LSW Task Documentation

Introduction:

This document is intended to serve as a basic introduction to, and explanation of the systems implemented in this task. All code was made from scratch with simplicity in mind and the intent to establish the basis for different scalable systems.

Input:

"i" key : used to toggle the inventory on/off.
"e" key : used to interact with objects.
"w, a, s, d" keys : used for player movement.
Mouse cursor : used for interacting with the shop and inventory elements.

Systems:

The first implemented feature was the logic for a basic player character. The logic was initially separated between three classes that acted as model, view and controller for the character. The *PlayerModel* class mainly contained data that the *PlayerView* class would later use for movement and displaying the equipped items. The player controller acts as an interface between these components and other elements on the scene, as well as handling input from the player.
Then a simple shop was added upon which I would later add more logic for handling interaction and purchasing logic. Both the shop and the player's inventory are initialized with data from .json files, in order to allow designers to make changes without having to go through code or unity editor settings.
I added an *Interactor* component in order to handle interaction with the shop. I constructed it in such a manner that would allow future extension in order to handle interactions with other elements. An *IInteractable* interface was created so different elements could implement and handle interaction from the Interactor component. i.e: interacting with the shop opens the shop UI, interacting with an NPC opens a dialog bubble, etc.
After this was done, I created the shop UI. I followed the same principle of simplicity and scalability for this. I used different Unity UI elements in order to account for different cases like the Inventory size changing in the future or more shop elements being added.
Finally I created a component that handles the player's animation and another one that handles each clothing piece separately. The idea is that animations for the different elements the player can equip have the same amount of keyframes as the player character's animation. This way by keeping track of the sprite the player character is displaying, each equipment piece can display the correct sprite to sync up with that animation.
Finally a simple inventory menu was added in order to be able to equip/unequip items.

Final thoughts:

I've had plenty of fun doing this task and have enjoyed the challenge presented. My only regret with it is not having time to add more polish and visual elements. As a student with a full time job, I had to make use of every gap in my schedule during this weekend. I was only able to use a small portion of the 96 hours provided.
However, doing this task gave me several ideas and I believe I'll continue working on this project since I have things I would like to expand on. I think I have established a solid foundation upon which I can expand to add more fun features.