

# LiquidX Sample Test

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## Introduction

My name is Farhan, I'm passionate about gaming outside of work and play competitive games in my free time. Also I am Innovative game programmer with over 7 years of experience in the gaming field. Seeking unreal game developer position to utilize knowledge and skills to advance portfolio and potential for increased responsibility.

### Test 1

What I understand from test 1 code is missing UPROPERTY() from Myactors variable. If you don't store Myactors in a UPROPERTY wrapped pointer (or container). The GC will look at the object, will see if anything is holding a reference to it, if nothing is found, it deems it garbage, and removes it. So in the above example, that actor will get GC'd at the next run. and Also we can use Const Keyword in the PrintArray function parameter for more optimized code because the array is unnecessarily passed to the PrintArray function by copy.

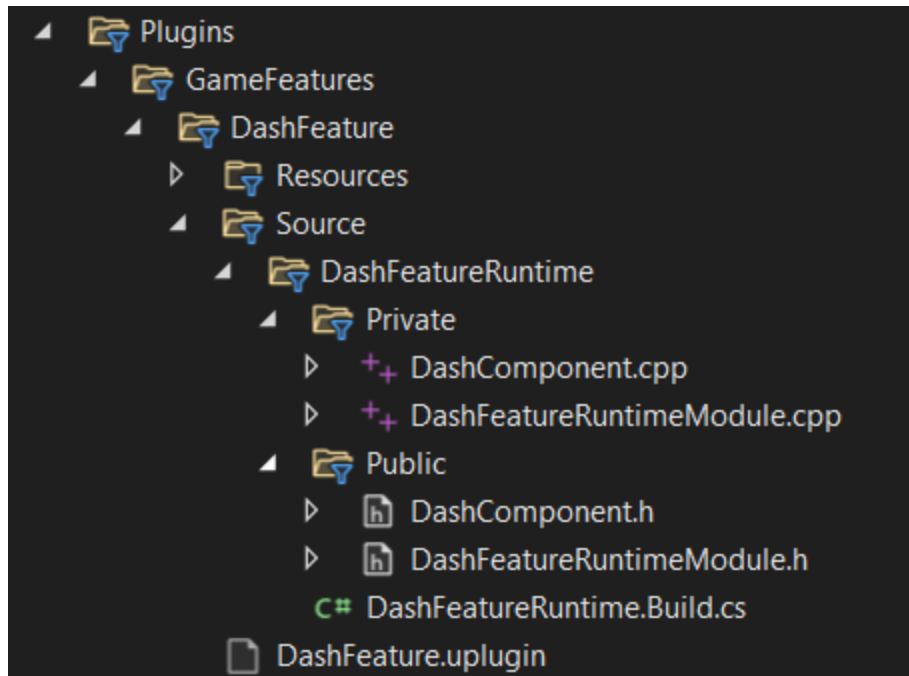
### Test 2

I implement three features in this third person project. You have to use the latest version of unreal engine to open the project.

#### 1. Dash

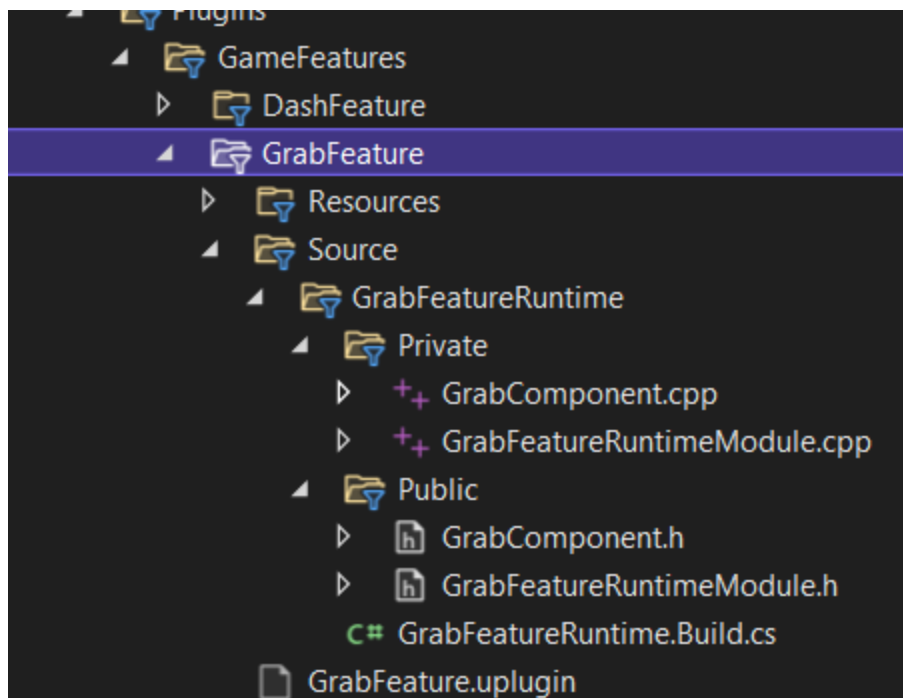
I created a modular gameplay feature for dashing and by default it is active in game. Dash component will be attached to third person Character on runtime. You can use the dash feature by pressing the left shift key. All the code is written in c++.

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## 2. Grab Objects

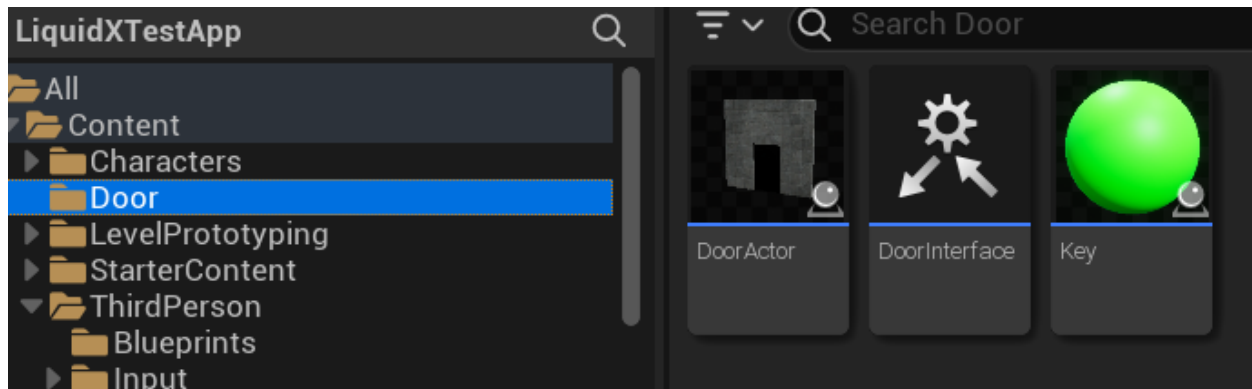
This feature is also integrated with the modular feature plugin and it is active by default. This component will be attached to the character on runtime. You can use this feature by moving your cursor to the cube object and pressing left mouse click for GRAB or release mouse button to THROW that cube.



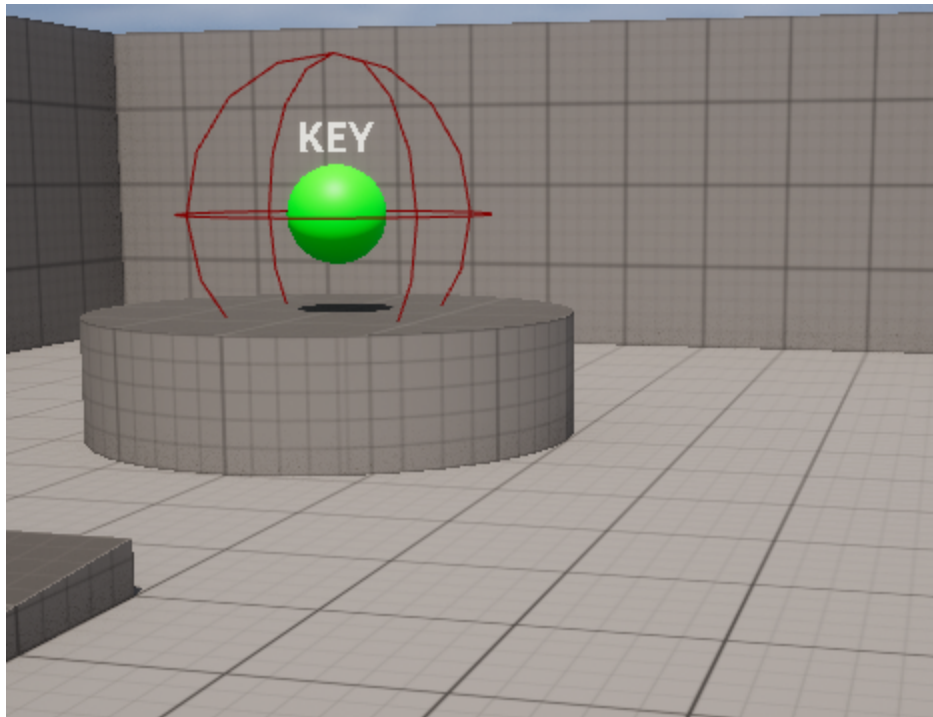
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### 3. Door

This Feature is implement in blueprint actor that is derived from c++ class.You can find actor in Door Folder here.



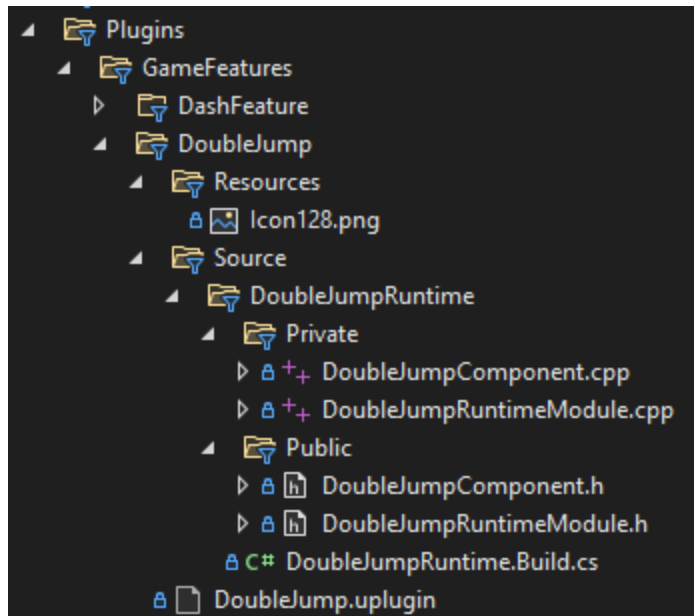
This feature is using an interface to pass the key information to the player character.You need to pick the KEY to open the door.



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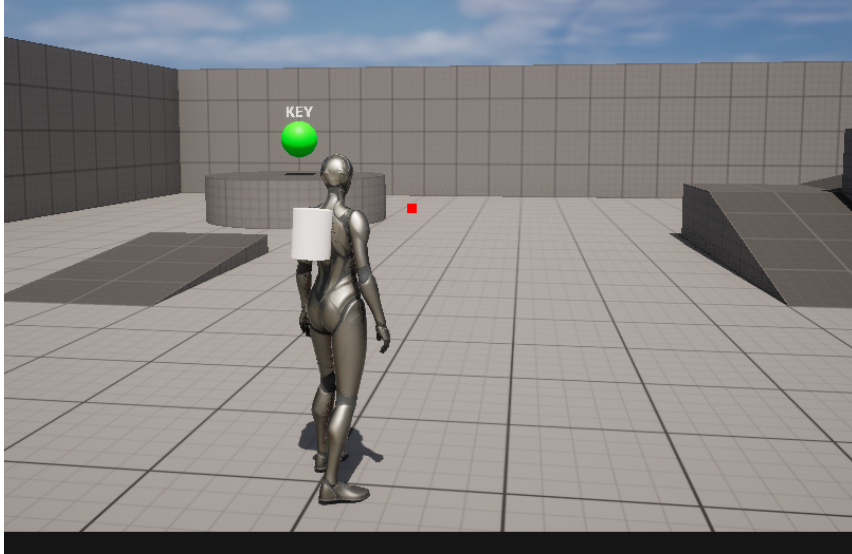
#### 4. Double Jump:

This feature is implemented through a modular gameplay feature plugin and by default it is active. You can use this feature by pressing space button twice.



#### 5. JetPack:

With the modular gameplay plugin approach , I made this feature and by default it is deactivated. You can Enable this feature by pressing the 5 Button on the keyboard.After that you have to press the space button to fly in the air and release the button to come down.



### **Improvement and Time**

It takes around 6 hours to create 5 features and I can improve these features through enabling or disabling the modular plugin on runtime. I already created a function for enabling or disabling the jetpack plugin on runtime and will make some changes to use it for all other modular features.