Matthew Sawrey
@matski53
matski53@gmail.com

Simple Pool

Information

Simple Pool is an object pooling solution for Unity. Designed to avoid the memory management issues associated with instantiating and destroying objects during runtime, Simple Pool has an easy-to-use, custom editor for the setup of object pools. Objects can then be taken from the pool, used in the scene and returned back to the pool during runtime, rather than being instantiated and destroyed on every use.

Scripts

ObjectPoolController.cs

Description

ObjectPoolController controls the overall ObjectPool. The overall ObjectPool contains multiple pools of single GameObjects. The initial setup of the ObjectPool is organised through the ObjectPoolController's editor interface, as shown in figures 1 - 4 below.

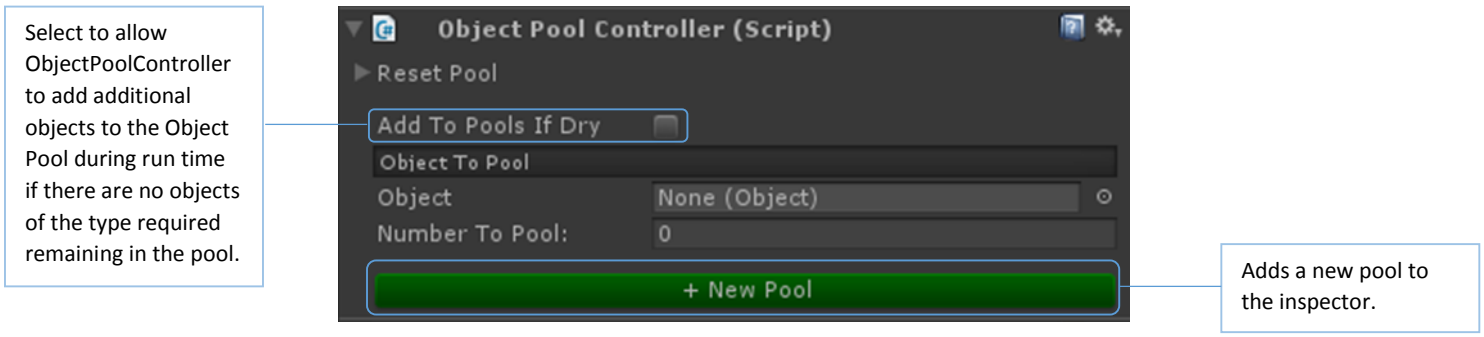

Figure 1. Empty Object Pool Controller

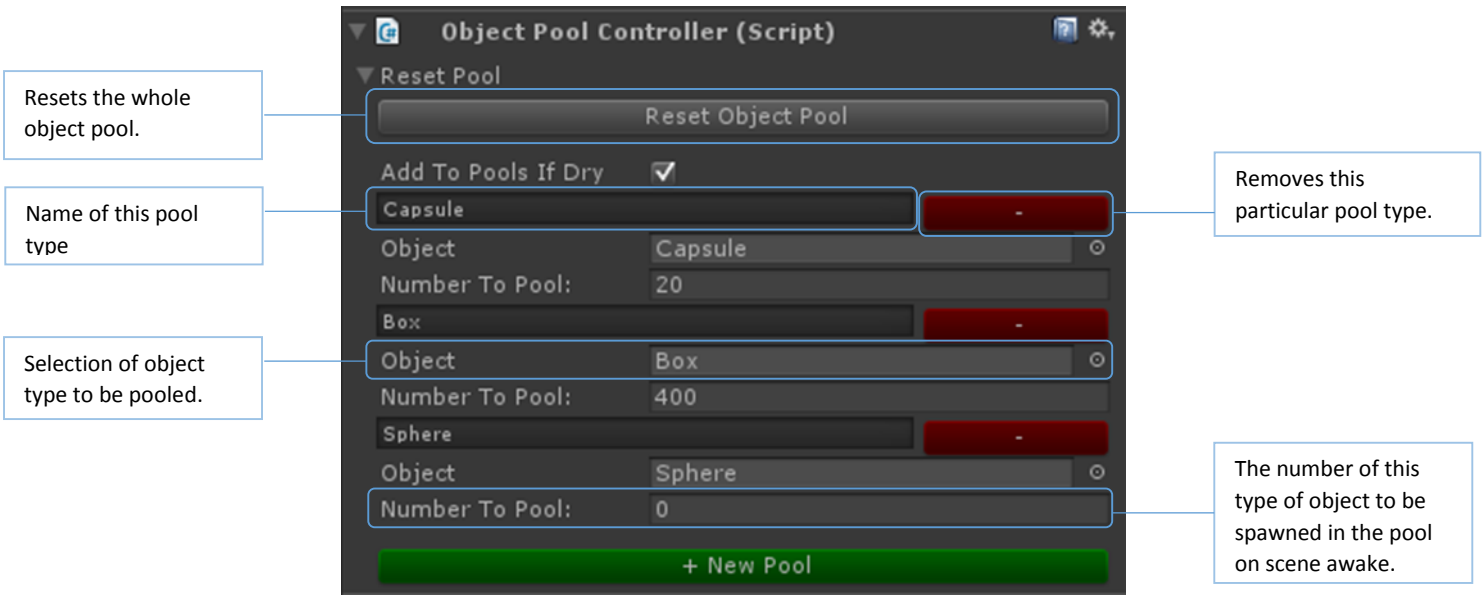

Figure 2. Object Pool Controller in Use

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Figure 3. ObjectPoolController during play

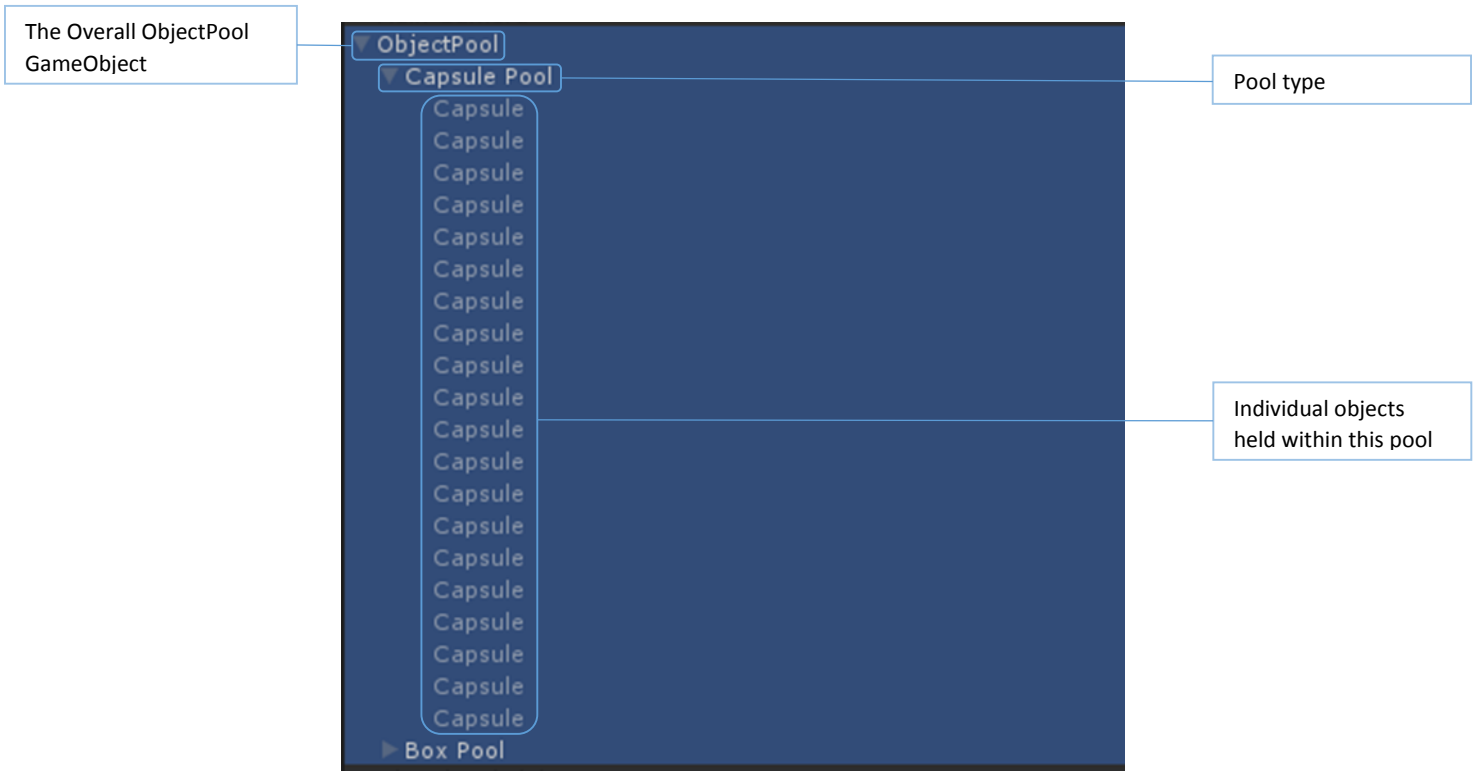

Figure 4. Objects pooled in the scene

Public Properties

public static ObjectPoolController Pool

- Singleton instance of the ObjectPoolController. To use the ObjectPoolController methods, use the syntax:

  ObjectPoolController.Pool.*MethodName();*

public List<ObjectPool> listOfObjectPools

- The list of all ObjectPools. In the ObjectPool represented in Figure 4 listOfObjectPools would contain 2 ObjectPools, one for the Capsule Pool and one for the Box Pool.

Events

ObjectPoolController.PoolInitialised

- Called once the overall Object Pool has been initialised. Used to control the order of execution for events that are required to wait for the Object Pool to be initialised.

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Methods

AddNewPool

public void AddNewPool(ObjectPool objPool)

- Adds a new pool of a single object type to the listOfObjectPools within the ObjectPoolController.

AddToExistingPool

public void AddToExistingPool(GameObject objToPool)

public void AddToExistingPool(GameObject[] objsToPool)

- Adds either a single GameObject or multiple GameObjects to an existing pools of objects of the type specified through the "objsToPool" parameter.

TakeFromPool

public GameObject TakeFromPool(string objectType)

public GameObject[] TakeFromPool(string objectType, int numObjectsToTake)

- Removes either a single GameObject or multiple GameObjects from the relevant pool of objects.

DestroyPool

public Void DestroyPool(string poolType)

- Removes a pool of objects of the specified type if they are no longer required in the overall object pool.

DestroyOverallObjectPooler

public Void DestroyOverallObjectPooler ()

- Destroys the overall object pool GameObject, removing it from the scene.

ObjectPool.cs

Description

ObjectPool represents a pool of a single type of GameObject. It contains a number of public properties that can only be read, but not assigned to externally. Its methods are used by the ObjectPoolController to manipulate the state of an ObjectPool.

ObjectPoolEditor.cs

Description

ObjectPoolEditor controls the inspector interface for the ObjectPoolController. This should not be interacted with.