My Process

- My First approach is to understand the requirements of the project. So read the test document in detail to not miss any crucial information.
- Once I understood the requirements then I started to think about this project which will be completed in less than 48 hours, because the most important thing is to complete the project with working functionalities.
    - Still I had gone too far in the idea phase, I had a lot of ideas but was able to cut them down in half focusing on the main requirements of the test.
- Then I listed down challenges which I will face during the project.
    - 2D art, animation
    - How to handle changing clothes with animation, How will it fit in the art creating process.
- I am a terrible artist so I tried to find top down characters with animation, but got nothing for free. Once I got a good art pack for top down characters with animation. It would not fit in with the custom clothes feature.
- Now, there was only one thing remaining, creating my own art. As I mentioned, I am a terrible artist. I chose my art style as “Pixel Art”.
- Created 4 animation cycles for run_down, run_left, run_right and run_up.
- Integrated those animations using blend tree and “CharacterController” which is an abstract class containing functionalities of movement and updating animation.
- Created ‘Custom Clothes’ in Aseprite. Created all 4 animation cycles with cloth. Then using “Animator Override Controller” functionality was able to override base animation with custom clothes. “Huraaaay” now game was able to equip pant/shirt separately.
- Now Next thing was to implement inventory.
    - I implemented core logic of Adding item, Removing item and equipping/dequipping item from inventory in “Inventory” Class.
    - I made an “Item” Scriptable object so that I can create an Item in Unity editor and store it as an asset. “Item” has Buy, Sell, Equip/Dequip which delegate to “Inventory” Add, Remove and Equip/Dequip.
- Now It's time to create a Shop and make him interact with the Inventory of who is interacting with the Shop.
    - I created Contract “INventoryINtereactable” which require Inventory to interact with shop.

    - Now the shop can Access interactor's inventory, So only thing remaining is to show it in UI form.
    - "Shop" class is has "ShopUI" which shows items using "ItemUiCard".
    - Whenever Inventory class gets updated, I am using C# events to convey changes to "PlayerController" and "ShopUI".
- Now It was time to interact with Shopkeeper, which means Dialogue system.
    - I implemented "DialogueController" which will handle Core logic of DialogueSystem. Containing StartDialogue, EndDialogue and DisplaynextSentence. This class is Singleton, so that it can be used by NPC to start dialogue.
    - "Dialogue" is a Scriptable Object and contains data for Dialogue. So that I can create in Editor and store it as an asset.
    - "DialogueUI" updates the UI by receiving information from "Dialogue Controller".
- Now It's time to integrate this whole thing with the NPC, so that the NPC has "Shop" and "Dialogue".
- I implemented simple Sound Effects and background music to give the game a good feel.
- I designed a small town for players to move around and buy clothes from multiple NPC's.
- Right now the game has 7 cloth items in total.

MY OPINION

- I think I did pretty good. I had some cool ideas which I wanted to implement like *locked cloth Items* which you can unlock by completing some mission in town. That's why I designed the town. But unfortunately I was unable to implement that due to the urgency I had, and also My major time invested and lack of skill in art and animation.
- However I was able to implement core features that I thought of in a good manner.
- Overall I had great experience working on this test. I learned a lot, I made some mistakes. But I am satisfied with what I have achieved in less than 48 hours.
- Thank You for this wonderful opportunity, You guys are doing great work and would love to be part of the team.