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

- A way to check your grades is on the way (website similar to the one used for CS148 this past quarter).
  - Will be announced on Piazza when it is ready.
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 me (mikebao@stanford.edu) 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.
  - Example: Rigid Bodies.
Short Form Assignments Feedback

YES, I READ THEM (KIND OF).
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.
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.
- 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
  - 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 in Maya

OR BLENDER OR 3DS MAX.
Maya UI
Maya UI

First Frame of Entire Animation
Maya UI

Last Frame of Entire Animation
Visible Animation Range
Maya UI

First Frame of Visible Range
Maya UI

Last Frame of Visible Range
Maya UI - Keyframes
Maya UI – Animation Curve Editor
Maya 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!
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).
In-Class Demo

FINALLY.