Outfit System

An easy to use and powerful outfit management system for Unity.

V 1.0.0

- Incomplete documentation parts will be improved over time.
- Get the most up to date documentation by clicking here.
- Remember you can hover over fields in the “Inspector” window in Unity’s editor to read tooltip explanations of each field.
- If you have any questions or need assistance email support at intuitivegamingsolutions@gmail.com.

Table of Contents

NOTE: See 'API Reference.pdf' (online) if you are looking for source code documentation for the 'OutfitSystem' core module.

Getting Started

2.a. Importing the Asset

There are 2 ways to import the 'Outfit System' package.

a. (Recommended) Using the Unity Editor ‘Package Manager’.
    i. Open the Windows→Package Manager using the Unity editor toolbar.
    ii. In the upper-left corner of the Package Manager window select ‘Packages: My Assets’.
    iii. Search for ‘Outfit System’ in the list or use the search bar in the window.
    iv. Select the asset in the package manager, select ‘Download’.
    v. After the package has finished downloading click ‘Import’ to import it into the project.
b. Importing OutfitSystem.unitypackage
    i. Using the Unity Editor’s toolbar select Assets→Import Package
    ii. In the file explorer that opens navigate to OutfitSystem.unitypackage
    iii. Double click the package and import it.

2.b. Included Demo Scenes

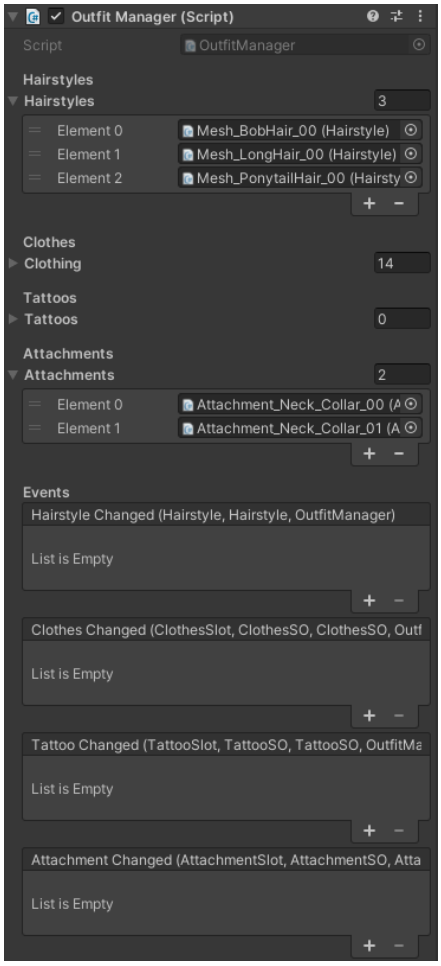
- ***Important*** *Before using the included demo scenes 'Catwalk' or 'Return To Closet' buttons make sure to add both the closet and catwalk scenes to your projects build using the 'Add To Build' button. This allows the UI to swap between the two scenes.*
- **OutfitAndTatooDemo_Closet** - a demo scene that allows you to pick between the various hairstyles, clothes, tattoos, and attachments for the demo female.
- **OutfitAndTatooDemo_Catwalk** - a demo showing the demo female's outfit state being automatically loaded when switching to a new scene (the catwalk scene) that loads the last saved outfit user state for the demo female and provides a simple showcase scene.

2.c. Included Demo UI

- Table of include demo UI prefabs:

Prefab Name	***Description***
UI_HairstyleSelection.prefab	A UI prefab for selecting hairstyles.
UI_ClothesSelection.prefab	A UI prefab for selecting clothes that includes a slot selection dropdown, click-to-wear, and click-to-take-off support.
UI_TattooSelection.prefab	A UI prefab for selecting tattoos that includes a slot selection dropdown, click-to-add, and click-to-remove support.
UI_AttachmentSelection.prefab	A UI prefab for selecting attachments that includes a slot selection dropdown, click-to-attach, and click-to-detach support.
UI_ConfirmationPanel.prefab	A simple confirmation panel UI that is used in the demo to request confirmation for actions like delete and overwrite actions.

The OutfitManager Component



A screenshot of the OutfitManager Inspector pane in the Unity Editor for v1.0.0

- The OutfitManager is the main component in 'Outfit System'. It is responsible for defining and managing hairstyles, clothes, tattoos, and accessories for a character.
- Hairstyle components can be referenced by the OutfitManager to define valid hairstyles.
- Clothes components can be referenced by the OutfitManager to define valid clothing.
- Tattoo components can be referenced by the OutfitManager to define valid tattoos.
- Attachment components can be referenced by the OutfitManager to define valid attachments.
- The OutfitManager maintains the current outfit state and manages object visibility for a single outfit manager instance.
- Events:

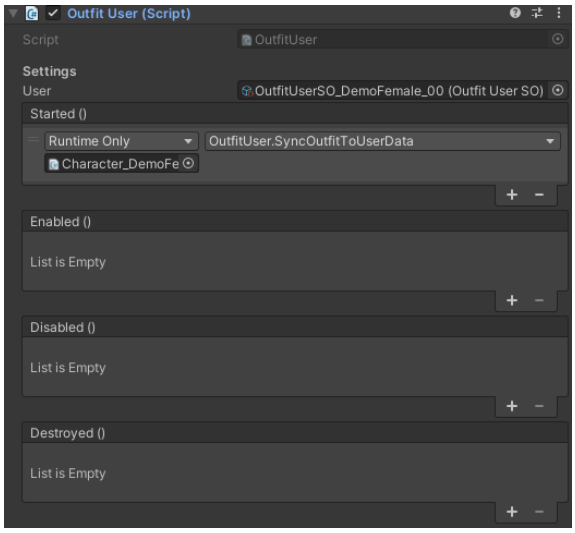
Event	***Description***	***Arguments***
HairstyleChanged	Invoked after the hairstyle has been changed.	**Arg0:** Hairstyle - *The last Hairstyle component or null.* **Arg1:** Hairstyle - *The new Hairstyle component or null.* **Arg2:** OutfitManager - *The OutfitManager the hairstyle change occurred on.*

ClothesChanged	Invoked after clothes in any slot have been changed.	**Arg0:** ClothesSlot - *The ClothesSlot that was changed.* **Arg1:** ClothesSO - *The scriptable object reference for the last clothing info, or null.* **Arg2:** ClothesSO - *The scriptable object reference for the new clothing info, or null.* **Arg3:** OutfitManager - *The OutfitManager the change occurred on.*
TattooChanged	Invoked after a tattoo in any slot has been changed.	**Arg0:** TattooSlot - *The TattooSlot that was changed.* **Arg1:** TattooSO - *The scriptable object reference for the last tattoo info, or null.* **Arg2:** TattooSO - *The scriptable object reference for the new tattoo info, or null.* **Arg3:** OutfitManager - *The OutfitManager the change occurred on.*
AttachmentChanged	Invoked after an attachment in any slot has been changed.	**Arg0:** AttachmentSlot - *The AttachmentSlot that was changed.* **Arg1:** AttachmentSO - *The scriptable object reference for the last attachment info, or null.* **Arg2:** AttachmentSO - *The scriptable object reference for the new attachment info, or null.* **Arg3:** OutfitManager - *The OutfitManager the change occurred on.*

Outfit Users

- The Outfit Users system allows you to easily track outfits, presets, settings, states, and more for an outfit user.
- The Outfit Users system enables you to easily track the current outfit state through scene changes where the character is re-created or already included in the scene.
- The demo includes a tutorial showing how the outfit user system can be leveraged to save the users outfits and custom presets to and load them from a file.

4.a. The OutfitUser Component

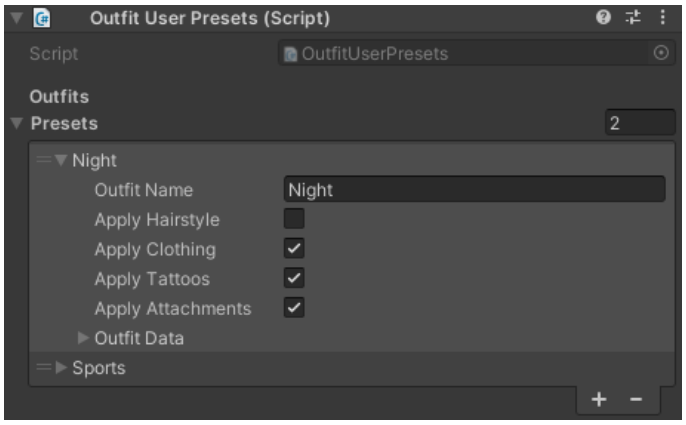


A screenshot showing the Inspector pane for the OutfitUser component in the Unity Editor. (v1..0.0)

- The OutfitUser component must be attached to the same GameObject as an OutfitManager component. This component is responsible for tracking the current state of the user's outfit and storing it (or loading it from) a ScriptableObject, specifically a OutfitUserSO, as referenced using the 'OutfitUser.user' field.
- You can leave this component out of your OutfitManager driven character if you do not need any of the state saving or loading features provided by the outfit users system.
- The OutfitUser component implements two extremely important public methods that can be used with *Unity editor events* and/or *C# scripts* to either save or load the relevant OutfitManager's state to or from the relevant OutfitUserSO ('OutfitUser.user' field):
    - public void SyncOutfitToUserData()
        - Syncs the relevant OutfitManager with data from the relevant OutfitUserSO.
        - This clears the relevant OutfitManager's current outfit (hairstyle, clothes, tattoos, attachments) and attempts to activate all valid outfit items from the items referenced by the relevant OutfitUserSO.
    - public void SyncUserDataToOutfit()
        - Syncs the relevant OutfitUserSO with data from the relevant OutfitManager.
        - This checks hairstyle and iterates through clothes, tattoos, and attachments checking for valid attire and populates the relevant OutfitUserSO so that it matches the outfit currently being worn by the OutfitManager.
- The OutfitUser component also implements *Unity editor events* for common Unity events such as Started, Enabled, Disabled, and Destroyed to allow you to easily configure editor events for situations where you want the simplest set up where you want to invoke

'OutfitUser.SyncOutfitToUserData()' on 'Started *(Unity's Start() callback)*' as shown in the screenshot above.

4.b. The OutfitUserPresets Component

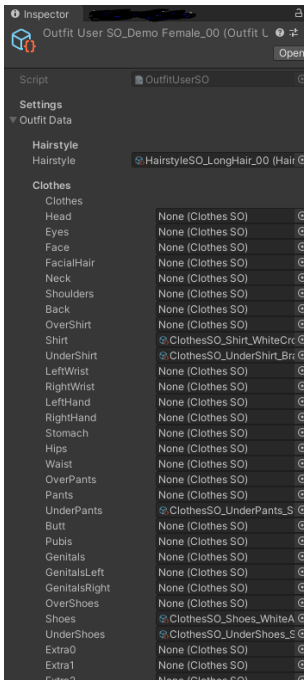


The Inspector pane in the Unity Editor for the OutfitUserPresets component. (v1.0.0)

- The OutfitUserPresets component is attached to the same GameObject as an OutfitUser.
- This component may be left out if you do not need or want preset support for an outfit user (or if you are using an OutfitManager without an OutfitUser).
- The OutfitUserPresets component allows the developer to specify OutfitPreset entries in the editor and/or add or remove them at runtime using the scripting API.
- Each OutfitPreset entry may specify the following:

Field	***Description***	***Type***
Outfit Name	The name of the outfit preset.	string
Apply Hairstyle	When applied does this outfit preset override hairstyle?	bool
Apply Clothing	When applied does this outfit override clothing?	bool
Apply Tattoos	When applied does this outfit override tattoos?	bool
Apply Attachments	When applied does this outfit override attachments?	bool
Outfit Data	The actual OutfitData that tracks what outfit items are in the outfit preset.	OutfitData

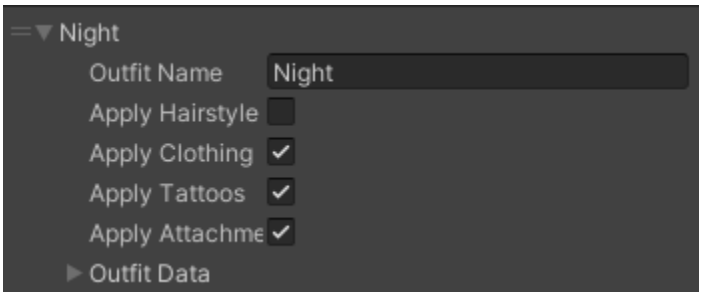
4.c. OutfitUserSO ScriptableObject



A partial screenshot of the Inspector pane when selecting an OutfitUserSO. (v1.0.0)

- The OutfitUserSO is a ScriptableObject implementation that contains OutfitData and is intended to contain the current outfit state for an OutfitUser.
- The OutfitUserSO scriptable objects provide a convenient way to visualize and modify the current outfit state for an outfit user from within the editor.

4.d. OutfitPreset



A screenshot showing the property drawer for an OutfitPreset instance in the Unity Editor Inspector pane, outfit data section is collapsed. (v1.0.0)

- An OutfitPreset is a class (data type) that contains a name, type-application settings, and OutfitData that describes the hairstyle, clothes, tattoos, and attachments for an outfit and which elements of an outfit the preset overrides.
- Here is an overview of the fields:

Field	***Description***	***Type***
Outfit Name	The name of the outfit preset.	string
Apply Hairstyle	When applied does this outfit preset override hairstyle?	bool
Apply Clothing	When applied does this outfit override clothing?	bool
Apply Tattoos	When applied does this outfit override tattoos?	bool
Apply Attachments	When applied does this outfit override attachments?	bool
Outfit Data	The actual OutfitData that tracks what outfit items are in the outfit preset.	OutfitData

Clothing

5.a. The Clothes Component

5.b. The ClothesSlot Enumerate

5.c. The ClothesSlotMask Mask

5.d. ClothesSO

5.e. ClothesUtility

5.f. ClothesSlotDictionary

Tattoos

6.a. The Tattoo Component

6.b. The TattooSlot Enumerate

6.c. The TattooSlotMask Mask

6.d. TattooSO

6.e. TattooUtility

6.f. TattooSlotDictionary

Attachments

7.a. The Attachment Component

7.b. The AttachmentSlot Enumerate

7.c. The AttachmentSlotMask Mask

7.d. AttachmentSO

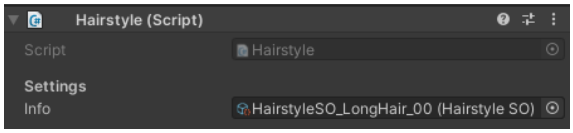
7.e. AttachmentUtility

7.f. AttachmentSlotDictionary

Hairstyles

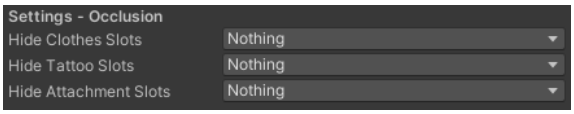
8.a. The Hairstyle Component

- The Hairstyle component is intended to be attached to any GameObject on a character (even an empty one) and will activate and deactivate said GameObject as said Hairstyle is made the active one, or made inactive respectively.
- The 'Info' field is where the relevant HairstyleSO scriptable object that this Hairstyle implements is specified.



- The 'Active Transforms' setting allows you to reference Transforms that are non-children of the Hairstyle component's GameObject. The Transforms' GameObject will then automatically be activated when this Hairstyle becomes active and deactivated when the Hairstyle becomes inactive.
- The 'Deactivate Transforms' setting allows you to reference Transforms that you want to be automatically deactivated when this Hairstyle becomes active and reactivated when the Hairstyle becomes inactive.

- The occlusion settings allow you to specify slots for clothes, tattoos, and/or attachments that you want to be automatically hidden while this Hairstyle is active (not unequipped, just hidden).

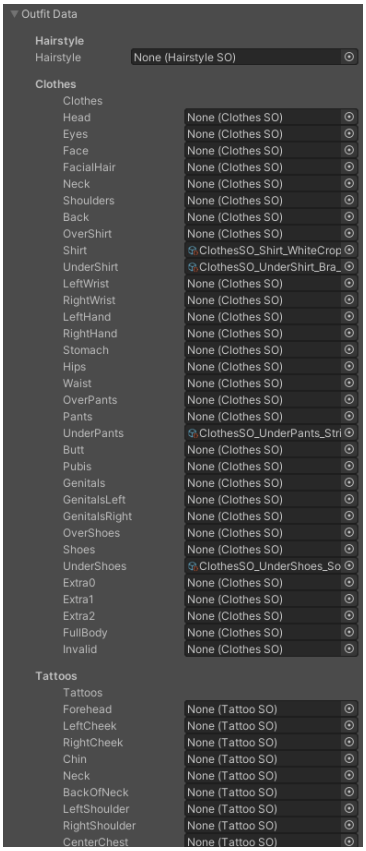


- The 'Made Active' Unity editor event is invoked whenever the Hairstyle (argument #1) is made active for a given OutfitManager (argument #2).
- The 'Made Inactive' Unity editor event is invoked whenever the Hairstyle (argument #1) is made inactive for the given OutfitManager (argument #2).

8.b. HairstyleSO

- The HairstyleSO scriptable object is responsible for defining the type for a hairstyle.
- Similarly to ClothesSO, TattooSO, and AttachmentSO, the HairstyleSO scriptable object is used to define unique types which will then be referenced by a character-specific Hairstyle component. The HairstyleSO is responsible for allowing a given hairstyle to be identified in a character-independent way.

OutfitData



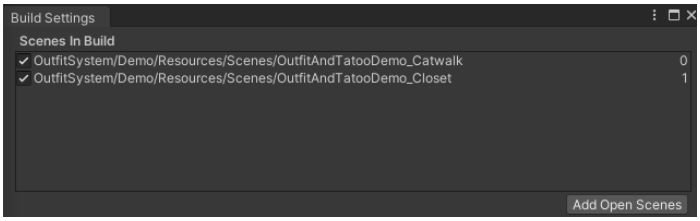
A partial screen capture showing the property drawer for an OutfitData instance as seen in the Unity Editor Inspector pane. (v1.0.0)

- The OutfitData class (data type) contains a reference to the current HairstyleSO that is 'equipped' according to the outfit data.
- The OutfitData class (data type) contains an enumerate key'd dictionary (ClothesSlot, TattooSlot, AttachmentSlot) for clothes, tattoos, and attachments that specify which relevant scriptable objects (ClothesSO, TattooSO, AttachmentSO), if any are in a given slot according to the outfit data.

FAQ

(Frequently Asked Questions)

Q: I am getting an error saying the 'OutfitAndTattooDemo_Closet' and/or 'OutfitAndTattooDemo_Catwalk' scenes have not been added to the build when clicking the 'Return To Closet' or 'Catwalk' UI button(s) in the catwalk or closet demo scenes respectively.
A: This warning appears when you've forgotten to add the demo scenes to the build settings of your project using 'File → Build Settings… → Add Open Scenes'.
Simply add the scenes to build settings.
It is recommended when you are done with the demo scenes to remove them from 'Build Settings' if you do not plan to include them on the release build for your project.



A screenshot showing the demo scenes added to the 'Build Settings' of a project.