

Little Shop Test

The technical test is about creating a small clothing shop where you buy and sell. The bought items must be shown on the player.

Assets

I downloaded the shop interior and the customizable character from the Unity Store using the assets of "[Daniel Thomas](#)". His customizable character allowed me to allocate slots that will be used to put clothes on the character. His apparel is limited but useful for demonstration.

Character Controller

Since Daniel already had a rigidbody character controller (the same that I was going to use), so there was no need to reinvent the wheel here and used his rigidbody character controller along with the basic walking animation.

Usually there would be sprites for forward and backward movement, but due to the time limit, I opted out of the sprites for backward movements.

Shop Inventory

Starting from the UI, I created two panels, one for buying and one for selling. In both cases I needed a container to hold the items and an item prefab that will be used to populate the shop. The item prefab holds the name, sprite, and the price of the item.

The items are scriptable objects which are super useful in this case to create many items.

I created two scripts, one for buy shop and one for sell shop.

The buy shop script:

The way it populates the items is by adding the items to a list in the inspector. As you will see, the buy shop has categories based on item type. So by clicking a category, the script will run through the items list in the inspector, check if the item type matches the string on the item category, if it does, it instantiates the above item prefab more than once (depends on how many items there are per category) and assigns the name, sprite, and price of the item prefab based on the scriptable object.

The Sell Shop Script:

To do this, I created a separate script (Equipped Items script) on the player. I attached to every slot that can be equipped with an item. Once an item is bought, I simply change the sprite of this slot. To populate the sell shop, it finds all the objects in the scene that have the equipped item scripts and checks if there is an item or not and then populates the item prefab just like above.

Coin Manager and UI

A coin manager was needed to handle the economy. It takes care of adding and deducting coins and communicating with the UI to display the available coins and so on. UI assets were used from a humble bundle bought a while ago.

Things to Improve Upon

1. Given more time, I could've founded better assets for the clothes, more variety
2. When creating the scriptable objects, I started in reverse, as in created the item to populate a shop with instead of creating a general notion of an item. Refactoring would have taken some time, so I decided to leave it as is.
3. I wanted to add a way to gain coins instead of cheating, but I wanted to stick with the 48 hours initially given to me, and to be honest here I used 5 to 6 hours in these 48hours