

Function	Software
Game Engine	Unity 2017.3.0
Character Creation	Adobe Fuse
Character Motion/Rigging	Mixamo.com

Plugin	Function	Documentation
Adventure Creator	Inventory Menus Logic Interaction Speech Cursor Actions Variables Settings	<a href="https://adventurecreator.org/files/Manual.pdf">https://adventurecreator.org/files/Manual.pdf</a>
TextMesh Pro	Text Rendering	<a href="http://digitalnativestudios.com/textmeshpro/docs/">http://digitalnativestudios.com/textmeshpro/docs/</a>
Volumetric Lighting	Volumetric lighting Area lights Tube lights Fog	<a href="https://github.com/Unity-Technologies/VolumetricLighting">https://github.com/Unity-Technologies/VolumetricLighting</a>
Potential Above-Ground Volumetric Lighting	Maybe Fog	<a href="https://github.com/SlightlyMad/VolumetricLights">https://github.com/SlightlyMad/VolumetricLights</a>
ProCore Bundle	Mesh Creation?Editing Grids in Unity Grouping Quickediting	<a href="http://procore3d.github.io/probuilder2/">http://procore3d.github.io/probuilder2/</a>

## Key Development Procedures

### *Character Creation*

1. Login to Creative Cloud on your computer
2. Open Fuse and create your character
3. Don't forget to fiddle with the textures and remove as much of the stock look as possible :D
4. Open in mixamo
5. Add rig for body and face default settings
6. Go to the animations tab and choose a t-pose

## 7. 3DS MAX EDITS

- a. Click to download character as a normal FBX if you are going to add elements in 3DS max

**DOWNLOAD SETTINGS**

Format	FBX(.fbx)	Skin	With Skin
Frames per Second	30	Keyframe Reduction	none

- b. If you are editing in 3ds max, open character in 3ds max and add items to individual places of the mesh and make sure they are attached/grouped properly so that they work with the existing rig
- c. Next step, go to Mixamo and UPLOAD the FBX you have created in 3ds max to mixamo and then download it again as an FBX for unity

## 8. No 3DS MAX EDITS

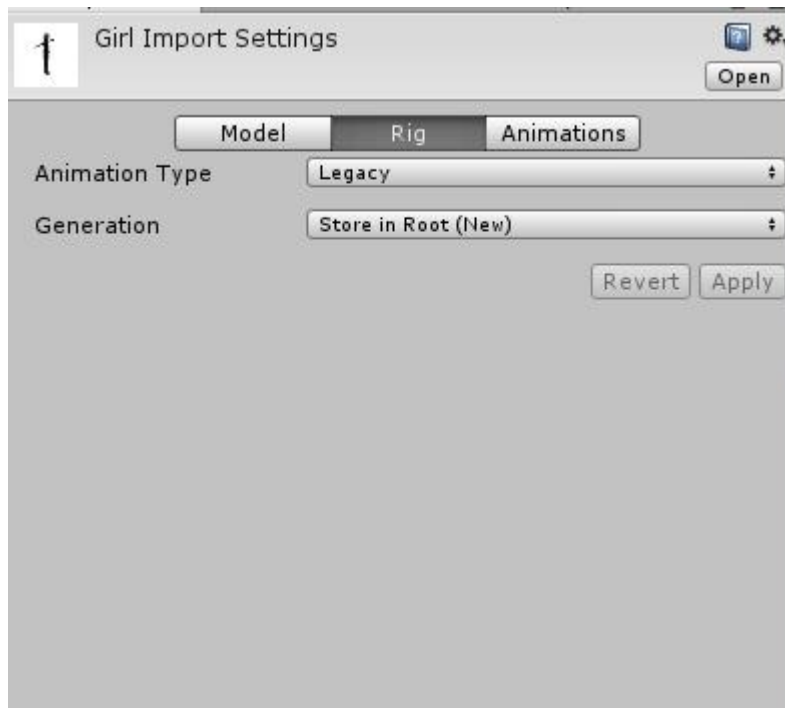
- a. If you are going to add this character to unity as is, export as FBX for Unity

**DOWNLOAD SETTINGS**

Format	FBX for Unity(.fbx)	Skin	With Skin
Frames per Second	30	Keyframe Reduction	none

b.

9. Add your character FBX to the scene with the following settings:



- a.
  - b. Click apply
10. Go to the Adventure Creator > Character Wizard
    - a. Select legacy for the animation
  11. Create character

##### when making changes on the fly in game mode you can copy and paste the component via the cog #####

#### 1. Organise Managers

Adventure Creator > Getting Started > Load 3D Demo Manager

#### 2. Create New Game Manager

File > New Scene...

Adventure Creator > Getting Started > New game wizard

Follow dialog to set up game

3. Navigate to '3D Game' folder in the Project window > click on Manager Package > ...

Inspector > Assign Managers

4. Open Scene > Organise Models/Prefabs into \_SetGeometry folder && Lights into \_Lights folder

5. Set starting position of Player Start

6. Set NavMesh to set parameters of where Players/characters can move

Select - TutorialFiles > evilLair > Set > EvilLair\_NavMesh

In Game Editor db-click NavMesh tab. New NM will be created in hierarchy > Drag from hierar to default NM in Game editor

Drag Assets/EvilLair\_NavMesh > Inspector - Mesh Collider/Mesh && Mesh Filter/Mesh (Fix Transform in Inspector!!!)

\*You can hide the NavMesh now by GameEditor/Scene/visibility...click off

#### 7. Set player model/prefab

Drag player from Assets > AC Game Editor/Settings/Player:

Player will fall through the floor due to no gravity - so...

8. Place a floor down - Use collision cube prefab > Rename to floor - Lower it to  $y = -0.5$  stretch over whole scene

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### Creating Model From Scratch

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1. Drag model/prefab into Hierarchy
2. Add component > Rigidbody (to make use of physics)
3. Add component > Capsule collider resize collider
4. Add component > type player in form to add script && assign animations from Assets/Prefab to Inspector anim fields
5. Add bone transforms from the (expand) Player prefab in Hierarchy. Drag onto Inspector slots

Make it a prefab by dragging it into your 'Game' dir in the project window

Then Drag new prefab from Assets to AC GameEditor/Settings > player slot

Delete instance of player from the scene hierarchy

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### Game Camera to follow player

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AC Game Editor > Scene tab > Default camera slot - create

Move to similar position and the original camera

Select new NavCam1 in the hierarchy and go to Inspector

In the GameCamera Script have a play with the x, y and z-axis (Uncheck lock box)

...in this case set x-axis to suit (Offset 3)

...also set Spin Location similarly (height 1.6, z-offset 1.3)

...Field Of View - change offset to -20 to move closer to player target

...Target object follow speed 1.1

...Constrain x-axis to stop character moving out of shot

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### Using Triggers - Cameras

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1. create new camera in AC Game Ed

2. Create new trigger in AC Game Ed - move to desired transform/space

Trigger properties in Inspector 'When Running' - Run in BG

Inspector > Camera Crossfade...

Action Type: Camera + Switch

Drag NavCam2 into New Camera slot

Transition time: Custom curve

Set/ply with the cameras properties like section above

\* Triggers cannot be duplicated so to switch camera 2->1 create a new trigger/copy transform/ slightly reposition...

copy and 'Paste After' details to new trigger - delete old trigger above

Add Scirp component Remember Trigger to SwitchCam1->2 to make sure this is set to ON

Add Scirp component Remember Trigger to SwitchCam2->1 to make sure this is set to OFF

Need to change info on the SwitchCam node editor in hierarchy => Click Node in 1->2

Action Type: Object : Send message - Drag in 1->2 Turn OFF

Action Type: Object : Send message - Drag in 2->2 Turn ON

Copy and Paste into other Cam Node and reverse the Turn OFF and ON fields

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## Hotspots and Interactions

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### LIFT DOORS

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1. In 3D Game folder create a Controllers folder
2. Inside folder create an Animator Controller
3. Select Lift in hierarchy and drag Lift Controller into the Inspector Animator Controller slot
4. Drag Lift animations from the Prefab to the Animator window
5. Animator window - Set Lift doors shut to default state by right click
6. Create Int parameter for each state - call it State 0  
Create transitions from 'Any State' in the Animator window to each animation  
Click arrow on transition to Set the State Condition in the Inspector [also click settings and uncheck Can Transition to Self]

### CREATE HOTSPOT FOR DOORS

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1. Create hotspot in AC Game Ed > Name it in the hierarchy
2. Position and resize etc
3. Add Highlight Script on Lift Object in Hierarchy -  
Select LiftDoors Hotspot and Drag Lift into Inspector script slot  
Under that field Create a walk-to marker and position it (set Y-axis to 0) + rotate arrow to door

### CREATE INTERACTIONS FOR DOORS

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1. In Hierarchy > LiftDoors ... Inspector click Use Interactions to a couple of them  
Set first Cursor: Use ---- Player Action: Walk To Marker  
Second Cursor: Look At --- Player Action Turn To Face
2. 'Look At' interaction in Node editor > Action Type: Dialog > Play Speech  
Check Player Line? box
3. 'Use' interaction in Node editor  
Create a simple Camera in the Ac Game Ed - cll 'LiftCam' - click add new  
Position to face the lift doors  
AC Game Ed - Create a new Marker 'Inside Lift'  
Move it to inside the lift doors and rotate to face into the Scene  
In hierarchy/Interaction/Lift doors > click node  
In the AC Action List:  
0: Action Type - Camera & Switch  
Drag LiftCam into Camera slot  
1: Action Type - Object & Animate  
Anim Eng: Mechanim  
Animator: Lift  
Param to affect: State  
Set as Val: 1  
After running: Continue  
2: Action Type - Engine & Wait  
Wait time: 0.6  
After running: Continue

- 3: Action Type - Character & Move To Point  
 Marker to reach: Inside Lift [Drag over marker]  
 Is Player: check box  
 \*\* Uncheck pathfind because lift are is outwith the floor NavMesh \*\*  
 Check 'wait until finish'  
 After Running: stop
- 4: Copy and Paste #2 but change 'Set as Val: to 2'
- 5: Action Type: Camera & Fade  
 Check 'wait until finish'  
 rest of fields - default settings
- 6: Action Type: Engine & End Game  
 Command: Quit Game

Hotspots for laser Gun

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Repeat process 1,2,3 as for LiftDoors Hotspots  
 Create a Simple Cam in AC Game Ed and position it.  
 Duplicate it and decrease 'Field of view' a little bit for tighter camera angle  
 Set LaserGun Interactions - Good for setting multiple cameras on an object

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1. Select LaserGun: Look At node
2. In ActionList Editor...
  - 0: Action Type > Camera & Switch  
 New Camera: Drag in LaserCam1
  - 1: Action Type > Camera & Switch  
 New Camera: Drag in LaserCam2  
 Transition: 10  
 Uncheck > Wait Until finish
  - 2: Action Type > Engine & Wait  
 Wait time: 1
  - 3: Action Type > Dialogue & Play Speech  
 Check Player Line  
 Enter text
  - 4: Action Type > Camera & Switch  
 Check > Return to last gameeplay

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Creating an NPC

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1. Drag NPC Model/Prefab into hierarchy
2. Goto Inspector > If NPC not freee moving the Uncheck 'Apply Root Motion'
3. Select NPC Model/Prefab in Assets and Inspector /Rig > Select type of Anim Type
4. Create a Controller for NPC in Controllers folder  
 Select Model in Hierarchy > Assign new controller to Inspector Controller Slot
5. Drag your animations from your NPC model to the Animator window then...  
 set your Params (in the case of AC NPC it is a trigger)
6. On the NPC root game obj in Hierarchy, Add NPC scripot component > Set Anim Eng to Mechanim
7. To tidy up - MOve The root object into the NPC dir in the hierarchy

## For Interacion with NPC

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1. In AC Game Ed - Create a HOTSPOT for the NPC > resize and postion it
2. Add a highlight script to the NPC model (sub-level of the root obj in hierarchy)
3. Drag NPC model from hierarchy in to NPC HOTSPOT 'Object to highlight' field in the Inspector

Also, click create to add a 'Walk to Marker' to the NPC Hotspot  
Postion it to where you want player to stop/interact with NPC