

## Explaining the system / My thought process

All the inputs are available in the HUD. Focused on simplicity for the systems (as described) to have more time to focus on audio feedback and visual polish. Besides that, tried to maintain a good code foundation and project organization that can be easily expanded upon.

### **ScriptableObjects**

I really like using ScriptableObjects when working with Unity, they allow the creation of a centralized space for editing, are persistent, allow great reusability (the SFX system uses them, allowing many places to easily trigger SFX through UnityEvents) and facilitated the serialization / save system implementation a lot.

### **Systems and Components**

Instead of relying the initialization of objects and dependency fetching on Awake or Start, that usually lead to race conditions and a lot of headache, I implemented a simple Dependency Injection system. There are some "System" MonoBehaviours that inject themselves or other systems to other MonoBehaviours like the Player or the InventoryPanel in the UI through a "Setup()" method. That way there are no worries regarding race conditions and the system is easily expandable and maintainable.

All MonoBehaviours have the "Component" prefix on them to make them easily recognizable and to not mistake that type of script with pure C# or ScriptableObject scripts, for instance.

### **SFX System**

Leveraging the power of ScriptableObjects, I was able to create a simple "SoundEffectDefinition" ScriptableObject that allows setting: random Audio, random pitch range, volume configuration (and any other option can be easily added). And then the created asset can be easily used in UnityEvents that allows non-engineers to inject audio feedback without the need of code changes.

## Personal assessment of your performance

I think I could have done more polish passes and finished sooner, however I really liked the final result: it's cute, visually appealing, consistent, with SFX for most interactions (wish I had time to implement some particles too), intuitive (all inputs are available in the HUD) and the Level Design is simple but also appealing.