Blue Gravity Studio Test

Initial impressions:
My initial impressions of this task were that it wasn't too difficult, but would take a sizable chunk of the given time to complete. I've worked with 2D games before, but have never created a human character paper doll system. I decided to go with a simple singleton design mindset, as I'm most comfortable with it, and it's good for quick prototyping.

Scene setup:
The most time consuming part of this test was getting the necessary assets and setting the shop environment up. I wasted some time downloading unfinished free assets, assets meant for other game engines, before settling on some simple 16 pixel spritesheets.

Player setup:
Setting up the player movement was simple, initially using the transform component and later switching to a rigidbody so collisions wouldn't be jittery.
The other thing that took a while was creating animations for clothes and the character, simple but time consuming.

UI setup:
Two main parts to the UI, the shop inventory and the player inventory, the UI is set up using anchors so it would adjust to most conventional displays.
The inventories use grid layout groups in combination with initialized prefabs to generate the items inside. When clicking on an item in the player's inventory, it checks whether it's equipped or not, and shows corresponding menu options, allowing the player to sell it back if a shop is opened, as well.

Inventory setup:
I decided to use ScriptableObjects for inventories and items, allowing for simple saving systems to be implemented later if needed. As mentioned, the player uses a paper doll system for the clothes, layering one sprite and animation on top of another.

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Added elements:
I added a simple tutorial screen that shows up when first opening the application, and some quiet music which the player can enable and disable.

My performance:
Overall I think I did fairly well, my main drawback was my lack of experience with paper doll systems, otherwise I could have created a system to make animations from spritesheets directly, without doing it by hand. Other than that, given the time constraints, the overall system works, doesn't look too bad and is set up to be expanded upon for different types of items/clothing, NPC types and interactables, and looking through the code afterwards and adding a few simple comments, it seems readable and simple to understand.