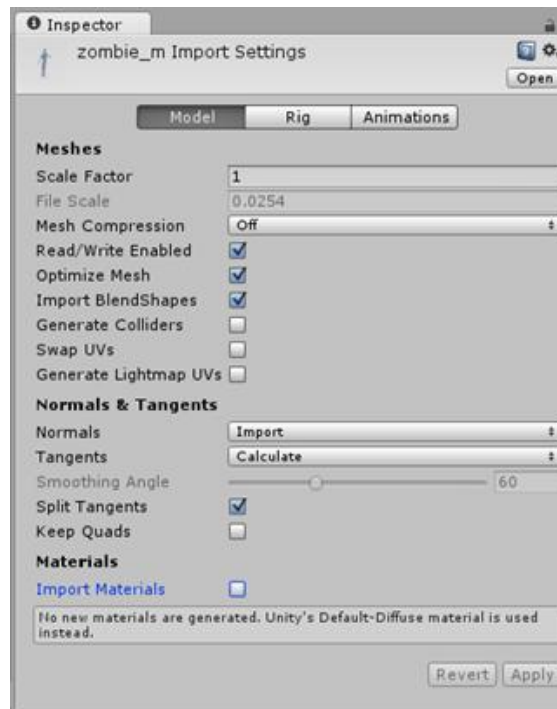


# Chapter 1 – The Zombie Attacks!





**Inspector** zombie\_m Import Settings Open

**Model** **Rig** Animations

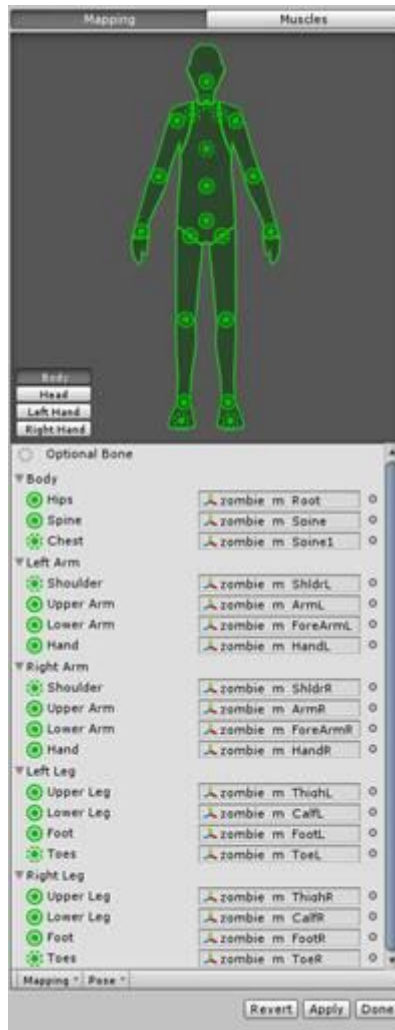
Animation Type: Humanoid

Avatar Definition: Create From This Model

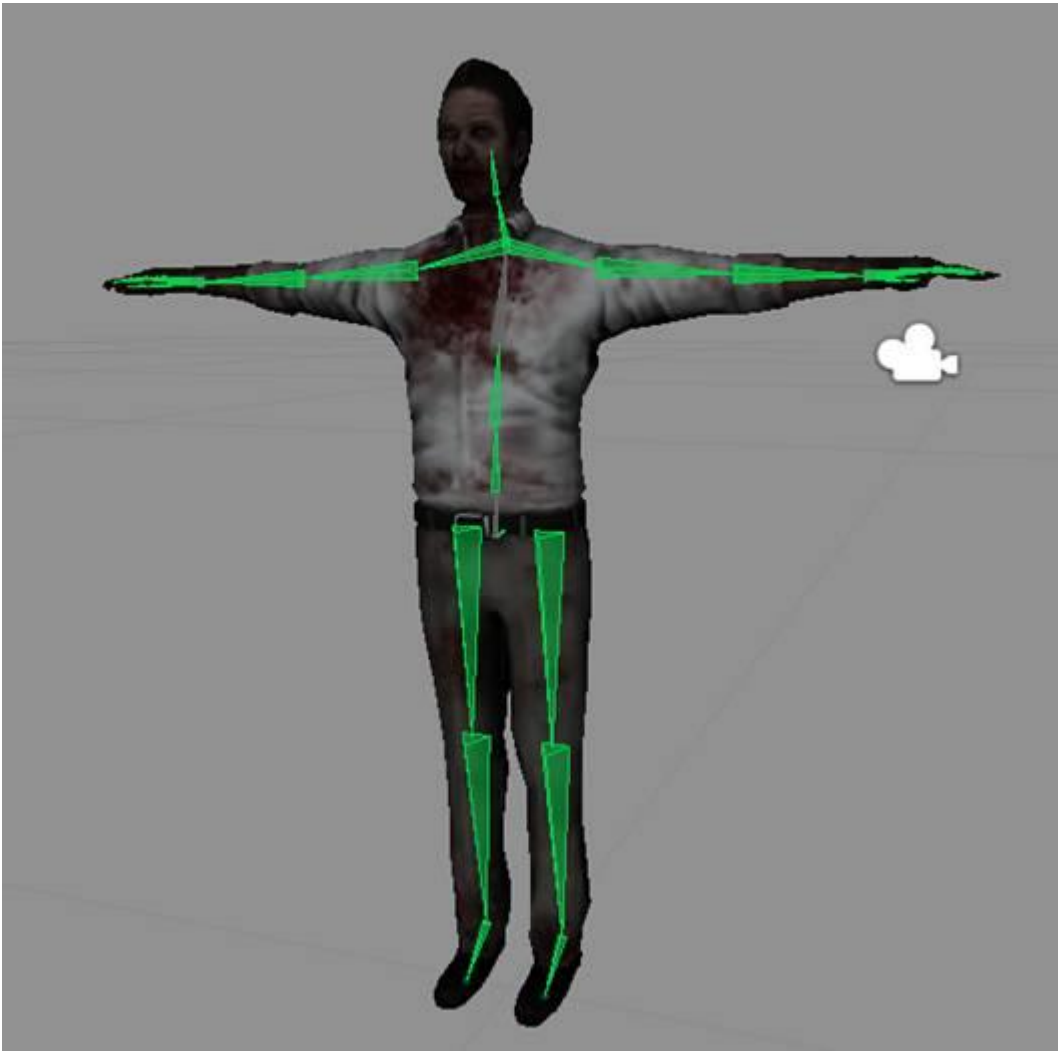
Configure...

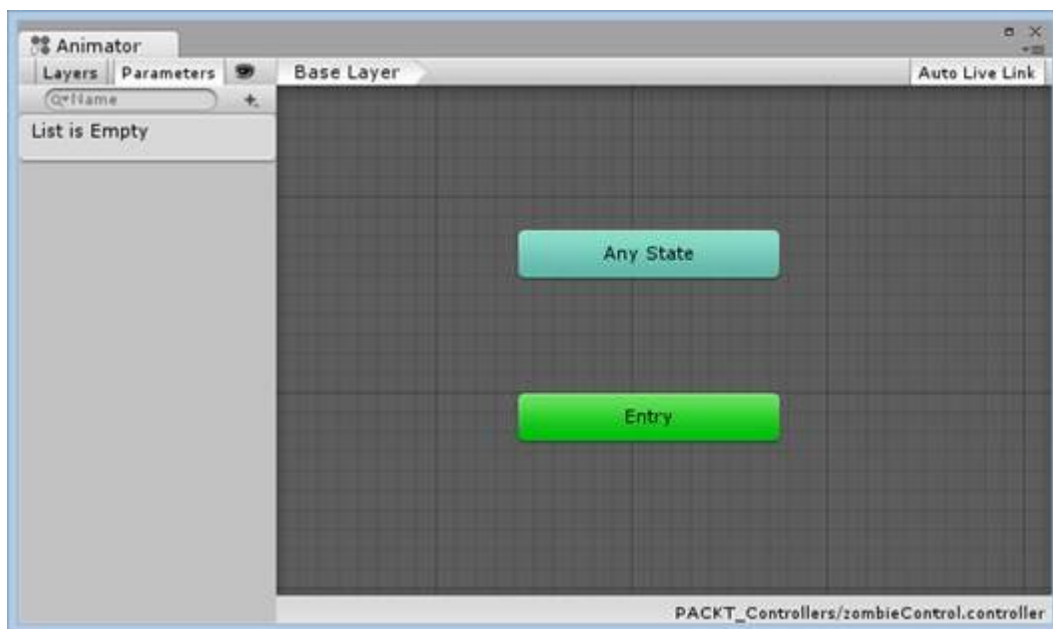
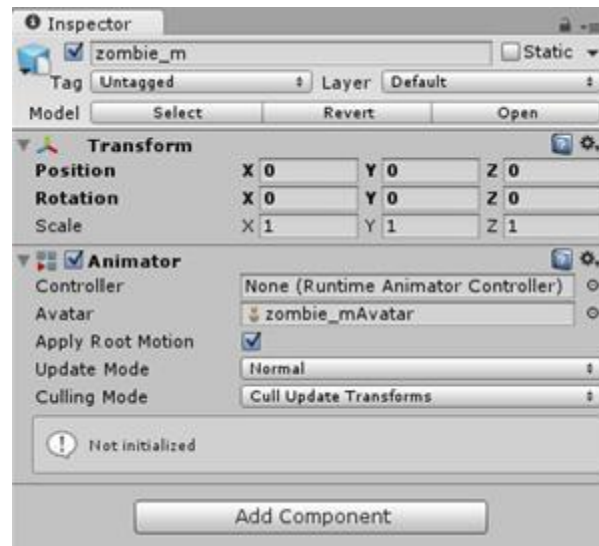
Optimize Game Objects

Revert Apply



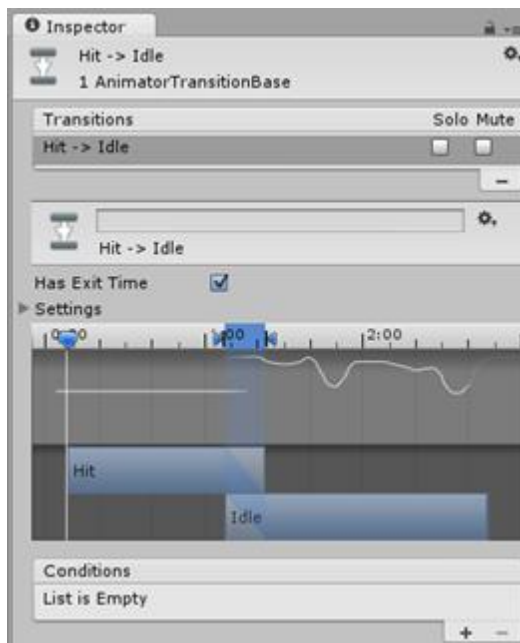
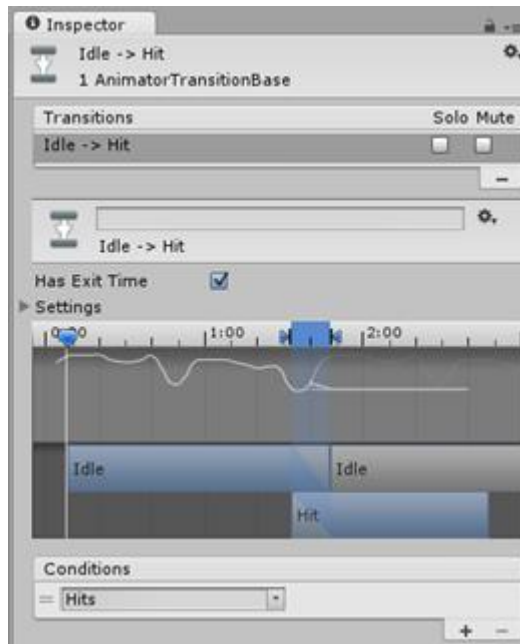


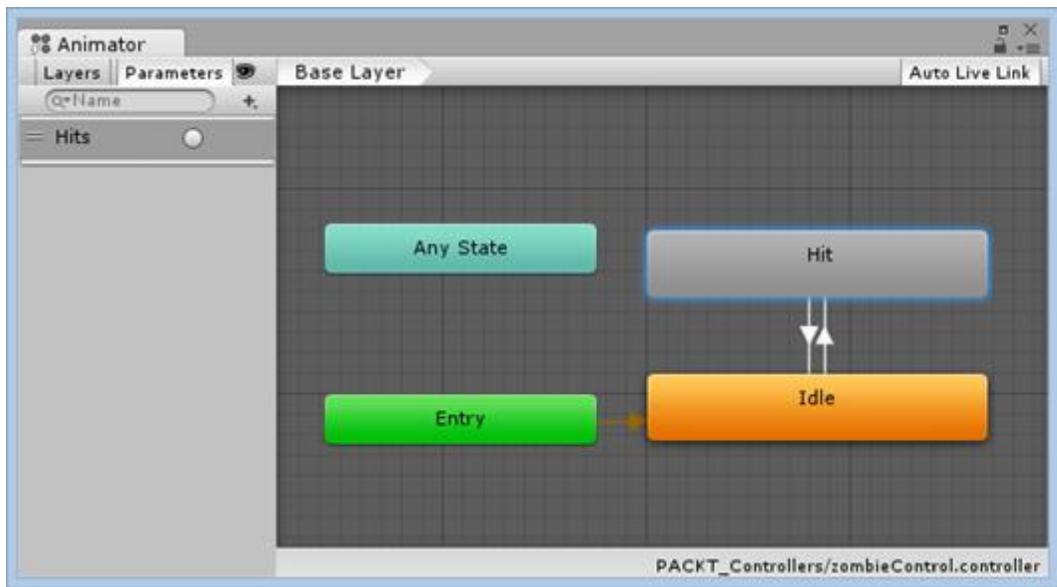


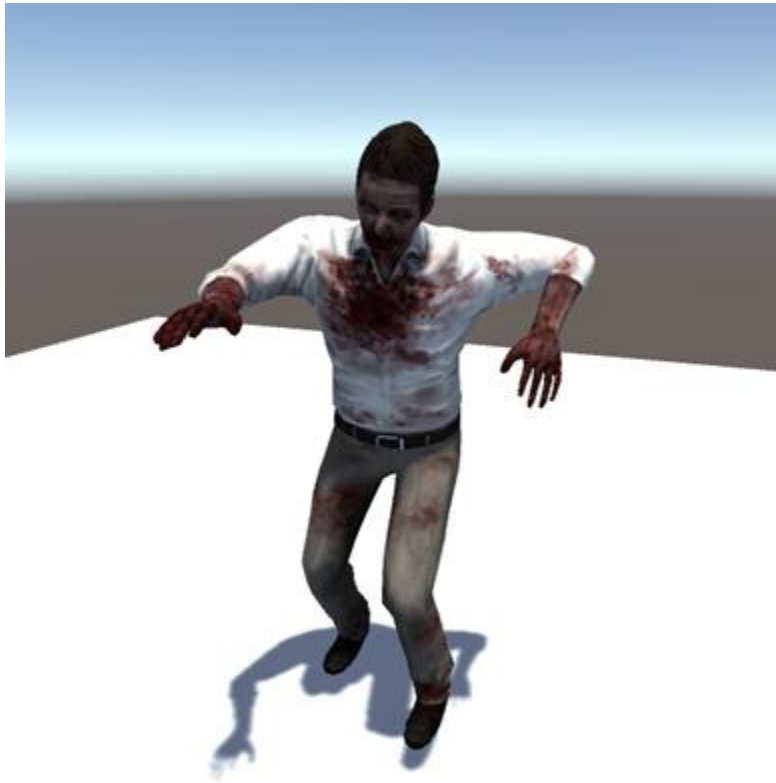




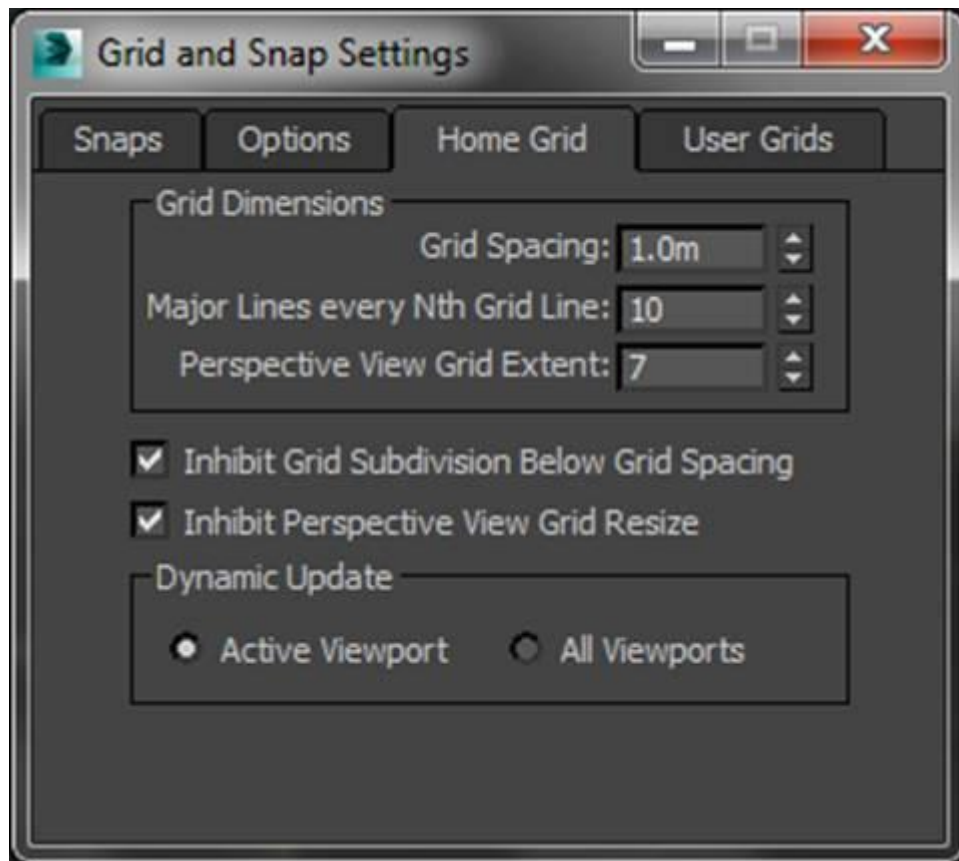


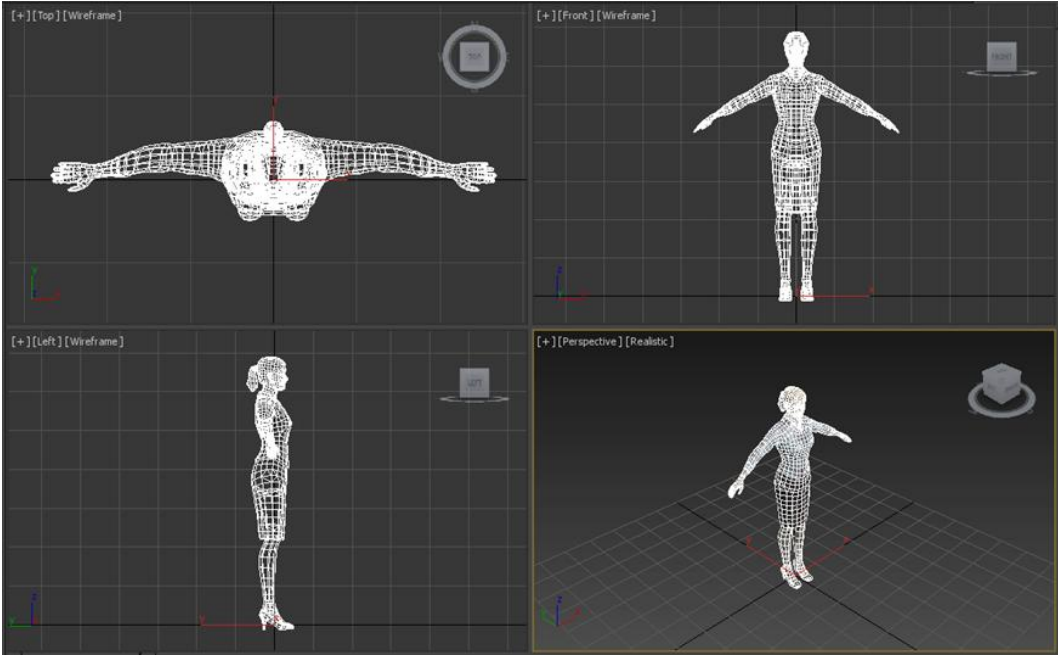


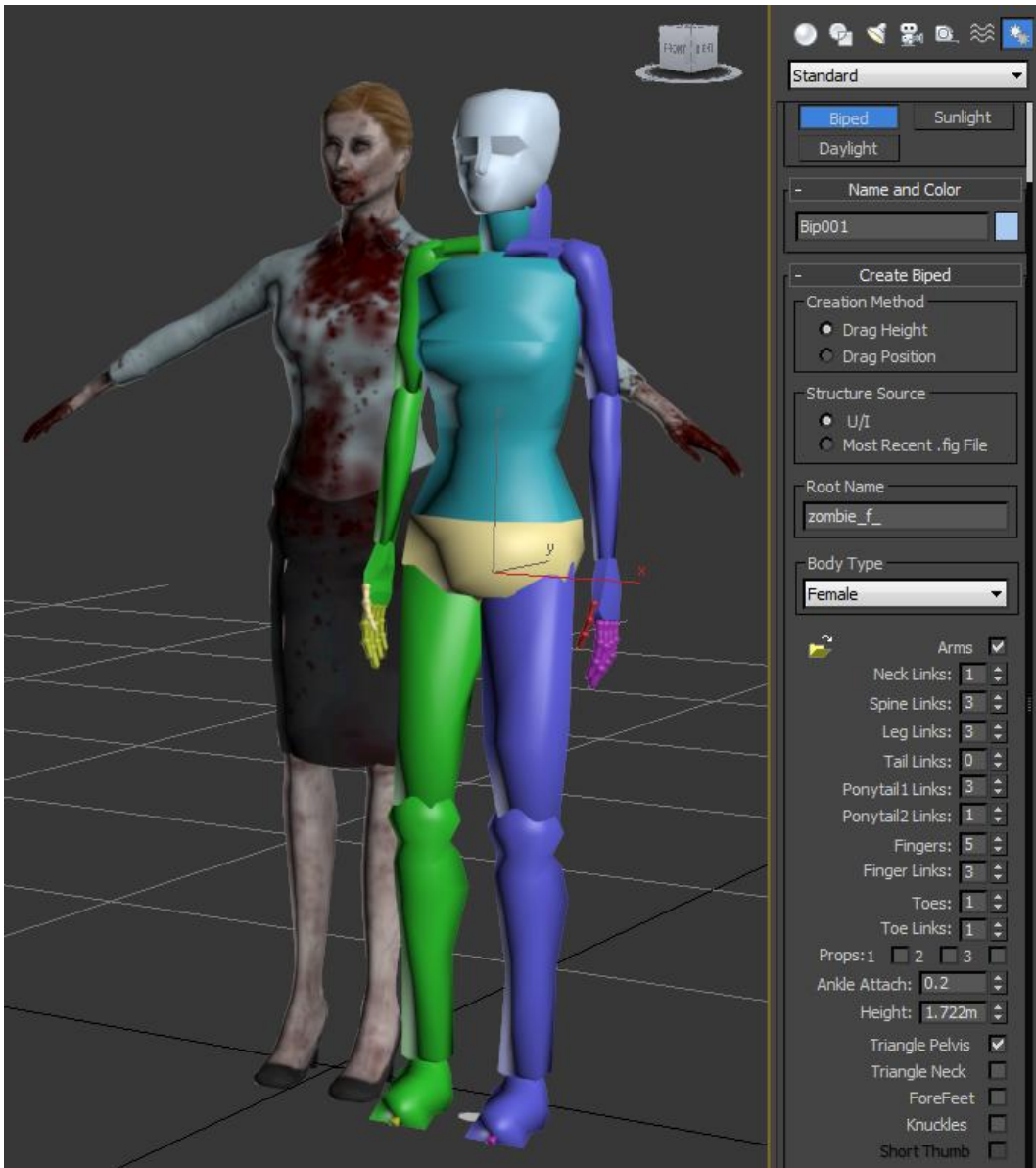


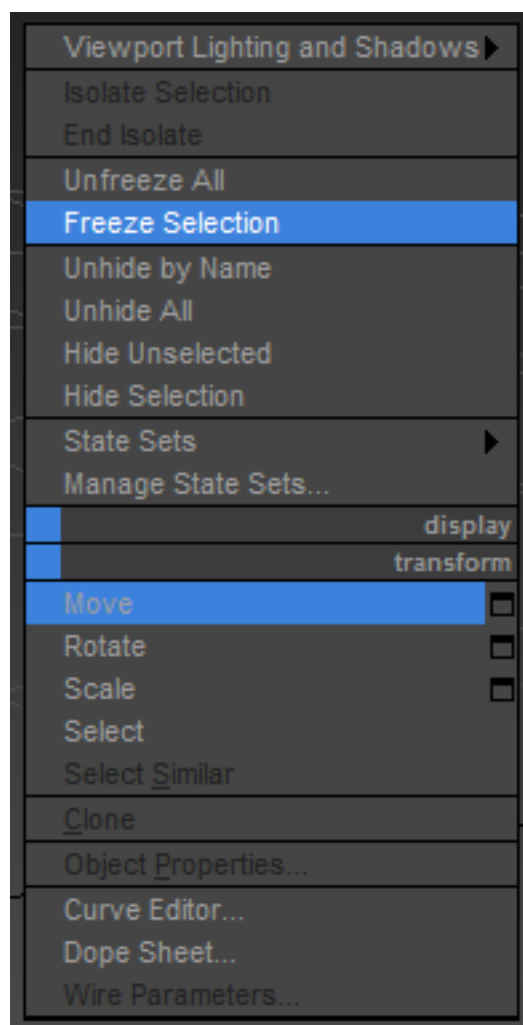
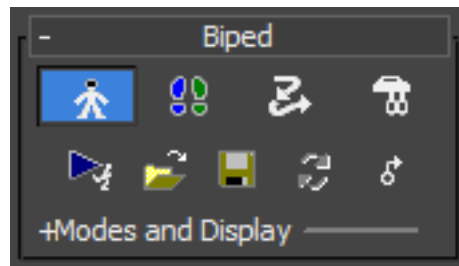


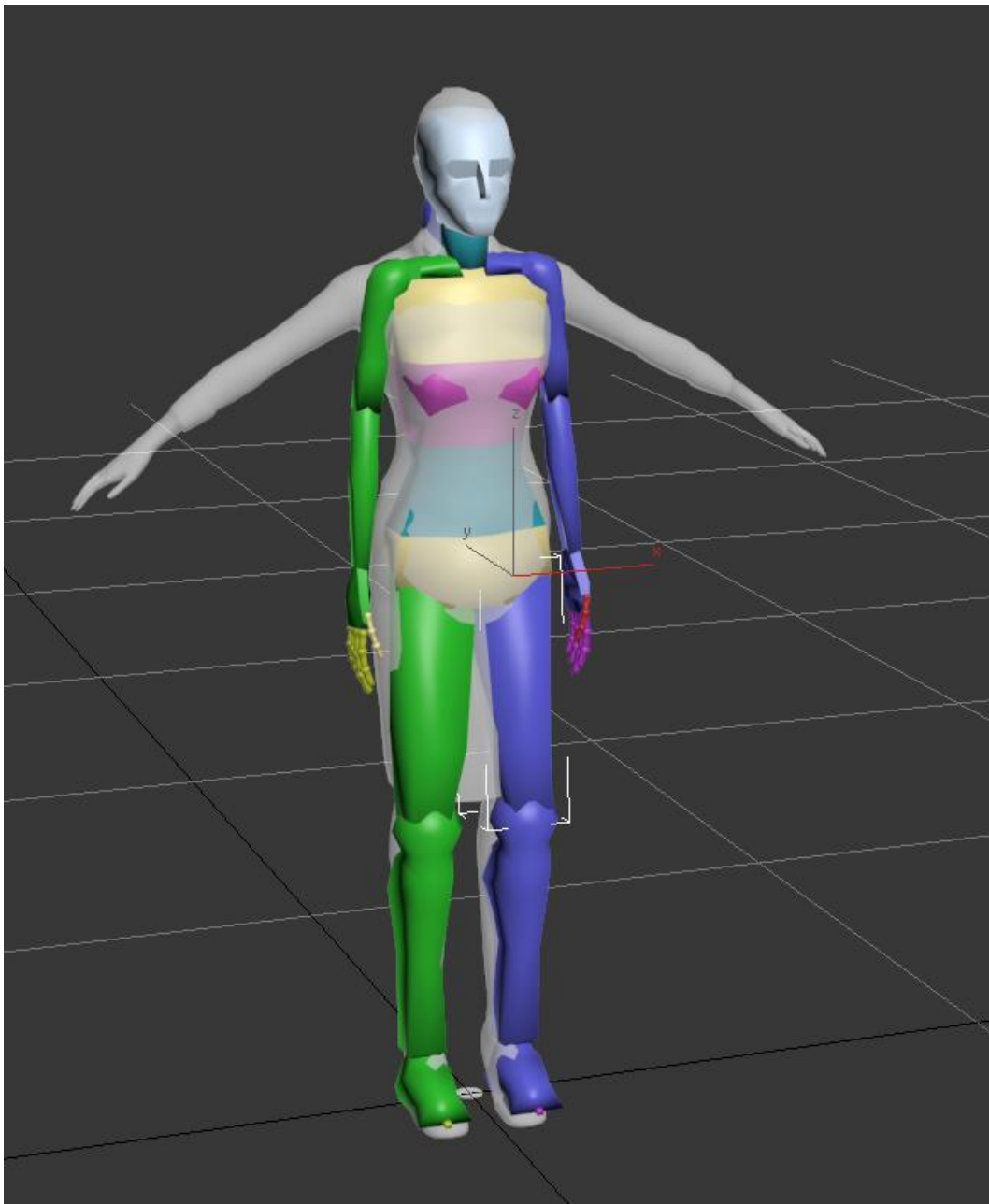
## **Chapter 2 – Rigging Characters for Unity in 3ds Max and Maya**



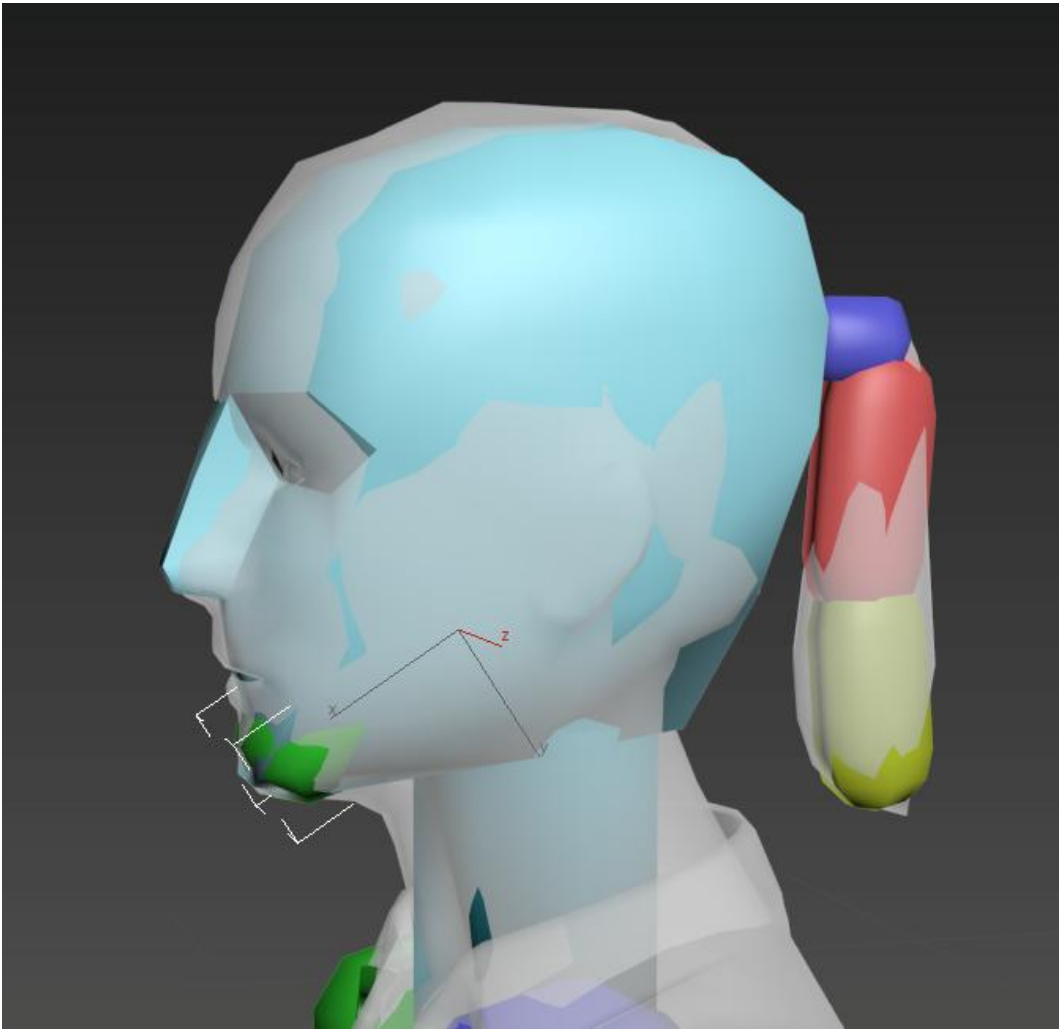


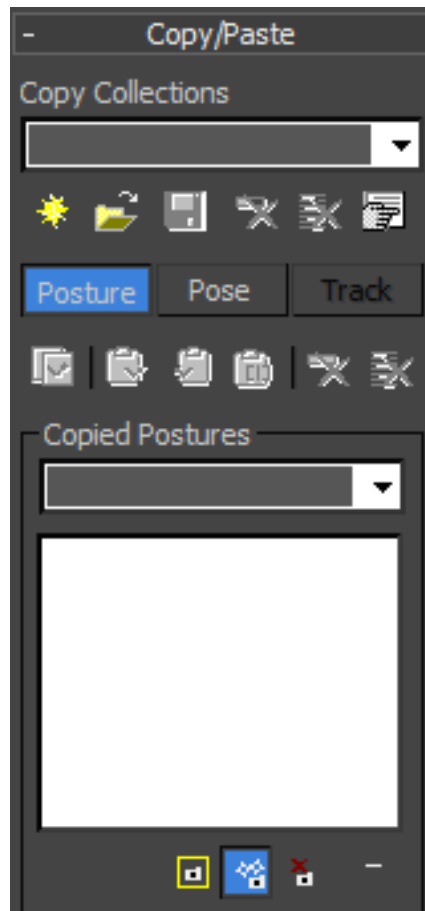


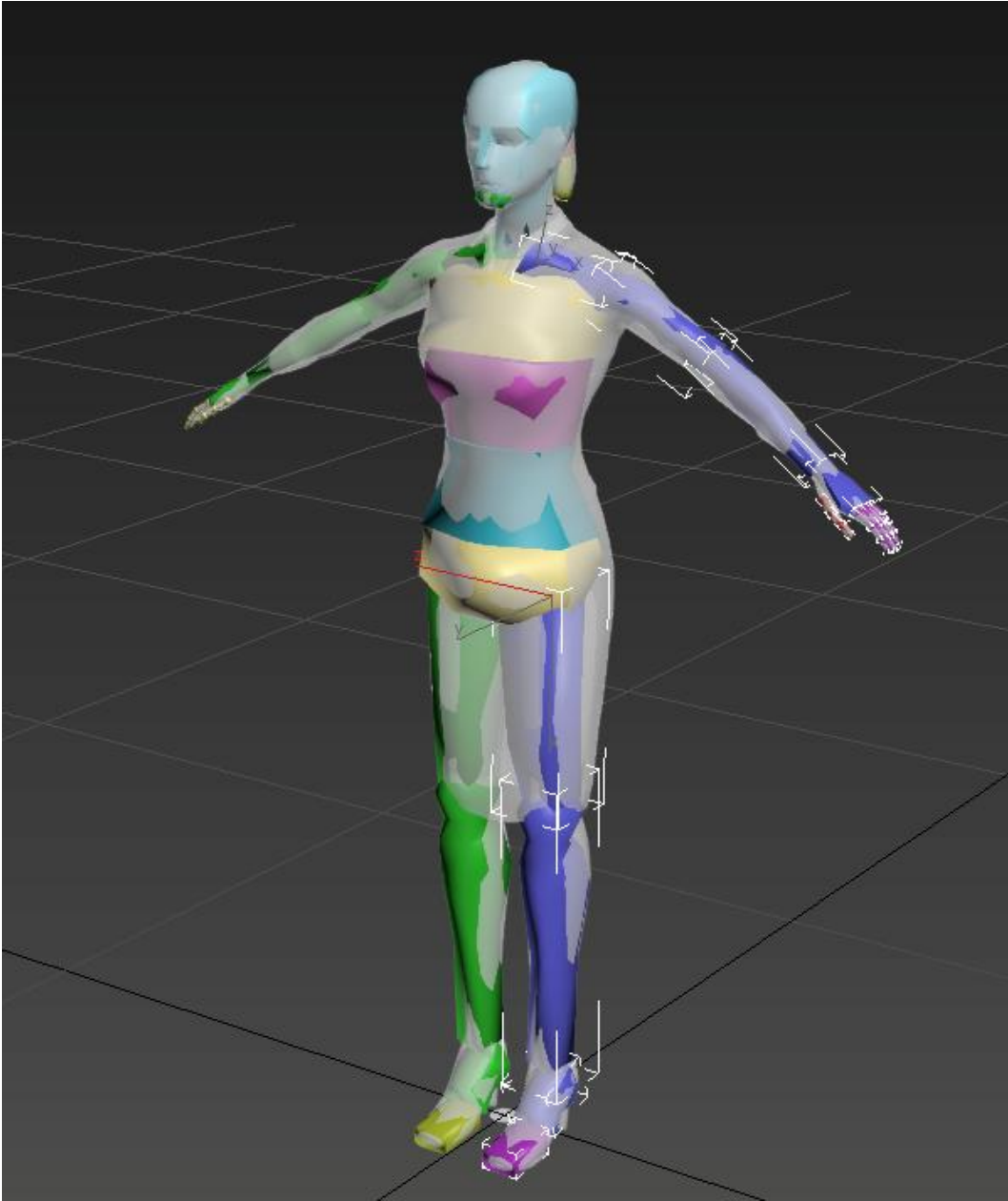


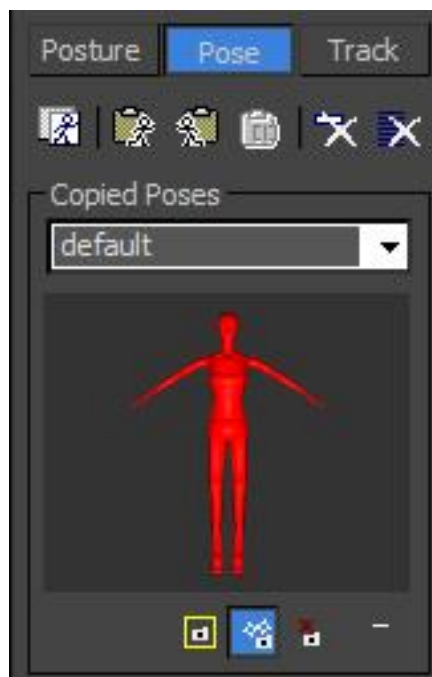
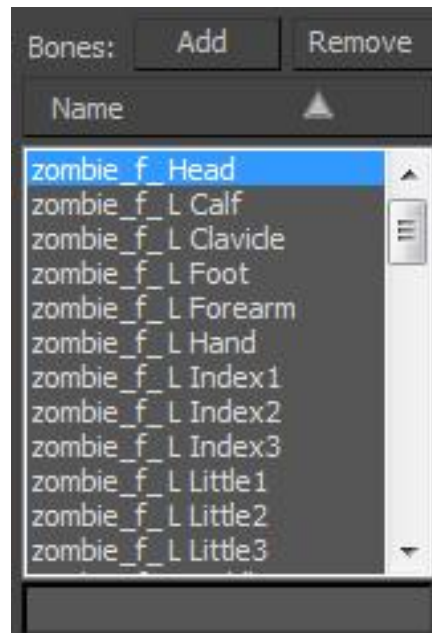












- Key Info

← → 2 30 ↕

● ✂ ● → ● ~

+TCB \_\_\_\_\_

+IK \_\_\_\_\_

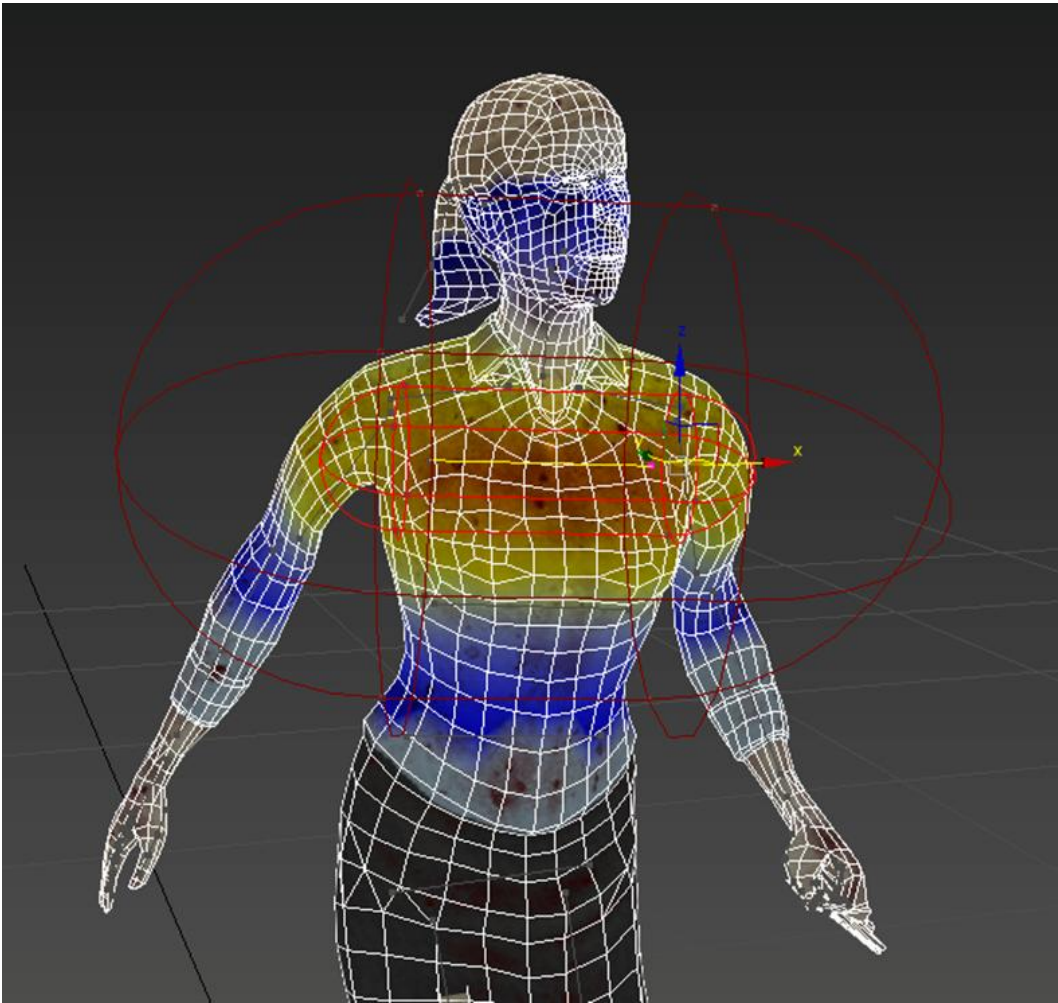
+Head \_\_\_\_\_

+Body \_\_\_\_\_

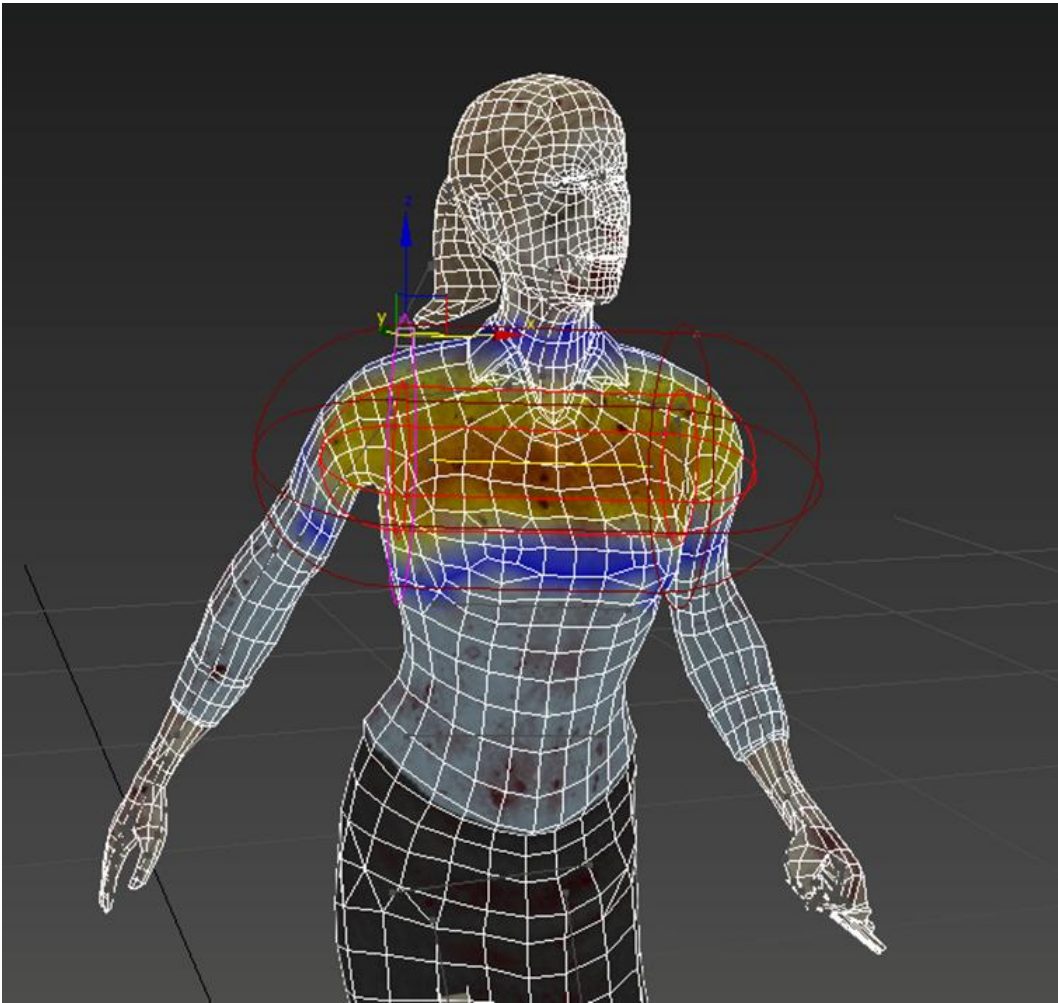
+Prop \_\_\_\_\_

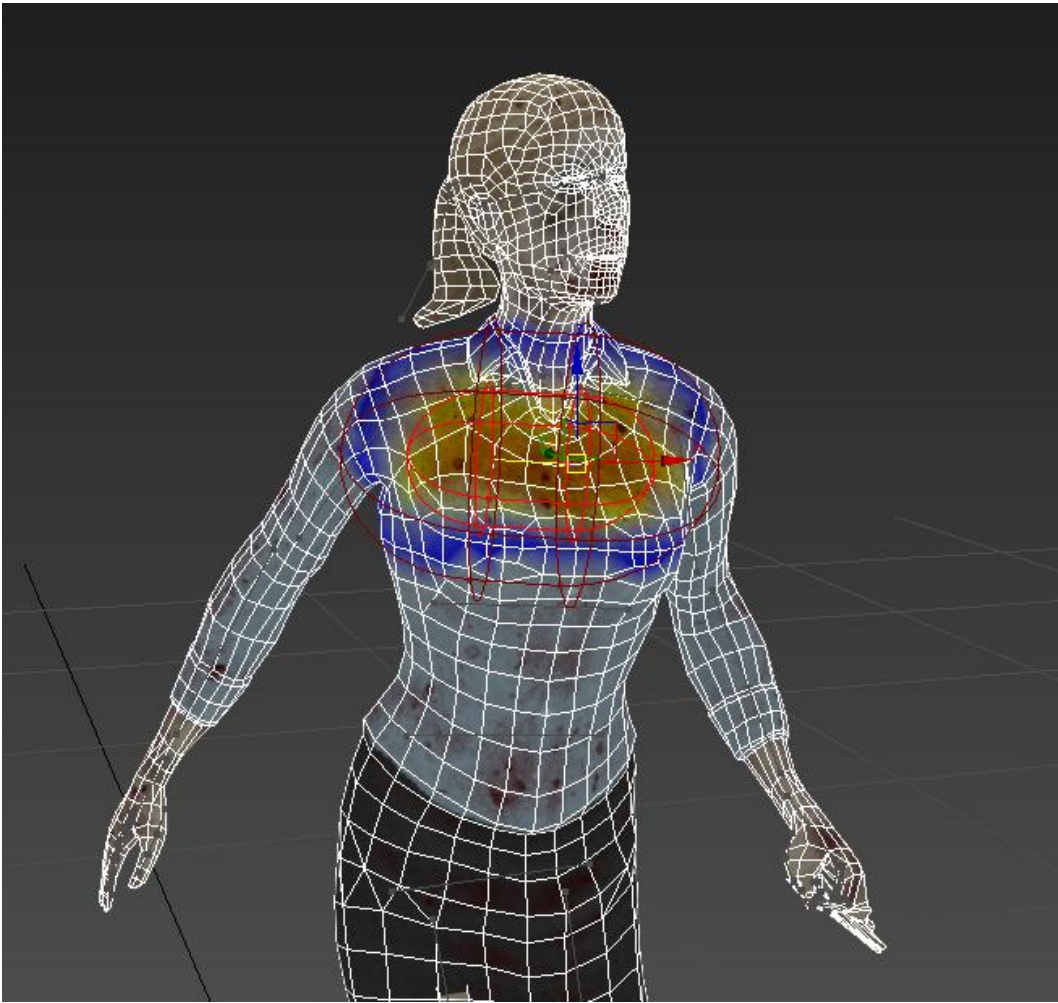


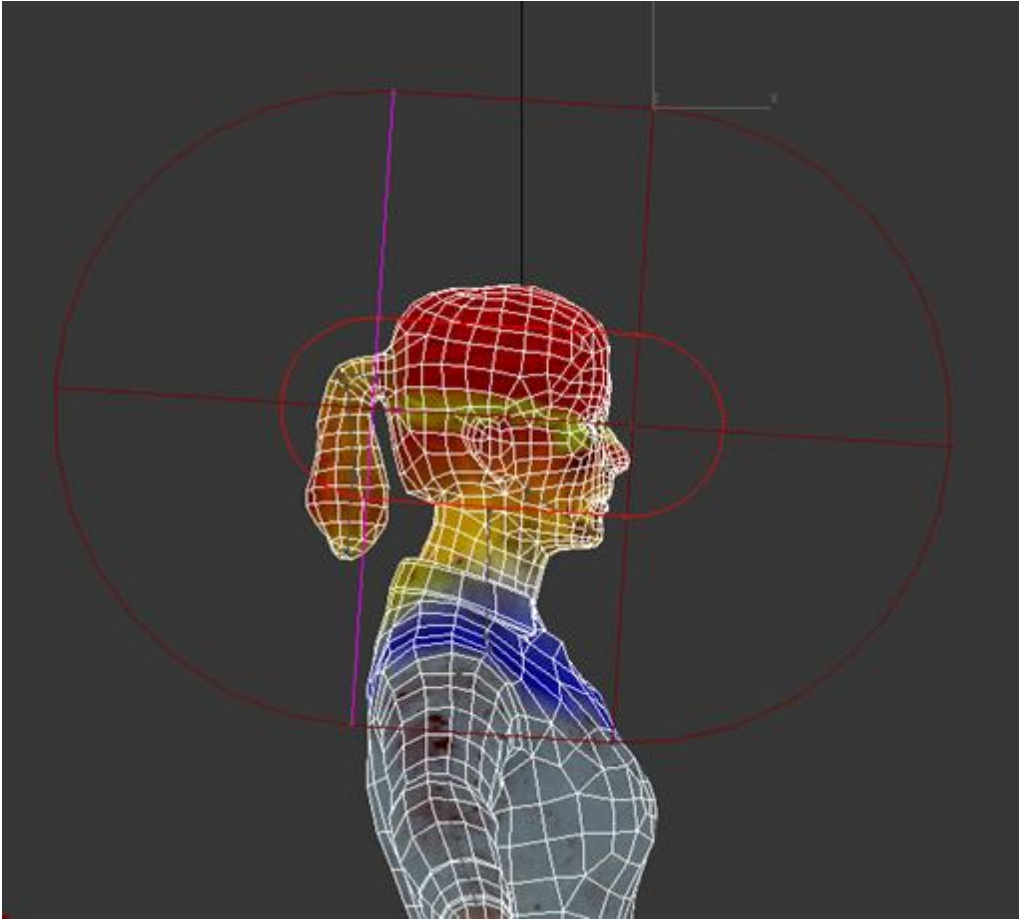


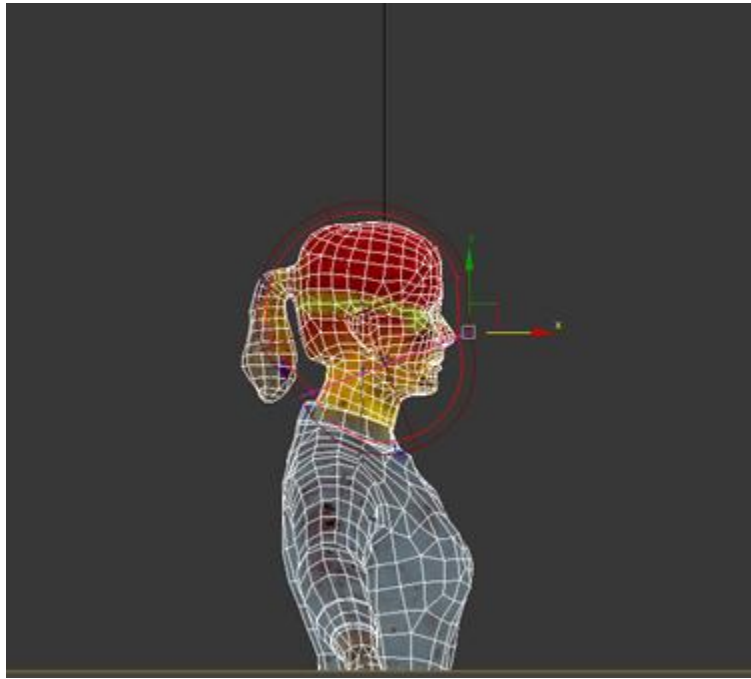


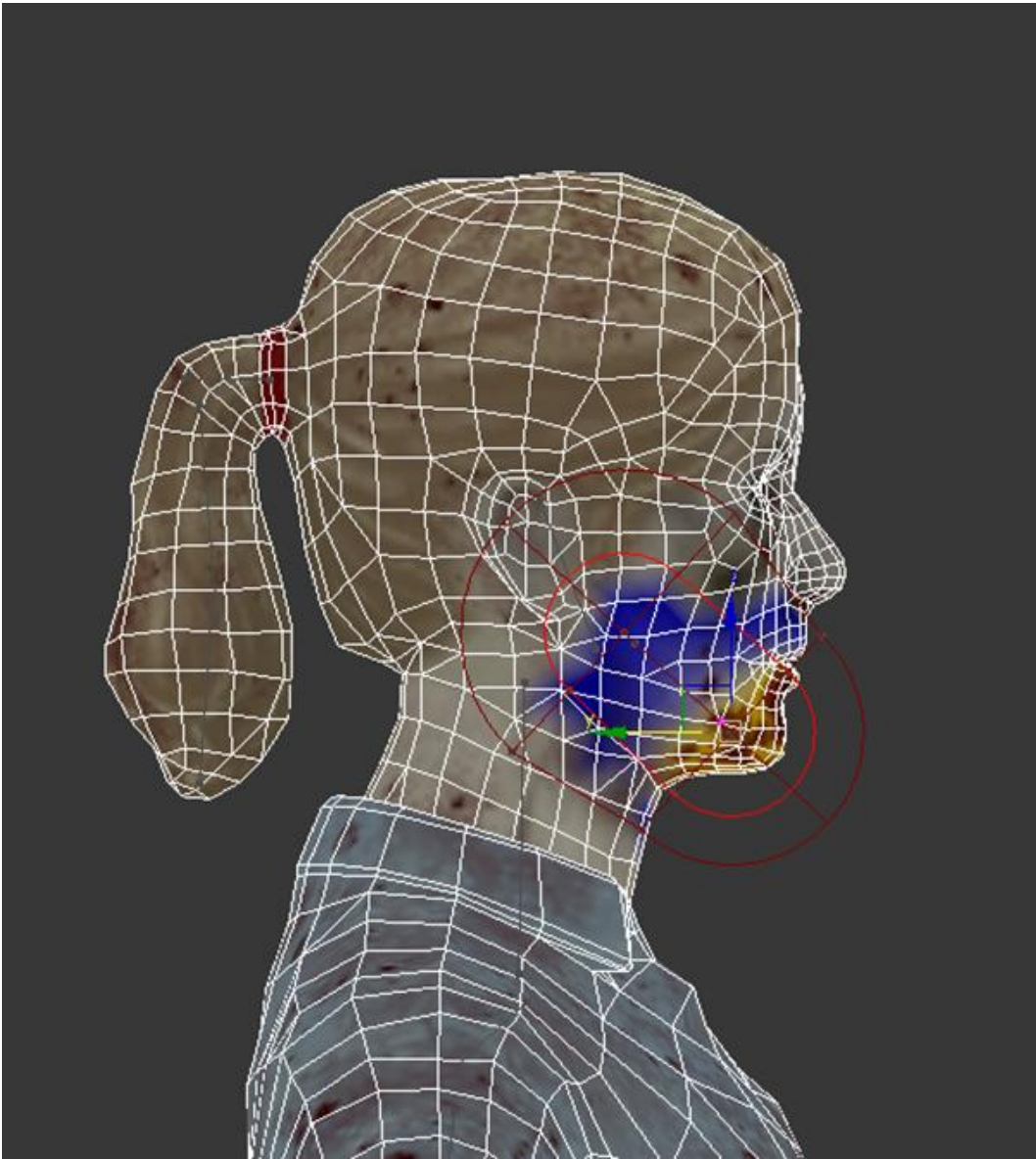




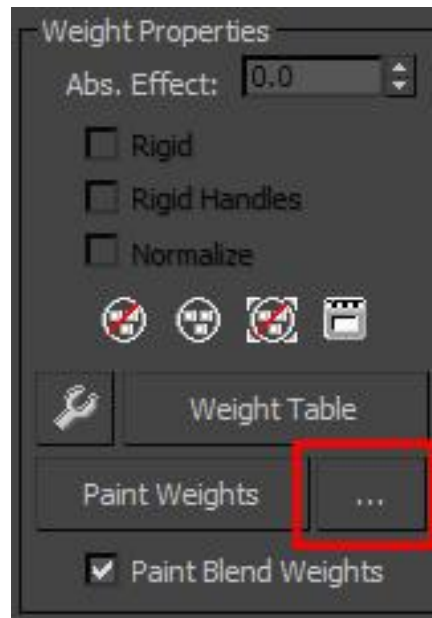


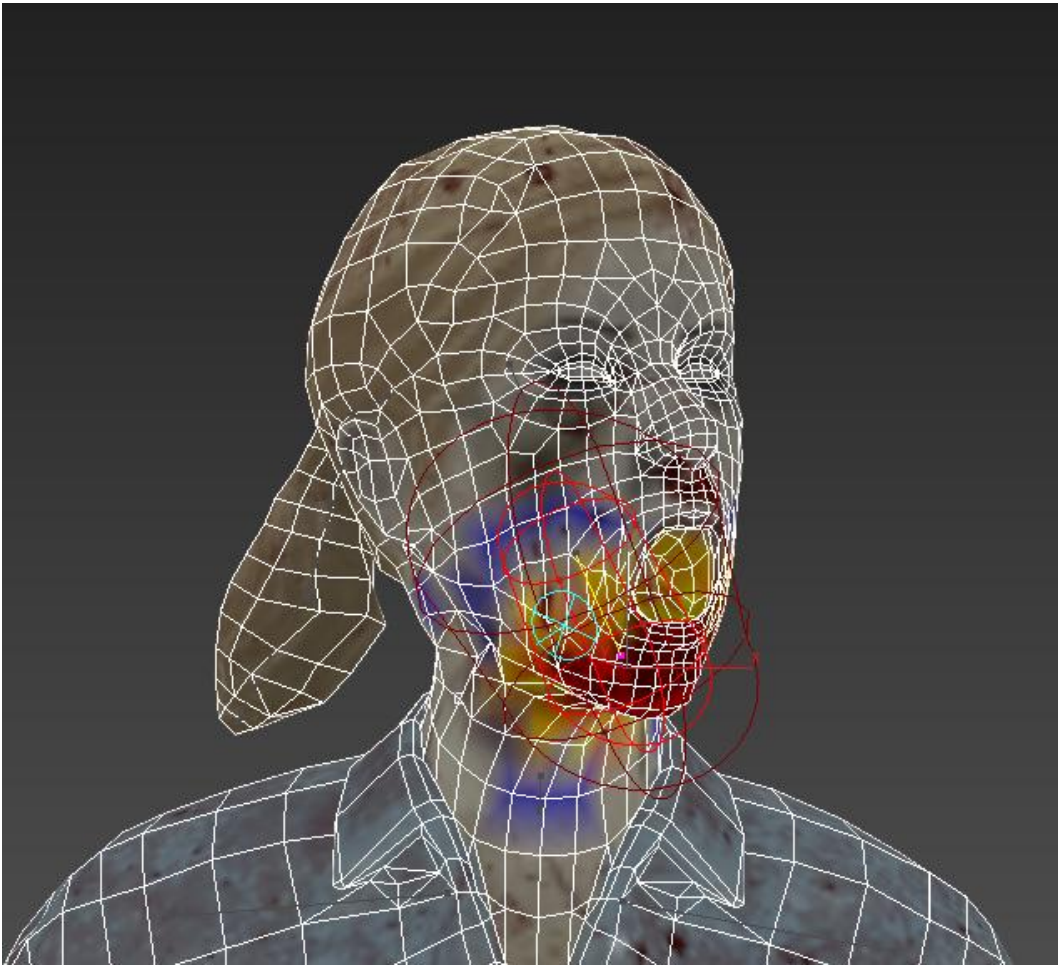




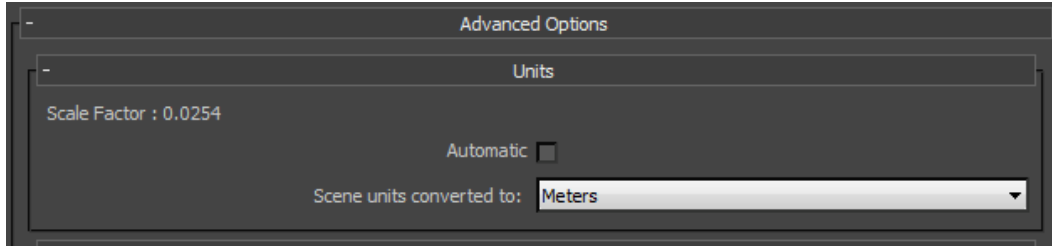
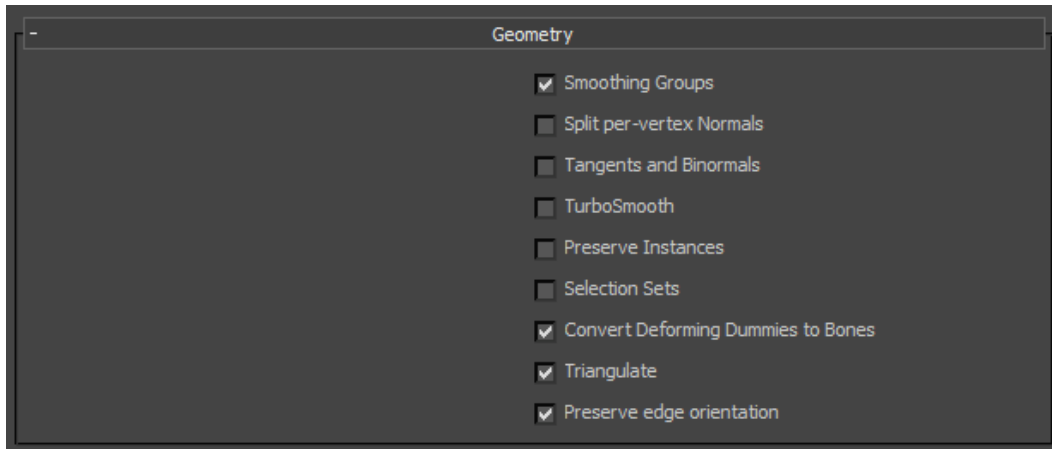






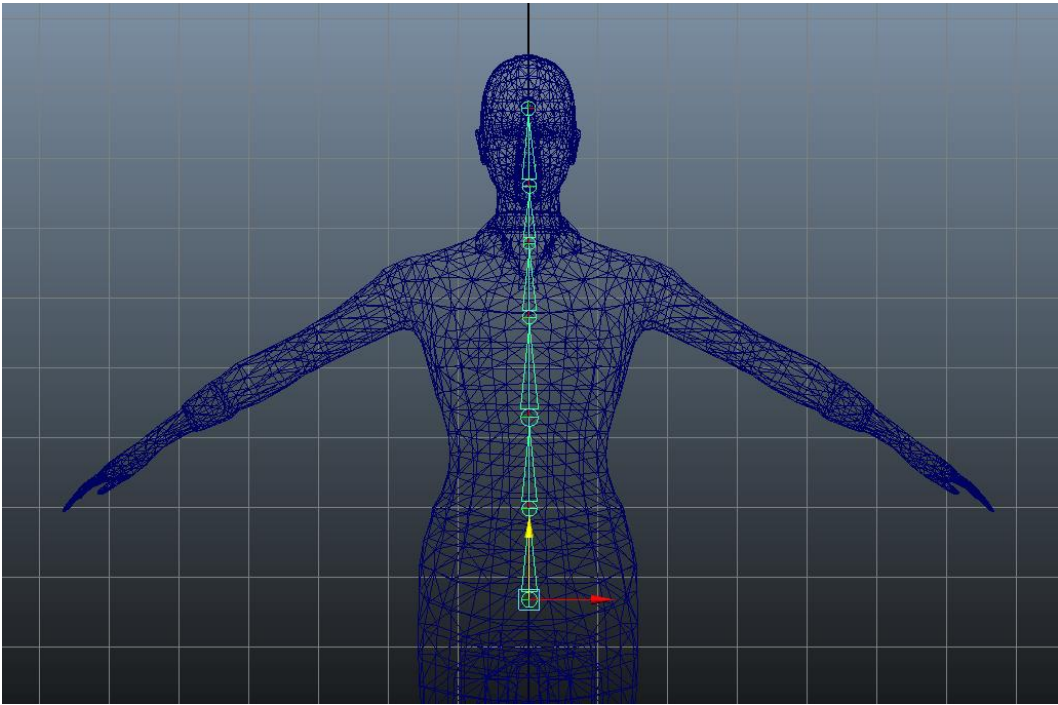


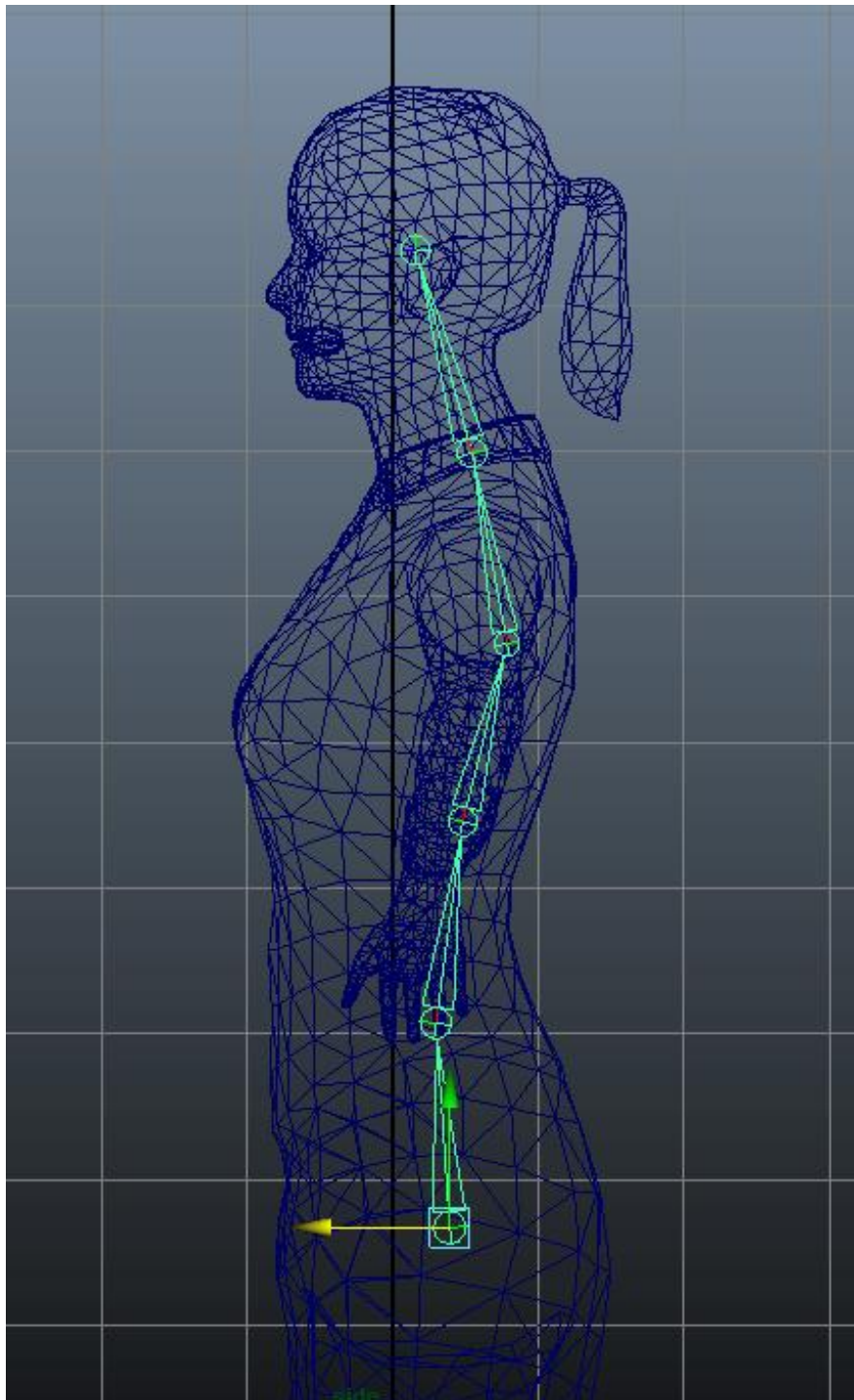


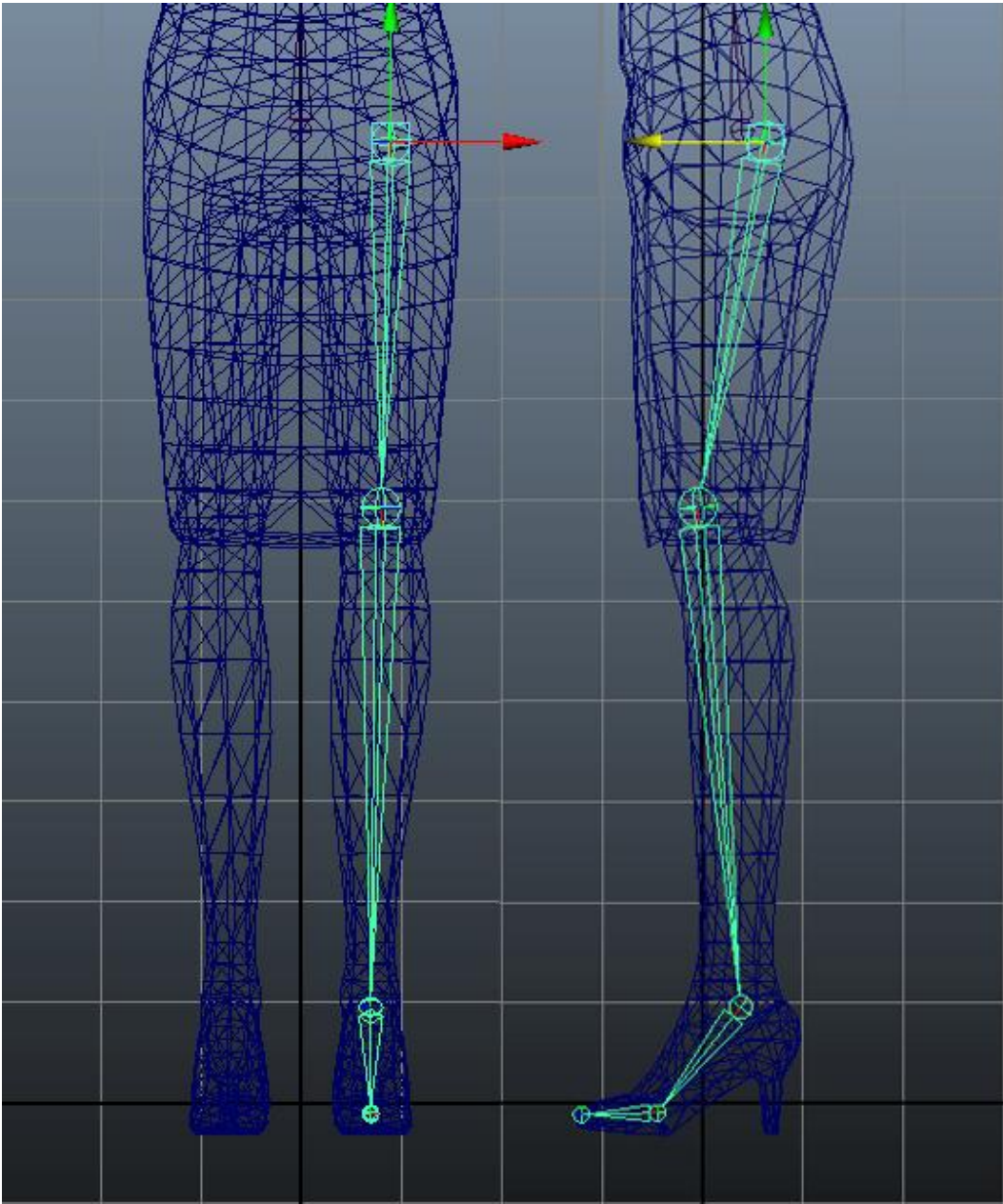


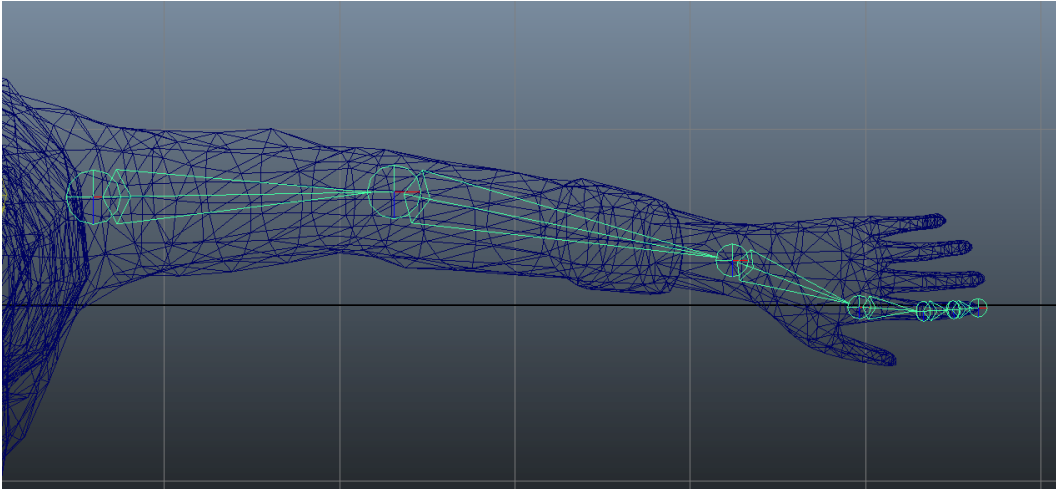


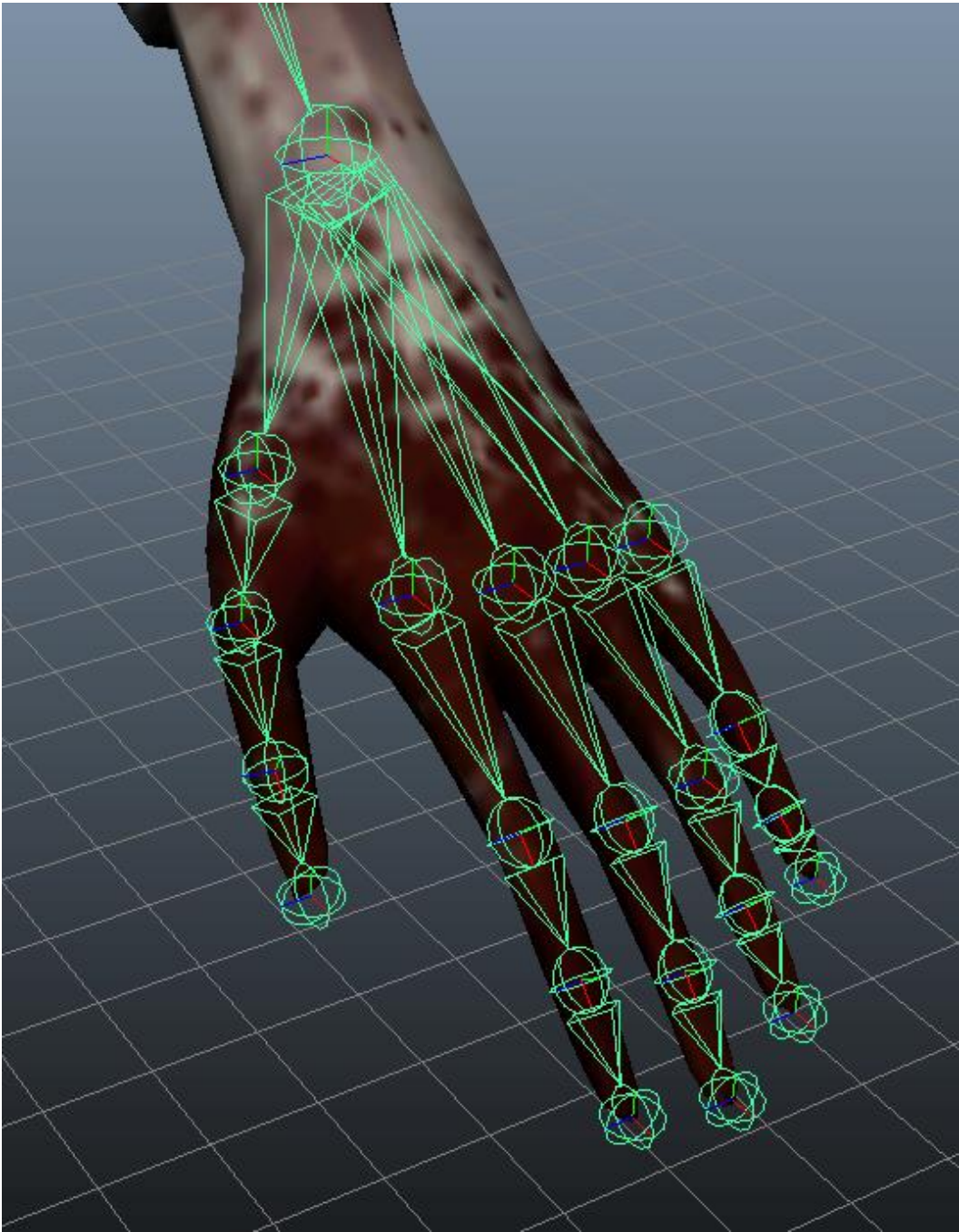
Animation ▼

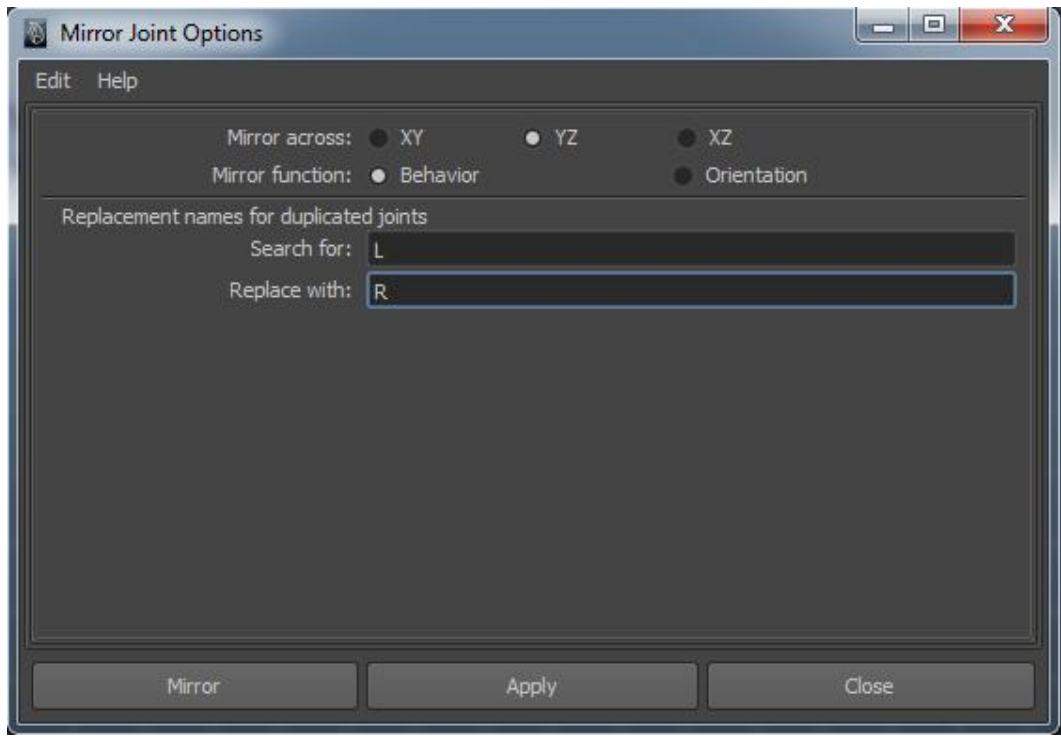




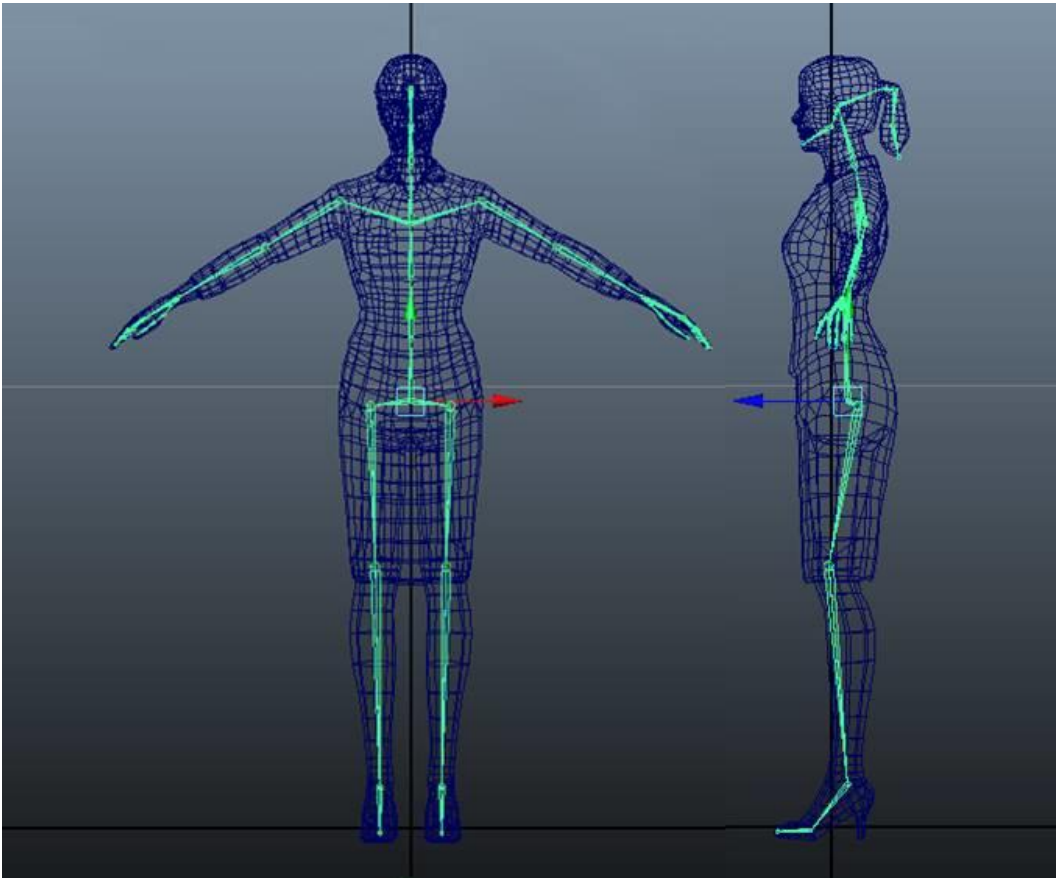


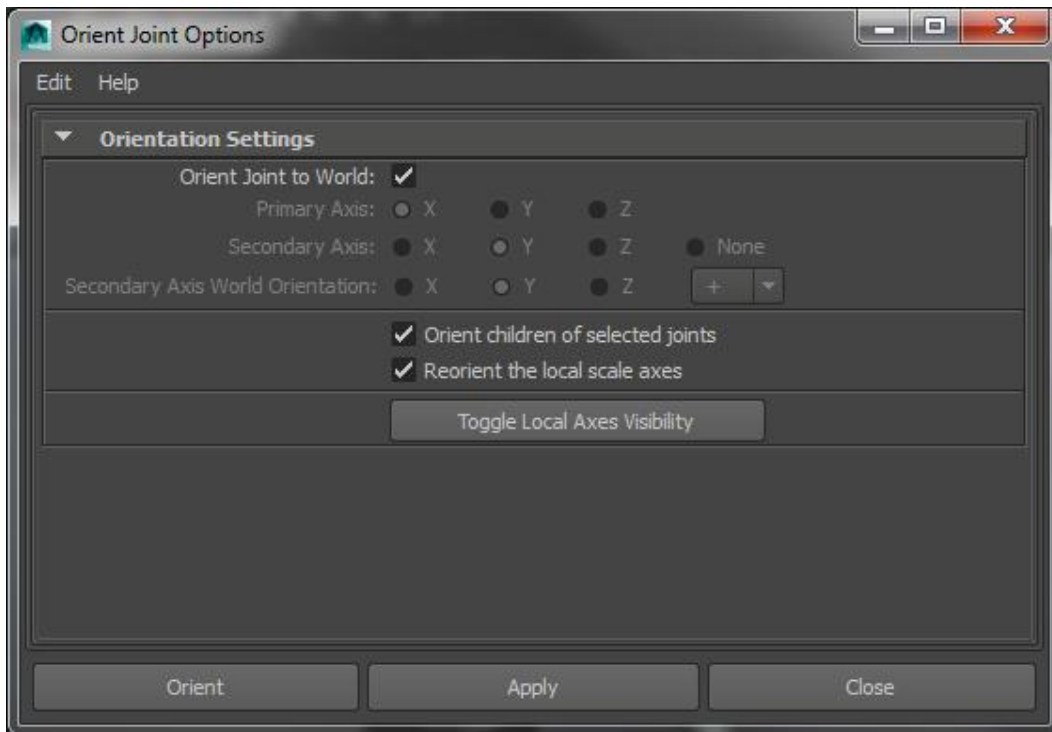


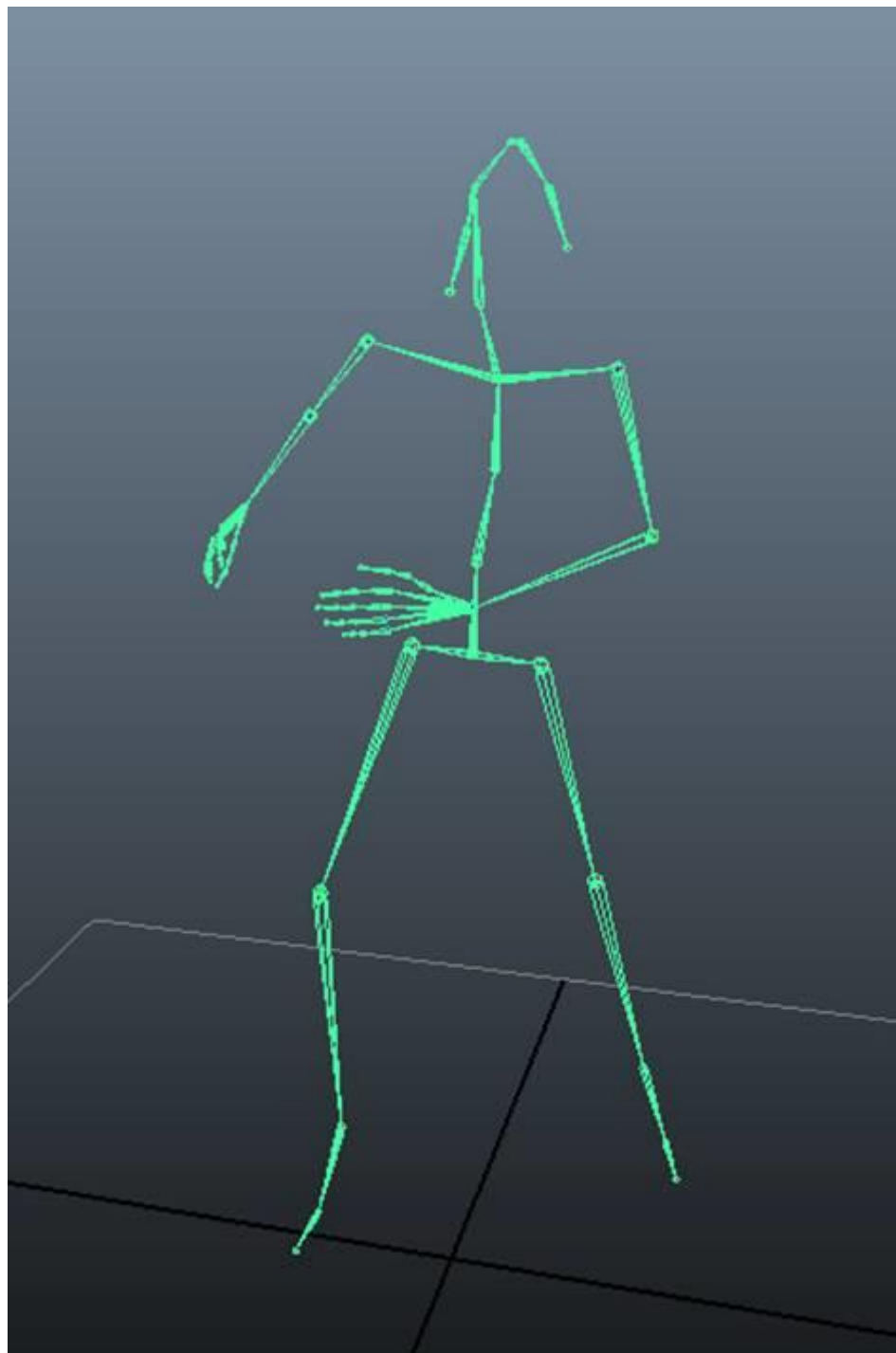




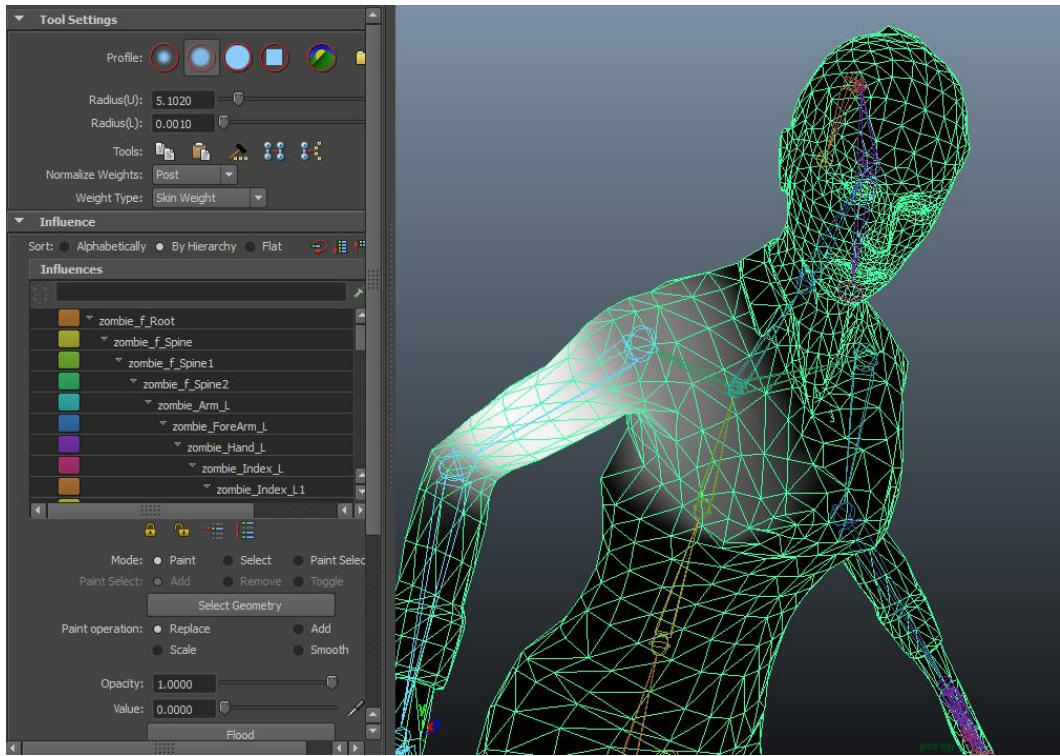


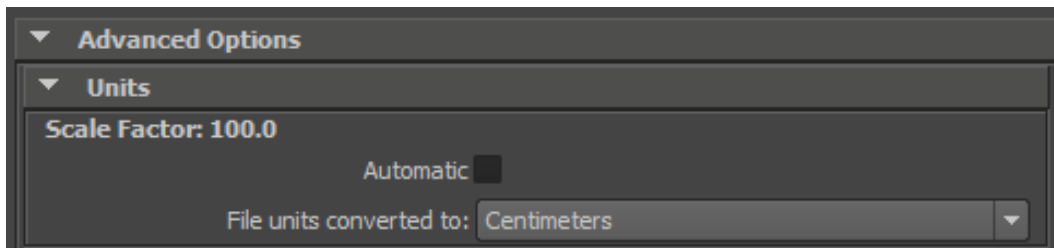
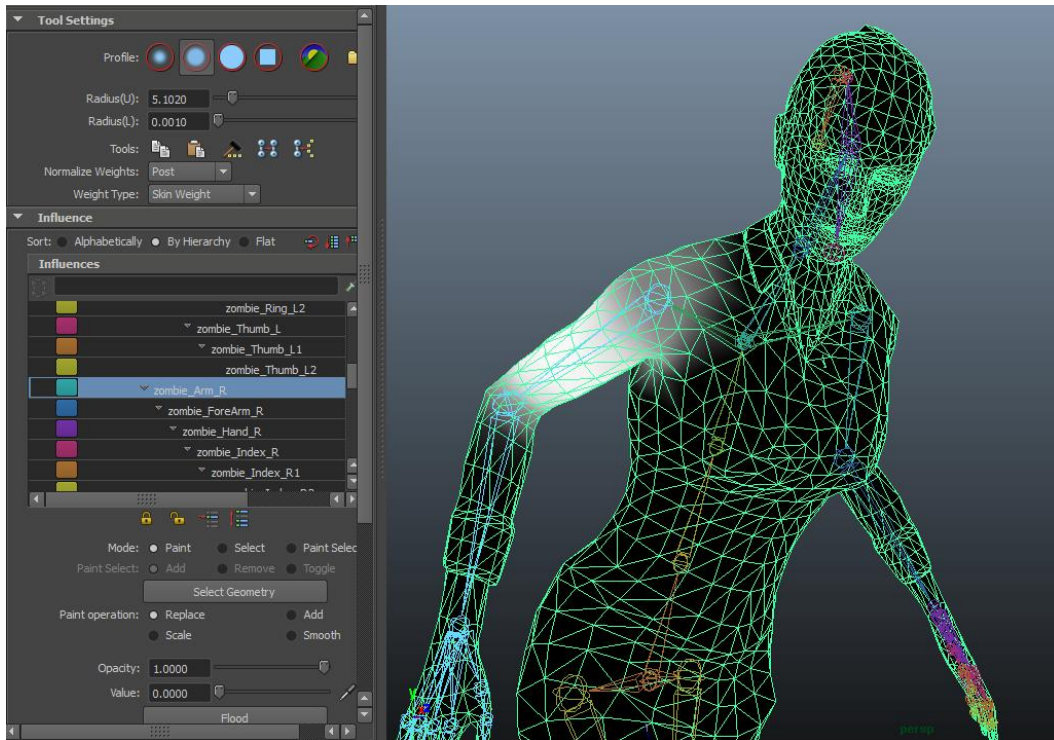






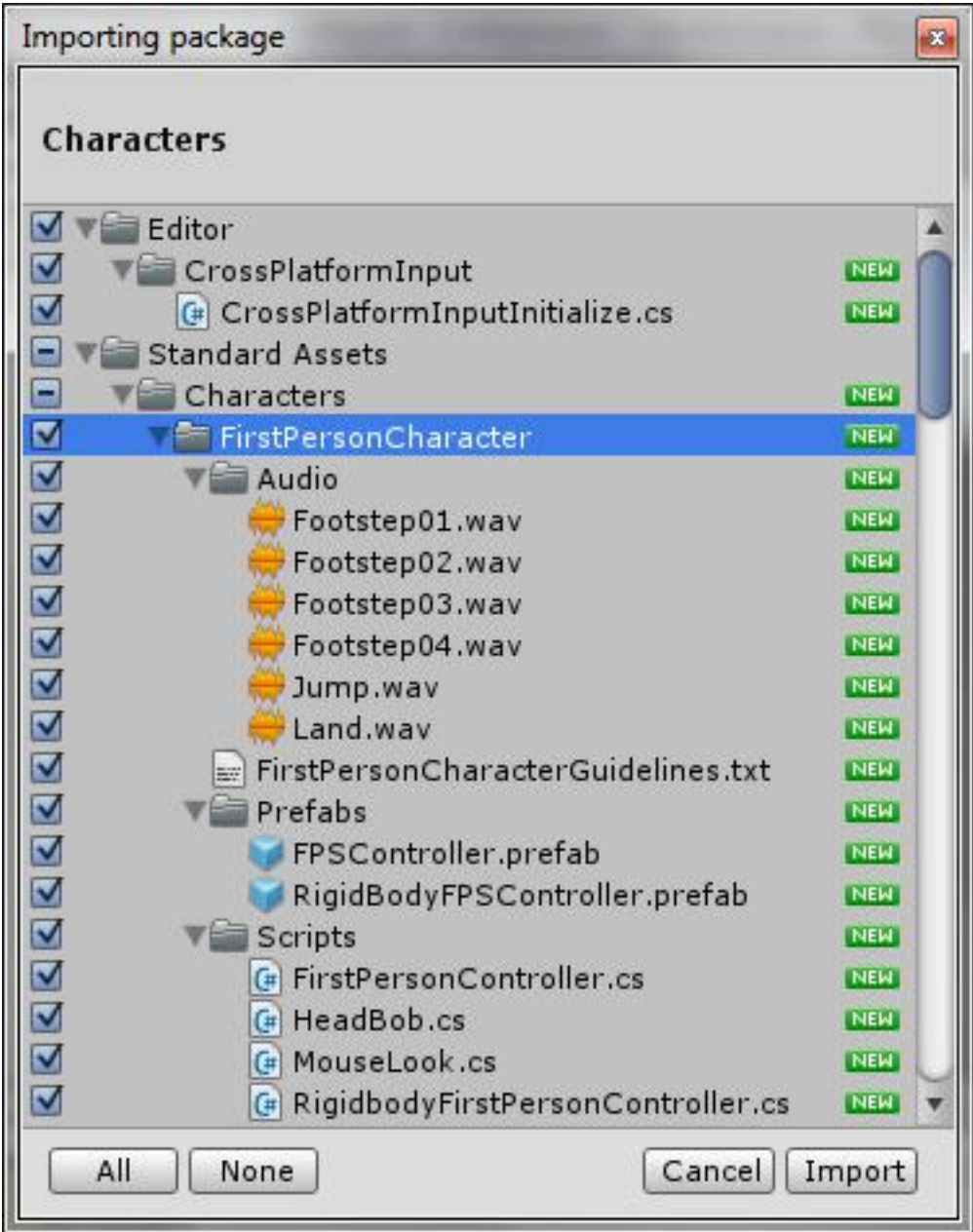




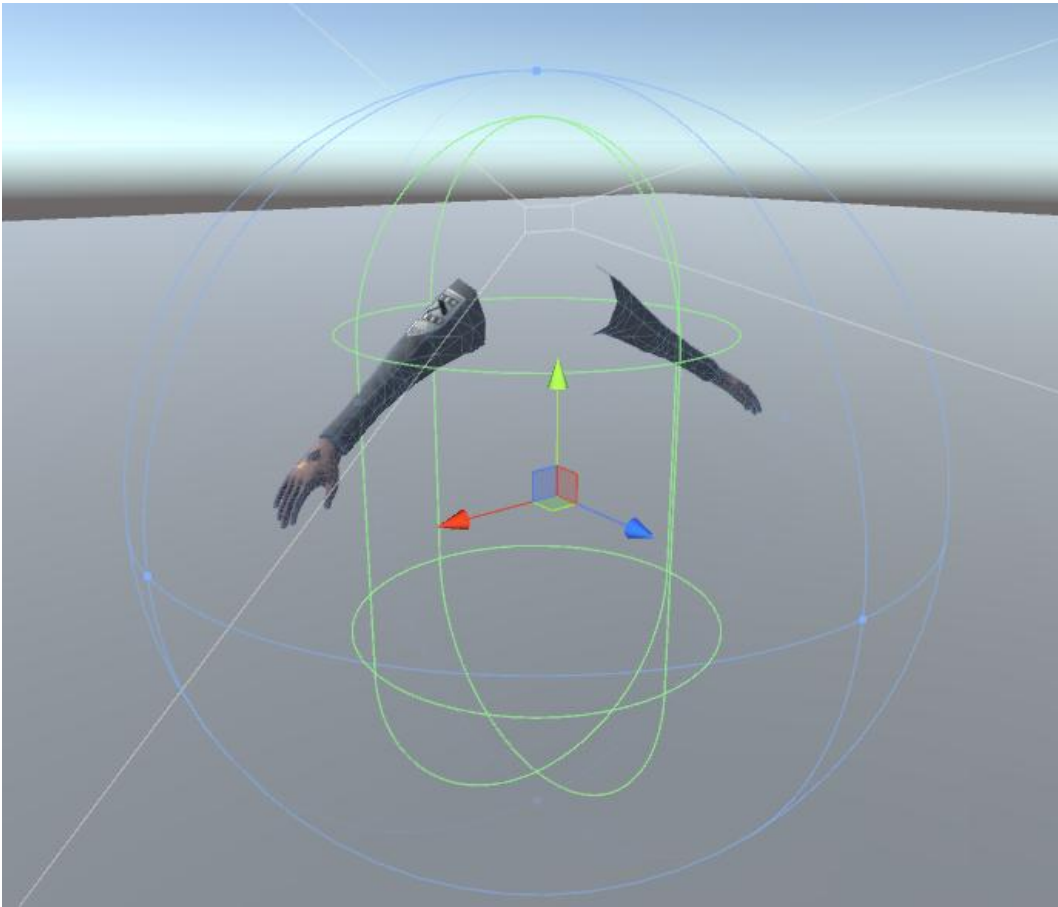


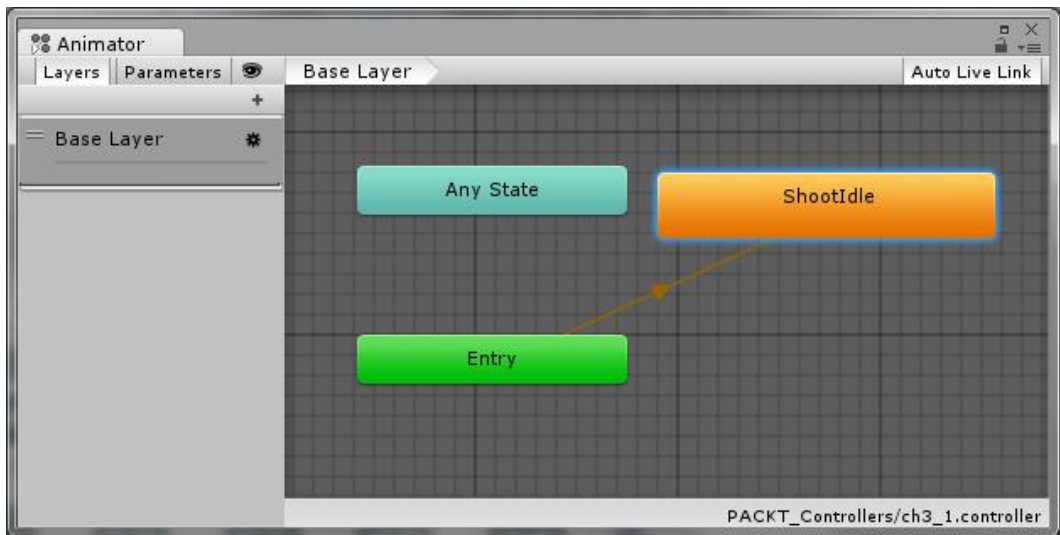
## Chapter 3 – Interacting with the Environment



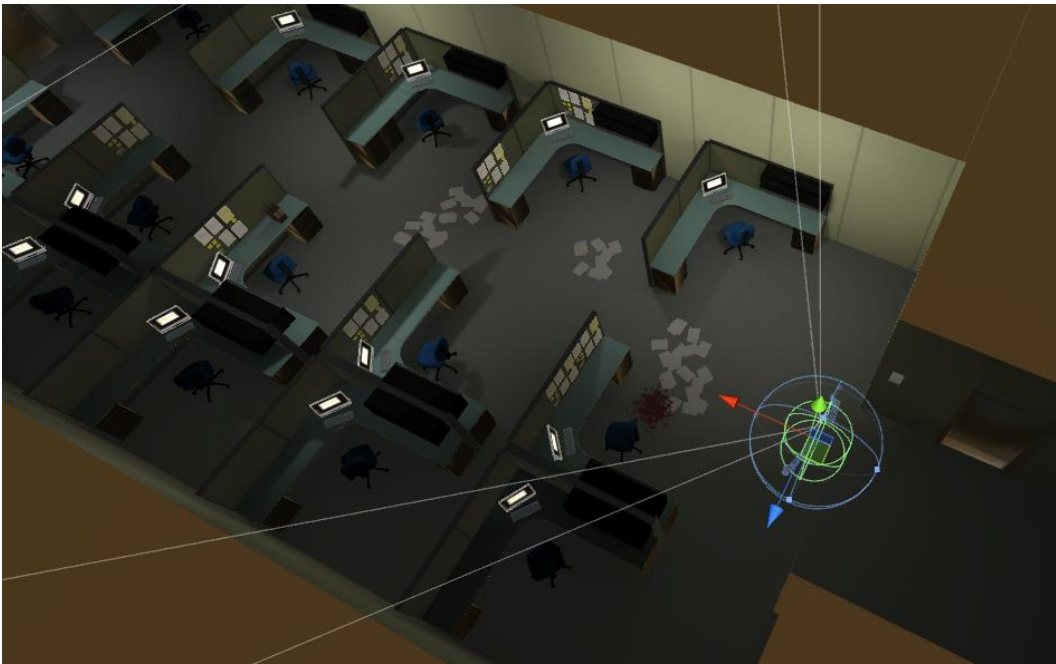
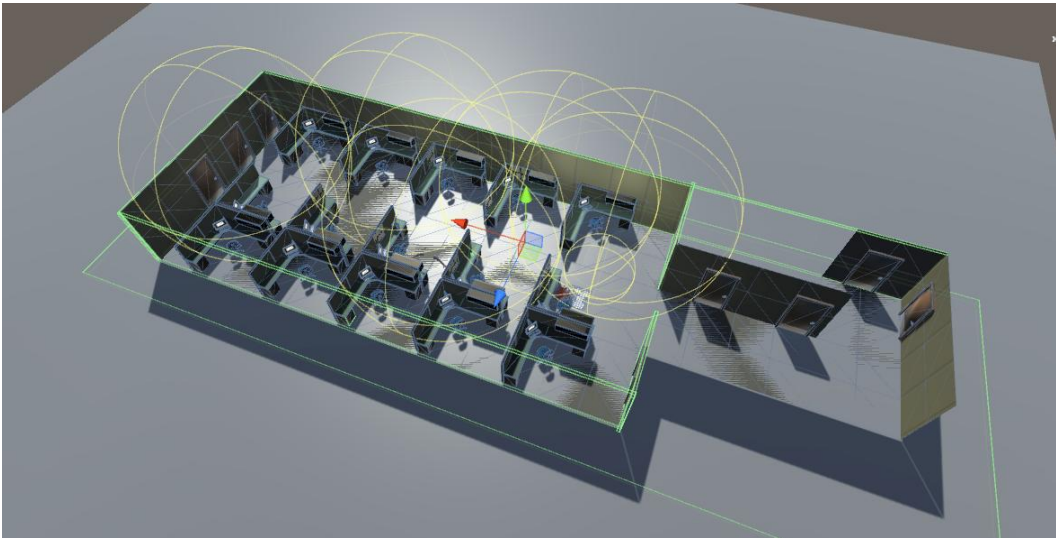








- ▼ zombie\_m\_ThumbL1
  - ▼ zombie\_m\_ThumbL2
    - zombie\_m\_ThumbL\_Nub
- zombie\_m\_WristL
- ▼ zombie\_m\_ShldrR
  - ▼ zombie\_m\_ArmR
    - ▼ zombie\_m\_ForeArmR
      - ▼ zombie\_m\_HandR
        - ▼ zombie\_m\_IndexR
          - ▼ zombie\_m\_IndexR1
            - ▼ zombie\_m\_IndexR2
              - zombie\_m\_IndexR\_Nub
      - ▼ zombie\_m\_LittleR
        - ▼ zombie\_m\_LittleR1
          - ▼ zombie\_m\_LittleR2
            - zombie\_m\_LittleR\_Nub
      - ▼ zombie\_m\_MiddleR
        - ▼ zombie\_m\_MiddleR1
          - ▼ zombie\_m\_MiddleR2
            - zombie\_m\_MiddleR\_Nub





ShootIdle -> Shoot  
1 AnimatorTransitionBase

Transitions Solo Mute  
ShootIdle -> Shoot

ShootIdle -> Shoot

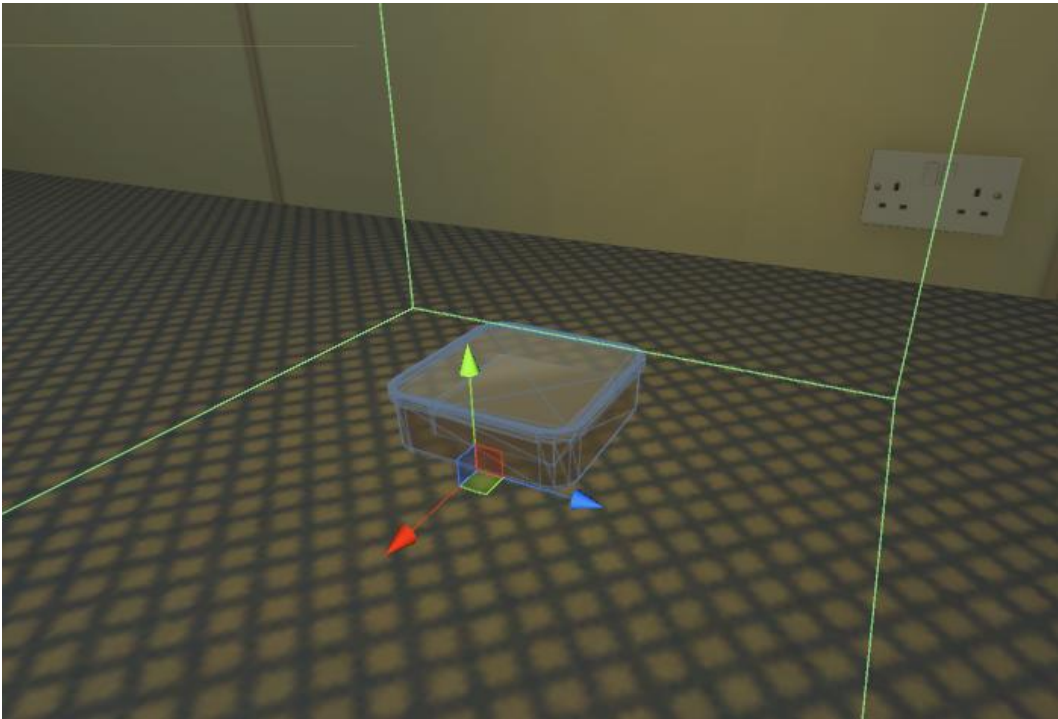
Has Exit Time

Settings

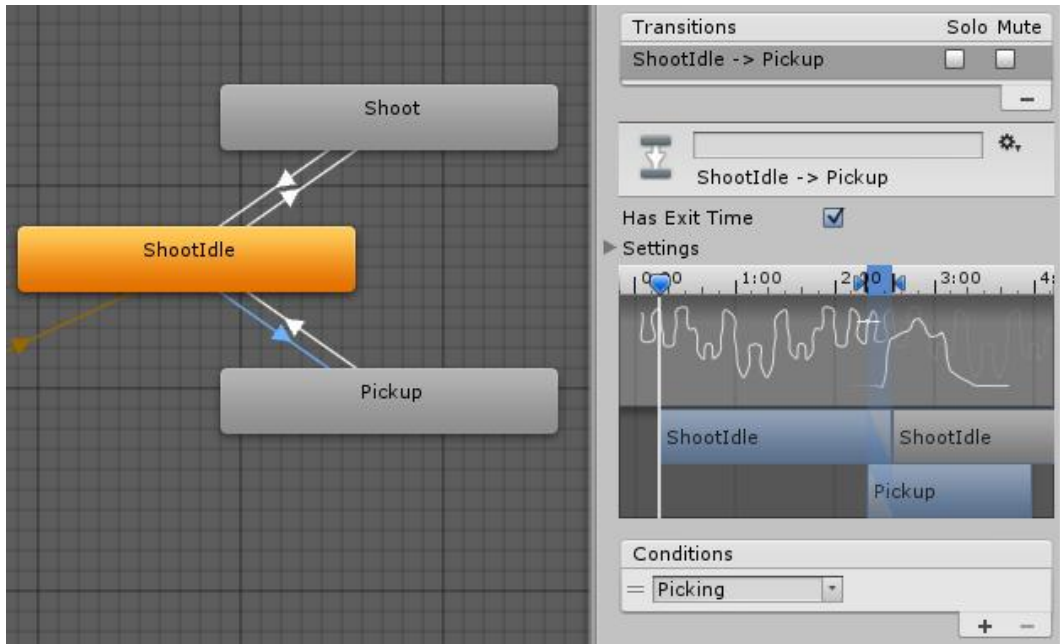
0:00 1:00 2:00 3:00

ShootIdle ShootIdle  
Shoot

Conditions  
= Shooting

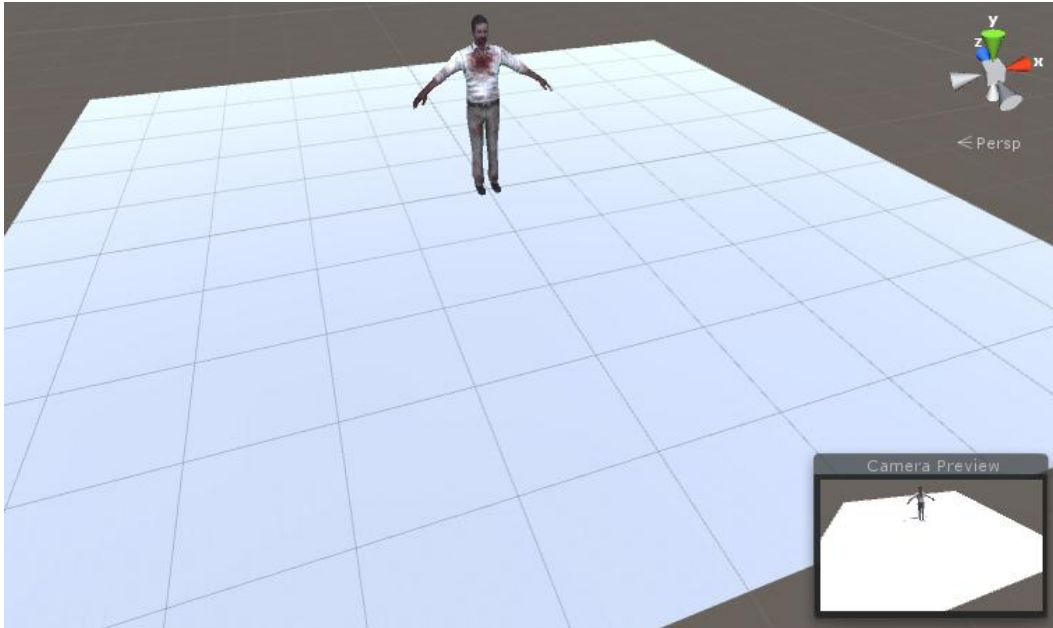








## Chapter 4 – Working with Motion Capture Data



## zombie\_walk Import Settings



Open

Model

Rig

Animations

### Meshes

Scale Factor	<input type="text" value="1"/>
File Scale	<input type="text" value="1"/>
Mesh Compression	<input type="text" value="Off"/>
Read/Write Enabled	<input checked="" type="checkbox"/>
Optimize Mesh	<input checked="" type="checkbox"/>
Import BlendShapes	<input checked="" type="checkbox"/>
Generate Colliders	<input type="checkbox"/>
Swap UVs	<input type="checkbox"/>
Generate Lightmap UV	<input type="checkbox"/>

### Normals & Tangents

Normals	<input type="text" value="Import"/>
Tangents	<input type="text" value="Calculate"/>
Smoothing Angle	<input type="text" value="60"/>
Split Tangents	<input checked="" type="checkbox"/>
Keep Quads	<input type="checkbox"/>

### Materials

Import Materials	<input checked="" type="checkbox"/>
Material Naming	<input type="text" value="By Base Texture Name"/>
Material Search	<input type="text" value="Recursive-Up"/>

For each imported material, Unity first looks for an existing material named [BaseTextureName]. Unity will do a recursive-up search for it in all Materials folders up to the Assets folder. If it doesn't exist, a new one is created in the local Materials folder.

Revert

Apply

zombie\_walk Import Settings



Open

Model

Rig

Animations

Animation Type

Humanoid

Avatar Definition

Create From This Model



Configure...

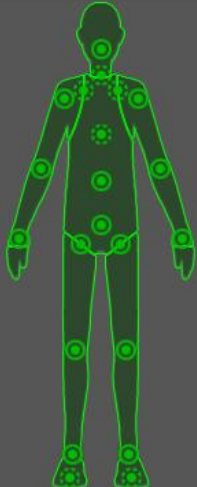
Optimize Game Objects

Revert

Apply

Inspector  
zombie\_walkAvatar

Mapping Muscles



Body  
Head  
Left Hand  
Right Hand

Optional Bone

- Body
  - Hips  Hips
  - Spine  Spine1
  - Chest  Spine2
- Left Arm
  - Shoulder  LeftShoulder
  - Upper Arm  LeftArm
  - Lower Arm  LeftForeArm
  - Hand  LeftHand
- Right Arm
  - Shoulder  RightShoulder
  - Upper Arm  RightArm
  - Lower Arm  RightForeArm
  - Hand  RightHand
- Left Leg
  - Upper Leg  LeftUpLeg
  - Lower Leg  LeftLeg
  - Foot  LeftFoot
  - Toes  LeftToeBase
- Right Leg
  - Upper Leg  RightUpLeg
  - Lower Leg  RightLeg
  - Foot  RightFoot
  - Toes  RightToeBase

Mapping Pose

Revert Apply Done

Asset Labels

zwalk01

Length 1.500 30 FPS

5:00 10:00

Start 180 End 225

Loop Time    
 Loop Pose  loop match ●   
 Cycle Offset 0

Root Transform Rotation   
 Bake Into Pose  loop match ●   
 Based Upon (at Start) Body Orientation   
 Offset 0

Root Transform Position (Y)   
 Bake Into Pose  loop match ●   
 Based Upon (at Start) Feet   
 Offset 0

Root Transform Position (XZ)   
 Bake Into Pose  loop match ●   
 Based Upon Center of Mass

Mirror

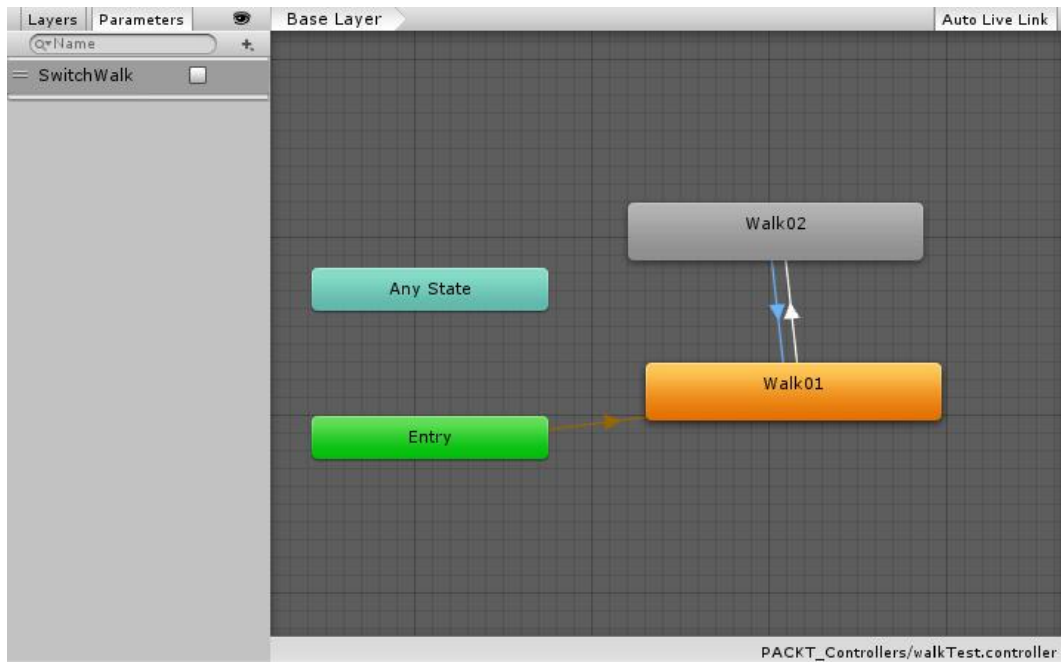
Average Velocity: (-0.015, 0.000, 0.411)   
 Average Angular Y Speed: -2.3 deg/s

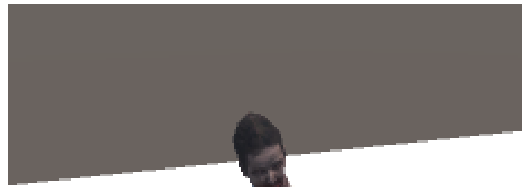
► Mask   
 ► Events

Revert Apply

Preview IK [IK icon] [IK icon] 1.00

0:00 (000.0%)





## Chapter 5 – Retargeting Animation








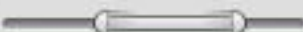















Mapping		Muscles	
Preview	Muscle Group Preview		
<input type="button" value="Reset All"/>	Reset All Preview Values		
<input type="range"/>	Open Close		
<input type="range"/>	Left Right		
<input type="range"/>	Roll Left Right		
<input type="range"/>	In Out		
<input type="range"/>	Roll In Out		
<input type="range"/>	Finger Open Close		
<input type="range"/>	Finger In Out		
Preview	Per-Muscle Settings		
	▶ Body		
	▶ Head		
	▶ Left Arm		
	▶ Left Fingers		
	▼ Right Arm		
<input type="range"/>	▶ Shoulder Down-Up		
<input type="range"/>	▶ Shoulder Front-Back		
<input type="range"/>	▶ Arm Down-Up		
<input type="range"/>	▶ Arm Front-Back		
<input type="range"/>	▶ Arm Twist In-Out		
<input type="range"/>	▶ Forearm Stretch		
<input type="range"/>	▶ Forearm Twist In-Out		
<input type="range"/>	▶ Hand Down-Up		
<input type="range"/>	▶ Hand In-Out		
	▶ Right Fingers		
	▶ Left Leg		
	▶ Right Leg		

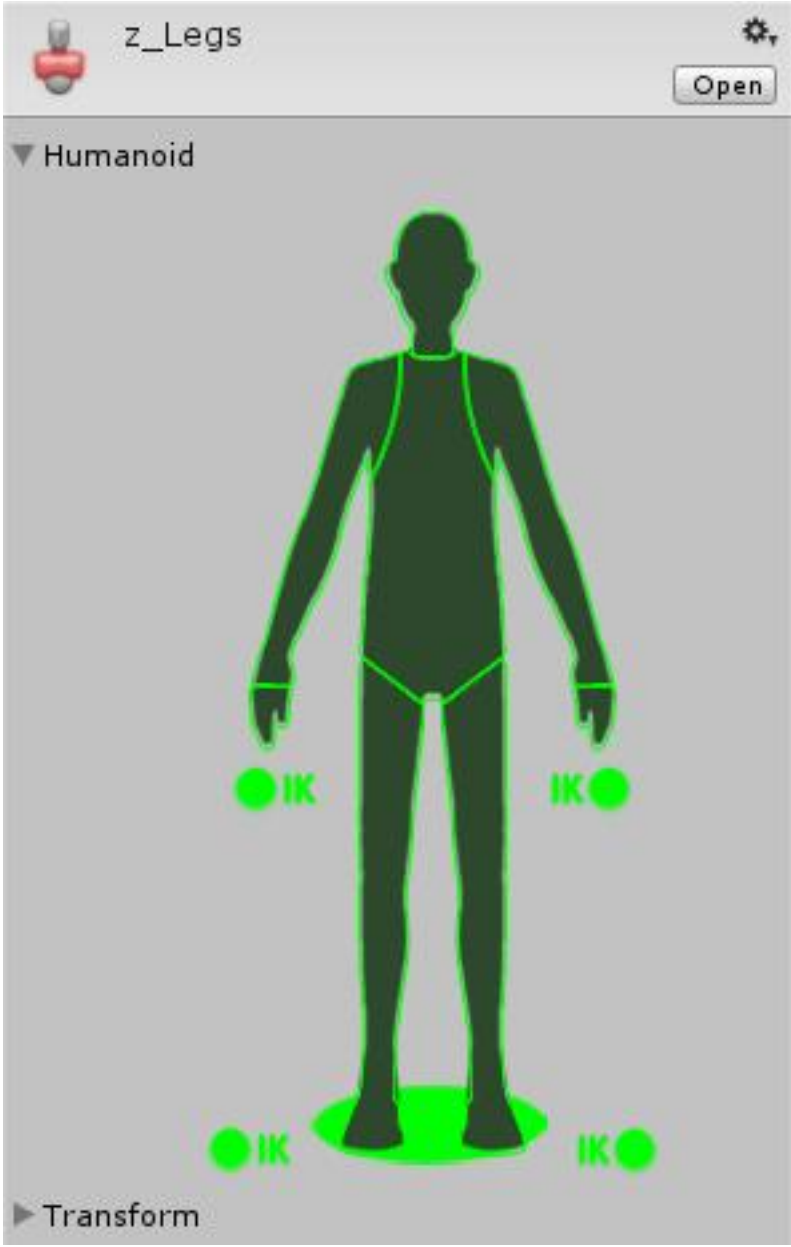
Preview	Per-Muscle Settings
	▶ Body
	▶ Head
	▶ Left Arm
	▶ Left Fingers
	▼ Right Arm
	▶ Shoulder Down-Up
	▶ Shoulder Front-Back
	▼ Arm Down-Up
	<input data-bbox="695 720 781 751" type="text" value="-60"/>  <input data-bbox="1122 720 1208 751" type="text" value="100"/>
	▶ Arm Front-Back
	▶ Arm Twist In-Out
	▶ Forearm Stretch
	▶ Forearm Twist In-Out
	▶ Hand Down-Up
	▶ Hand In-Out
	▶ Right Fingers
	▶ Left Leg
	▶ Right Leg

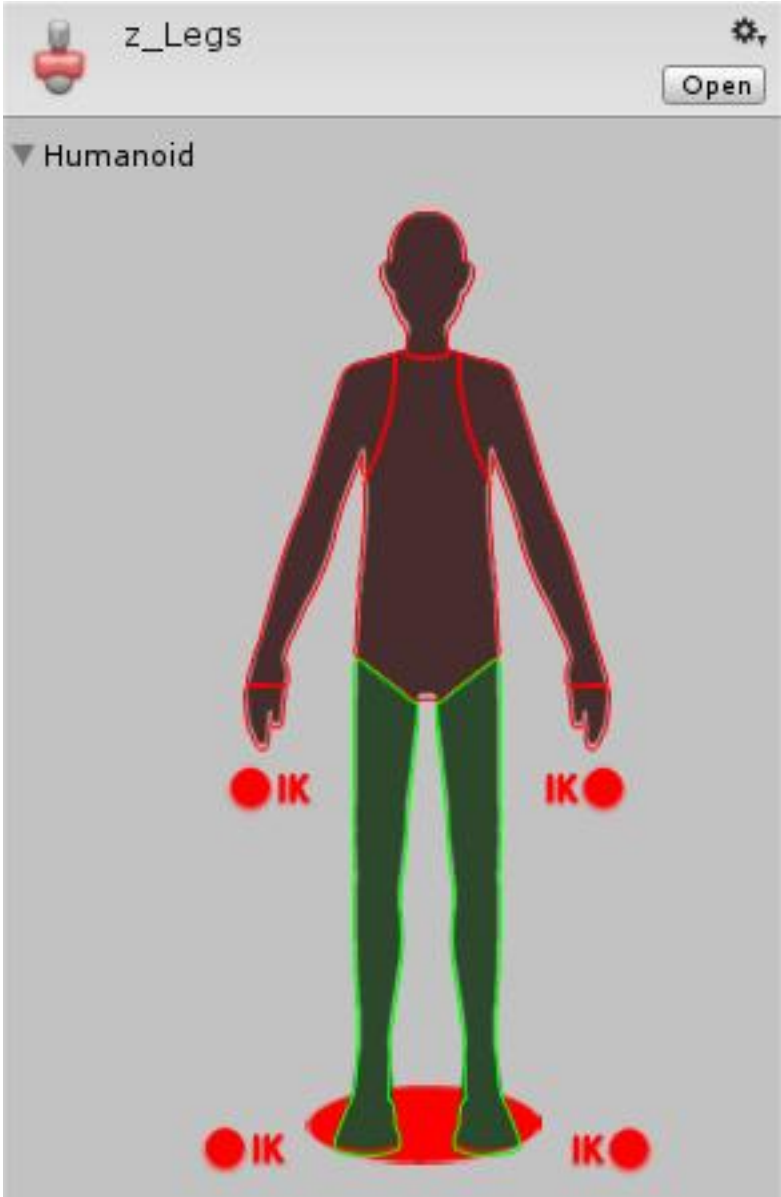


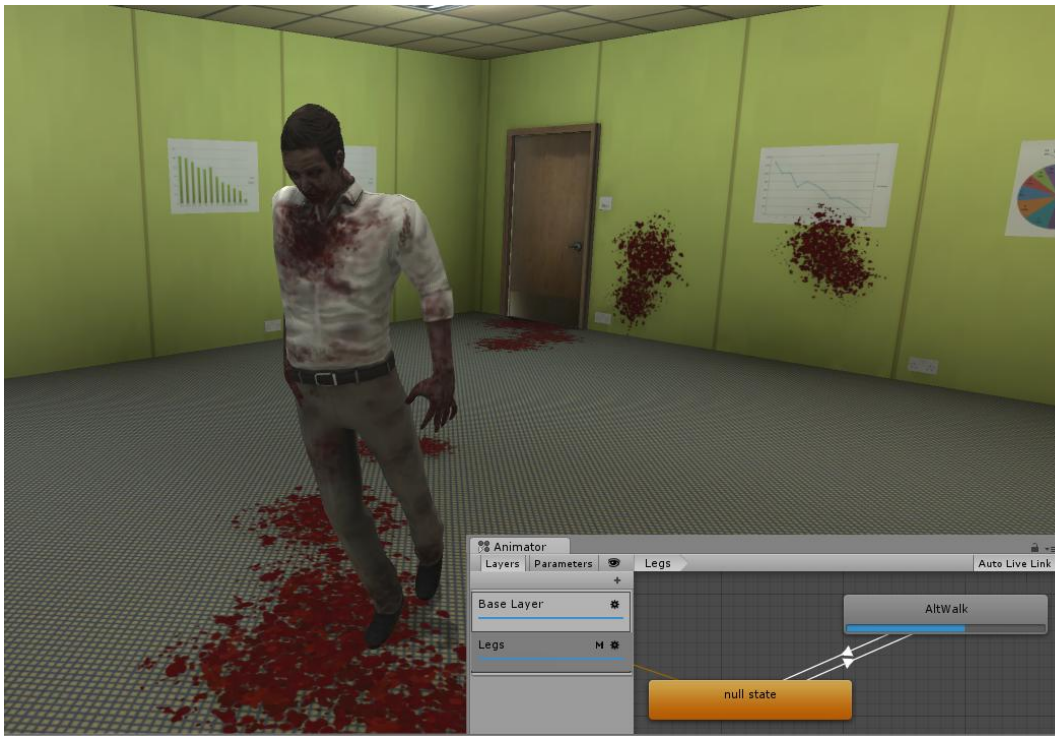
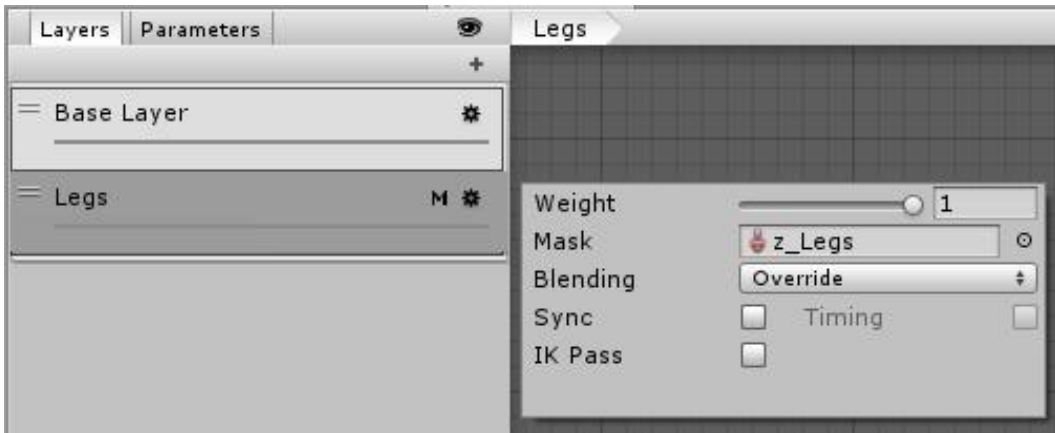
Mapping		Muscles	
<b>Preview</b>	<b>Muscle Group Preview</b>		
<input type="button" value="Reset All"/>	Reset All Preview Values		
<input type="range"/>	Open Close		
<input type="range"/>	Left Right		
<input type="range"/>	Roll Left Right		
<input type="range"/>	In Out		
<input type="range"/>	Roll In Out		
<input type="range"/>	Finger Open Close		
<input type="range"/>	Finger In Out		
<b>Preview</b>	<b>Per-Muscle Settings</b>		
	▶ Body		
	▶ Head		
	▶ Left Arm		
	▶ Left Fingers		
	▼ Right Arm		
<input type="range"/>	▶ Shoulder Down-Up		
<input type="range"/>	▶ Shoulder Front-Back		
<input type="range"/>	▼ Arm Down-Up		
	-41	<input type="range"/>	80
<input type="range"/>	▶ Arm Front-Back		
<input type="range"/>	▶ Arm Twist In-Out		
<input type="range"/>	▶ Forearm Stretch		
<input type="range"/>	▶ Forearm Twist In-Out		
<input type="range"/>	▶ Hand Down-Up		
<input type="range"/>	▶ Hand In-Out		
	▶ Right Fingers		
	▶ Left Leg		
	▶ Right Leg		



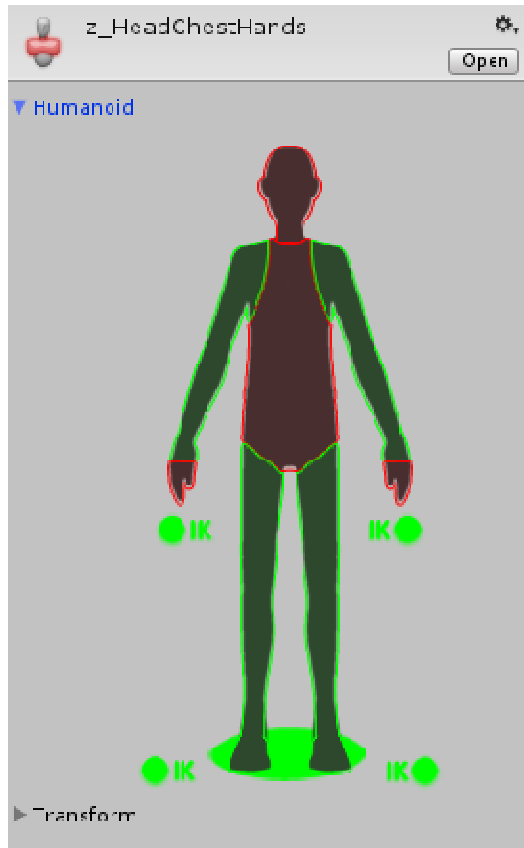
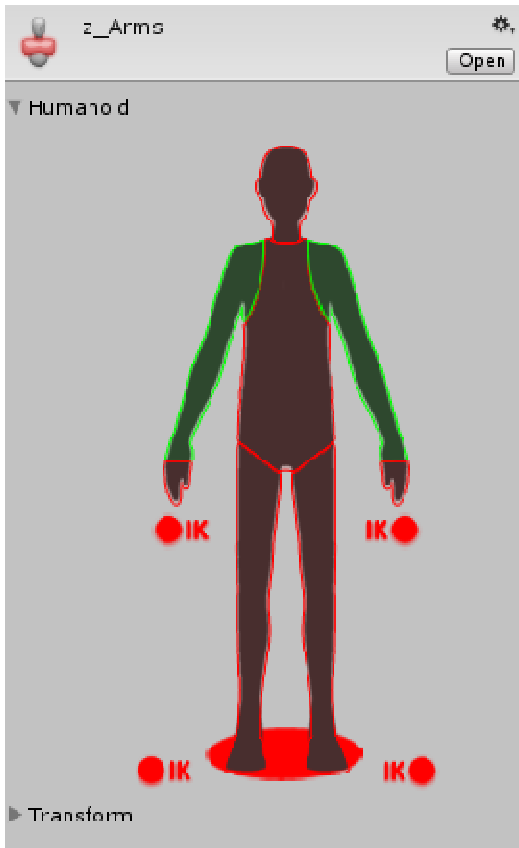




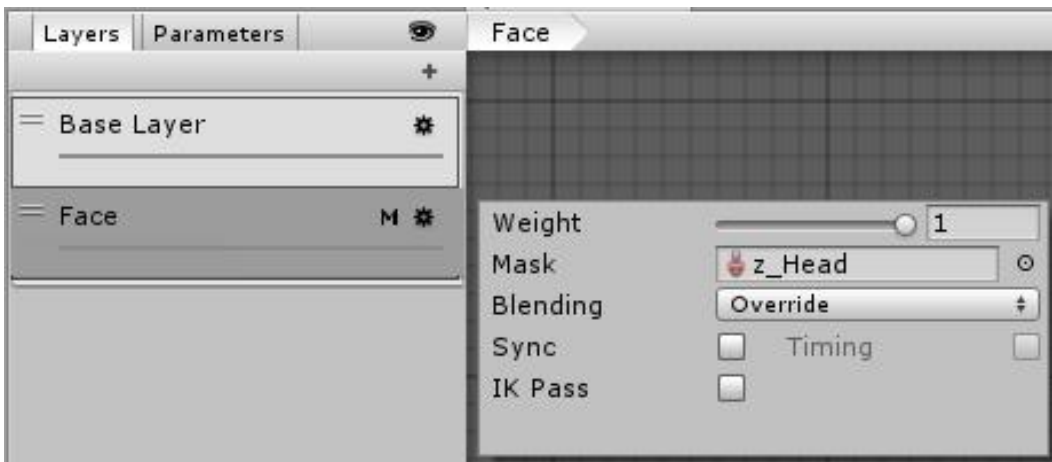


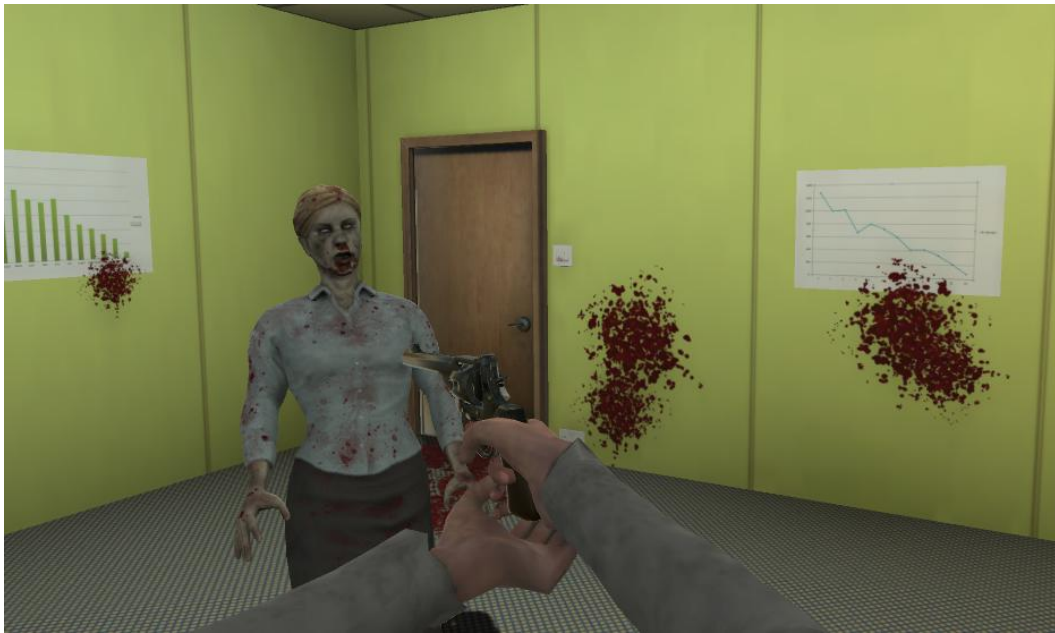
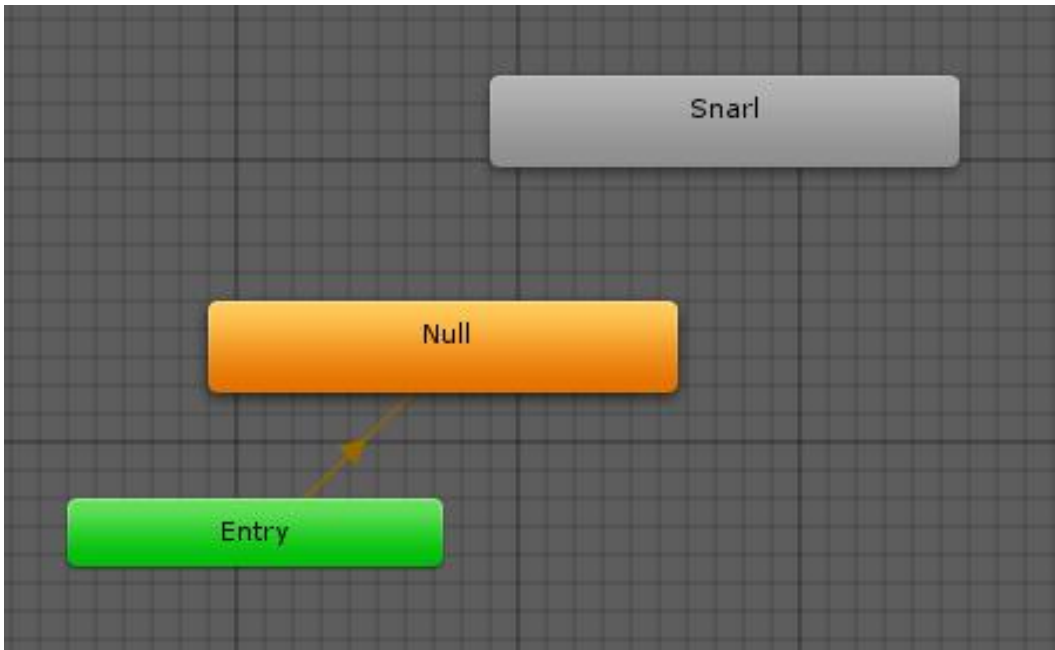


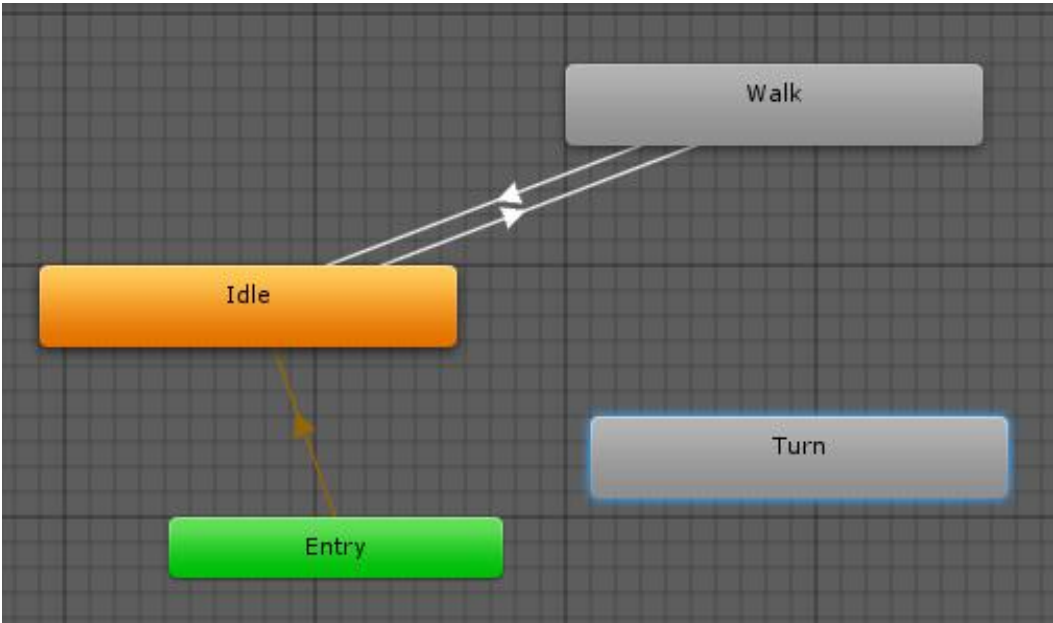




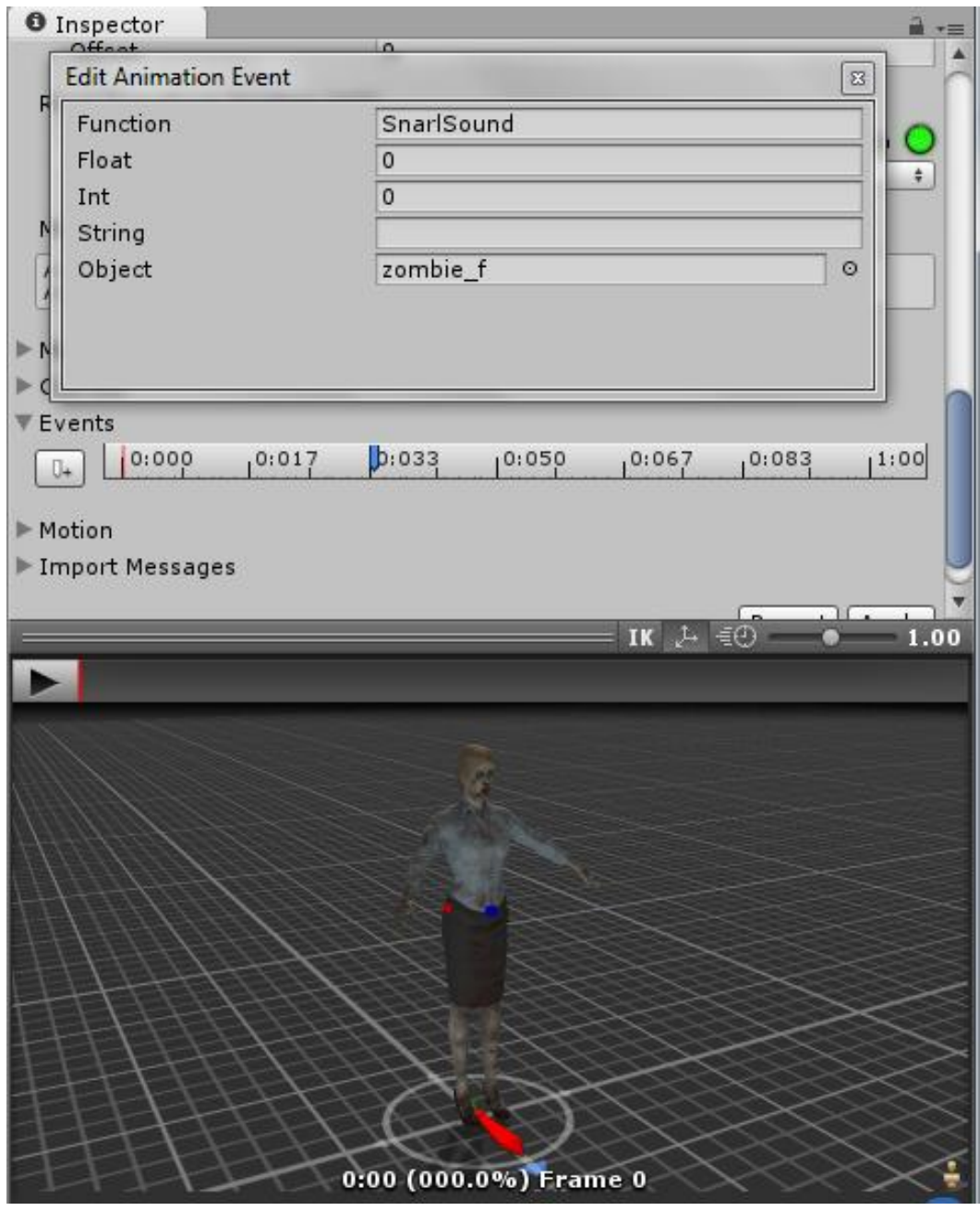
## Chapter 6 – Talking Heads

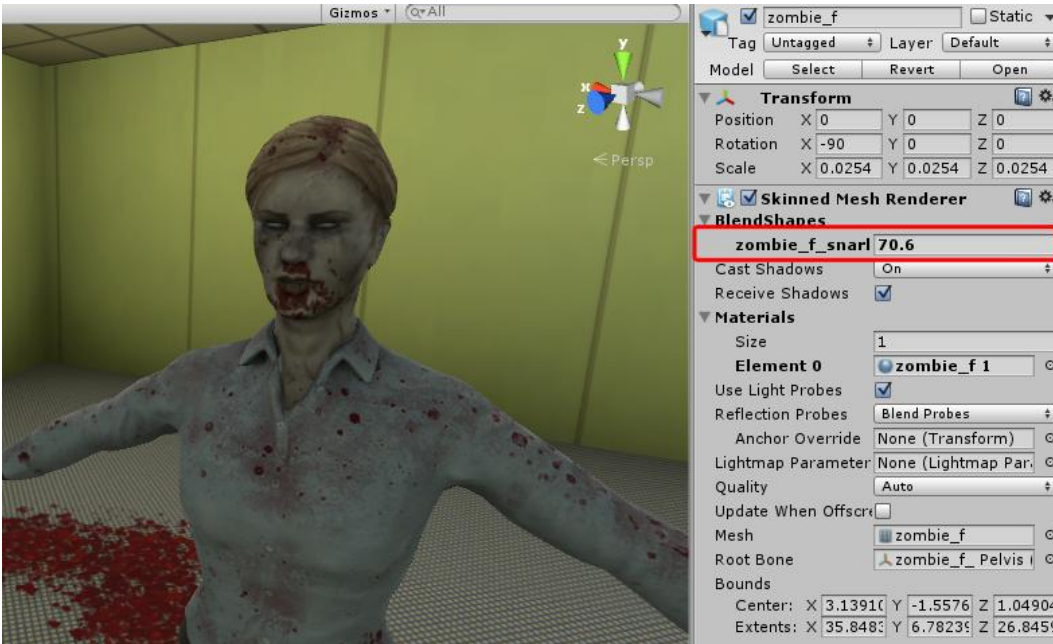


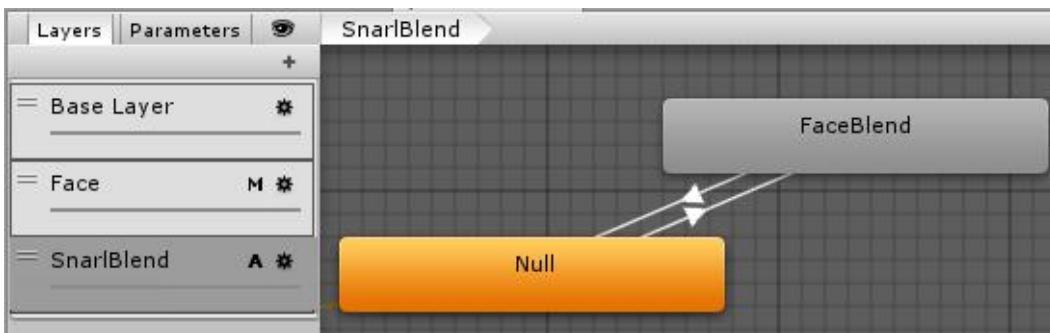
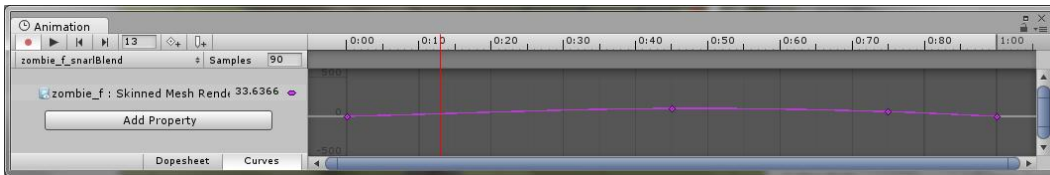
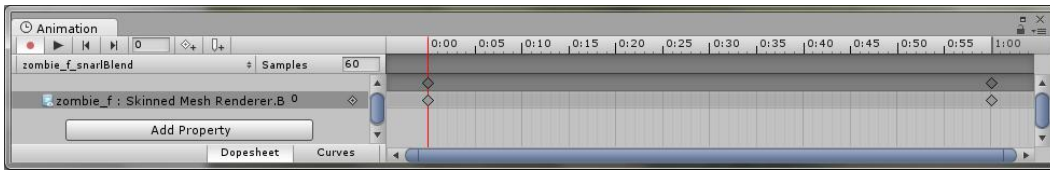






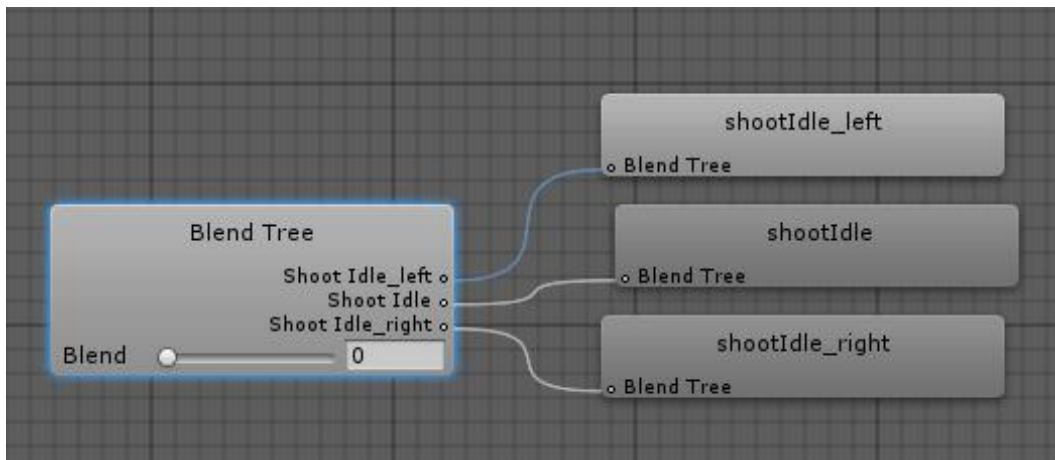
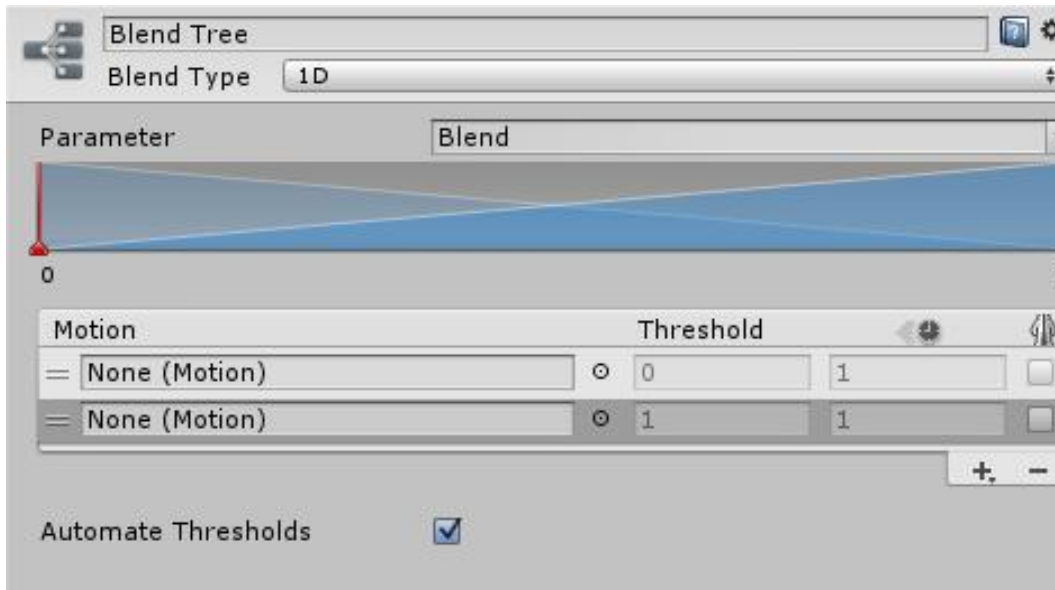


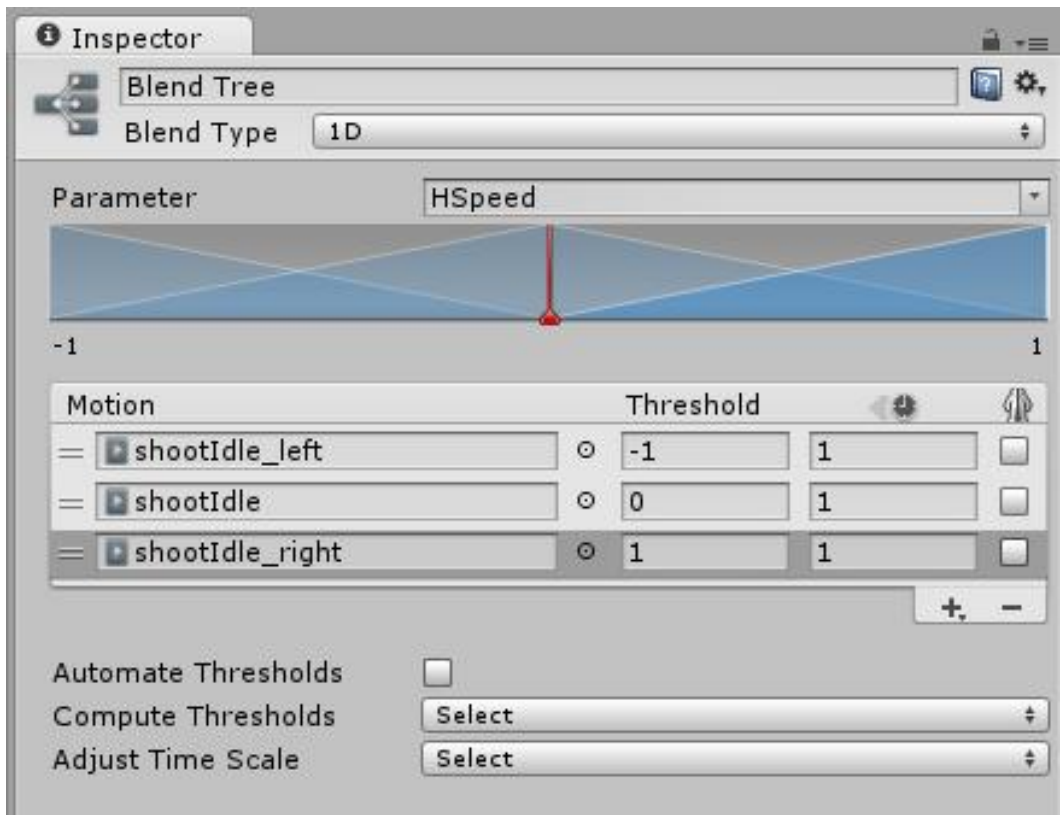


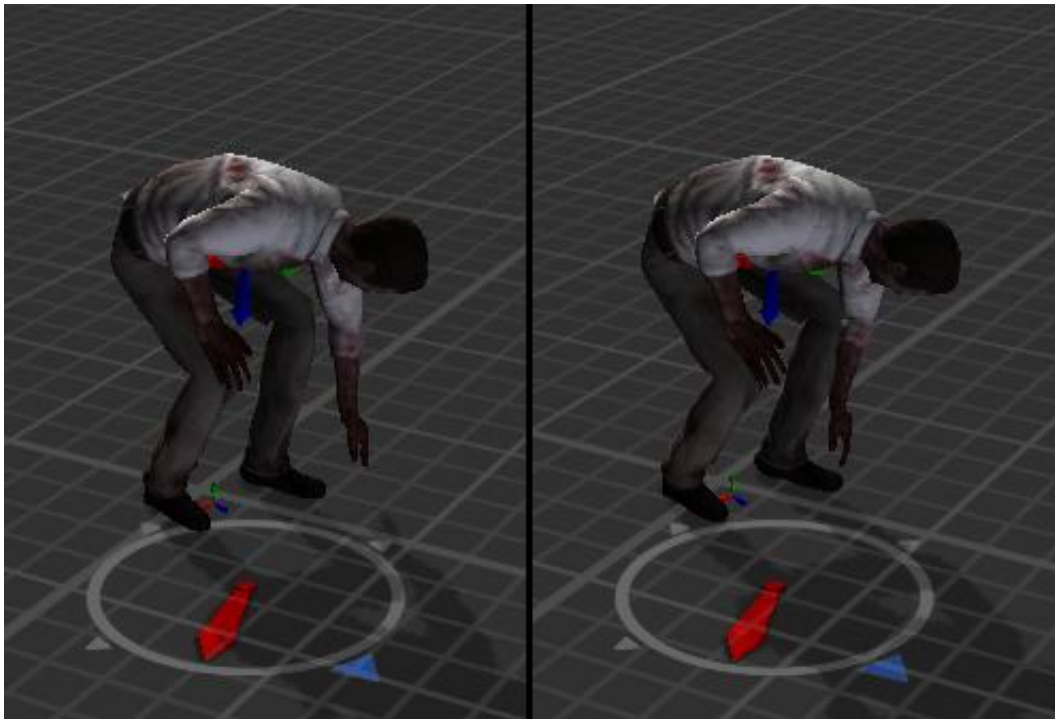
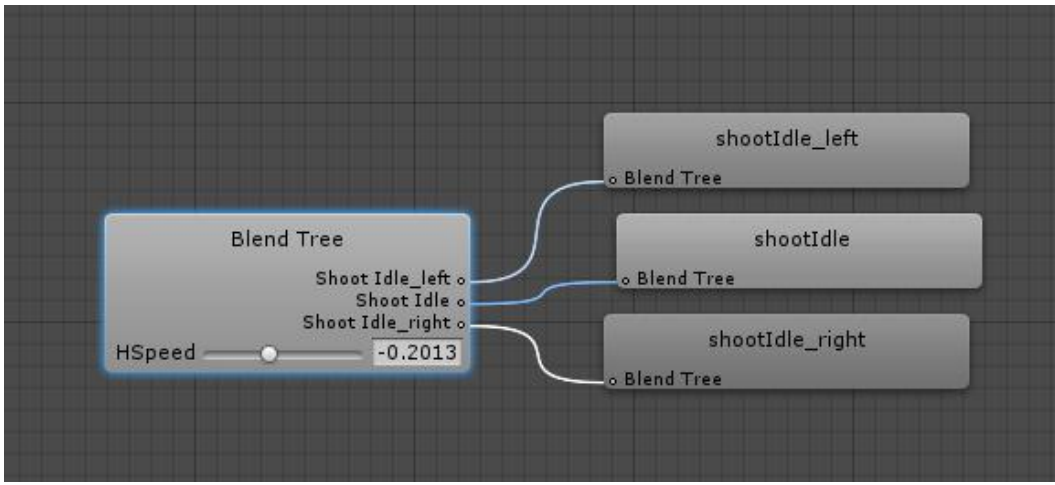


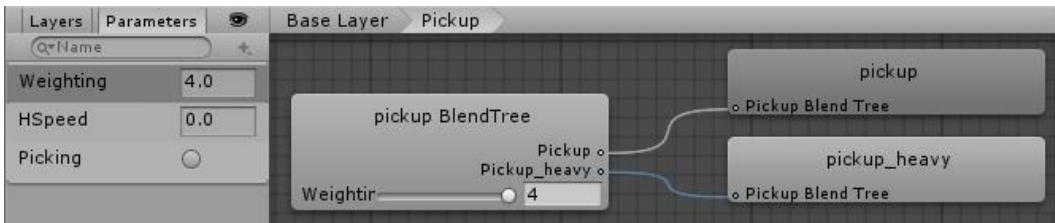
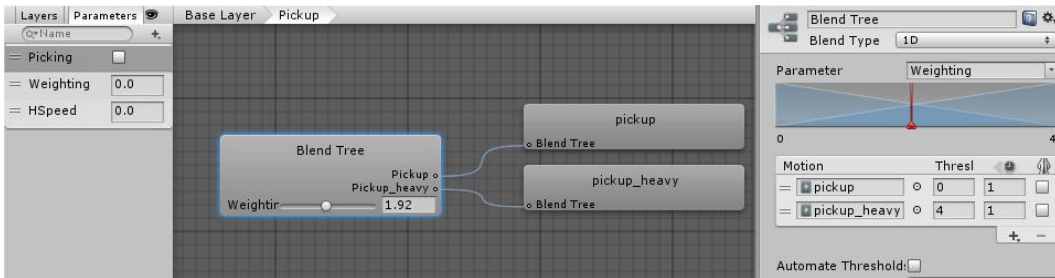


## Chapter 7 – Controlling Player Animation with Blend Trees



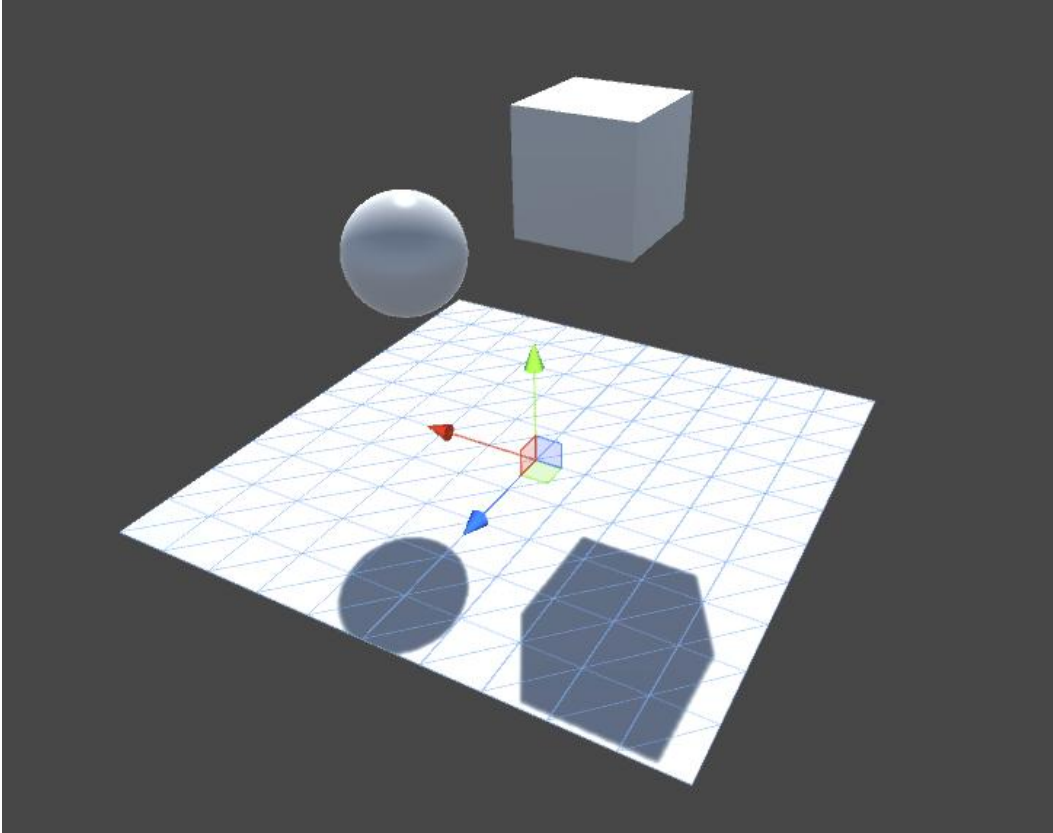


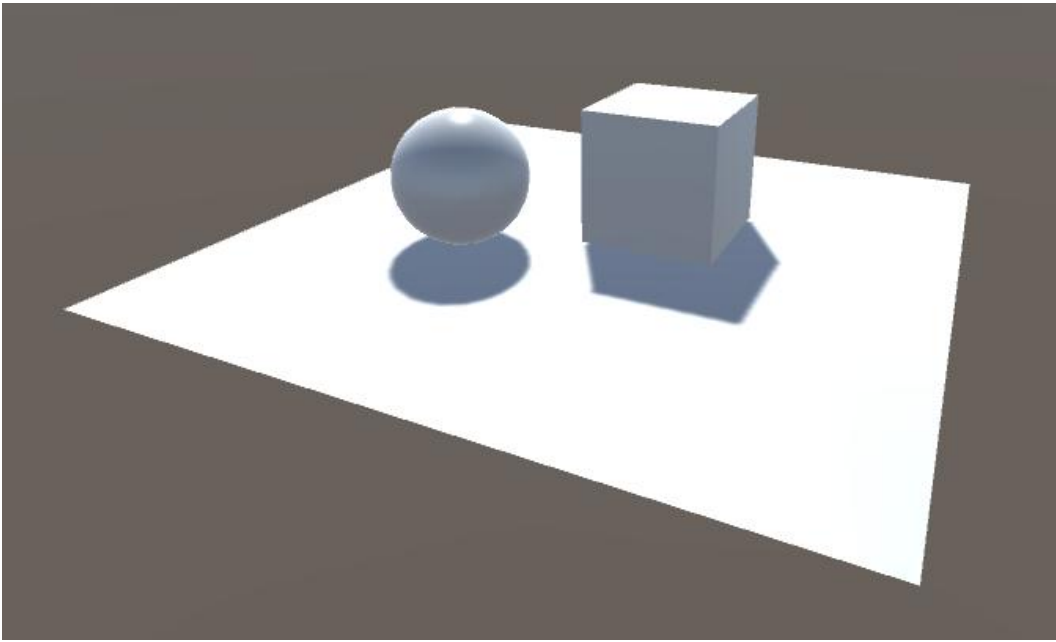






## Chapter 8 – Implementing Ragdoll Physics





**Hinge Joint**

Connected Body:

Anchor: X  Y  Z

Axis: X  Y  Z

Auto Configure Connected:

Connected Anchor: X  Y  Z

Use Spring:

Spring

Spring:

Damper:

Target Position:

Use Motor:

Motor

Use Limits:

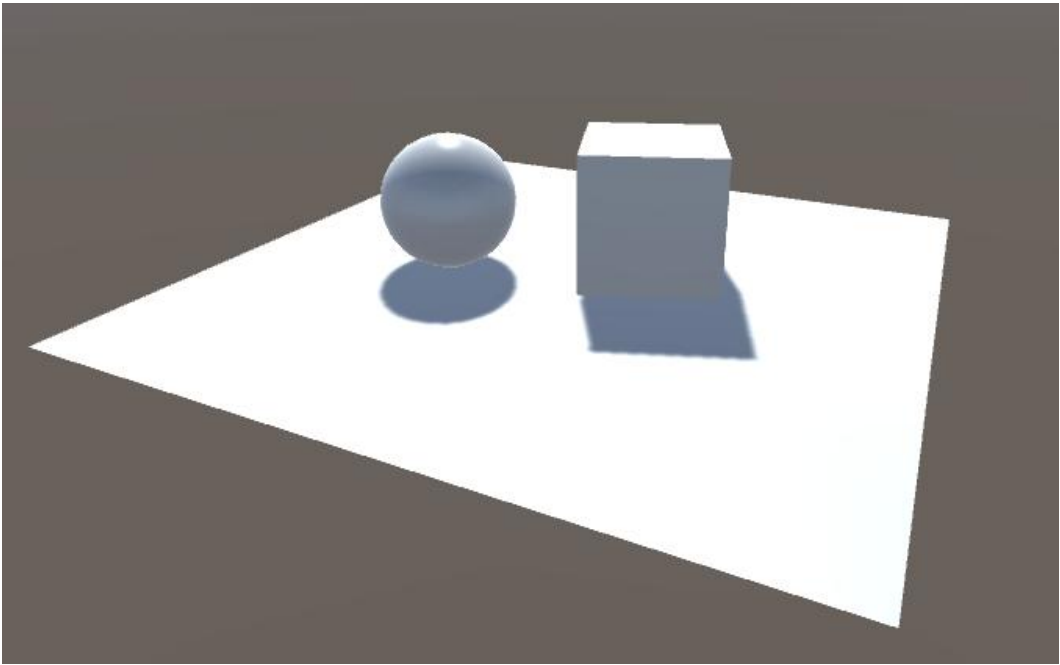
Limits

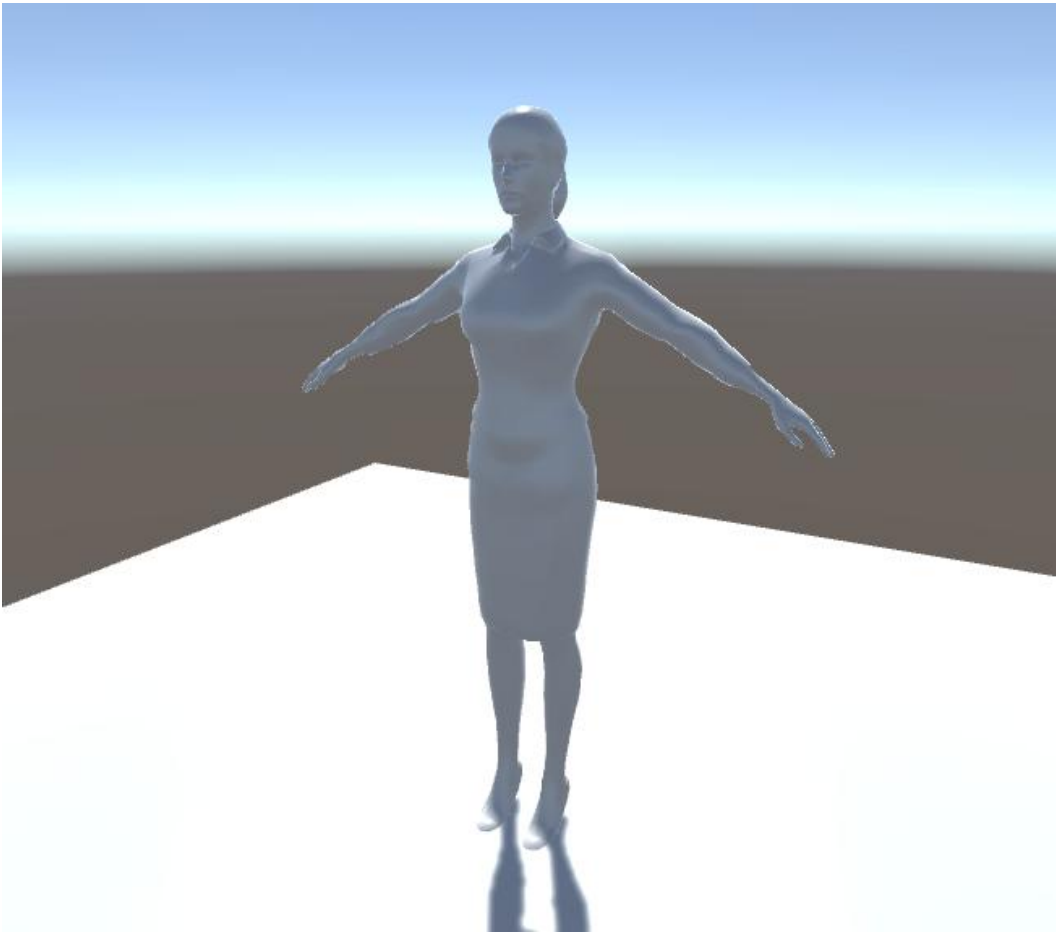
Break Force:

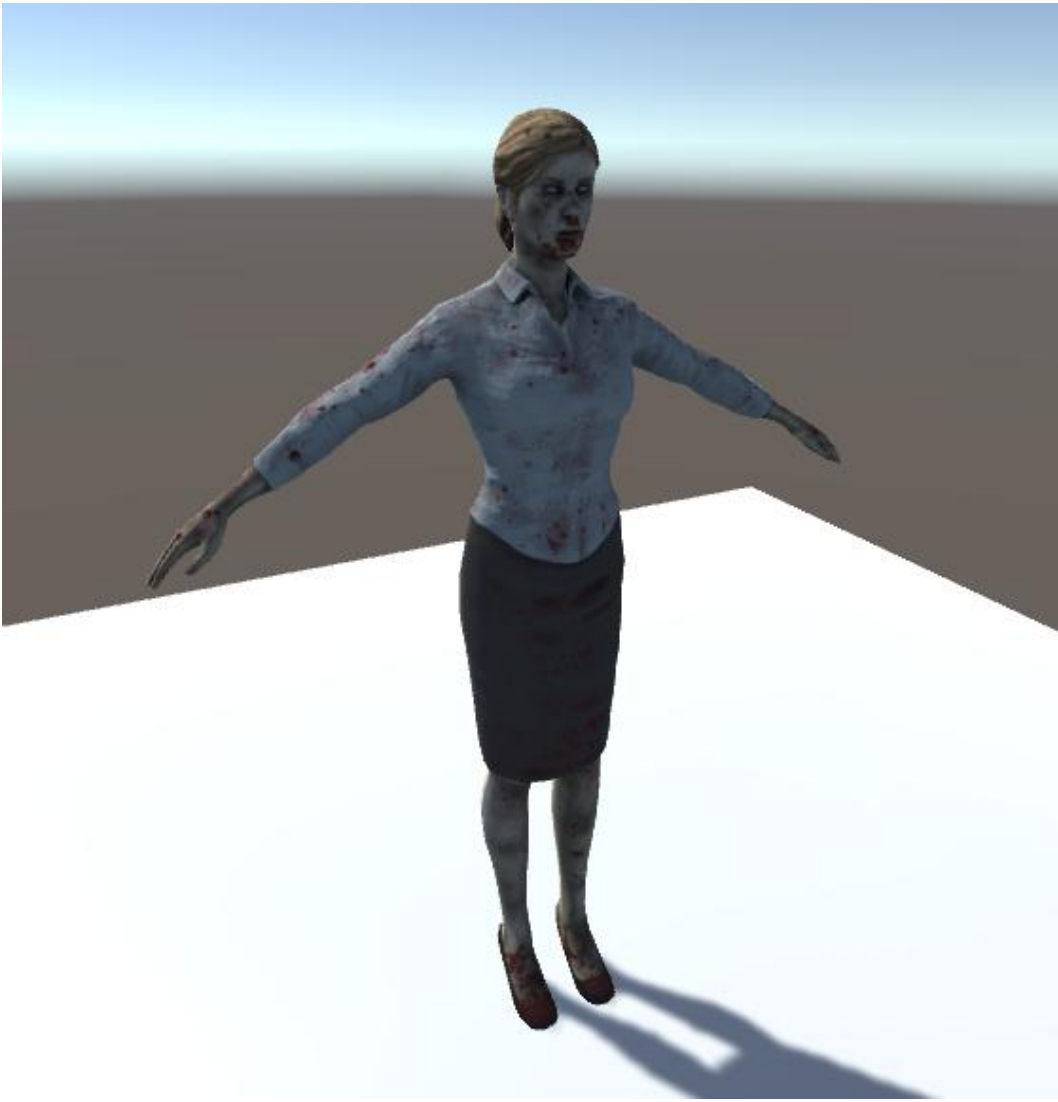
Break Torque:

Enable Collision:

Enable Preprocessing:



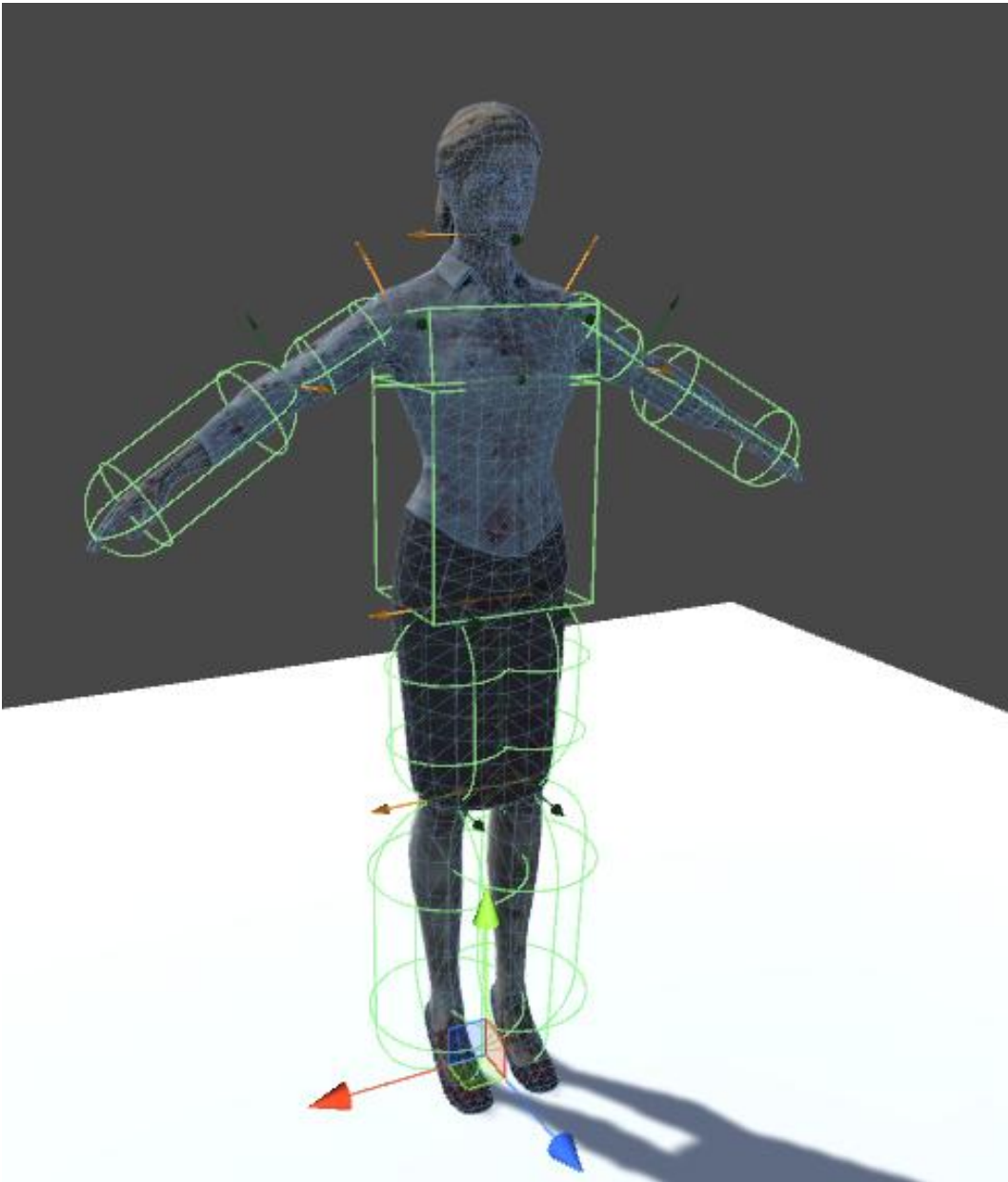




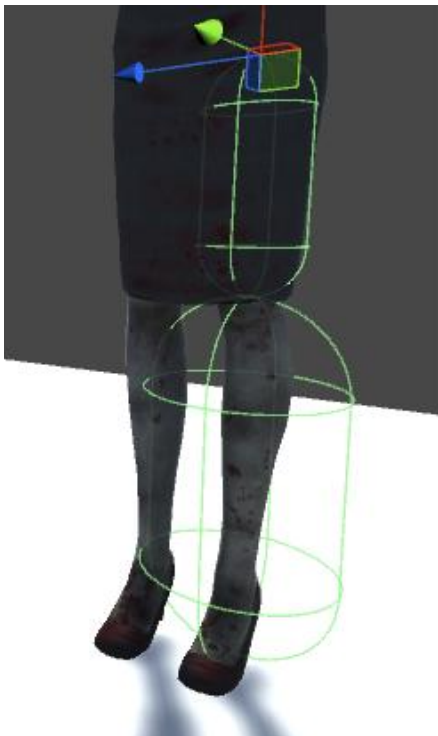
**Create Ragdoll** ✕

Make sure your character is in T-Stand.  
Make sure the blue axis faces in the same direction the chracter is lool  
Use flipForward to flip the direction

Pelvis	<input type="text" value="zombie_f_ Pelvis (Transform)"/>	<input type="radio"/>
Left Hips	<input type="text" value="zombie_f_ L Thigh (Transform)"/>	<input type="radio"/>
Left Knee	<input type="text" value="zombie_f_ L Calf (Transform)"/>	<input type="radio"/>
Left Foot	<input type="text" value="zombie_f_ L Foot (Transform)"/>	<input type="radio"/>
Right Hips	<input type="text" value="zombie_f_ R Thigh (Transform)"/>	<input type="radio"/>
Right Knee	<input type="text" value="zombie_f_ R Calf (Transform)"/>	<input type="radio"/>
Right Foot	<input type="text" value="zombie_f_ R Foot (Transform)"/>	<input type="radio"/>
Left Arm	<input type="text" value="zombie_f_ L UpperArm (Transform)"/>	<input type="radio"/>
Left Elbow	<input type="text" value="zombie_f_ L Forearm (Transform)"/>	<input type="radio"/>
Right Arm	<input type="text" value="zombie_f_ R UpperArm (Transform)"/>	<input type="radio"/>
Right Elbow	<input type="text" value="zombie_f_ R Forearm (Transform)"/>	<input type="radio"/>
Middle Spine	<input type="text" value="zombie_f_ Spine2 (Transform)"/>	<input type="radio"/>
Head	<input type="text" value="zombie_f_ Head (Transform)"/>	<input type="radio"/>
Total Mass	<input type="text"/>	
Strength	<input type="text" value="0"/>	
Flip Forward	<input type="checkbox"/>	







**Rigidbody**

- Mass: 1e-07
- Drag: 0
- Angular Drag: 0.05
- Use Gravity:
- Is Kinematic:
- Interpolate: None
- Collision Detection: Discrete

Constraints


**Character Joint**

- Capsule Collider**

Edit Collider

- Is Trigger:
- Material: None (Physic Material)
- Center: X -7.153, Y 0, Z 0
- Radius: 3.09
- Height: 14.30693
- Direction: X-Axis

Add Component



**Transform**

Position	X	-3.3293	Y	0	Z	-4.5474
Rotation	X	0	Y	1.52587	Z	357.537
Scale	X	1	Y	1	Z	0.99999

**Rigidbody**

Mass: 1e-07  
Drag: 0  
Angular Drag: 0.05  
Use Gravity:   
Is Kinematic:   
Interpolate: None  
Collision Detection: Discrete

Constraints

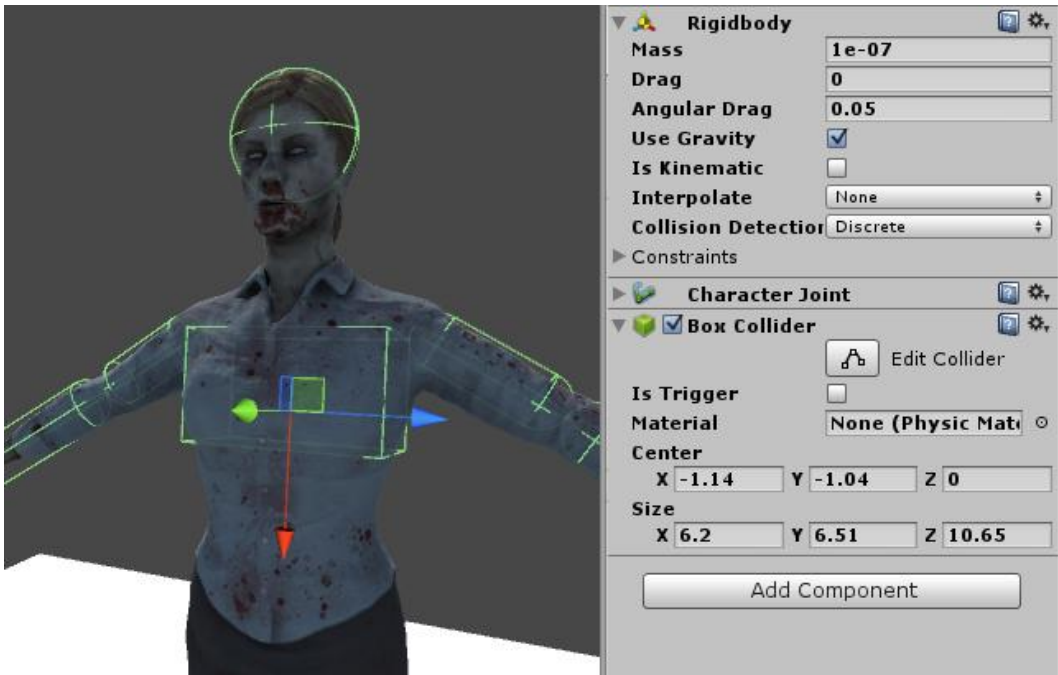
**Character Joint**

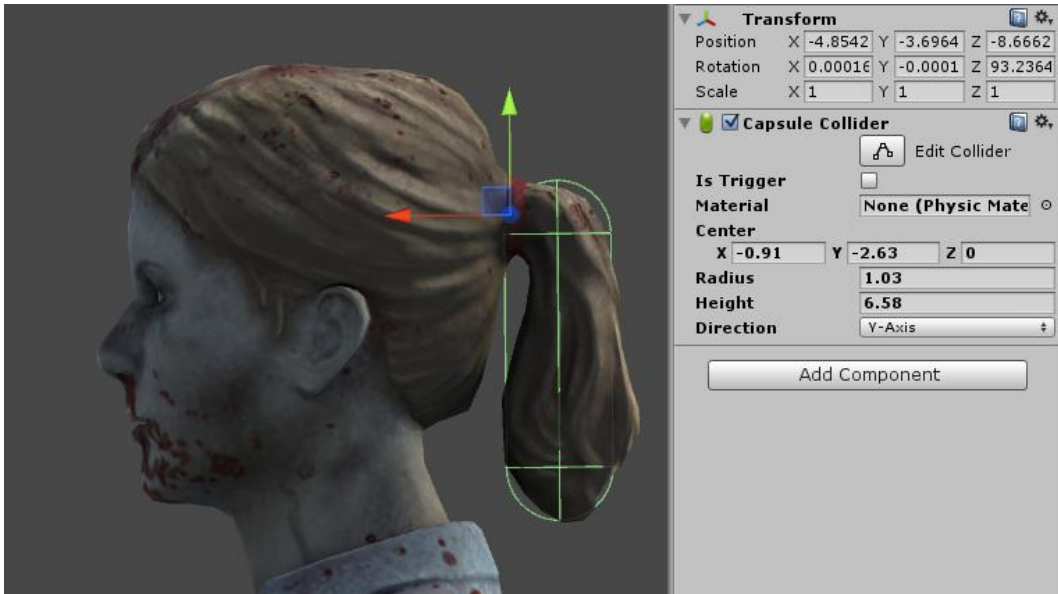
**Sphere Collider**




Edit Collider

Is Trigger:   
Material: None (Physic Mat)  
Center: X -4.92 Y 0.47 Z 0  
Radius: 3.26

Add Component





 **Character Joint**  

**Connected Body**

**Anchor** X  Y  Z

**Axis** X  Y  Z

**Auto Configure Connected**

**Connected Anchor** X  Y  Z

**Swing Axis** X  Y  Z

▶ **Low Twist Limit**

▶ **High Twist Limit**

▶ **Swing 1Limit**

▼ **Swing 2Limit**

**Limit**

**Bounciness**

**Spring**

**Damper**

**Break Force**

**Break Torque**

## Chapter 9 – Controlling Enemy Animation with AI and Triggers



