

Prefab Overview

A Prefab is a reusable GameObject that is stored in the Project View.

Prefabs can be inserted into any number of scenes, multiple times per scene.

When you add a Prefab to a scene, you create an instance via drag and drop or code.

All Prefab instances are linked to the original Prefab and are essentially clones of it.

Prefabs are similar in nature to movieclips or components that reside in the library in Flash.

If you make any changes to the original prefab, the changes will be applied to all of the instances in your scene, just like when you change a movieclip in the library in Flash.

If you add a script to a GameObject in your prefab all instances of your prefab will get the script too.

If you want to change a property of a GameObject but not the prefab or the other GameObjects then you can use an override flag.

Prefabs come in very handy when you want to instantiate complicated GameObjects at runtime.

Instantiating Prefabs has many advantages:

- * You can instantiate a Prefab from one line of code, with complete functionality.
- * You can set up, test, and modify the Prefab quickly and easily in the Scene and Inspector.
- You can change the Prefab being instanced without changing the code that instantiates it.

Gotcha

When you place a mesh asset into your Assets folder, Unity automatically imports the file and generates something that “looks similar” to a Prefab out of the mesh (Blue cube with little white file icon). This is simple the asset file itself. Prefab show up as just a blue cube.

Creating Prefabs

In order to create a Prefab, you must make a new blank Prefab using the menu. This blank Prefab contains no GameObjects, and you cannot create an instance of it. Think of a new Prefab as an empty container, waiting to be filled with GameObject data.

1. In Project View, select the folder you want to contain the Prefab.
2. Choose Assets->Create->Prefab from the main menu, or Create->Prefab from the Project View context menu.
3. Name your Prefab with the keyboard.
4. In Hierarchy View, select the GameObject you wish to make into a Prefab.
5. Drag & drop the GameObject from the Hierarchy onto the Prefab in Project View.

Changing a Single Instance of a Prefab

- It is possible to change the properties of a single instance while keeping the link intact.
- All public properties in the Inspector of a linked GameObject will have a checkbox.
- This checkbox is the override flag.
- If the override flag of any property is enabled, that property will not be affected by changes in the Prefab.
- This allows you to modify linked GameObjects to make them unique from their Prefabs, without breaking their Prefab link.

Breaking Prefab Links

There are some changes that will break your prefab link.

- * If you try to add a new Component to a linked GameObject
- * If you try to remove a Component from a linked GameObject
- * If you try to attach other GameObjects as children to a linked GameObject

- Performing any of these actions will pop up a warning message confirming that the Prefab link will be broken if you continue.
- When a GameObject's link to a Prefab has been broken, changes to the Prefab will no longer affect that particular GameObject.

Re-Establishing a Prefab Link

If you purposefully or accidentally break the link to an instance, you can apply your changes to the Prefab and re-establish the link. This will cause the Prefab and all instances to adopt the changes you've made.

Instantiating Prefabs

Drag and Drop Way

To create a Prefab instance in the current scene, drag the Prefab from the **Project View** into the **Scene or Hierarchy View**. This is very similar to dragging a MovieClip from the library and onto the stage and Flash.

Code

Like instantiating a MovieClip in you library with a class associated with it in Flash , new Ball()

Instantiate (original : **Object**, **position** : Vector3, **rotation** : Quaternion) : Object

Clones the object original and returns the clone.

Instantiate will clone the entire game object hierarchy, with all children cloned as well. All game objects are activated.

Destroying Prefabs with Code

Like removeMovieClip or removeChild or unloadAndStop in Flash 10

```
static function Destroy (obj : Object, t : float = 0.0F) : void
```

Removes a gameobject, component or asset.

The object obj will be destroyed now or if a time is specified t seconds from now. If obj is a Component it will remove the component from the GameObject and destroy it.

If obj is a GameObject it will destroy the GameObject, all its components and all transform children of the GameObject. Actual object destruction is always delayed until after the current Update loop, but will always be done before rendering.