

The game implements several features:

1. Character movement
2. Character interaction with world items
3. Dialog with NPC
4. Buying / selling items with currency
5. Equipping items (hats & weapons)

## 1. Character movement

The character movement is simple, it works by receiving WASD input from the user and calculating the direction of movement accordingly. It sets rigidbody velocity to achieve movement. The simple script `TopDownCharacterController` was taken from an asset (Cainos – Pixel Art Top Down) and modified. However, it is a very simple script and the only code taken from an asset.

## 2. Character interaction with world items

A simple interaction system was implemented. Any items which can be interacted with inherit from an `Interactable` abstract class. These items do arbitrary actions when interacted with. E.g. items on display, shop keeper, free gold, etc.

The player constantly checks a surrounding circle for the nearest interactable if available. The UI updates to indicate that there is an interactable whenever a new interactable is detected.

## 3. Dialog with NPC

Dialog is implemented by iterating through a list of texts whenever the user clicks space bar. It is blocking meaning that the player needs to go through the whole dialog without skipping.

## 4. Buying and selling items

The player has “money” which can be spent to purchase items or gained by selling them. Each item has a price associated with its `ScriptableObject` entry in the Data folder.

Selling items returns the price of the item to the player.

## 5. Equipping items

2 types of items have been implemented: hats & weapons. Each has a single sprite rendered placed at the desired place, and all the sprites of one type look right in that place (this is from the Medieval Fantasy Characters asset.)

The player has a list of items currently in his possession. Using up/down and right/left arrow keys, the player cycles through the available hats/weapons and equips them. The player also keeps track of the current hat and current weapon.

## Thoughts

The “game” was quite fun to work on, I did not implement this type of games before so it was a fun new challenge. I am sure the way I implemented the systems could be improved but given that I did it in around 1.5 days I would say I am happy with it. Of course the game lacks major features like animation and sound, but I think given more time I can make a more complete game, I hope.

Enjoy