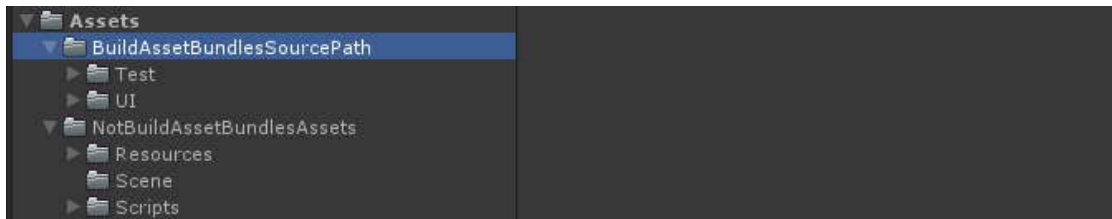


AssetBundle Framework's Introduction

1. Description of the folder in Project:

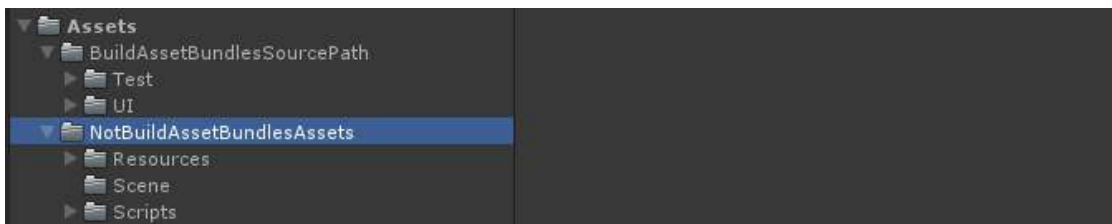
① The folder named BuildAssetBundlesSourcePath:

The assetbundle name of asset which be put into this folder will be set for the name of asset itself,that is to say, the asset which be put into this folder will be regarded as the asset that could be incremental update,it will be built into the form of AssetBundle.



② The folder named NotBuildAssetBundlesAssets:

The assetbundle name of asset which be put into this folder will not be set,that is to say,the asset which be put into this folder will be regarded as the asset that can not be incremental update,it will not be built into the form of AssetBundle.



③ The folder named UnEncryptAssetBundlesFolder:

Click the option which is located in unity's menu:AssetBundles/Build AssetBundles/Build UnEncrypt AssetBundles,then the assets which are in the folder called BuildAssetBundlesSourcePath will be build into unencrypt AssetBundles,and generate to the folder called UnEncryptAssetBundlesFolder in the root of the Project:



④ EncryptAssetBundlesFolder:

Click the option which is located in unity's menu:AssetBundles/Build AssetBundles/Build Encrypt AssetBundles,then the assets which are in the folder called

BuildAssetBundlesSourcePath will be build into encrypt AssetBundles,and generate to the folder called EncryptAssetBundlesFolder in the root of the Project:



⑤ **Application.persistentDataPath:**

When your game is running on mobile device or select the AssetBundleCompleteMode in unity editor,the application will read and write the AssetBundles from this path.

2. Instructions for several key configurations in the framework:

In script named ConfigurationManager.cs:

//The server url when we update our AssetBundle files

```
public const string AssetBundlesServerURL = "http://localhost:8080";
```

// The Extension of AssetBundle file

```
public const string AssetBundleExtensions = ".unity3d";
```

// When you build AssetBundles,if you click the option located in menu bar:AssetBundles/Build AssetBundles/Build UnEncrypt AssetBundles,please set this variable to false,in order to load unencrypted AssetBundle when game is running.

if you click the option located in menu bar:AssetBundles/Build AssetBundles/Build Encrypt AssetBundles,please set this variable to true,in order to load encrypted assetbundle when game is running.

```
public const bool AssetBundlesUseCipher = false;
```

//The encryption key when we build encrypt AssetBundles

```
public const string AssetBundleEncryptKey = "SwordMasterFramework";
```

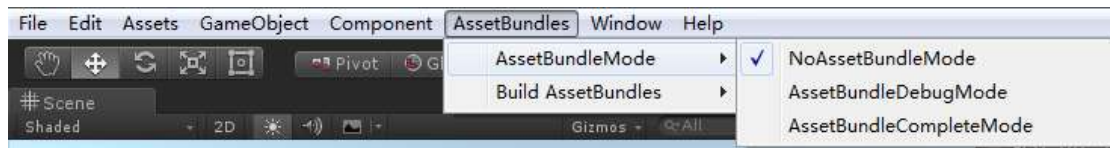
// The initialization vector of encryption key when we build encrypt AssetBundles

```
public const string AssetBundleIV = "SwordMaster";
```

//Encryption algorithm type of AssetBundles

```
public const EnryptType AssetBundleEnryptType = EnryptType.AES;
```

3. The working mode of the framework in unity editor :



There are three options in Unity menu which under AssetBundles/AssetBundleMode:

NoAssetBundleMode、**AssetBundleDebugMode**、**AssetBundleCompleteMode**

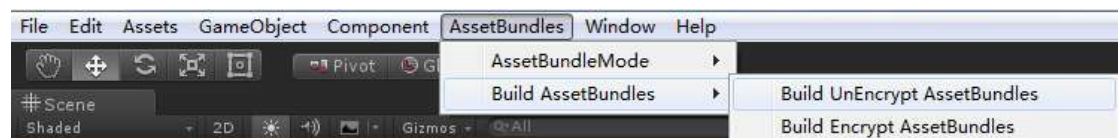
(1) **NoAssetBundleMode:**

Considered that some game developers want to see assets being loaded immediately during the game development stage, In order to see assets' effect when game is running, that is to say, they don't want to load the asset in the form of AssetBundle, therefore, use this mode in unity editor, assets will be loaded from directory called BuildAssetBundlesPath directly, rather than load asset from its AssetBundle.

(2) **AssetBundleDebugMode:**

Considered that some game developers want to load assets in the form of assetbundles during the game development stage, but they don't want to build a asset server, therefore, use this mode in unity editor:

① *After asset is build into AssetBundle, AssetBundle will be save to the folder which named UnEncryptAssetBundlesFolder or EncryptAssetBundlesFolder in the root of Project (if you click the option in unity menu bar: AssetBundles/Build AssetBundles/Build UnEncrypt AssetBundles, AssetBundles will be built into the folder named UnEncryptAssetBundlesFolder. if you click the option in unity menu bar: AssetBundles/Build AssetBundles/Build Encrypt AssetBundles, AssetBundles will be built into the folder named EncryptAssetBundlesFolder.)*



② *When you build AssetBundles, if you use the option in unity's menu editor: AssetBundles/Build AssetBundles/Build UnEncrypt AssetBundles, please set the variable named AssetBundlesUseCipher in ConfigurationManager.cs to false, then the folder named UnEncryptAssetBundlesFolder will be regared as the asset server's asset directory, that is to say, all the assets which could be incremental updated, will be update to local persistence path on device from directory named UnEncryptAssetBundlesFolder. when update complete, the application will load the corresponding asset's AssetBundle from persistence path on device.*

When you build AssetBundles, if you use the option in unity's menu editor: AssetBundles/Build AssetBundles/Build Encrypt AssetBundles, please set the variable named AssetBundlesUseCipher in ConfigurationManager.cs to true, then the folder named EncryptAssetBundlesFolder will be regared as the asset server's asset directory, that is to say, all the assets which could be incremental updated, will be update

to local persistence path on device from directory named *EncryptAssetBundlesFolder*.when update complete,the application will load the corresponding asset's *AssetBundle* from persistence path on device.

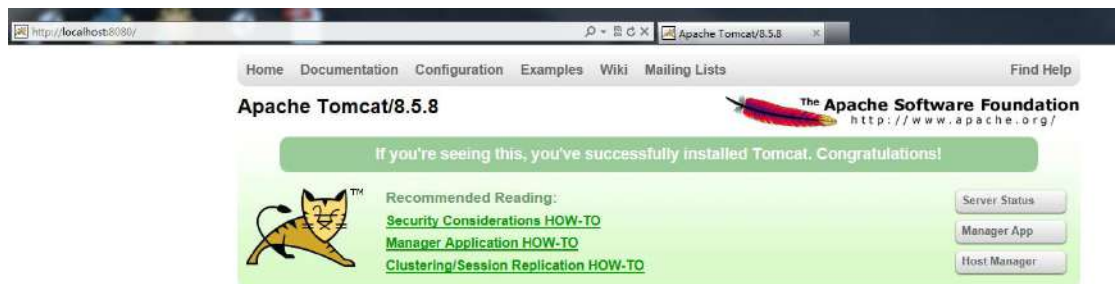
(3) **AssetBundleCompleteMode:**

This pattern is the complete process pattern for the framework :

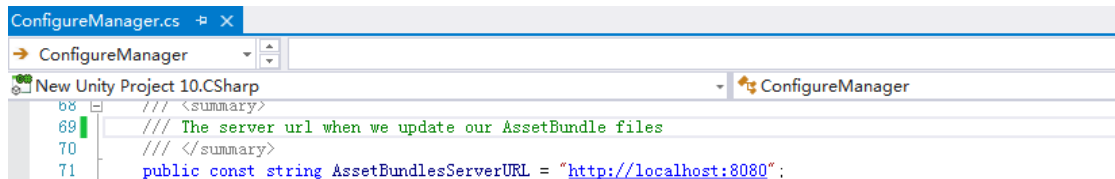
① *Before use this mode,the game developer need build the server of asset of their own,for example,the Apache Tomcat.*

After set up the server successfully,please make sure the server of asset is opened,and close the firewall of your computer.

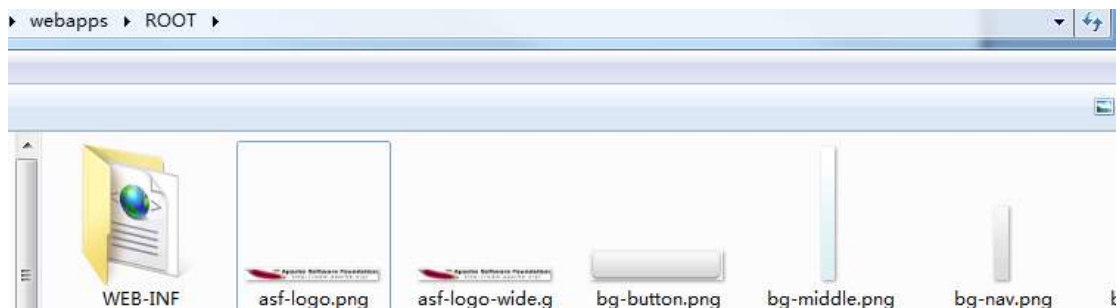
Input the asset server's url on your computer's browser,then make sure you could connect to the asset server normally.



*Finally,set the variable which named *AssetBundleServerURL* in script of *ConfigureManager.cs* to your asset server's url,for example: <http://localhost:8080>*

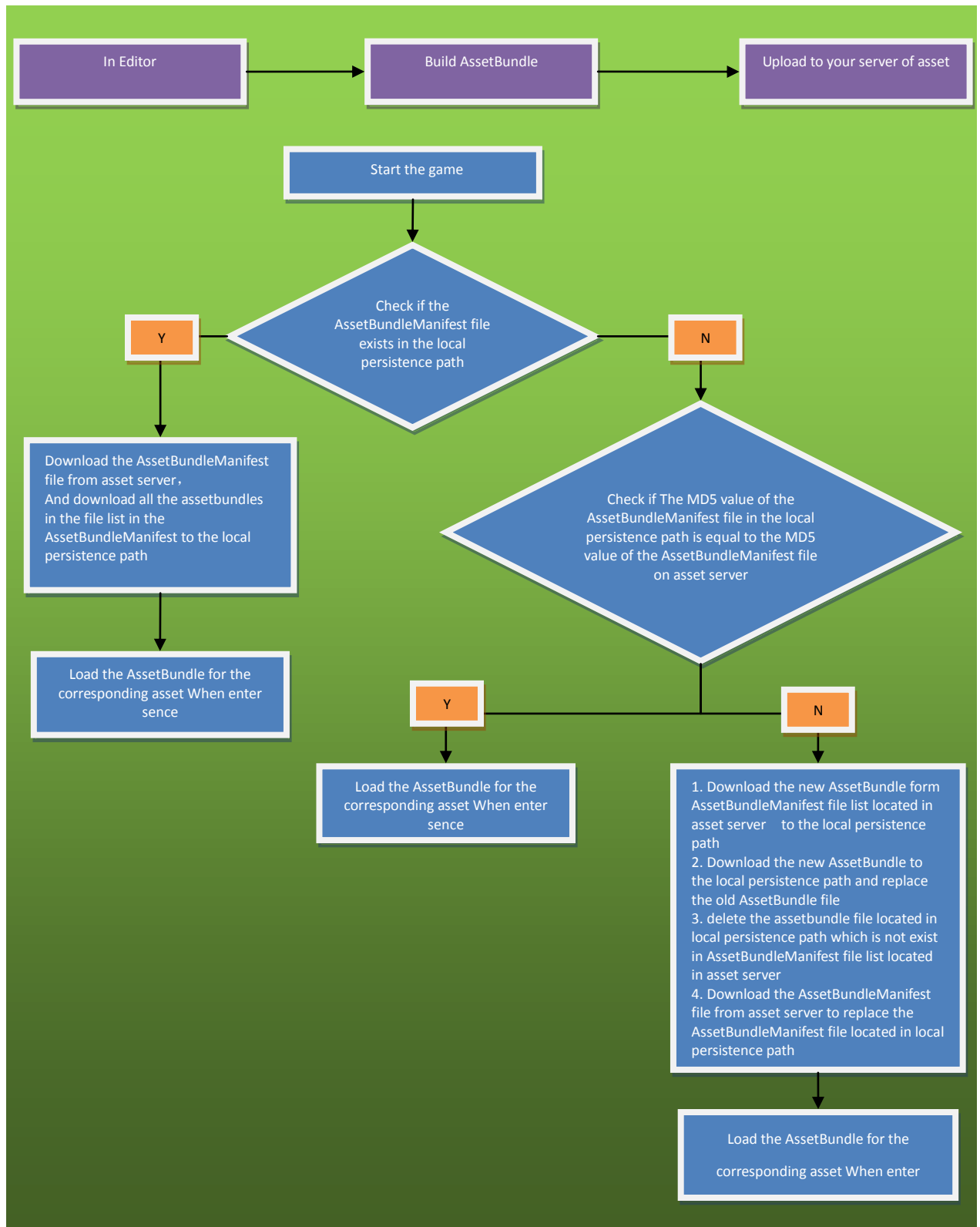


② *When AssetBundles build successfully,upload assetbundles to the root directory of your asset server(for example,the Apache Tomcat of windows version,its root directory is located in Tomcat\webapps\ROOT of its installation directory,as shown below.)*



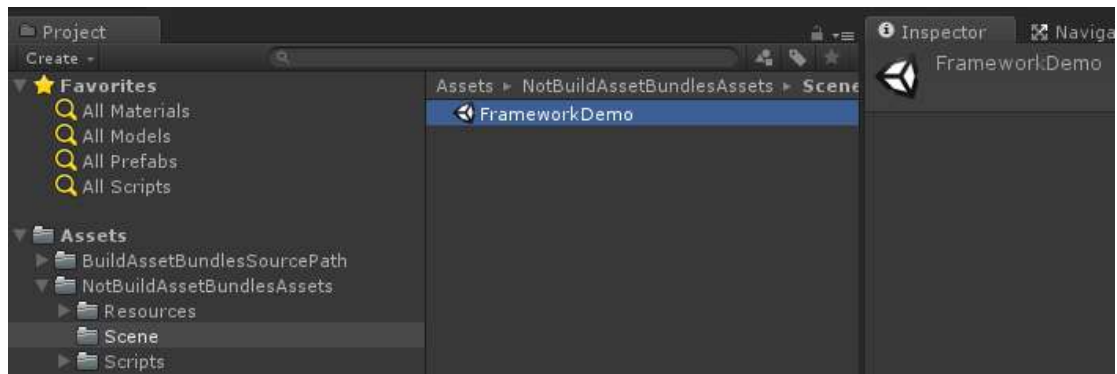
③ *Select this mode in unity editor,when start the game,all of the AssetBundles which could be incremental updated will be update to the persistence path on device. when update complete,the application will load AssetBundles from persistence path on device.*

4. The diagram of the framework's workflow:



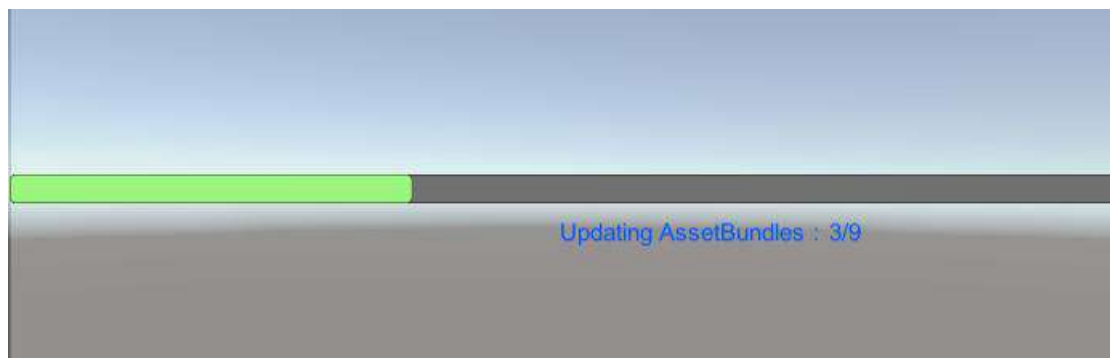
5. FrameworkDemo:

There is a demo scene in the Project:



(Please make sure assetbundles has been built correctly and your configuration has been set correctly.)

Start the game, you may see this:

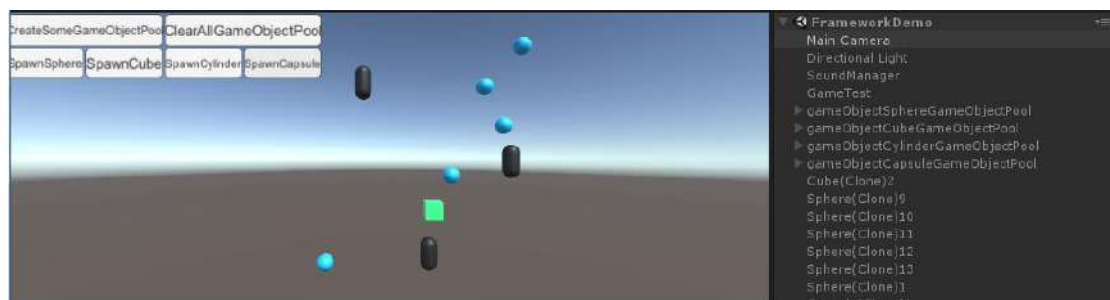


After AssetBundles has been Updated,the game will show the UI in below.

First of all,click the button which called CreateSomeGameObjectPool.

Secondly,click the button frequently which are in the last line.

Finally,Check if there is some gameObject instantiated.



6. Brief Introduction for Framework's API:

① In script which name is `ResourceManager.cs`, there are some function might be used frequently:

```
// Initialize the resource manager
public static void ResourceManagerInit()

// load asset's assetbundle and asset to memory, then return the reference of this asset
public static UnityEngine.Object LoadAsset(string assetPath)

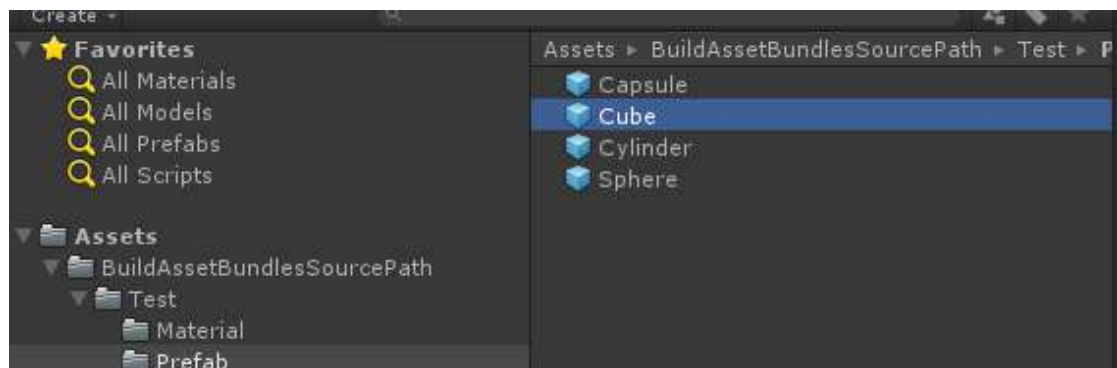
// load asset's assetbundle and asset to memory, then return the reference of this asset
public static T LoadAsset<T>(string assetPath) where T : UnityEngine.Object

// load asset's assetbundle to memory, then return the reference of this asset's assetbundle
public static AssetBundle LoadAssetBundleOfAsset(string assetPath)

// unload asset's assetbundle from memory
public static void UnLoadAssetBundleOfAsset(string assetPath)
```

② The use of **`ResourceManager.LoadAsset(string assetPath)`** is similar to the Unity's API: **`Resources.load(string path)`**, this is the demonstration:

If you want to load a prefab which is named Cube in this path:



Then you can load and instantiate like this:

```
GameObject CubeAsset = ResourceManager.LoadAsset<GameObject>("Test/Prefab/Cube");
```

```
GameObject cubeInstantiate = Instantiate(CubeAsset) as GameObject;
```

7. Contact:

If you have any questions, please email me: 18311310080@163.com