

# Report

## 1 Controls

To move the character press the WASD keys, and whenever the character is near an interactable object a popup will be shown. By pressing E, the player can interact with the objects.

## 2 Project Architecture

To ensure clean and maintainable code, the project's architecture leveraged Scriptable Objects as an intermediary for events. This approach was chosen to minimize script dependencies. Besides that, ScriptableObjects were also used in the sellable items.

I first decided to create the interactable objects in the world. First the House (the left side building) where the player can access its inventory, then the Shop (right Side Building) where the player can access the shop and buy and sell items and then a Money Log where the player can gain some money to shop with. Afterwards, I decided to create an inventory system that has items. Both the Player and the Shop have their inventory and whenever the player decides to buy an item, that item is moved from one inventory to the other. The same happens when the player sells an item, although the shop will only pay 80% of the price it sold it for. The player can only sell the items that they are not using, so, to sell an item the player must first unequip it by going to the House and accessing the inventory.

### 2.1 Abstract Classes

I decided to have 2 abstract classes, the *Building* and the *BuildingUI*. Although unnecessary for this small game I decided on this approach to allow for easier future customization. In the future if I wanted to have a different behaviour for a building this approach would make that very easy to implement.

#### 2.1.1 Actions to Improve

One clear point where I could improve was in the asset choice and UI implementation. Although visually the assets are not too flashy I focused more on the technical implementation of the task.