System Explanation, Thought Process, and Personal Assessment

Hello everyone, and thank you for the opportunity to take part in Unity's programming test. The test was particularly interesting due to its focus on inventory and item management, which required me to make decisions ensuring the code was both expansive and modular. This approach allowed me to build a strong foundation for the system.

To facilitate communication between the UI and the inventory, I implemented the Observer design pattern. This made it significantly easier to manage interactions between subjects and observers. Another interesting challenge was working with ScriptableObjects, especially regarding their limitations with the save system. To address this, I assigned a unique ID to each ScriptableObject and created a list of strings to save item names. When the game loaded, it would iterate through this list and re-add the corresponding items to the inventory. While I could have copied the data into a MonoBehaviour script and passed the information that way, I found this approach more suitable given the time constraints.

For the player movement script, I opted for a heavier boat-like movement to convey a sense of weight, incorporating physics calculations such as kinematics. All assets were sourced from external platforms like the Asset Store, Sketchfab, and itch.io, except for the boat animation, which I created myself. I will include all asset links in the GitHub README for reference. Additionally, I used Astah to prototype the project with a UML diagram, which will also be attached to the GitHub repository. Overall, this was a great experience that challenged me to implement all mechanics within a short timeframe. Thank you for the opportunity, and I hope you find my work satisfactory. Have a great day!