Technical Documentation for Jumping Robot

SUMMARY

Executive Summary

- This document serves as the technical documentation for Buggy Factory, consisting of following contents
  1. Code Repository
  2. Unity Prefabs
  3. Unity Scripts and Project Structure

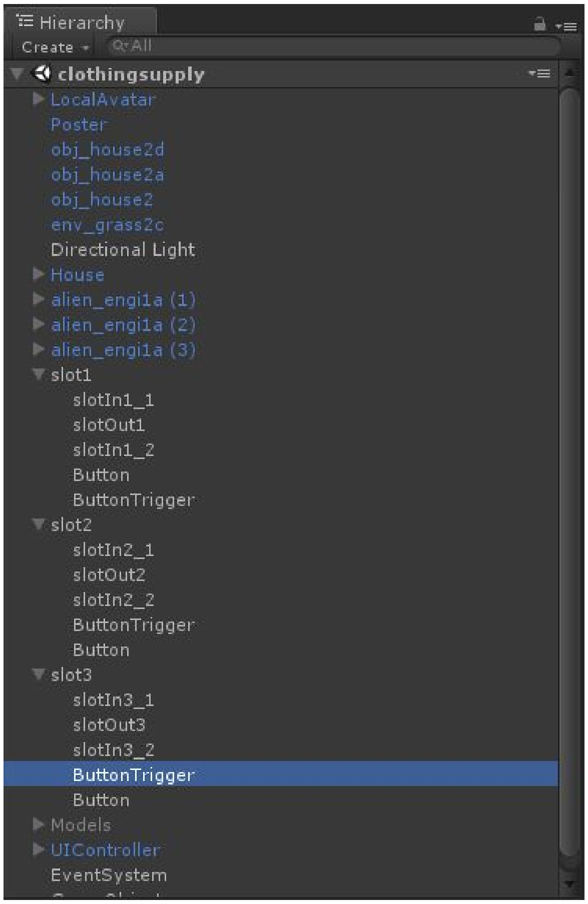
CONTENT

Code Repository

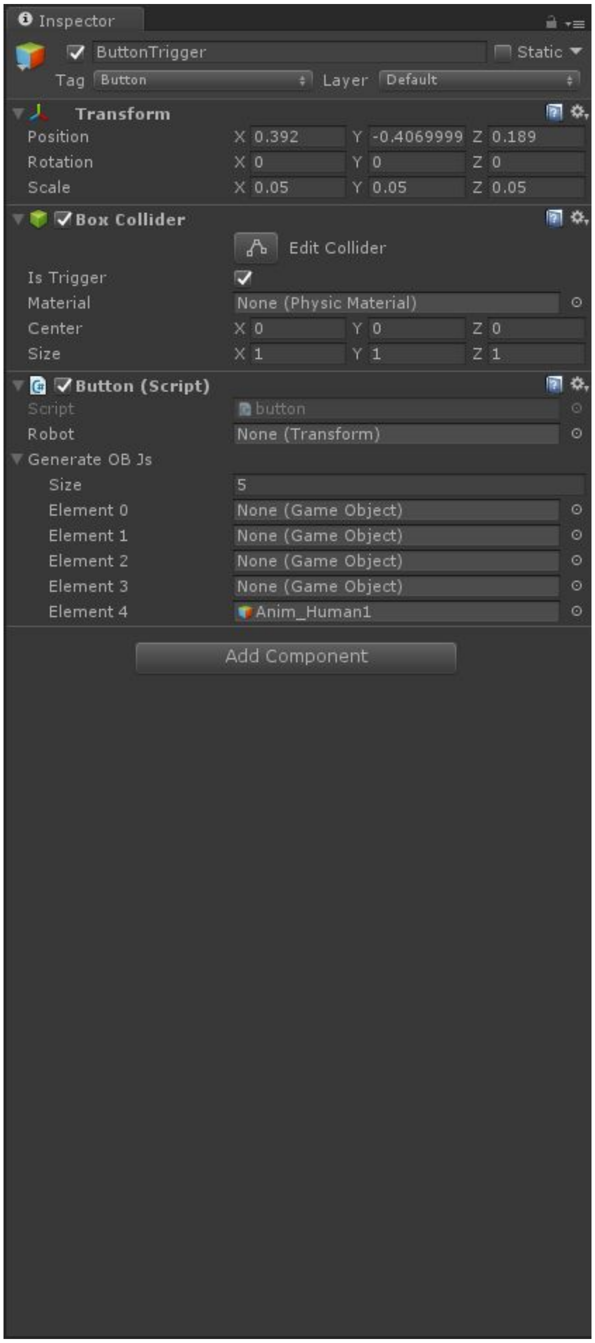
- We use github as our code repository, which can be found at https://github.com/NickGod/Prototype_BuggyFactory.git.

Unity Prefabs/GameObjects

- This project has following prefabs/gameObjects.



```
clothingsupply
  LocalAvatar
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
  alien_engi1a (1)
  alien_engi1a (2)
  alien_engi1a (3)
  slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
  slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
  slot3
    slotIn3_1
    slotOut3
    slotIn3_2
    ButtonTrigger
    Button
  Models
  UIController
  EventSystem
```



Inspector

☑ ButtonTrigger □ Static

Tag Button Layer Default

Transform

Position	X	0.392	Y	-0.4069999	Z	0.189
Rotation	X	0	Y	0	Z	0
Scale	X	0.05	Y	0.05	Z	0.05

☑ Box Collider

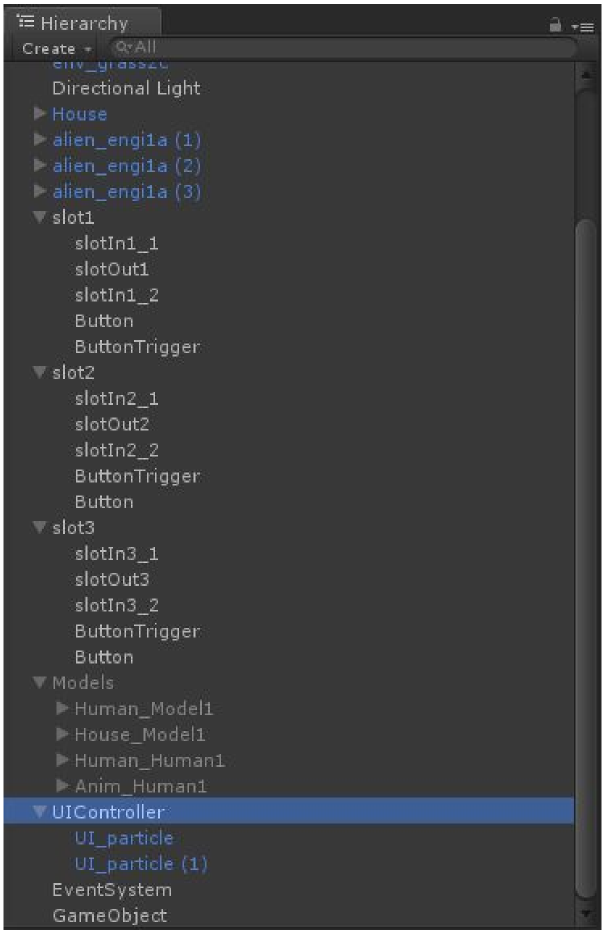
Edit Collider

Is Trigger	☑					
Material	None (Physic Material)					
Center	X	0	Y	0	Z	0
Size	X	1	Y	1	Z	1

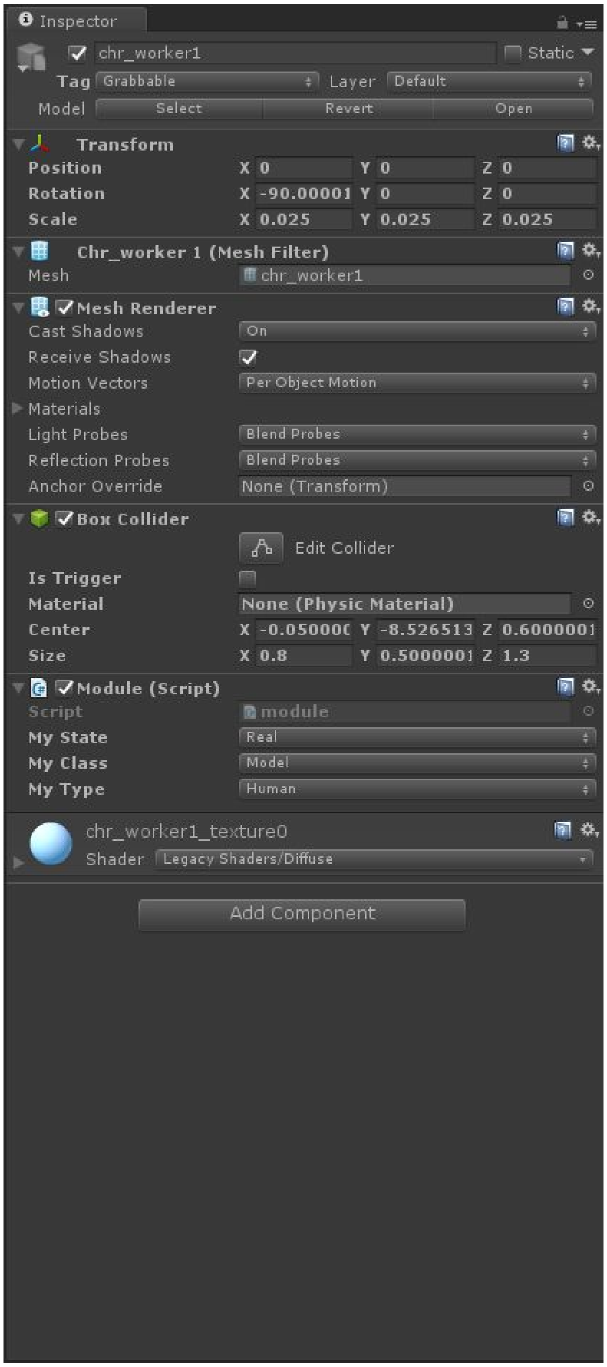
☑ Button (Script)

Script	button
Robot	None (Transform)
Generate OB Js	
Size	5
Element 0	None (Game Object)
Element 1	None (Game Object)
Element 2	None (Game Object)
Element 3	None (Game Object)
Element 4	Anim_Human1

Add Component



```
  env_grass2c
  Directional Light
▶ House
▶ alien_engi1a (1)
▶ alien_engi1a (2)
▶ alien_engi1a (3)
▼ slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
▼ slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
▼ slot3
    slotIn3_1
    slotOut3
    slotIn3_2
    ButtonTrigger
    Button
▼ Models
  ▶ Human_Model1
  ▶ House_Model1
  ▶ Human_Human1
  ▶ Anim_Human1
▼ UIController
    UI_particle
    UI_particle (1)
  EventSystem
  GameObject
```



☑ chr_worker1 □ Static

Tag: Grabbable Layer: Default

Model

Transform

Position X 0 Y 0 Z 0

Rotation X -90.00001 Y 0 Z 0

Scale X 0.025 Y 0.025 Z 0.025

Chr_worker 1 (Mesh Filter)

Mesh: chr_worker1

☑ **Mesh Renderer**

Cast Shadows: On

Receive Shadows: ☑

Motion Vectors: Per Object Motion

Materials

Light Probes: Blend Probes

Reflection Probes: Blend Probes

Anchor Override: None (Transform)

☑ **Box Collider**

Is Trigger: □

Material: None (Physic Material)

Center X -0.050000(Y -8.526513 Z 0.6000001

Size X 0.8 Y 0.5000001 Z 1.3

☑ **Module (Script)**

Script: module

My State: Real

My Class: Model

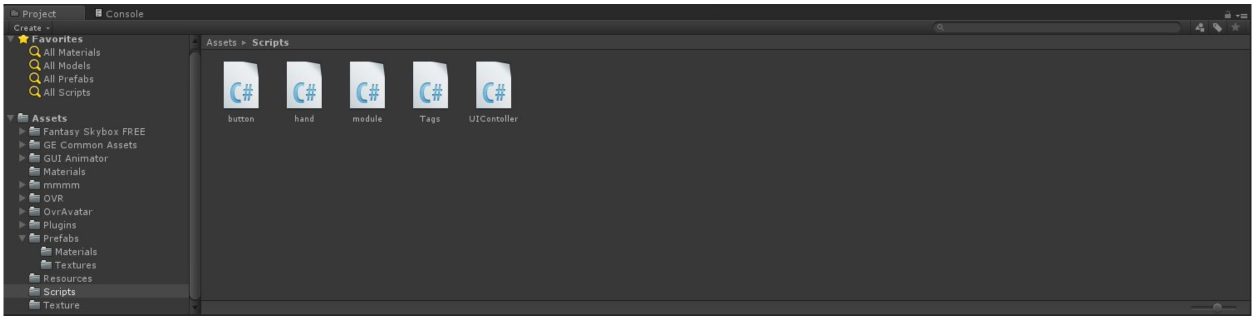
My Type: Human

chr_worker1_texture0

Shader: Legacy Shaders/Diffuse

Unity scripts and Project Structure

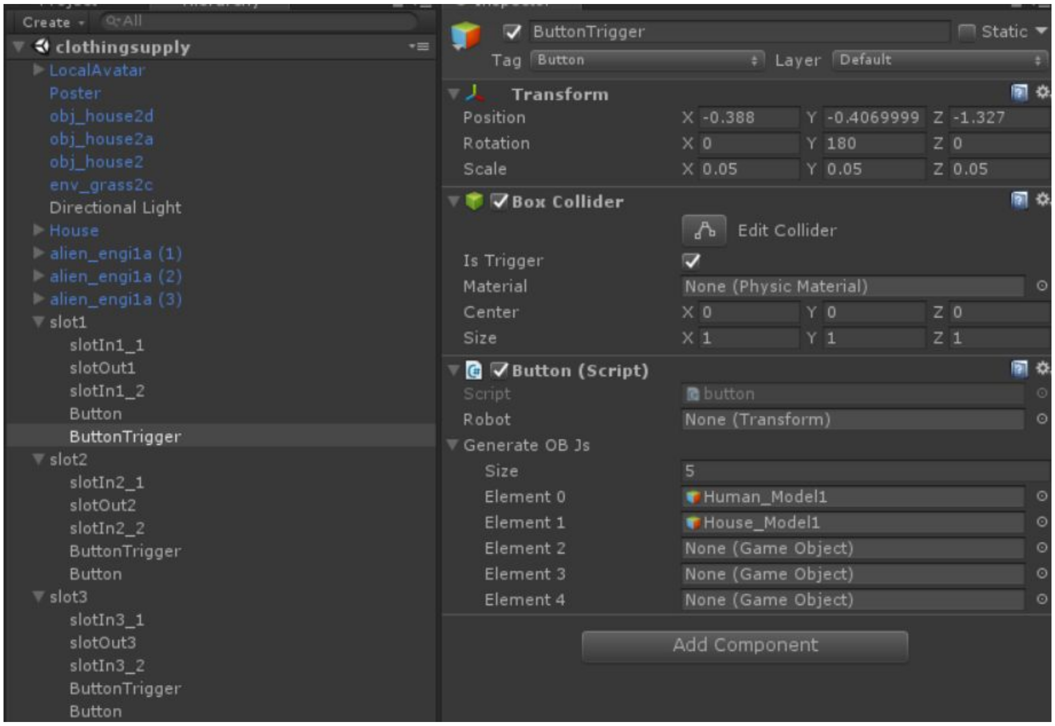
- The Unity project follows the following structure



(high level description of project structure and scene structure)
Scripts folder has all the code we have, they are ***Button.cs, Hand.cs, Module.cs, Tags.cs and UIController.cs***

- Detailed explanation on object and script correspondence, features/functionalities enabled by scripts.

Button.cs: Should be attached to the button trigger game object, which should be tagged as Button. Elements from 0 to 5 are five possible models that can be built from this Button. Button.cs validates the materials passed in, controls the robot movement, generates the output model according to the materials passed in. (Configuration shown below)



clothingsupply
- LocalAvatar
- Poster
- obj_house2d
- obj_house2a
- obj_house2
- env_grass2c
- Directional Light
- House
- alien_engi1a (1)
- alien_engi1a (2)
- alien_engi1a (3)
- slot1
  - slotIn1_1
  - slotOut1
  - slotIn1_2
  - Button
  - ButtonTrigger
- slot2
  - slotIn2_1
  - slotOut2
  - slotIn2_2
  - ButtonTrigger
  - Button
- slot3
  - slotIn3_1
  - slotOut3
  - slotIn3_2
  - ButtonTrigger
  - Button

☑ ButtonTrigger
Tag: Button Layer: Default

Transform

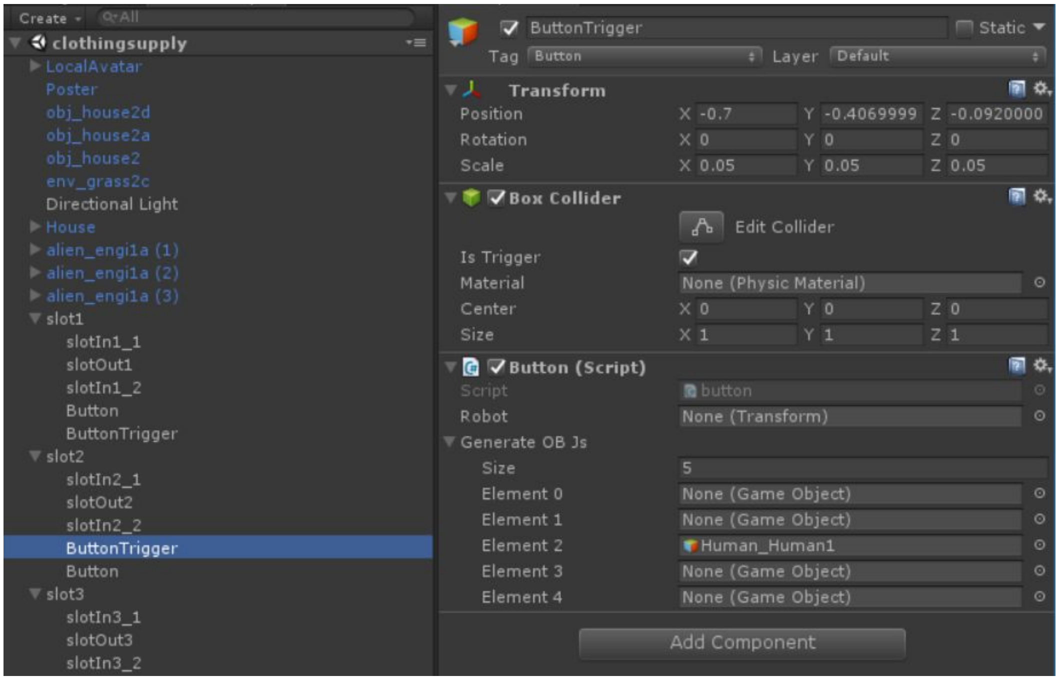
	X	Y	Z
Position	-0.388	-0.4069999	-1.327
Rotation	0	180	0
Scale	0.05	0.05	0.05

☑ Box Collider

Is Trigger: ☑
Material: None (Physic Material)
Center: X 0 Y 0 Z 0
Size: X 1 Y 1 Z 1

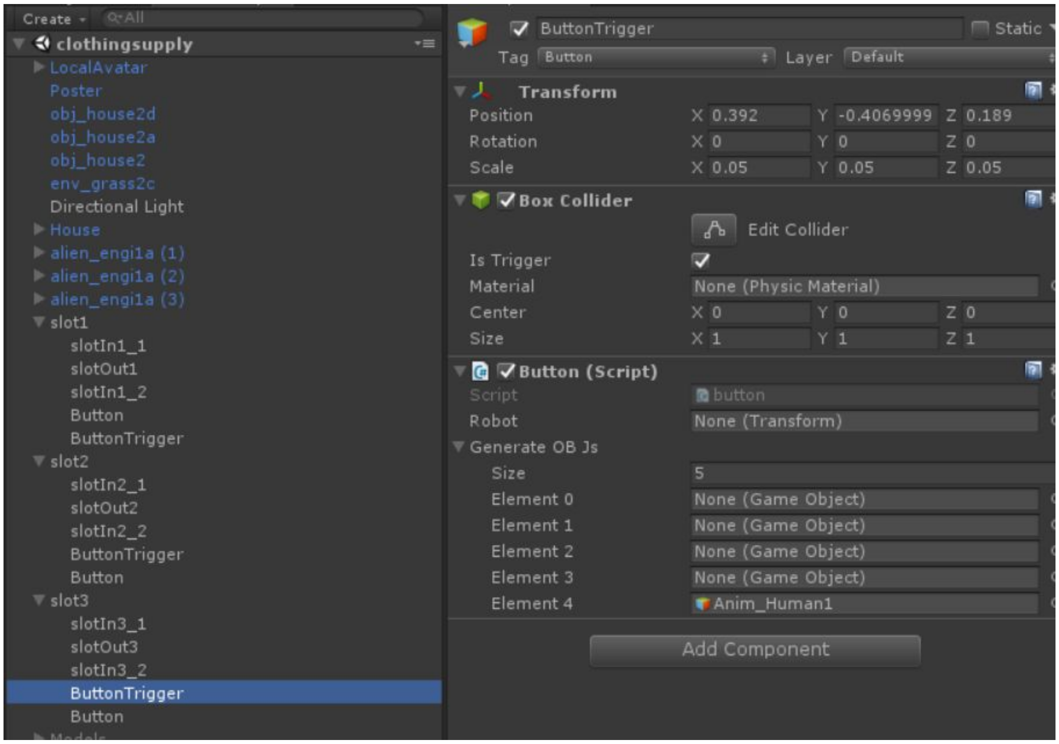
☑ Button (Script)

Script: button
Robot: None (Transform)
Generate OB Js
Size: 5
Element 0: Human_Model1
Element 1: House_Model1
Element 2: None (Game Object)
Element 3: None (Game Object)
Element 4: None (Game Object)



```
clothingsupply
  LocalAvatar
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
  alien_engi1a (1)
  alien_engi1a (2)
  alien_engi1a (3)
  slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
  slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
  slot3
    slotIn3_1
    slotOut3
    slotIn3_2
```

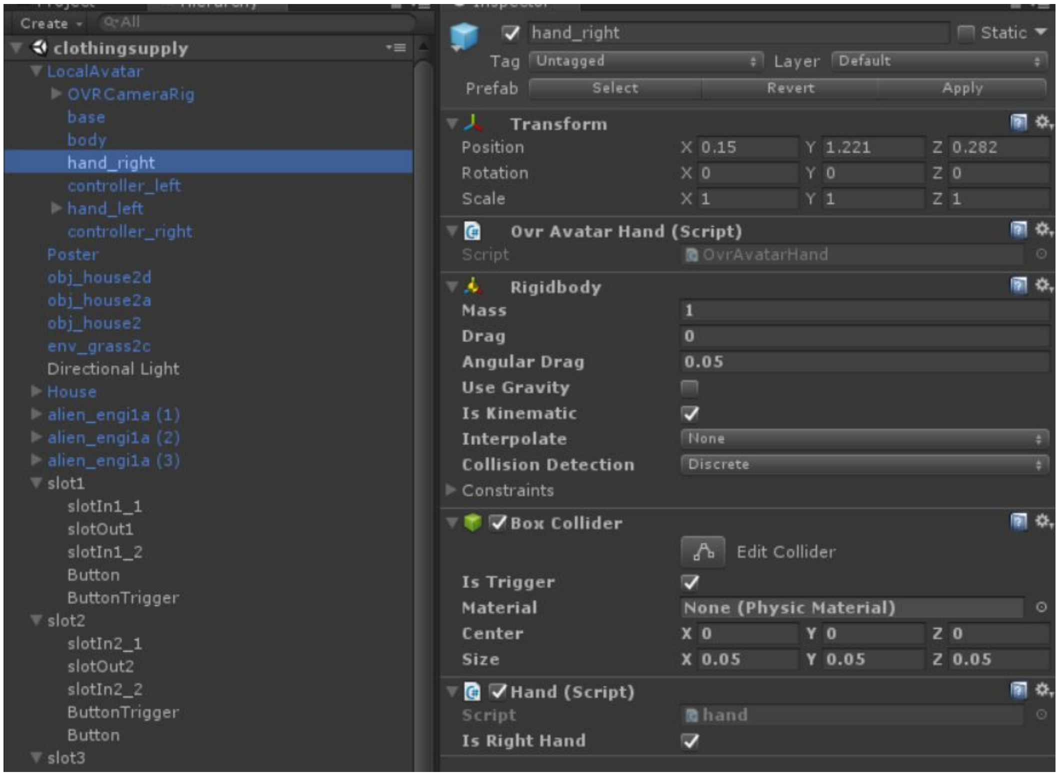
```
☑ ButtonTrigger                         □ Static
Tag Button            Layer Default
Transform
  Position   X -0.7   Y -0.4069999   Z -0.0920000
  Rotation   X 0      Y 0            Z 0
  Scale      X 0.05   Y 0.05         Z 0.05
☑ Box Collider
  Is Trigger ☑
  Material   None (Physic Material)
  Center     X 0   Y 0   Z 0
  Size       X 1   Y 1   Z 1
☑ Button (Script)
  Script     button
  Robot      None (Transform)
  Generate OB Js
    Size       5
    Element 0  None (Game Object)
    Element 1  None (Game Object)
    Element 2  Human_Human1
    Element 3  None (Game Object)
    Element 4  None (Game Object)
```



```
clothingsupply
  LocalAvatar
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
  alien_engi1a (1)
  alien_engi1a (2)
  alien_engi1a (3)
  slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
  slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
  slot3
    slotIn3_1
    slotOut3
    slotIn3_2
    ButtonTrigger
    Button
  Models
```

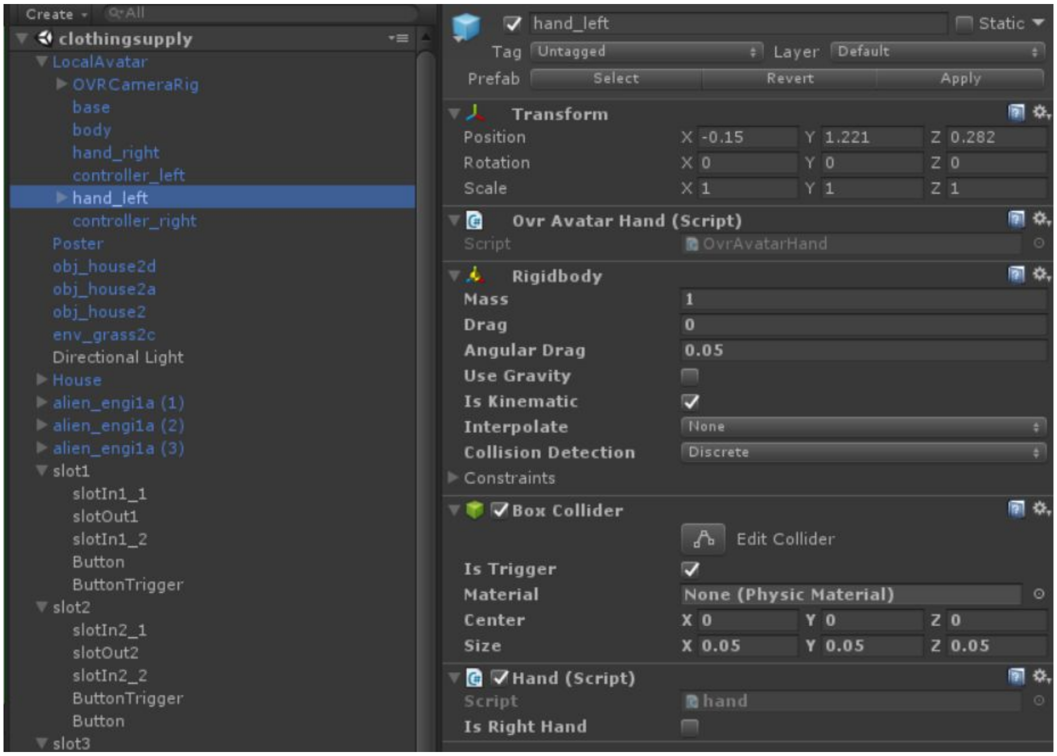
```
☑ ButtonTrigger                         □ Static
Tag Button            Layer Default
Transform
  Position   X 0.392  Y -0.4069999   Z 0.189
  Rotation   X 0      Y 0            Z 0
  Scale      X 0.05   Y 0.05         Z 0.05
☑ Box Collider
  Is Trigger ☑
  Material   None (Physic Material)
  Center     X 0   Y 0   Z 0
  Size       X 1   Y 1   Z 1
☑ Button (Script)
  Script     button
  Robot      None (Transform)
  Generate OB Js
    Size       5
    Element 0  None (Game Object)
    Element 1  None (Game Object)
    Element 2  None (Game Object)
    Element 3  None (Game Object)
    Element 4  Anim_Human1
```

Hand.cs: It handles the mechanics of grabbing object and showing inventory on the left hand Note that any object that can be grabbed should be tagged as Grabbable. (Configuration shown in the picture below)



```
clothingsupply
  LocalAvatar
    OVRCameraRig
    base
    body
    hand_right
    controller_left
    hand_left
    controller_right
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
  alien_engi1a (1)
  alien_engi1a (2)
  alien_engi1a (3)
  slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
  slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
  slot3
```

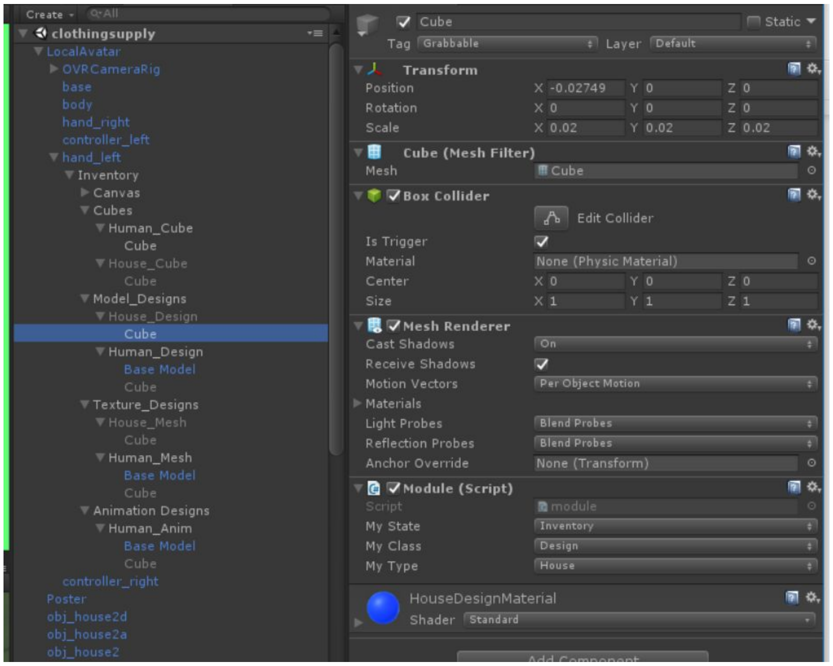
```
☑ hand_right                         □ Static
Tag Untagged          Layer Default
Prefab   Select   Revert   Apply

Transform
Position     X 0.15   Y 1.221   Z 0.282
Rotation     X 0      Y 0       Z 0
Scale        X 1      Y 1       Z 1

Ovr Avatar Hand (Script)
Script       OvrAvatarHand

Rigidbody
Mass                 1
Drag                 0
Angular Drag         0.05
Use Gravity          □
Is Kinematic         ☑
Interpolate          None
Collision Detection  Discrete
Constraints

☑ Box Collider
                     Edit Collider
Is Trigger           ☑
Material             None (Physic Material)
Center       X 0      Y 0      Z 0
Size         X 0.05   Y 0.05   Z 0.05

☑ Hand (Script)
Script               hand
Is Right Hand        ☑
```



```
clothingsupply
  LocalAvatar
    OVRCameraRig
    base
    body
    hand_right
    controller_left
    hand_left
    controller_right
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
  alien_engi1a (1)
  alien_engi1a (2)
  alien_engi1a (3)
  slot1
    slotIn1_1
    slotOut1
    slotIn1_2
    Button
    ButtonTrigger
  slot2
    slotIn2_1
    slotOut2
    slotIn2_2
    ButtonTrigger
    Button
  slot3
```

```
☑ hand_left                          □ Static
Tag Untagged          Layer Default
Prefab   Select   Revert   Apply

Transform
Position     X -0.15  Y 1.221   Z 0.282
Rotation     X 0      Y 0       Z 0
Scale        X 1      Y 1       Z 1

Ovr Avatar Hand (Script)
Script       OvrAvatarHand

Rigidbody
Mass                 1
Drag                 0
Angular Drag         0.05
Use Gravity          □
Is Kinematic         ☑
Interpolate          None
Collision Detection  Discrete
Constraints

☑ Box Collider
                     Edit Collider
Is Trigger           ☑
Material             None (Physic Material)
Center       X 0      Y 0      Z 0
Size         X 0.05   Y 0.05   Z 0.05

☑ Hand (Script)
Script               hand
Is Right Hand        □
```

Module.cs: It handles mechanics related to different modules. It calculates the distance between the gameObject that has this script attached and seven available spots for parameters, and will drop itself to the closest slot. Note that different modules and different state, class and type. This needs to be correctly set in order to make the game work. (Configuration shown below)



```
clothingsupply
  LocalAvatar
    OVRCameraRig
    base
    body
    hand_right
    controller_left
    hand_left
      Inventory
        Canvas
        Cubes
          Human_Cube
            Cube
          House_Cube
            Cube
        Model_Designs
          House_Design
            Cube
          Human_Design
            Base Model
            Cube
        Texture_Designs
          House_Mesh
            Cube
          Human_Mesh
            Base Model
            Cube
        Animation Designs
          Human_Anim
            Base Model
            Cube
    controller_right
  Poster
  obj_house2d
  obj_house2a
  obj_house2
```

☑ Cube ☐ Static
Tag Grabbable Layer Default

Transform
Position X -0.02749 Y 0 Z 0
Rotation X 0 Y 0 Z 0
Scale X 0.02 Y 0.02 Z 0.02

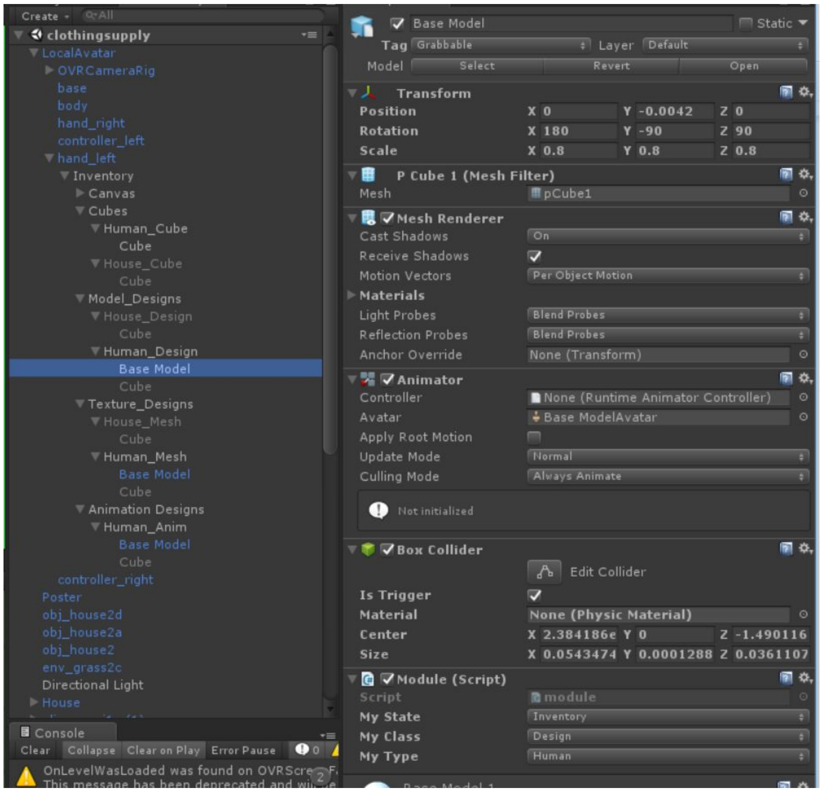
Cube (Mesh Filter)
Mesh Cube

☑ **Box Collider**
Edit Collider
Is Trigger ☑
Material None (Physic Material)
Center X 0 Y 0 Z 0
Size X 1 Y 1 Z 1

☑ **Mesh Renderer**
Cast Shadows On
Receive Shadows ☑
Motion Vectors Per Object Motion
Materials
Light Probes Blend Probes
Reflection Probes Blend Probes
Anchor Override None (Transform)

☑ **Module (Script)**
Script module
My State Inventory
My Class Design
My Type House

HouseDesignMaterial
Shader Standard



```
clothingsupply
  LocalAvatar
    OVRCameraRig
    base
    body
    hand_right
    controller_left
    hand_left
      Inventory
        Canvas
        Cubes
          Human_Cube
            Cube
          House_Cube
            Cube
        Model_Designs
          House_Design
            Cube
          Human_Design
            Base Model
            Cube
        Texture_Designs
          House_Mesh
            Cube
          Human_Mesh
            Base Model
            Cube
        Animation Designs
          Human_Anim
            Base Model
            Cube
    controller_right
  Poster
  obj_house2d
  obj_house2a
  obj_house2
  env_grass2c
  Directional Light
  House
```

OnLevelWasLoaded was found on OVRScre
This message has been deprecated and wi

☑ Base Model ☐ Static
Tag Grabbable Layer Default
Model Select Revert Open

Transform
Position X 0 Y -0.0042 Z 0
Rotation X 180 Y -90 Z 90
Scale X 0.8 Y 0.8 Z 0.8

P Cube 1 (Mesh Filter)
Mesh pCube1

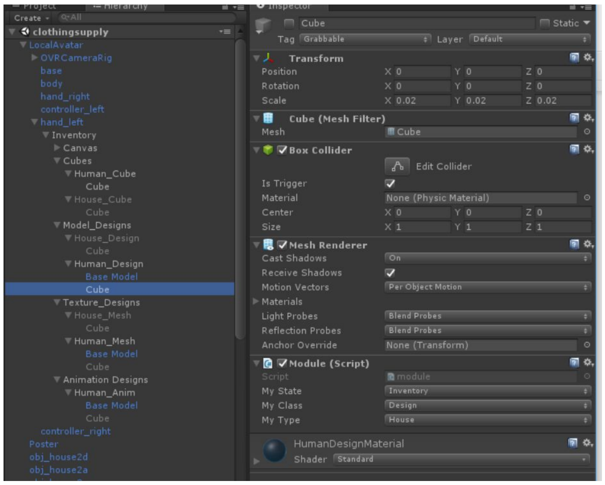
☑ **Mesh Renderer**
Cast Shadows On
Receive Shadows ☑
Motion Vectors Per Object Motion
Materials
Light Probes Blend Probes
Reflection Probes Blend Probes
Anchor Override None (Transform)

☑ **Animator**
Controller None (Runtime Animator Controller)
Avatar Base ModelAvatar
Apply Root Motion ☐
Update Mode Normal
Culling Mode Always Animate
Not initialized

☑ **Box Collider**
Edit Collider
Is Trigger ☑
Material None (Physic Material)
Center X 2.384186e Y 0 Z -1.490116
Size X 0.0543474 Y 0.0001288 Z 0.0361107

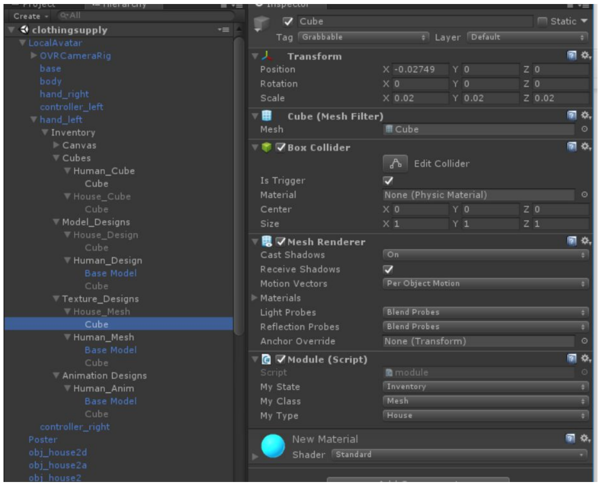
☑ **Module (Script)**
Script module
My State Inventory
My Class Design
My Type Human

Base Model 1



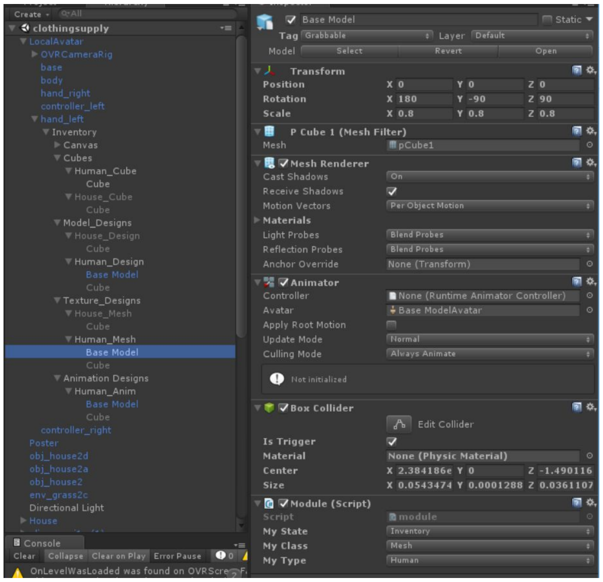
```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
    Poster
    obj_house2d
    obj_house2a
```

```
☐ Cube                                   ☐ Static ▾
Tag  Grabbable             Layer  Default
▼ Transform
Position        X 0        Y 0        Z 0
Rotation        X 0        Y 0        Z 0
Scale           X 0.02     Y 0.02     Z 0.02
▼ Cube (Mesh Filter)
Mesh            Cube
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 0        Y 0        Z 0
Size            X 1        Y 1        Z 1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Design
My Type         House
HumanDesignMaterial
Shader  Standard
```



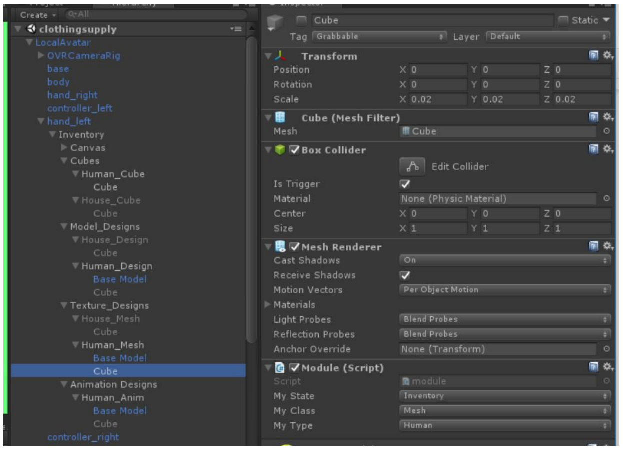
```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
    Poster
    obj_house2d
    obj_house2a
    obj_house2
```

```
☑ Cube                                   ☐ Static ▾
Tag  Grabbable             Layer  Default
▼ Transform
Position        X -0.02749  Y 0       Z 0
Rotation        X 0         Y 0       Z 0
Scale           X 0.02      Y 0.02    Z 0.02
▼ Cube (Mesh Filter)
Mesh            Cube
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 0        Y 0        Z 0
Size            X 1        Y 1        Z 1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Mesh
My Type         House
New Material
Shader  Standard
```



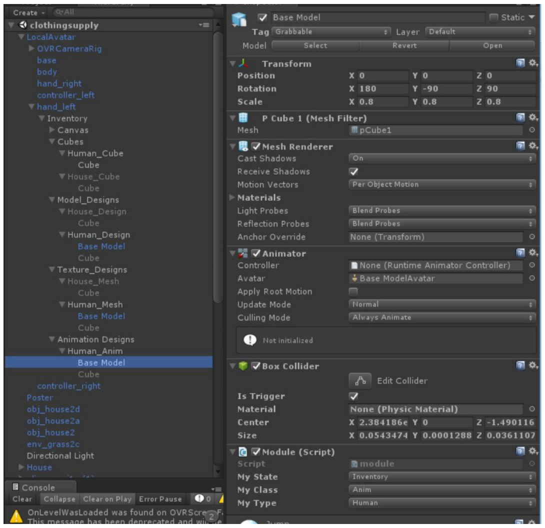
```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
    Poster
    obj_house2d
    obj_house2a
    obj_house2
    env_grass2c
    Directional Light
  ▶ House
Console
Clear  Collapse  Clear on Play  Error Pause  0
⚠ OnLevelWasLoaded was found on OVRScre
```

```
☑ Base Model                             ☐ Static ▾
Tag  Grabbable             Layer  Default
Model      Select      Revert      Open
▼ Transform
Position        X 0        Y 0        Z 0
Rotation        X 180      Y -90      Z 90
Scale           X 0.8      Y 0.8      Z 0.8
▼ P Cube 1 (Mesh Filter)
Mesh            pCube1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Animator
Controller            None (Runtime Animator Controller)
Avatar                Base ModelAvatar
Apply Root Motion     ☐
Update Mode           Normal
Culling Mode          Always Animate
  Not initialized
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 2.384186e  Y 0          Z -1.490116
Size            X 0.0543474  Y 0.0001288  Z 0.0361107
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Mesh
My Type         Human
```



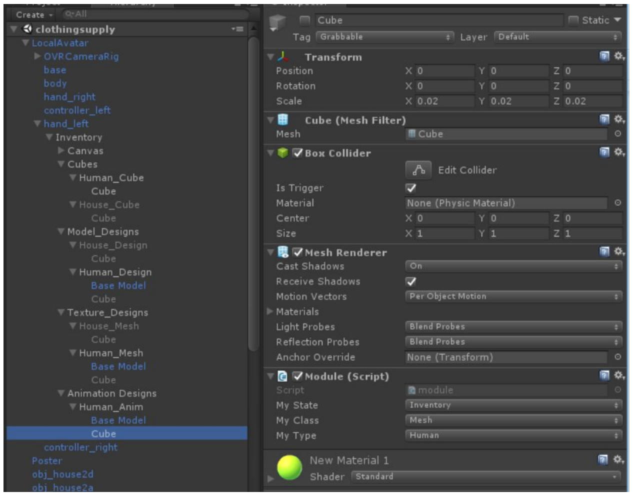
```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
```

```
☐ Cube                                   ☐ Static ▾
Tag  Grabbable             Layer  Default
▼ Transform
Position        X 0        Y 0        Z 0
Rotation        X 0        Y 0        Z 0
Scale           X 0.02     Y 0.02     Z 0.02
▼ Cube (Mesh Filter)
Mesh            Cube
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 0        Y 0        Z 0
Size            X 1        Y 1        Z 1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Mesh
My Type         Human
```



```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
    Poster
    obj_house2d
    obj_house2a
    obj_house2
    env_grass2c
    Directional Light
  ▶ House
Console
Clear  Collapse  Clear on Play  Error Pause  0
⚠ OnLevelWasLoaded was found on OVRScre
  This message has been deprecated and wi
```

```
☑ Base Model                             ☐ Static ▾
Tag  Grabbable             Layer  Default
Model      Select      Revert      Open
▼ Transform
Position        X 0        Y 0        Z 0
Rotation        X 180      Y -90      Z 90
Scale           X 0.8      Y 0.8      Z 0.8
▼ P Cube 1 (Mesh Filter)
Mesh            pCube1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Animator
Controller            None (Runtime Animator Controller)
Avatar                Base ModelAvatar
Apply Root Motion     ☐
Update Mode           Normal
Culling Mode          Always Animate
  Not initialized
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 2.384186e  Y 0          Z -1.490116
Size            X 0.0543474  Y 0.0001288  Z 0.0361107
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Anim
My Type         Human
Jump
```



```
Create ▾  All
▼ clothingsupply
  ▼ LocalAvatar
    ▶ OVRCameraRig
      base
      body
      hand_right
      controller_left
    ▼ hand_left
      ▼ Inventory
        ▶ Canvas
        ▼ Cubes
          ▼ Human_Cube
              Cube
          ▼ House_Cube
              Cube
        ▼ Model_Designs
          ▼ House_Design
              Cube
          ▼ Human_Design
              Base Model
              Cube
        ▼ Texture_Designs
          ▼ House_Mesh
              Cube
          ▼ Human_Mesh
              Base Model
              Cube
        ▼ Animation Designs
          ▼ Human_Anim
              Base Model
              Cube
      controller_right
    Poster
    obj_house2d
    obj_house2a
```

```
☐ Cube                                   ☐ Static ▾
Tag  Grabbable             Layer  Default
▼ Transform
Position        X 0        Y 0        Z 0
Rotation        X 0        Y 0        Z 0
Scale           X 0.02     Y 0.02     Z 0.02
▼ Cube (Mesh Filter)
Mesh            Cube
▼ ☑ Box Collider
                Edit Collider
Is Trigger      ☑
Material        None (Physic Material)
Center          X 0        Y 0        Z 0
Size            X 1        Y 1        Z 1
▼ ☑ Mesh Renderer
Cast Shadows          On
Receive Shadows       ☑
Motion Vectors        Per Object Motion
▶ Materials
Light Probes          Blend Probes
Reflection Probes     Blend Probes
Anchor Override       None (Transform)
▼ ☑ Module (Script)
Script          module
My State        Inventory
My Class        Mesh
My Type         Human
New Material 1
Shader  Standard
```

Tag.cs: it stores the tag constants, which may be used in other scripts.

UIController.cs: it decides when to show up the UI circle for parameters, by calculating the distance between hands and slots.

Known Issues

There are some known issues during development:
Unintentional left hand touch:
For showing up the inventory, you should always keep your left hand's index finger and middle finger away from the index trigger and middle trigger, some issues happened when you are trying to grab things out of inventory with you right hand. If this happens, first make sure you can see your left hand all the time, oculus touch doesn't work if any of the controller disappears, second make sure your left hand doesn't touch the triggers all the time, attention you might unconsciously touch the trigger when you are trying to grab with you right hand.

System Requirement

This project is builded on the environment of:
Processor: Intel(R)Core(TM)i7-4790 CPU@ 3.60Hz
Installed memory(RAM): 16.0 GB
Display adapter: NVIDIA Geforce GTX 745

Tested on the environment of:
Processor: Intel(R)Xeon(R)CPU E5-1603 v4 @2.80GHz
Installed memory(RAM): 16.0 GB
Display adapter: NVIDIA Geforce GTX 1080
With set-up of Oculus Rift CV1 and Oculus Touch

Average Frame Rate: 65 fps
Minimum Frame Rate: 38 fps

Next Steps

During development, our team thought that we would give player options to make different models. We reserved a namespace for house model and humanoid model. This namespace can be also extended to contain more models. For now, it is possible to add a house model into the game, and create different houses given different materials.