



# Tutorial Week 7

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# DOWNLOAD

1. Go to **<https://ter.ps/XRWeek7>**
2. Unzip downloaded Proj7 folder
3. Go to Assets/Scenes/ and open Scene1.unity

**OR** (if you know git)

1. Go to [github.com/umdxrclub/Tutorials](https://github.com/umdxrclub/Tutorials)
2. Git pull
3. Open project 7

# Animation - How to Animate:

- Open up animation tab (Window->Animation->Animation)
- Select **parent** gameobject
- “To begin animating \_\_\_, create an Animation clip”
  - Click “Create”
  - Name animation and save it in “Animation” folder
- Click red button to begin **recording mode**.
  - Move the slider at the top to a different frame value - 60 frames is one second
  - Any changes you make to the **parent** gameobject or its children will be **recorded**.
- Click red button again to exit **recording mode**.

# Animation/Controller/Animator




- Animations and Controllers are assets (go in project folder) while Animators are components (go on gameobject).
- Controllers contain multiple animations.
  - Controllers control what order and at what time different animations are played.
  - Different controllers can re-use the same animations.
- Animator component takes a single controller
  - Controller will play its animations for the gameobject that the animator component is attached to.

# Controller - Transitions



- Controllers use transitions to move between animations
- Transitions are controlled by variables
  - E.g. idle animation will go until “Jump” boolean is True, then jump animation will play
- Transitions are controlled by:
  - Variables
  - Combination of variables
  - Animation ending (**exit time**)

# Animate Malcolm!

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- Malcolm has six states:
    - Standing: Idle, Moving, ToCrouch
    - Crouching: Idle, Moving, ToStand
  - Malcolm has two behaviors:
    - When we press the space bar, malcolm goes from standing to crouching, and vice versa
    - When we press W or Up, Malcolm moves forward, for both crouching and standing
  - How do we turn these into transitions?