BY DEFAULT BECAUSE IN MOST CASES KEYFRAMED ANIATION IS NOT ANIMATING POSITIONS, JUST ROTATIONS, LEAVING THIS OPTION DISABLED CAN PROVIDE SOMETIMES ERRORS.

[4] `☑` THIS IS TOGGLE TO VIEW PREDICTED OR DEFINED TAIL CHAIN IN SCENE VIEW, THANKS TO THAT YOU CAN CHECK IF YOU NEED TO CHANGE CHILDREN HIERARCHY

TAIL ANIMATOR 'AUTO GET' GOES UP THROUGH FIRST CHILD IN HIERARCHY

BLEGL IS FIRST CHILD OF BSPINE_2

```
▼ PR_Fuman
  ▼ BRoot
    ▼ BSpine_2
      ▶ BLegL
      ▶ BLegR
      ▶ BSpine_3
```

```
▼ PR_Fuman
  ▼ BRoot
    ▼ BSpine_2
      ▼ BSpine_3
        ▼ BSpine_4
          ▼ BNeck_5
            ▶ BNeck_6
      ▶ BArmL
      ▶ BArmR
    ▶ BLegL
    ▶ BLegR
```

[5]

```
▼ Tuning Parameters          Automatic ☑
  Stretch Multiplier    1
  Refresh Helpers       ☐
  Full Correction           ☐
  Axis Correction
    X 0        Y 0        Z 1
  Axis LookBack
    X 0        Y 1        Z 0
    ▼ More Advanced Parameters   ☐
    From Axis
      X 0       Y 0       Z 1
    To Axis
      X 0       Y 0       Z 1
```

TUNING PARAMETERS CONTAINS OPTIONS FOR MORE COMPLEX TWEAKING, SOME OF THEM WAS DESCRIBED ON PAGE 3.

USING `Automatic ☑` VARIABLE, WILL TRY TO COMPUTE MATH TRANSLATIONS SO COMPONENT WILL WORK PROPERLY ON ANY SKELETON AXIS STRUCTURE. YOU CAN HIT PLAY AND SAVE THIS VARIABLES THEN DISABLE AUTOMATIC VARIABLE FOR SOME ADDITIONAL TWEAKS.
NOW YOU'LL BE ABLE TO MAKE YOUR TAIL BE BEND IN ALTERNATIVE WAY, JUST PLAY WITH ALL VARIABLES IN HERE.

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5 / 5 – SKINNING INSIDE UNITY

WHEN YOU HAVE STATIC MESH MODELS AND YOU WANT THEM TO WIGGLE LIKE TAIL AND YOU DON'T KNOW HOW TO SKIN THEM IN MODELLING SOFTWARE, OR YOU JUST WANT QUICKLY MAKE OBJECT ANIMATE WITH TAIL ANIMATOR YOU CAN USE TAIL EDITOR SKINNER!
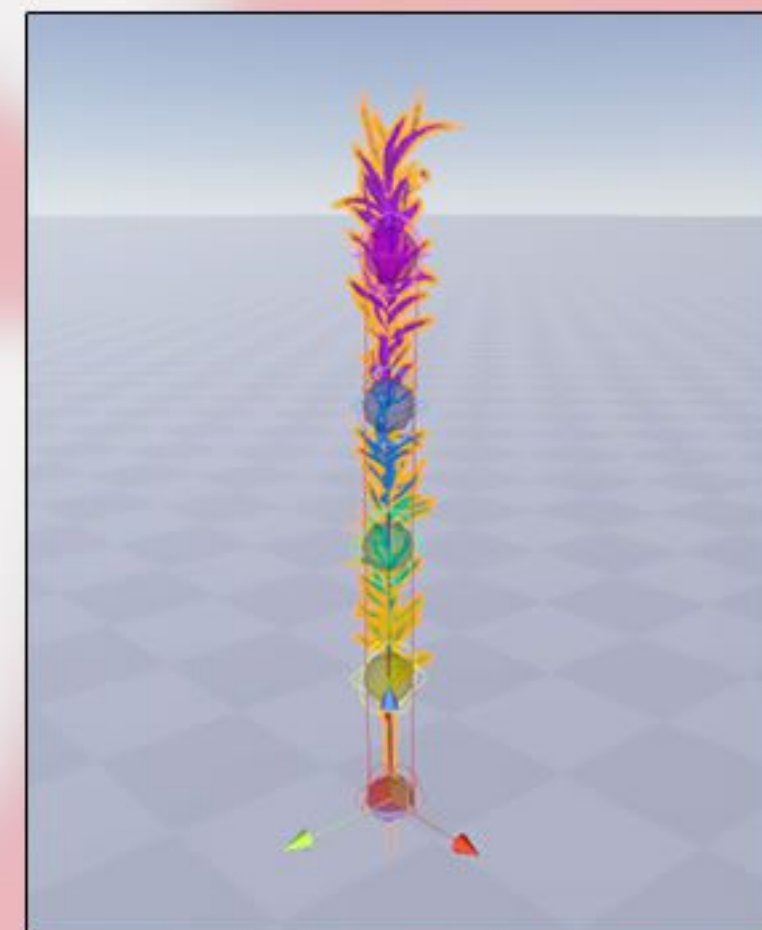
THIS COMPONENT IS DEDICATED TO QUICKLY CREATE SKINNED MESHES FROM STATIC ONES IN PURPOSE TO ANIMATE THEM.

YOU CAN QUICKLY DEFINE CHAIN FOR BONES, CONFIGURE SPREADING WEIGHT OVER THEM, THEN CLICK SKIN IT AND THEN YOU HAVE SKINNED MESH RENDERER.

PLANT MODEL IS FROM PACKAGE
"UNDERWATER LIFE DELUXE" BY JANPEC

Auto bone markers settings

Auto Markers Count	5		
Distance Value	0,3		
Position Offset	X 0	Y 0	Z 0
Start Direction	X -90	Y 0	
Rotation Offset	X 0,76	Y 0	
Help Scale Value			1,26
Distances Faloff			
Rotations Faloff			

DEFINE COUNT OF BONES CONFIGURE POSITIONS SHAPE IT WITH OTHER PARAMETERS TO FIT TO THE MODEL.

SET WEIGHT SETTINGS TO YOUR LIKES LIMIT HOW MANY BONES CAN SHARE VERTEX WEIGHTS FOR SMOOTHNESS / OPTIMIZATION

Weights Spread Settings

Spread Value	0,1
Spread Offset	1
Limit Bone Weight Count	2

MAKE WORKING WITH THIS COMPONENT EASIER WITH HELPER OPTIONS AND JUST SKIN IT

Additional Variables

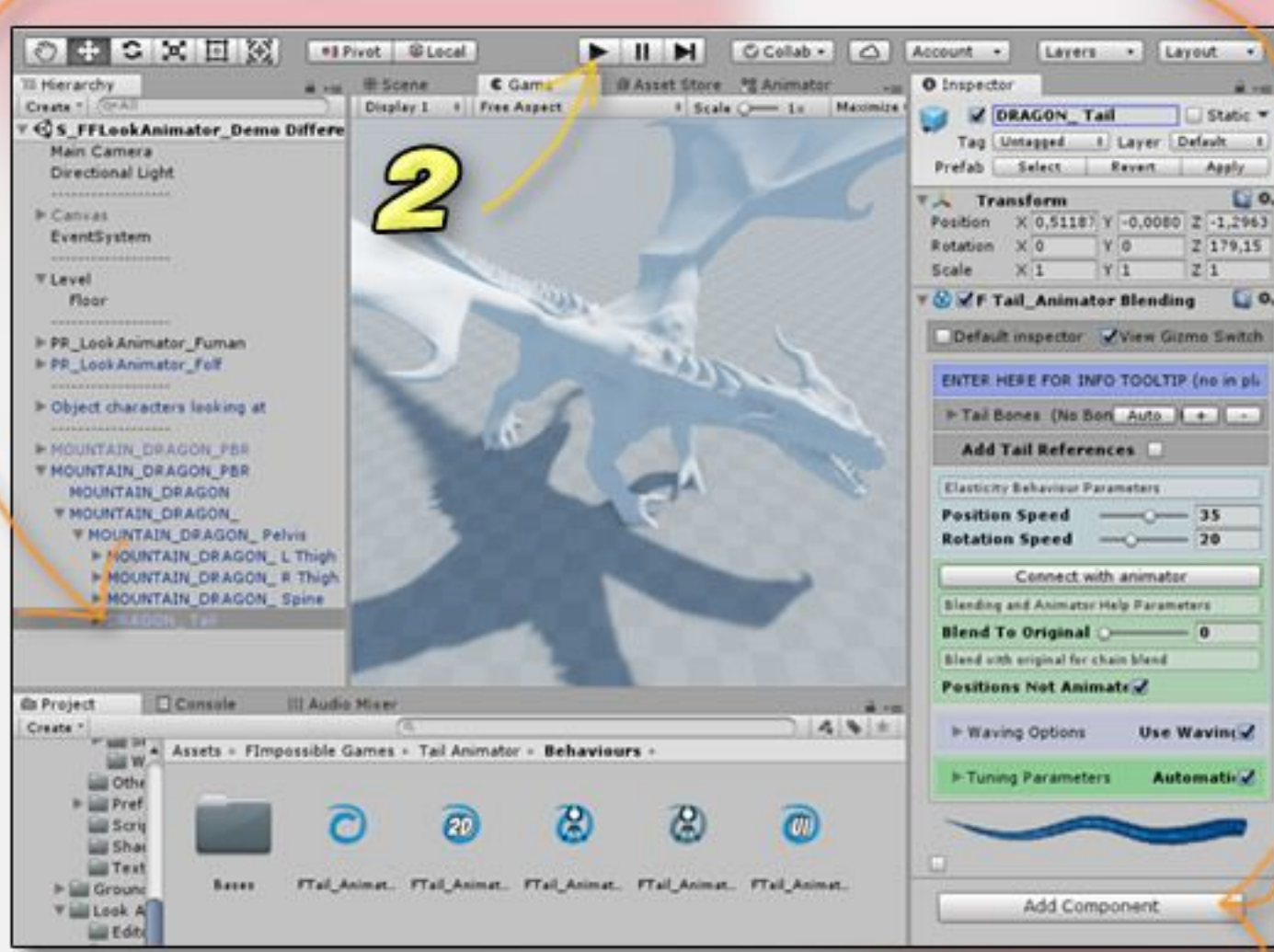|	
Gizmo Size	0,1
Gizmo Alpha	1
Realtime Update	
Show Preview	✓
Skin It	
Skin and add Tail Animator	

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QUICK TIP:

1.ADD COMPONENT -> 2.HIT PLAY -> 3.TWEAK! -> 4.COPY COMPONENT -> 5.EXIT PLAYMODE -> 6.PASTE COMPONENT VALUES
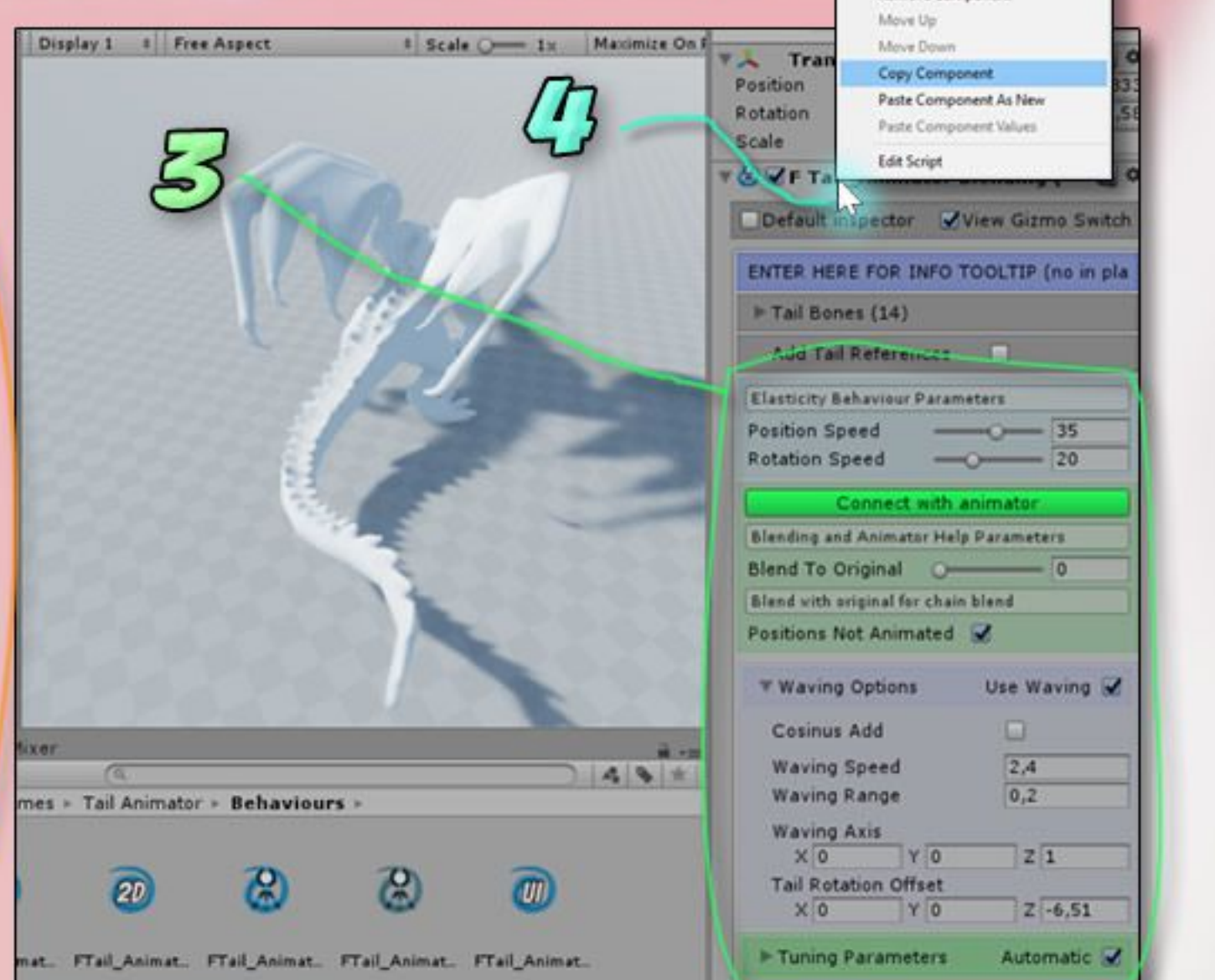
DRAGON MODEL IS FROM PACKAGE "HEROIC FANTASY CREATURES FULL PACK Volume 1" MADE BY PROTOFACTOR, INC

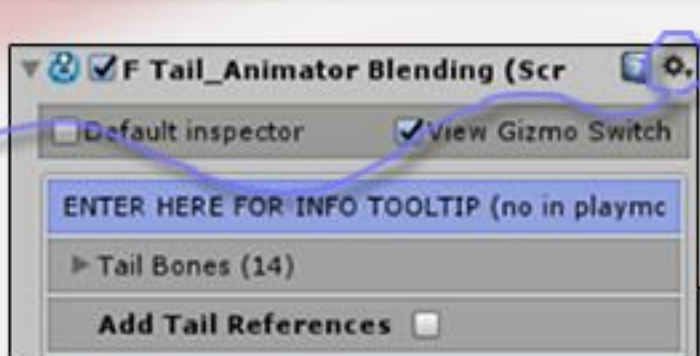**IF YOU WILL LIKE THIS PACKAGE PLEASE VISIT PAGE ON ASSET STORE AND RATE OR WRITE REVIEW :)**