# **CS248 Lecture 6**

SIMPLE ANIMATIONS IN UNITY

January 25<sup>th</sup>, 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.



### 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**

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Chivalry: Medieval Warfare



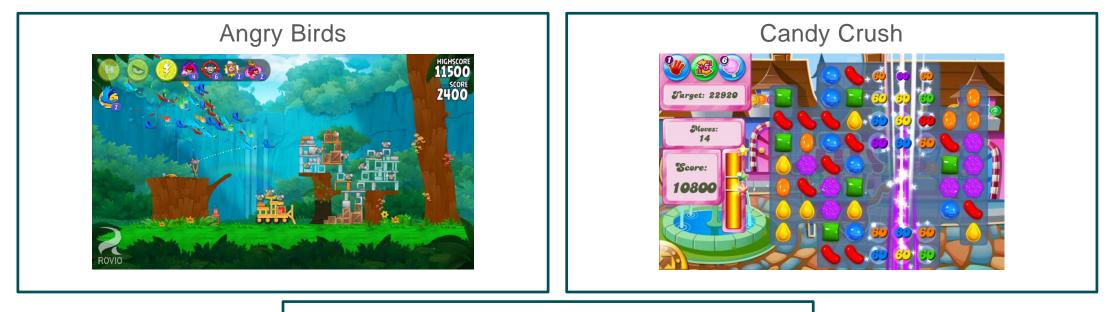
### User Interface

Mass Effect	World of Warcraft
Mission Computer	

Dead Space



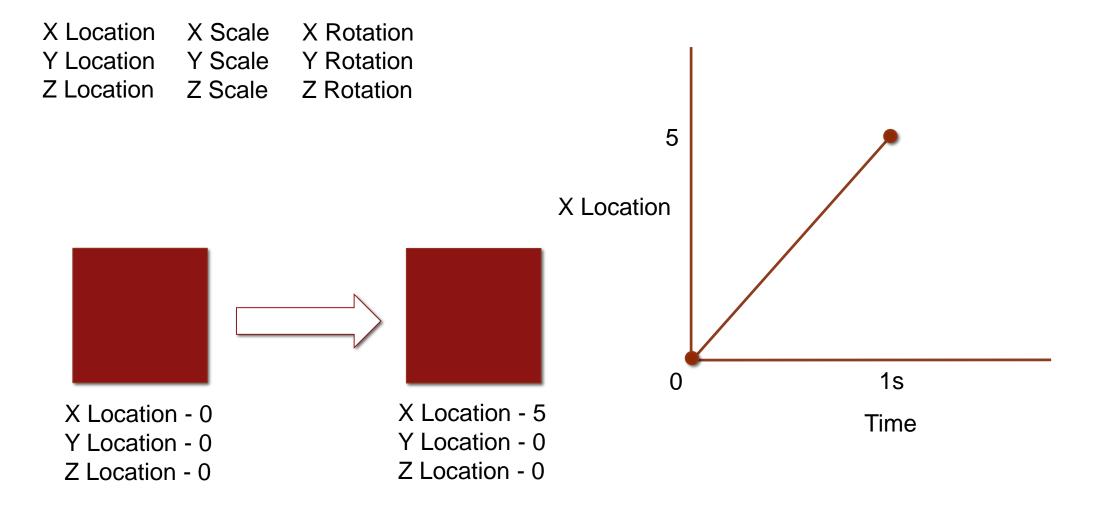
### And More...



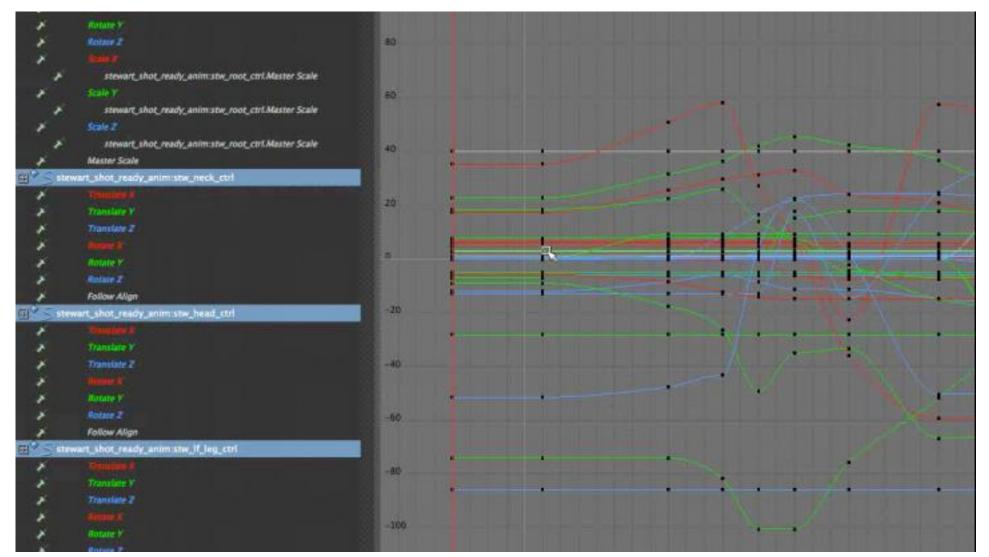
Hearthstone



### **Animation Splines**



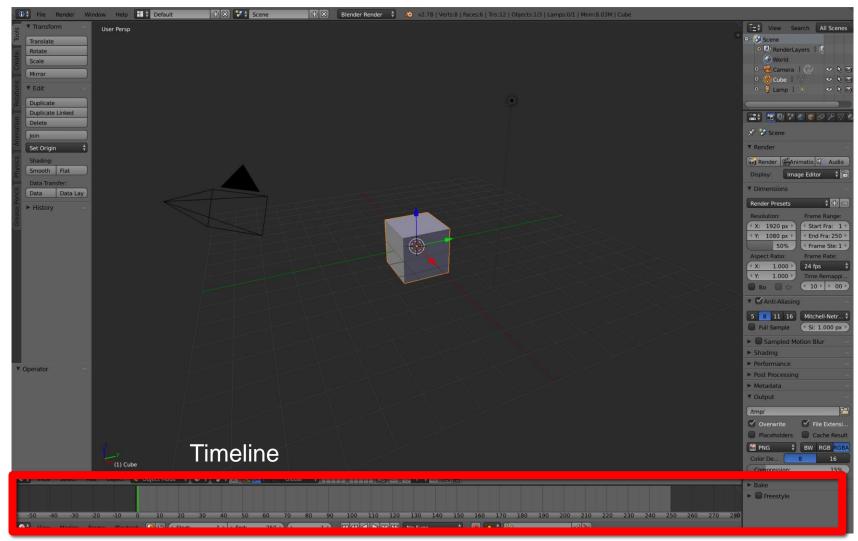
# **Animation Splines**

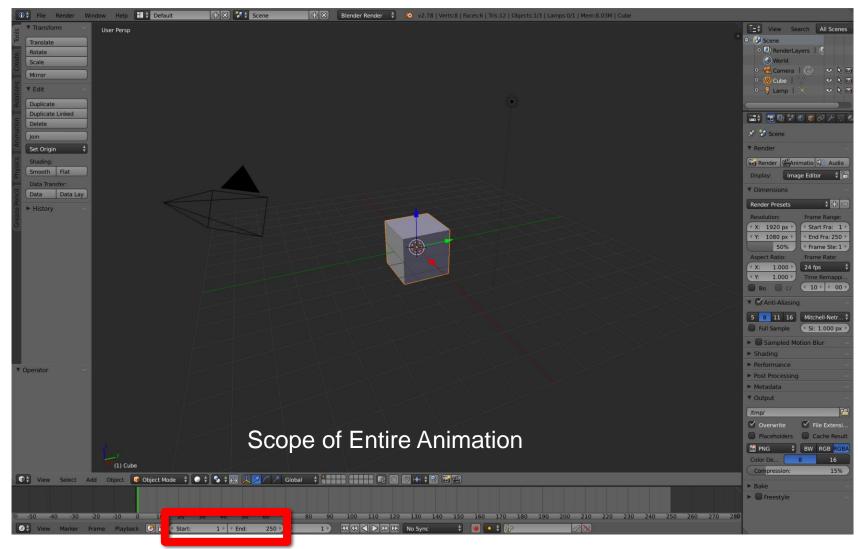


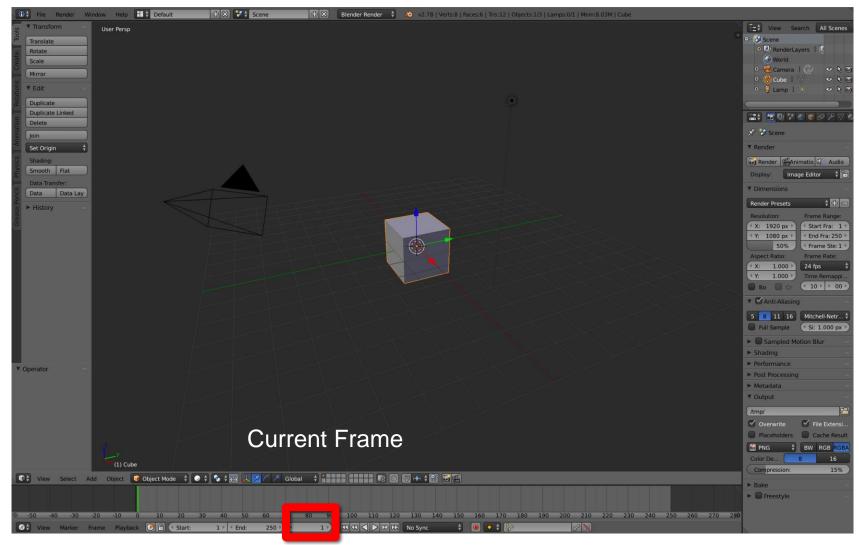
### **Animation in Blender**

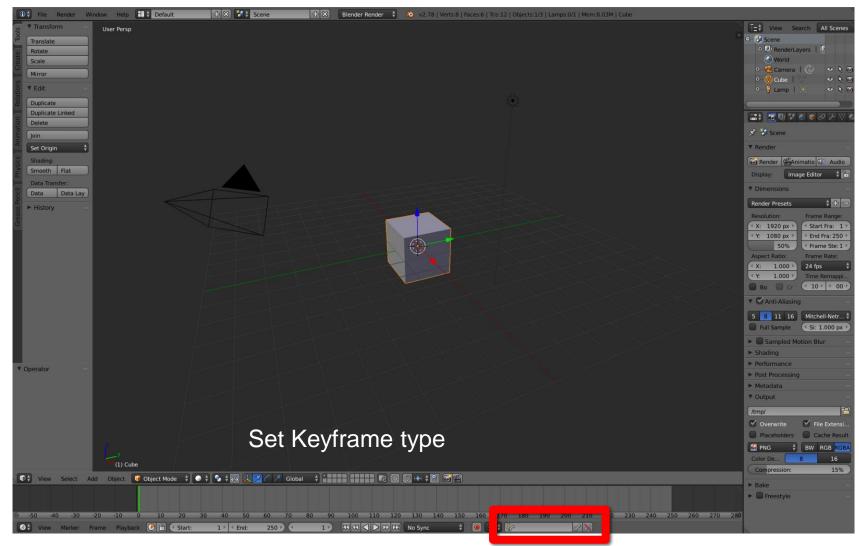
#### OR MAYA OR 3DS MAX.











# Blender UI – Export Animation

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### **Animation in Unity**

NATIVE AND IMPORTED ANIMATIONS.



### **Import Animations From Maya**

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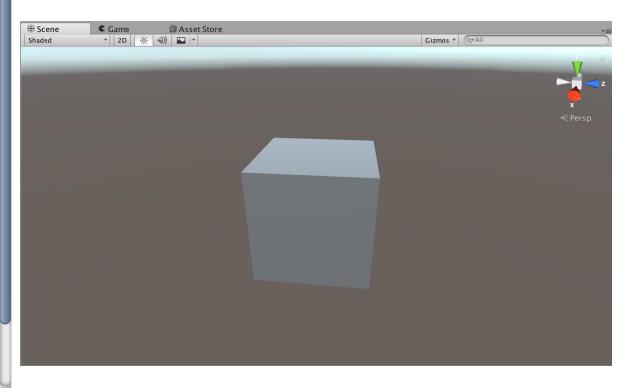
- Make sure the \*.FBX is in your "Assets" folder.
  - > Unity will automatically import it.
- Drag and drop into your scene!

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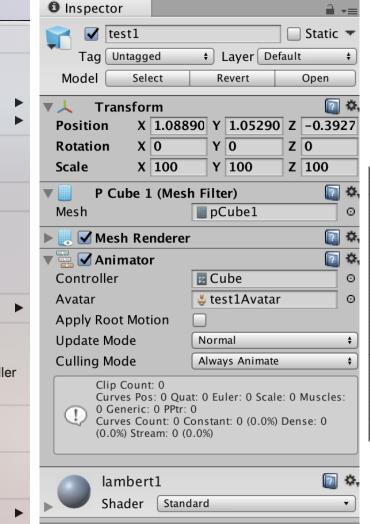
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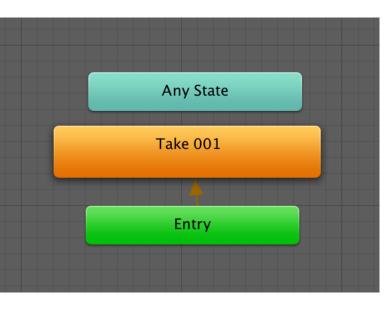


# **Unity Animation Controller**

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Animated objects need an "Animator Controller" to actually play animations.



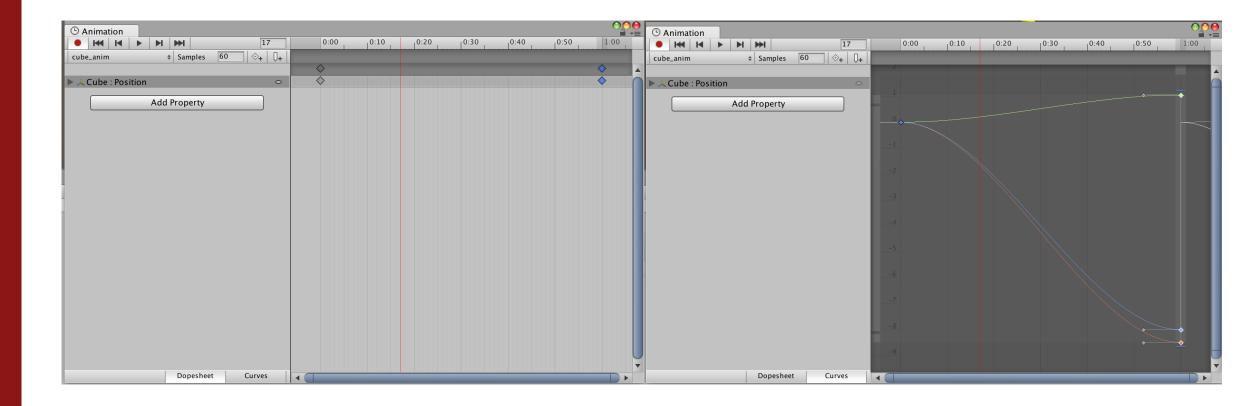
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# Native Unity Animation

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# Native Unity Animation



# Scripted Animation (Tweening)

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



