

CS248 Lecture 6

SIMPLE ANIMATIONS IN UNITY

January 25th, 2018

Overview

- Course Logistics
- Short-Form Assignment Feedback
- Practical Uses of Simple Animation
- Animation in Maya
- Animation in Unity
- In-Class Demo

Course Logistics



Piazza

- Please be on it.
- Please use it.
- Last reminder if you joined late.

Grades

- You should have gotten an email with your grades.
 - › We will send this out every Thursday to keep you updated
 - › If you are SCPD or doing long form responses and haven't sent them in yet, that could skew what you're seeing.

Short-Form Assignments

- Write your name (or at least your SUNetID).
 - › Lecture 4 had one without a name.
 - › If you have any doubts, please email us (cs248.staff@gmail.com) to double check to see if we have recorded your attendance.
- Write legibly.
- Answers should be RELEVANT.
 - › Future answers with horribly irrelevant answers will have points deducted.
 - › Don't get points deducted from your attendance when you actually attended.

Short Form Assignments Feedback

YES, I READ THEM



Rigid Bodies

- A general approximation for certain objects in the world.
- The ENTIRE object can only translate/rotate/scale.
 - › Each vertex gets transformed the same way.

Graphics

Technically Impressive



Aesthetically Pleasing



- Both are good!
- A good game should be aesthetically pleasing/coherent.
 - A good game is not necessarily technically impressive.
- “Gameplay over Graphics”
- Do NOT spend significant time implementing rendering techniques not packaged with Unity (e.g. real-time ray-tracing).

General Good Advice

- Start small.
- Design your game around a singular mechanic.
 - › Super Mario = Jumping.
 - › Flappy Birds = Tapping.
 - › Etc.
- Sound/music is an often overlooked part of video games but they contribute a lot.
 - › Generally harder to find/create though so don't worry about it that much.
- DO WHAT YOU ENJOY
- What is fun?
 - › Fun is different for different people.
 - › Casual vs Hardcore.
 - › PC vs Console vs Mobile.
 - › RPG vs RTS etc.

Practical Uses of Animation

IN VIDEO GAMES!



How to Make Animations

- Pre-Made
 - › Maya
 - › Blender
 - › Unity
- Scripted
 - › Tweening Package
 - › Change based off some velocity/acceleration value and/or user input.

On-Rails Movement

Star Wars Battlefront



Gears of War



Chivalry: Medieval Warfare



User Interface

Mass Effect



World of Warcraft



Dead Space



And More...

Angry Birds



Candy Crush



Hearthstone



Animation Splines

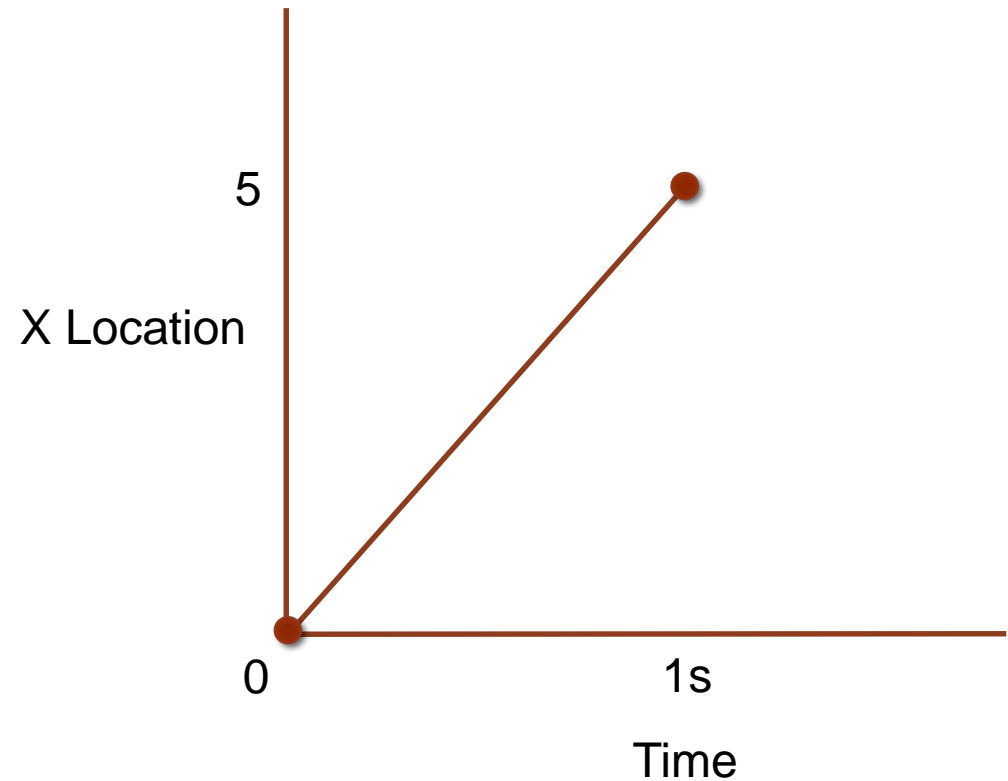
X Location	X Scale	X Rotation
Y Location	Y Scale	Y Rotation
Z Location	Z Scale	Z Rotation



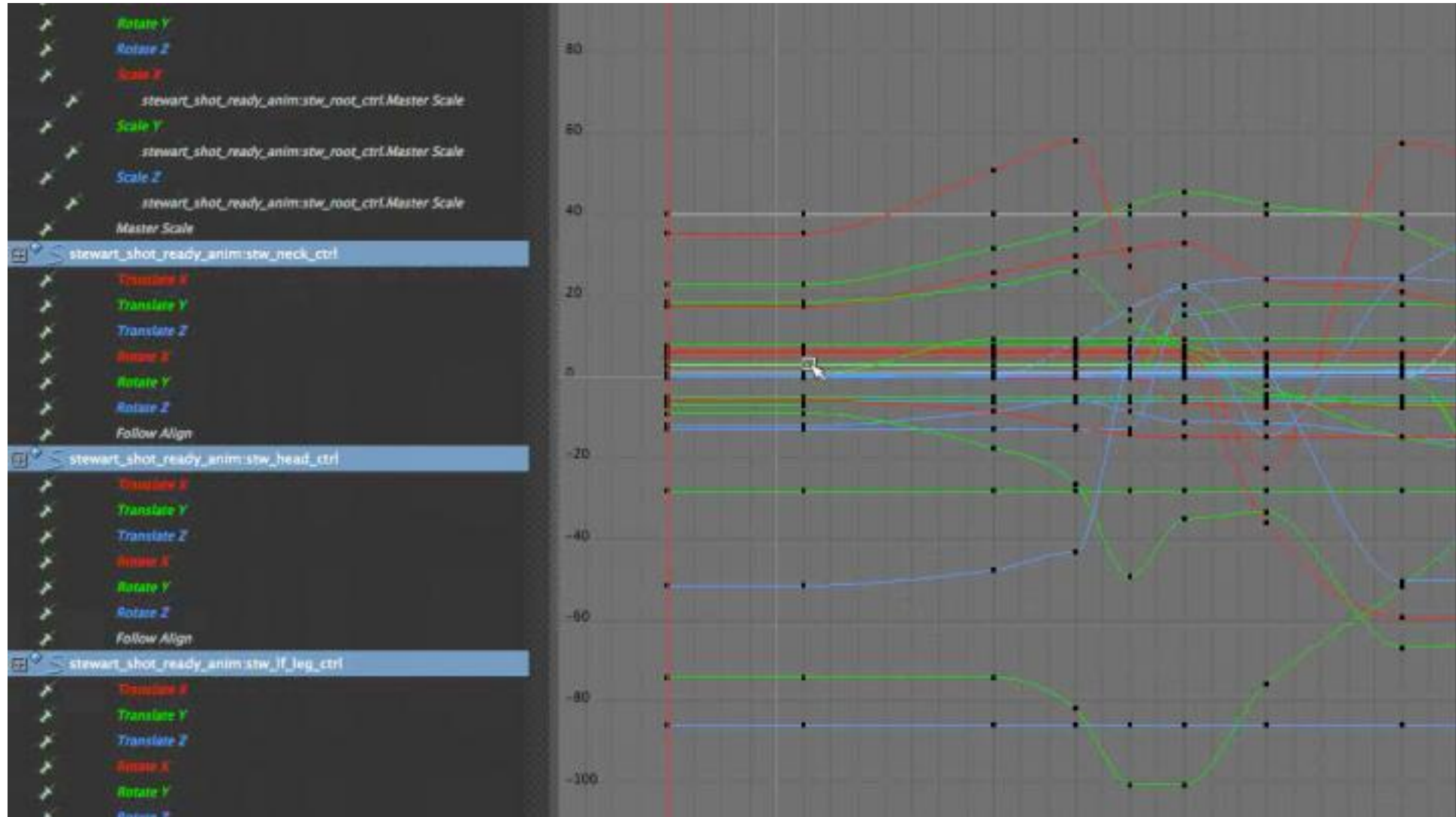
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Y Location - 0
Z Location - 0



X Location - 5
Y Location - 0
Z Location - 0



Animation Splines

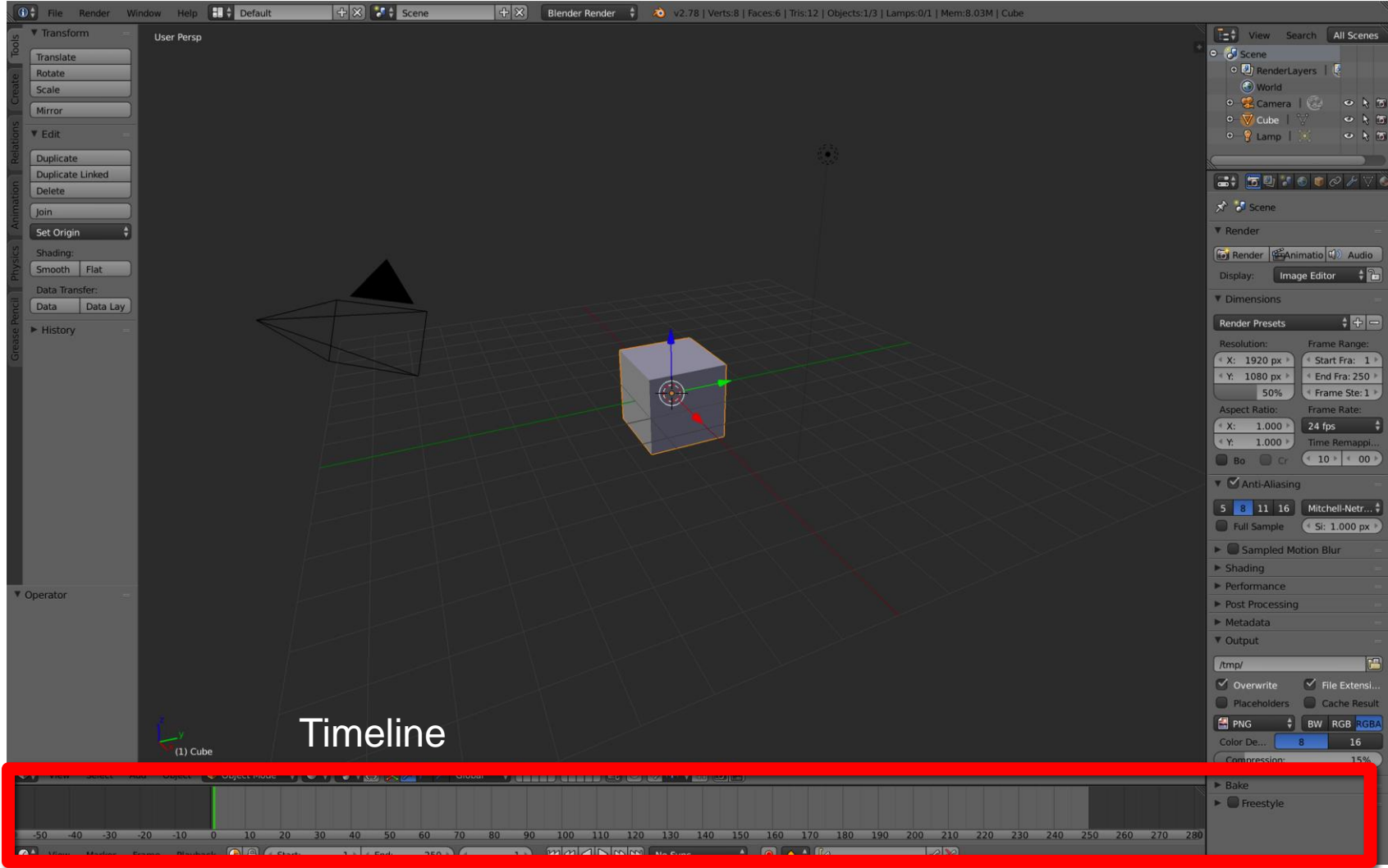


Animation in Blender

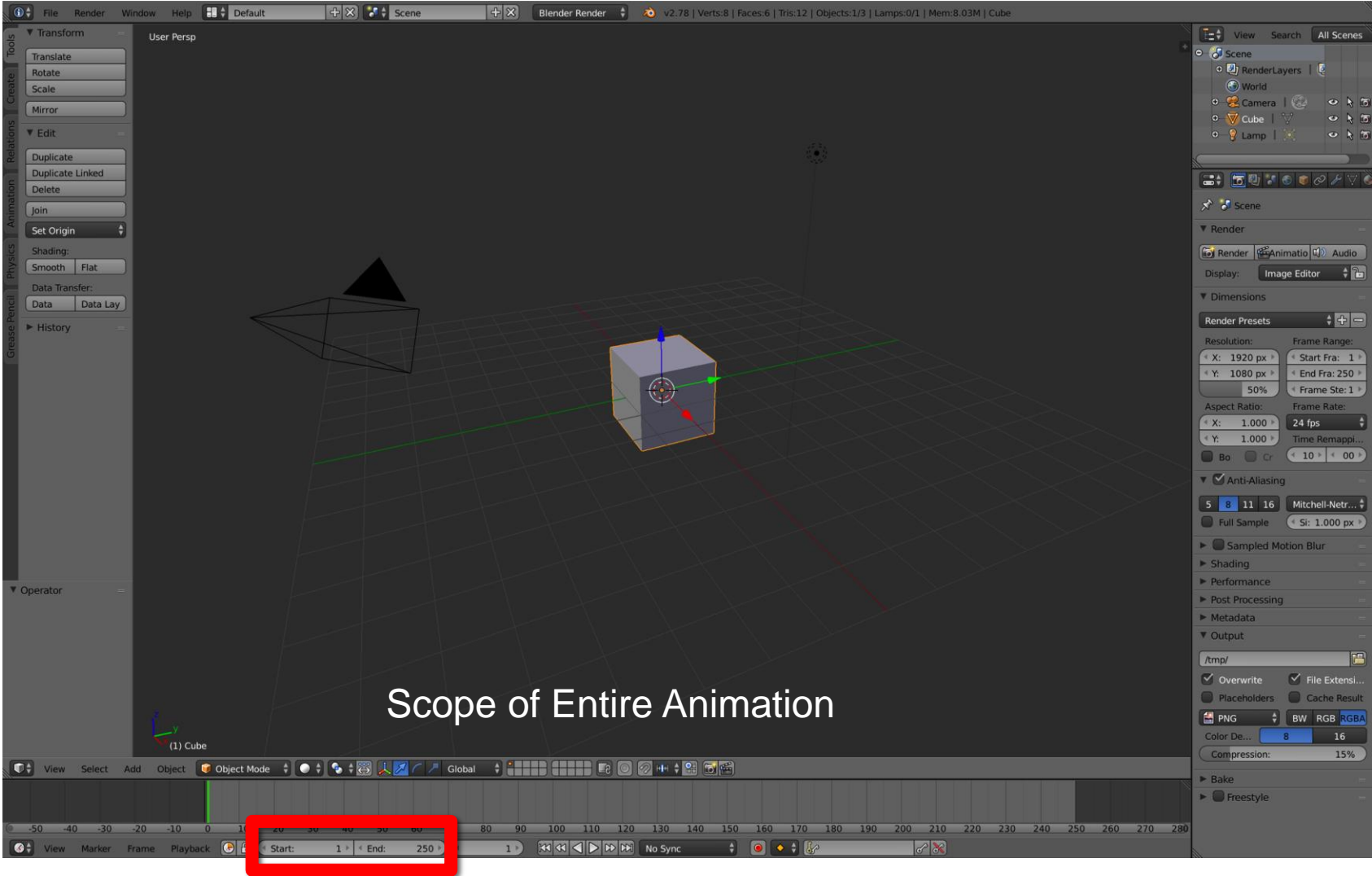
OR MAYA OR 3DS
MAX.



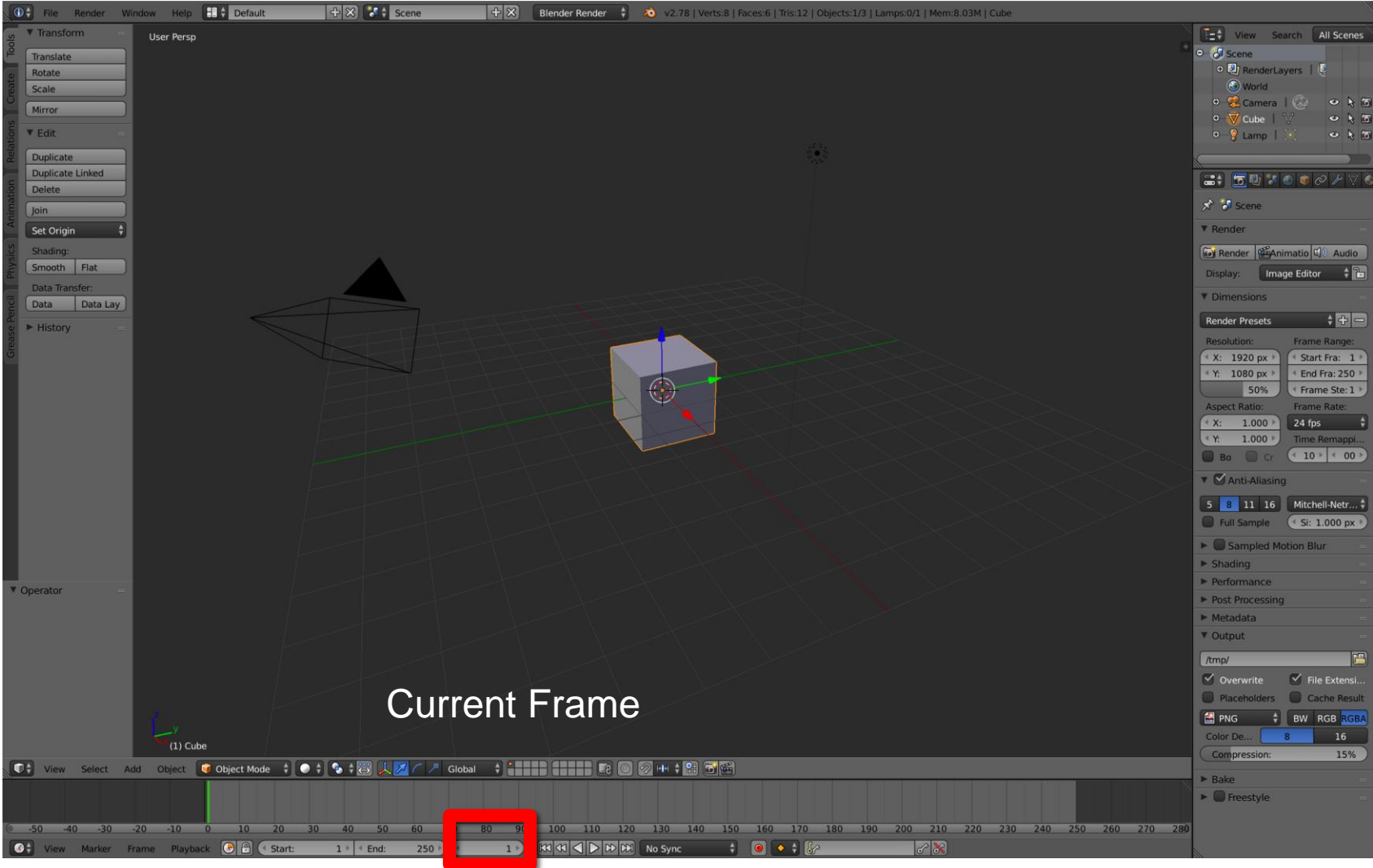
Blender UI



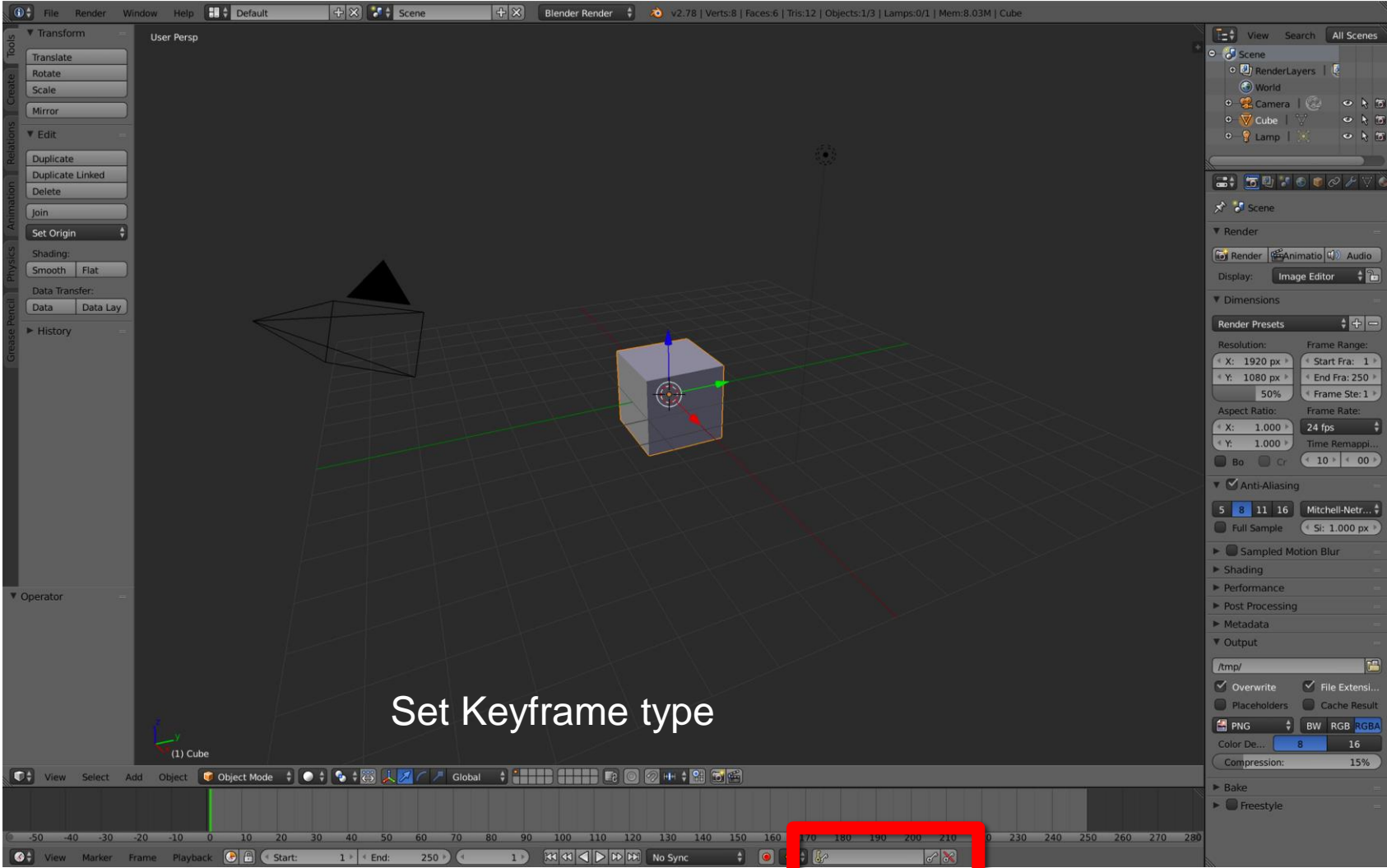
Blender UI



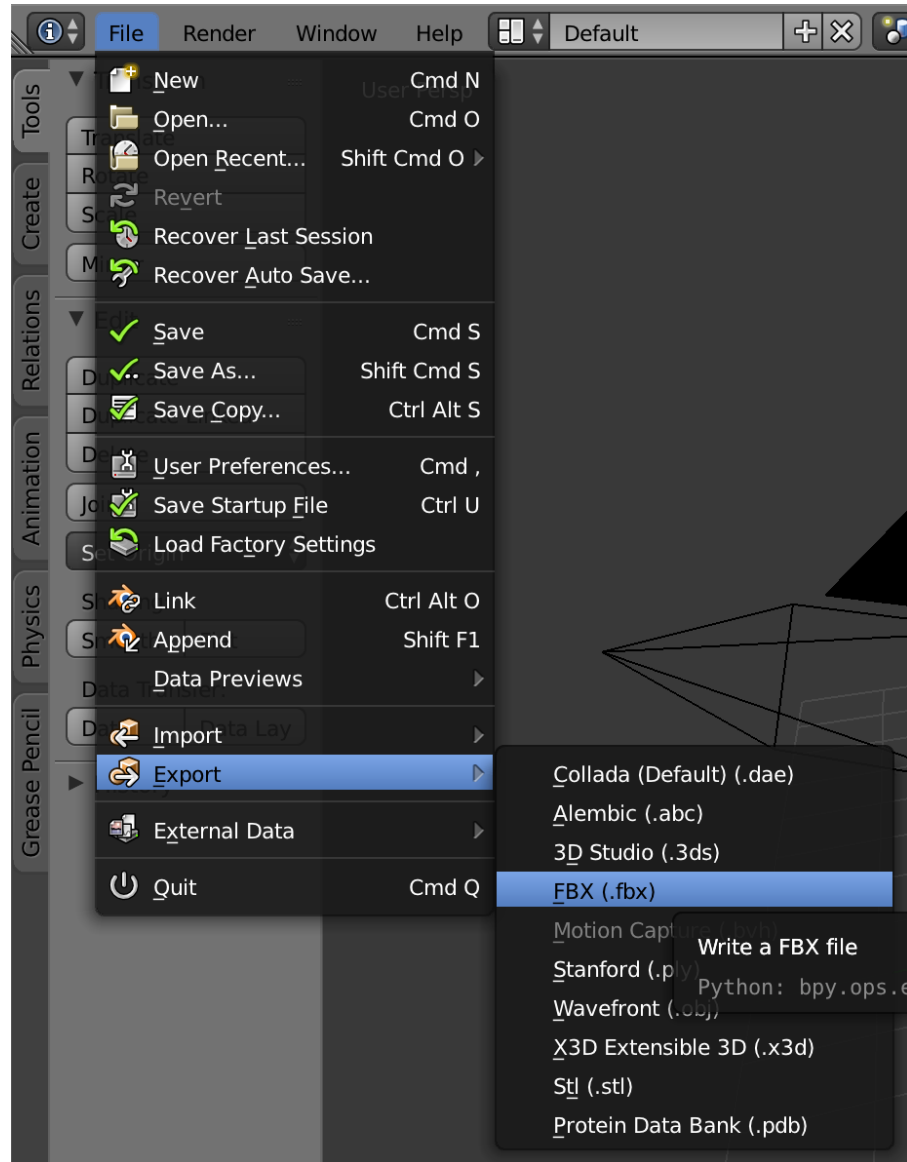
Blender UI



Blender UI



Blender UI – Export Animation

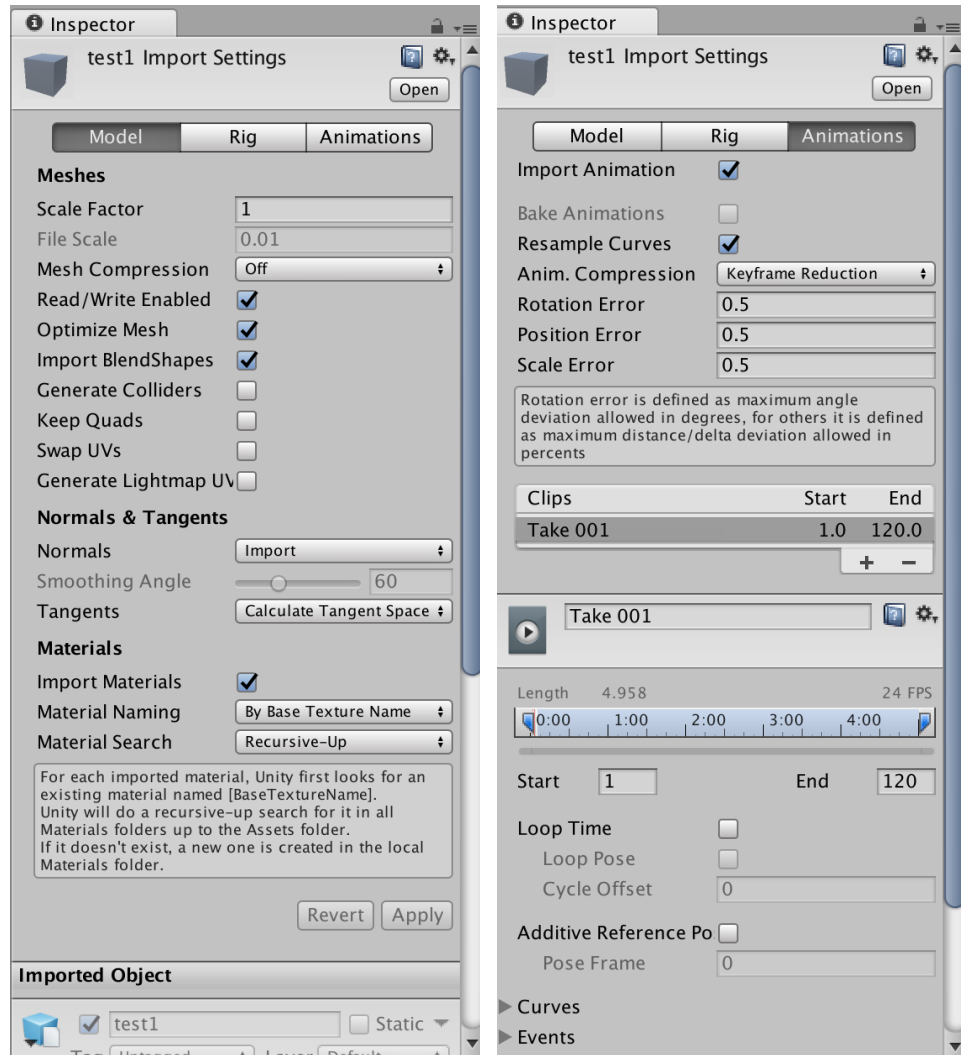


Animation in Unity

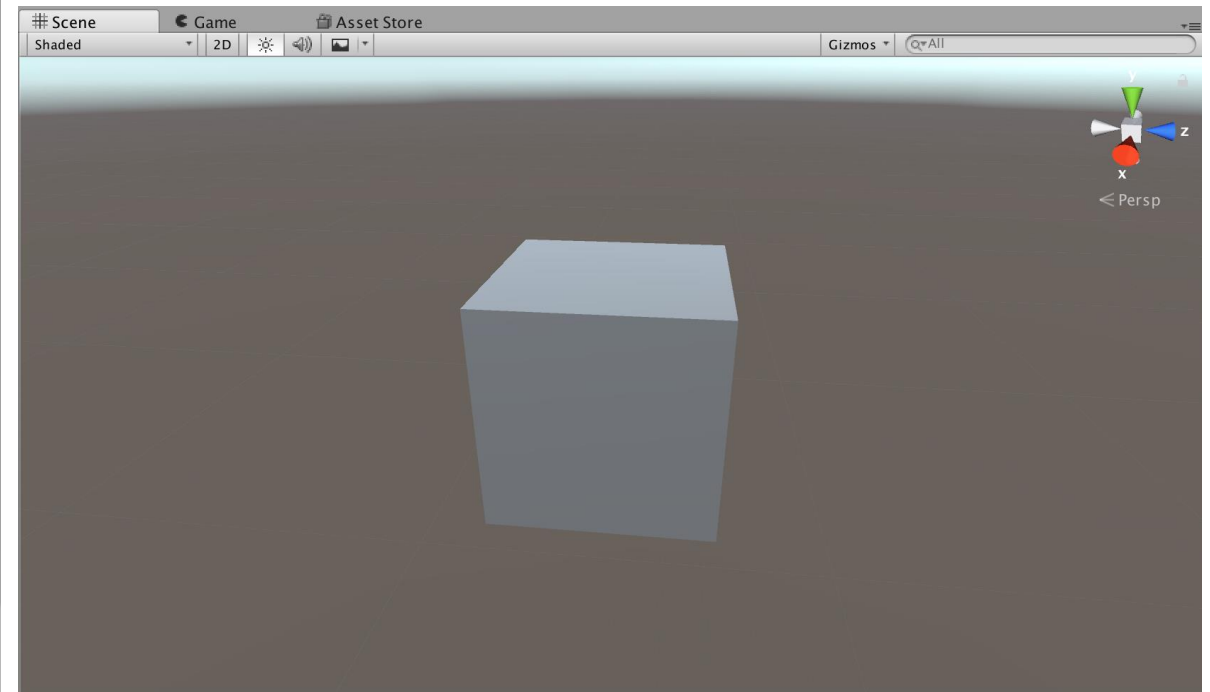
NATIVE AND
IMPORTED
ANIMATIONS.



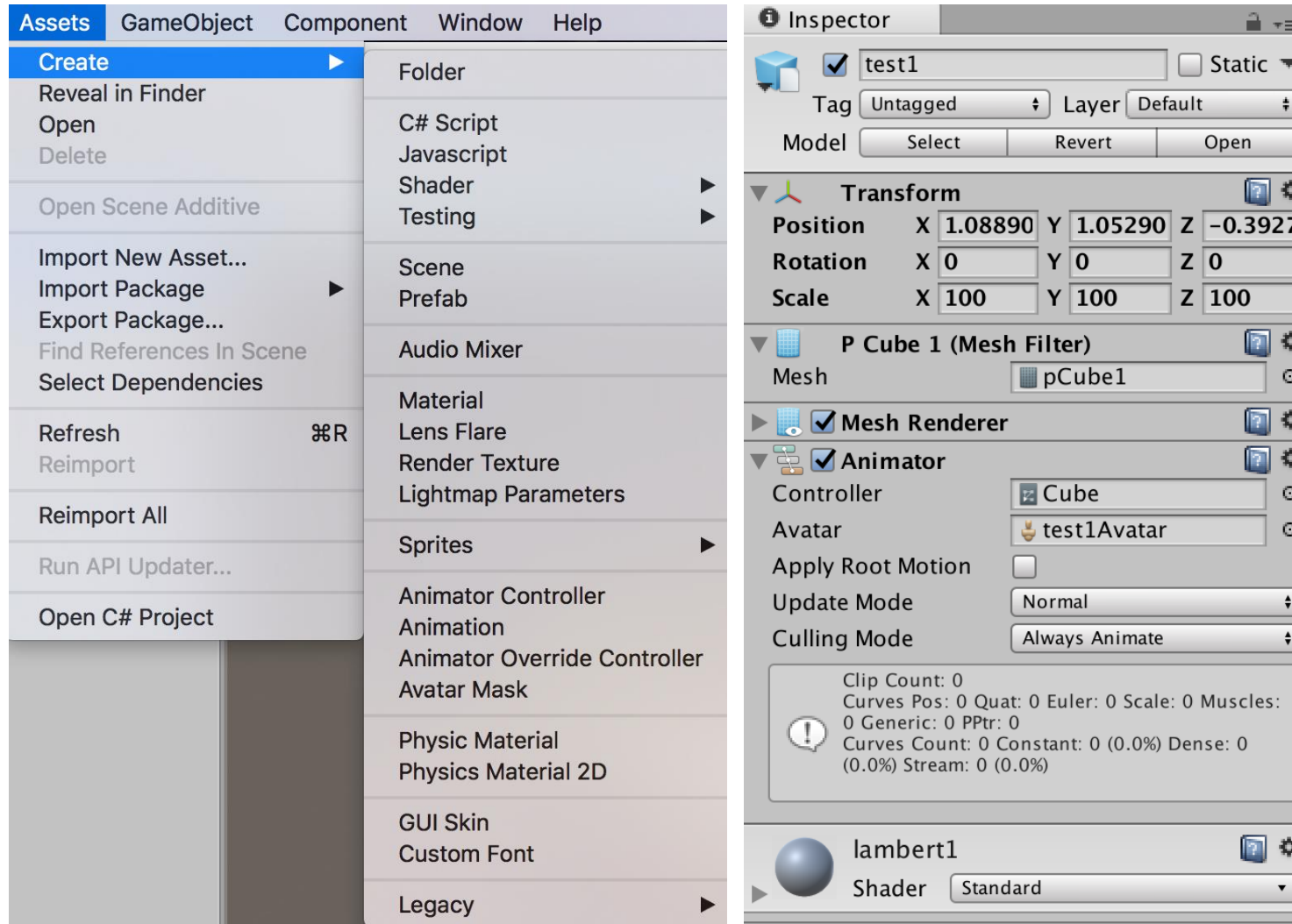
Import Animations From Maya



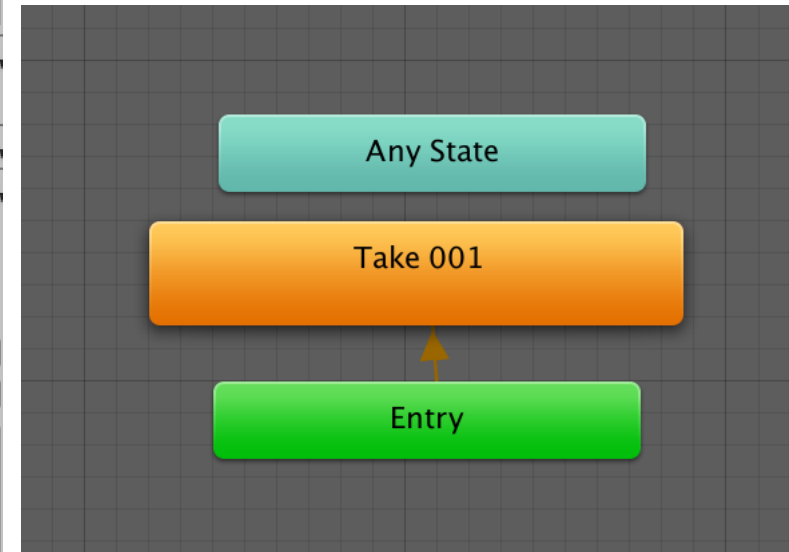
- Make sure the *.FBX is in your “Assets” folder.
 - › Unity will automatically import it.
- Drag and drop into your scene!



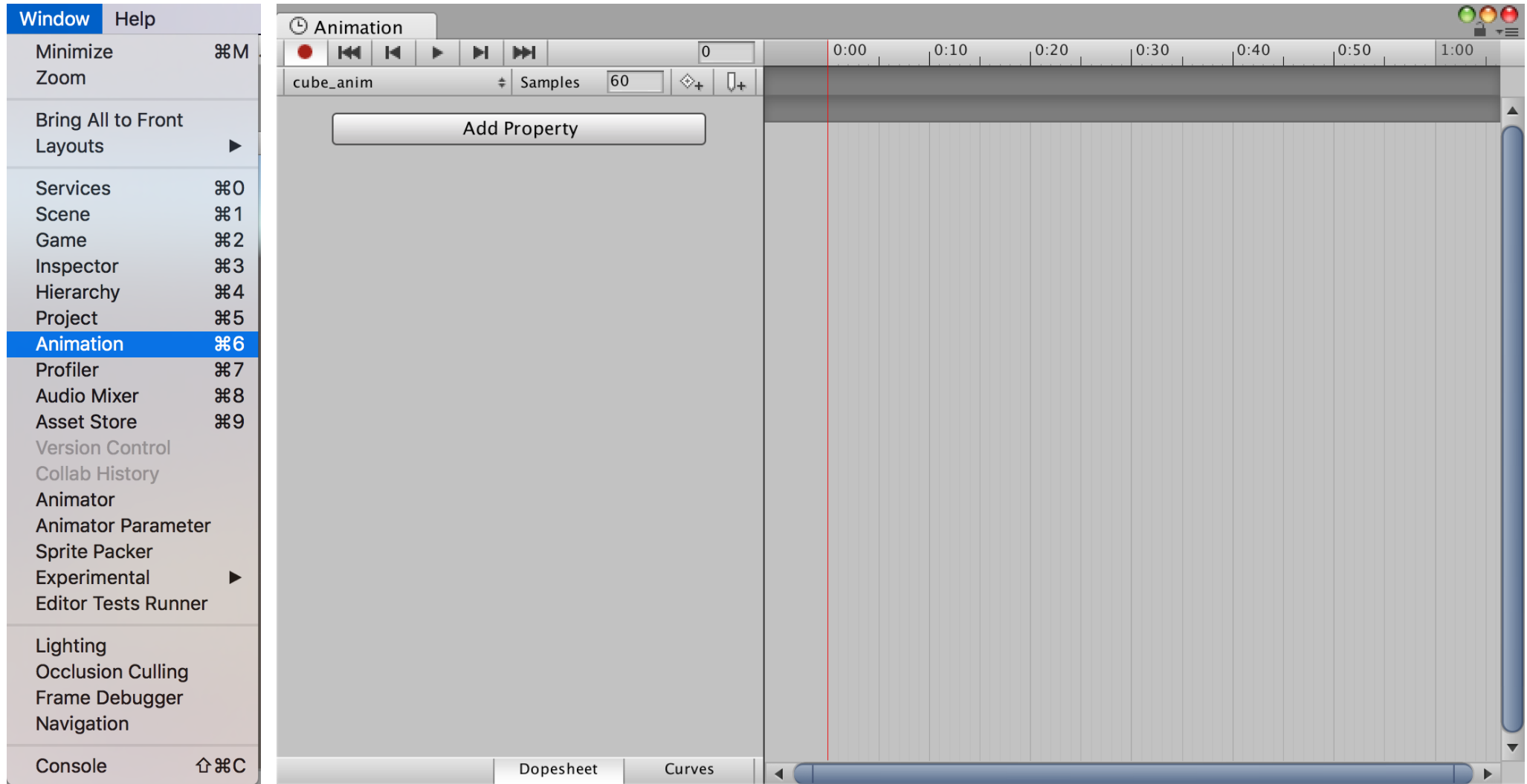
Unity Animation Controller



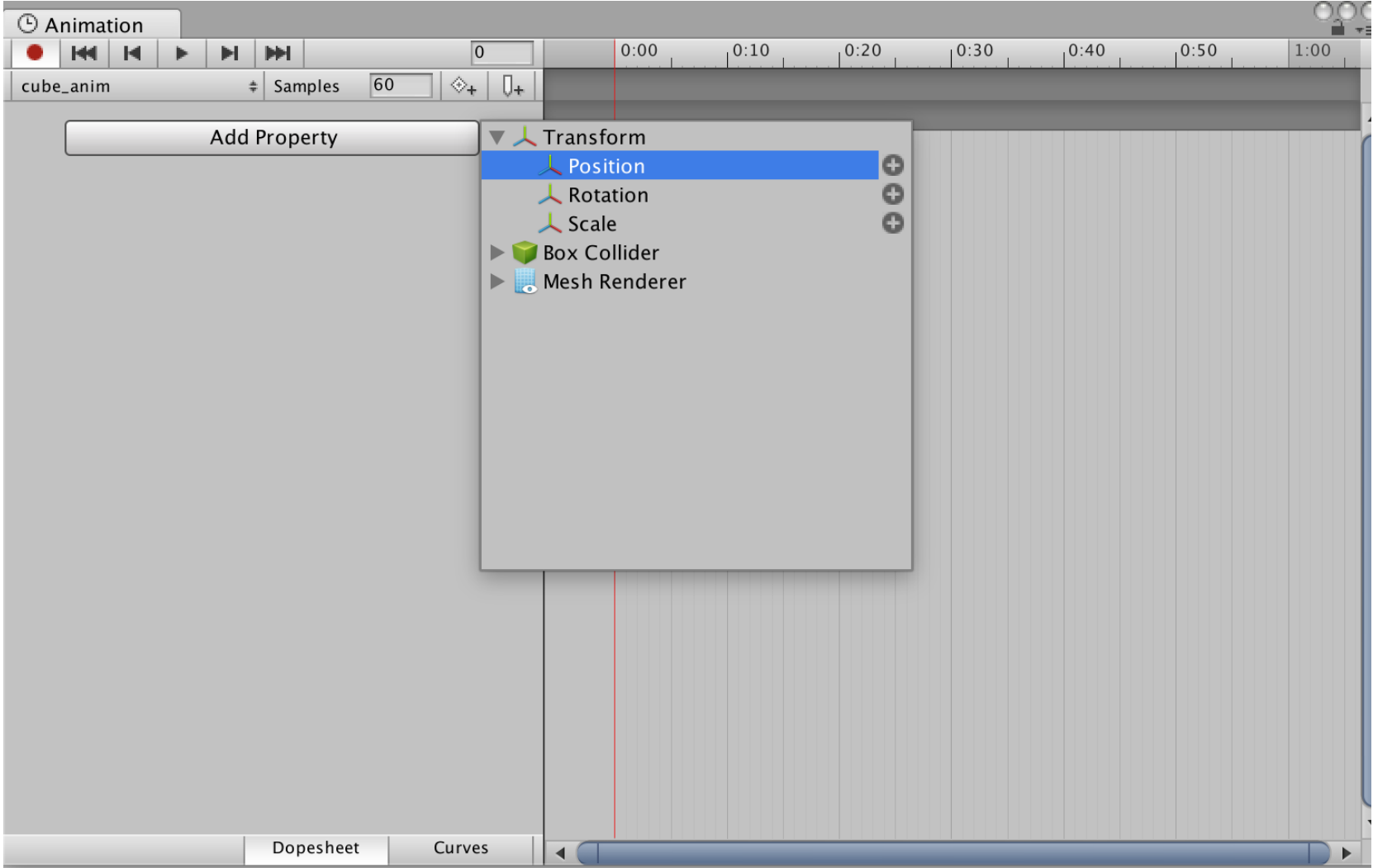
- Animated objects need an “Animator Controller” to actually play animations.



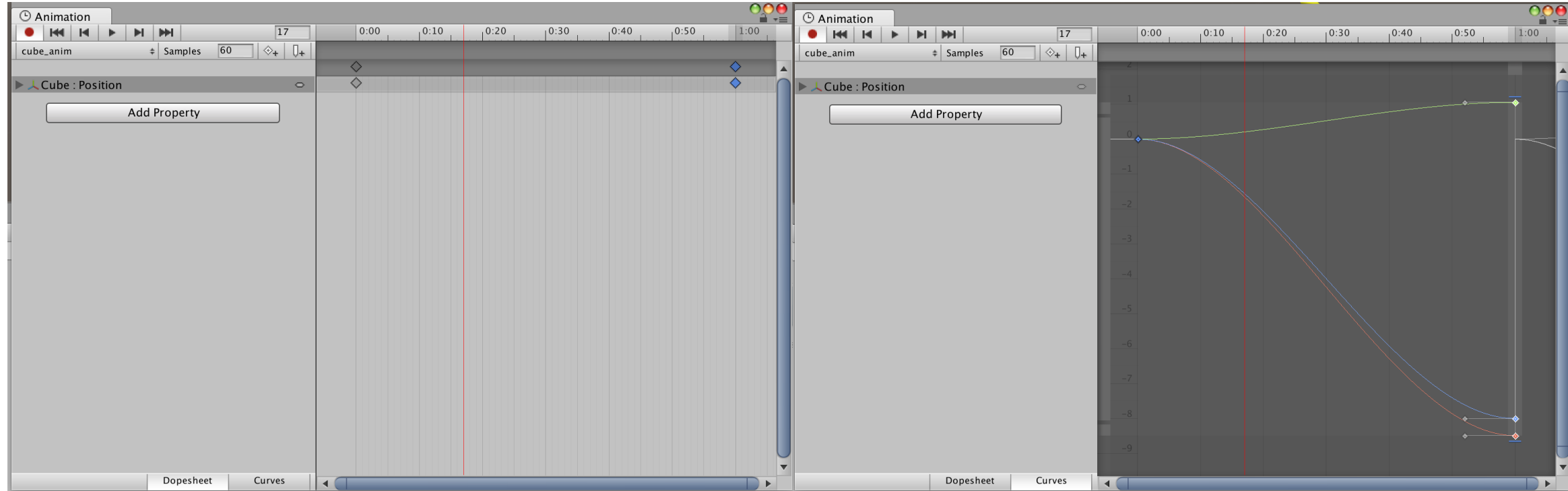
Native Unity Animation



Native Unity Animation



Native Unity Animation



Scripted Animation (Tweening)

- Lots of Tweening packages
 - › iTween
 - › DOTween
 - › Etc.
- Useful for simpler animations (e.g. user interface).
- DOTween Documentation: <http://dotween.demigiant.com/documentation.php>
- iTween Documentation: <http://www.pixelplacement.com/itween/documentation.php>

In-Class Demo

FINALLY.

