Animation

- Animation, rig and controller make up a character

- Animation comes from mocap, library,..

- Rig define the bones, joints and mesh

- By retargeting the animation to another rig, we can reuse the animation

- We are interested in humanoid animation in this tutorial

Packages needed

- We will first download needed packages from the asset stores first, namely

- Unity-Chan

- It is free packages, just download and import into your project

- Then go to Blackboard and download the Blacksmith characters in "Motion Retarget Asset" package

Motion Retarget

- First create a new project in Unity

- Import Unity-Chan into your project

- Open the scene "Action Check" and run

- Click the "Next"button to see various animations provided
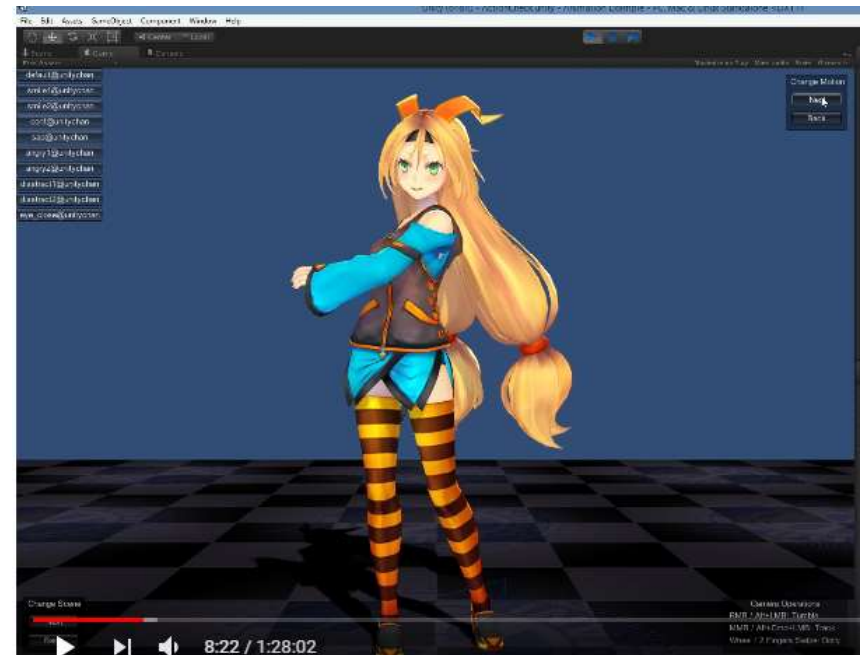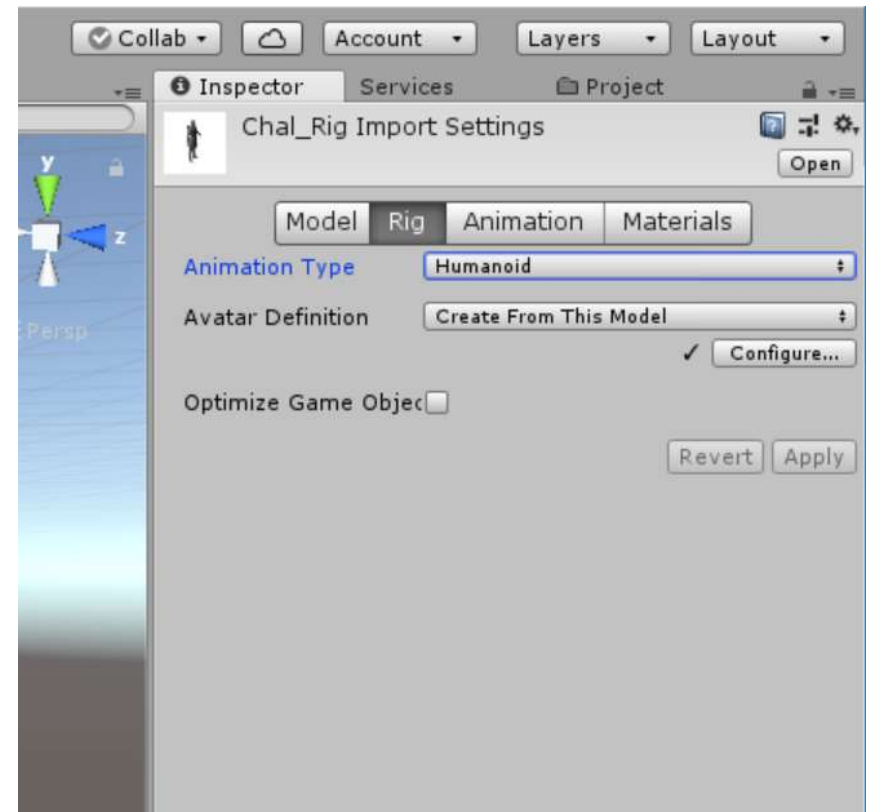
Challenger

- Now create a new scene

- Import the Blacksmith package by unzip the package into under "Asset" folder

- Go to "Assets/Art/Characters/Challenger" folder and drag the "Challenger_prefab" into the scene

- Adjust the camera and check the challenger scene

Configure Rig

- Go to project explorer under "Assets/Art/Character/ Challenger", select the chal"_Rig"

- In Inspector click "Rig", choose the "Animation Type" and change it from "Generic" to "Humaniod"

- Click "Apply"

- Now the bone system is compatible with that of Unity-Chan

Motion Retargeting

- Go to Unity-Chan/Model/Prefabs folder

- Click unityChan prefab

- In Inspector choose the "Idle-Change" script and select the "Copy Component"

- Go back to select Challenger prefab in scene

- Right click on one of the components and paste the component to the character
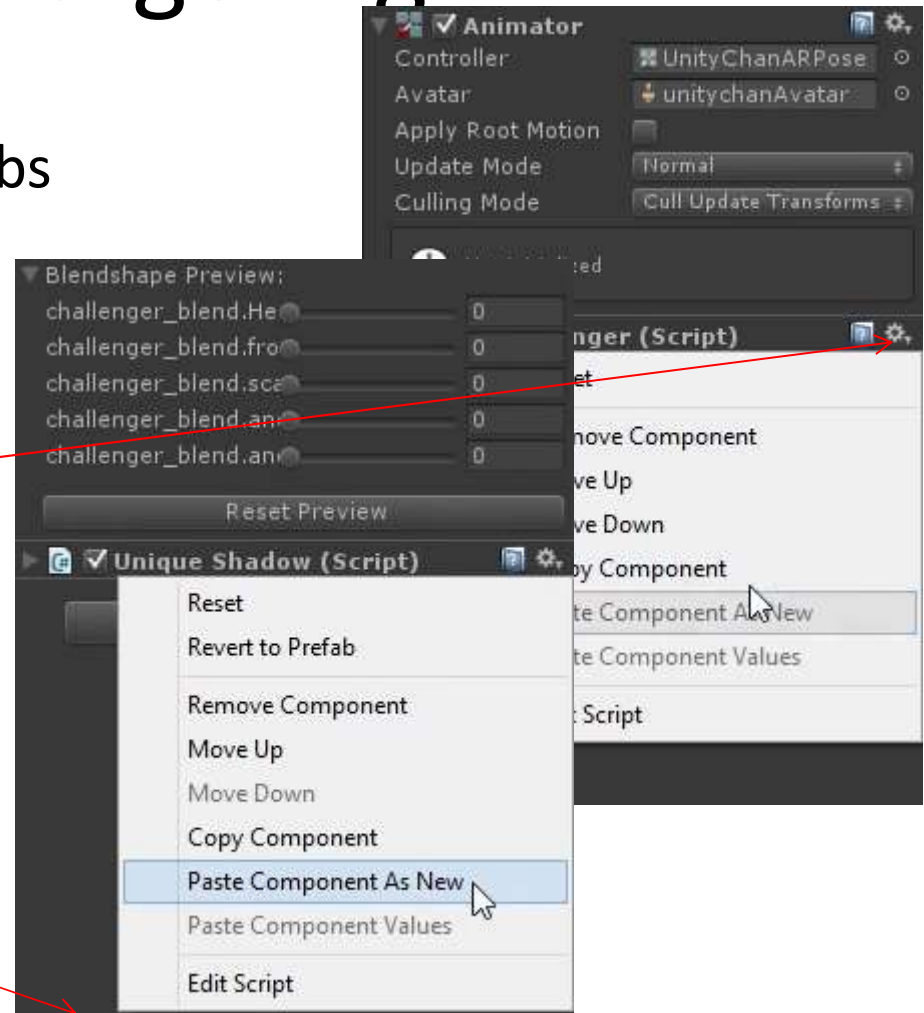
Motion Retargeting

- With the challenger still selected, go to Unity-Chan folder in project explorer

- locate the "UnityChanActionCheck" controller (under UnityChan!Model/Art/Animations/Animators)

- Drag the controller to replace that in Challenger
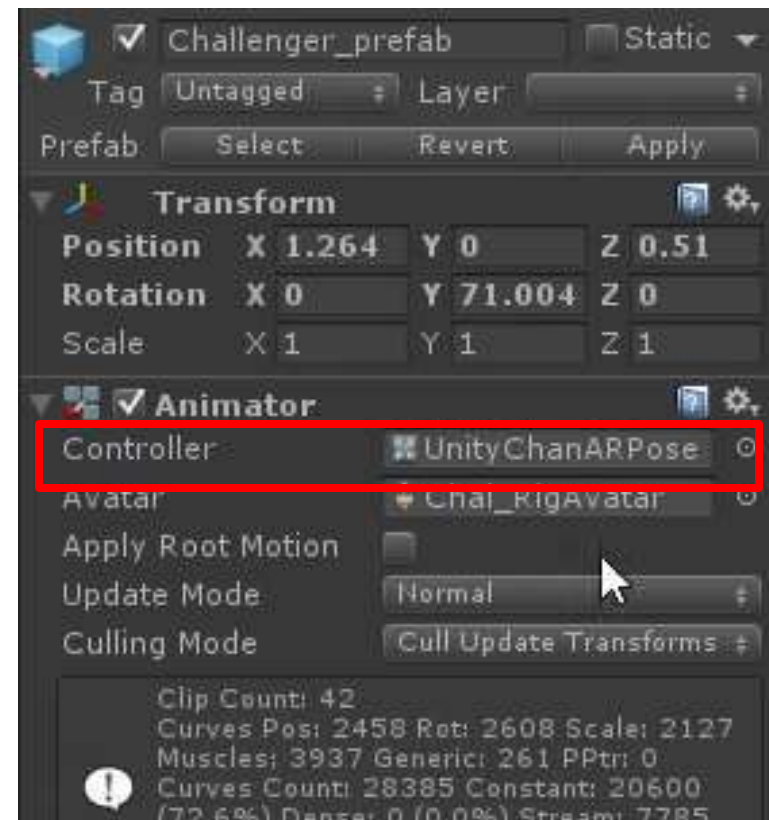
Motion Retargeting

- Now run the scene to see the new animations controlling the Challenger character

- This is "Motion retargeting" - reuse animations on possibly different rigs
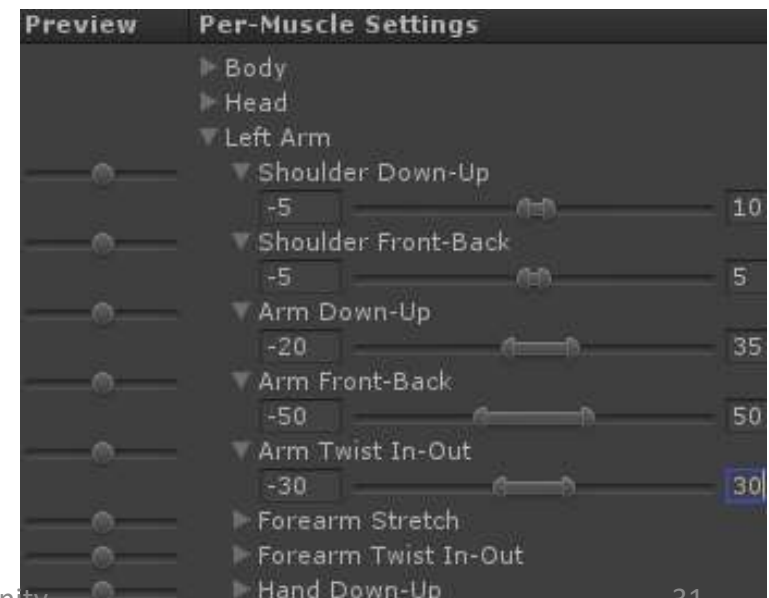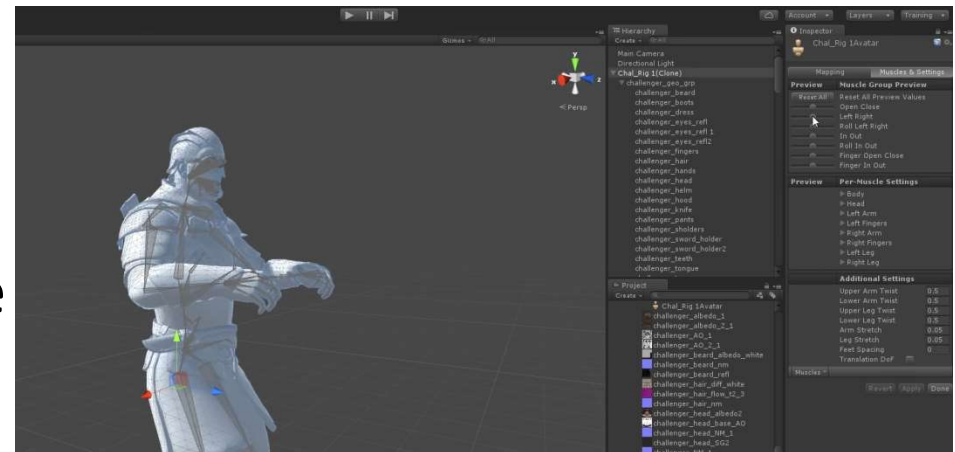
Muscles Based Animation

- Now closed the scene and create a new scene

- Drag the "challenger_prefab" to it

- Click on the project tab and select Challenger_rig, under the rig menu, choose "Configure"

- It will ask you to save the current scene, choose save
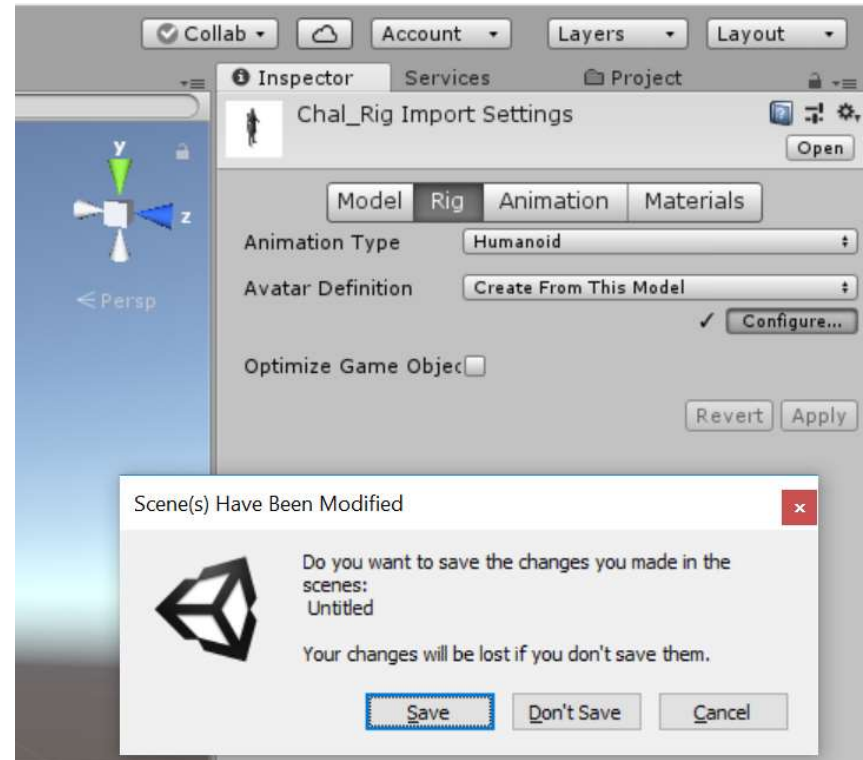
Muscles Based Animation

- Click the Muscles and settings tab

- You can twitch the muscle settings to see the effect

- Now change the muscle setting to as right

- We reduce the movement of left arm to compare with right

- Click "Apply" at bottom

Muscles Based Animation

- Now go back to original scene and run the scene with the new setting of the rig

- Compare the left and right arm motion

- Left arm now move much smaller extent than the right one

Reference

- This tutorial is derived from this live training: https://www.youtube.com/watch?v=wf6vtCgLk6w