For the test task, I developed a game system featuring a GameManager, InventoryManager, UIInventory, and associated scripts. The core system includes player interactions, item management, and basic game mechanics. A key focus was on utilizing ScriptableObjects to manage item properties and functionalities effectively.

System:

- **GameManager**: Manages the overall game state, including player lives, inventory, and game audio. It handles life updates, game over scenarios, and transitions between game states. It also controls the inventory UI visibility and player interactions with items.
- **InventoryManager**: Manages item collection and UI updates. It supports drag-and-drop functionality for item organization and provides methods for adding, removing, and using items. The inventory's drag-and-drop mechanics were particularly challenging but essential for a cohesive user experience.
- **UIInventory**: Provides the user interface for inventory management. It handles item display, drag-and-drop operations, and interactions with inventory slots. It updates the UI based on inventory changes and player actions.
- **Item and UsableItem**: Defines the properties and effects of items within the game. UsableItems include specific effects like gaining life or boosting jump abilities, influencing game mechanics directly.
- **PlayerInteractions**: Handles player collision and trigger events, such as interacting with enemies and ending the game upon reaching specific triggers.

During the test, my focus was on demonstrating my proficiency in UI design and animations. Creating the inventory system was a new challenge, and I was interested in learning about drag-and-drop functionality. Although I intended to implement a comprehensive audio manager, time constraints limited my progress.

Overall, I am satisfied with the deliverables. However, balancing multiple roles, such as game designer, artist, audio and developer, proved challenging. I wish I had more time to refine the system further, but I am pleased with the progress and the functional system I managed to create within the constraints.