Project System Overview

The system I developed is a modular inventory and player interaction framework designed for a 2D Unity game. The core components include an inventory UI handler, item data structures, player control, interaction mechanisms, and game-winning conditions. Inventory items are managed via InventoryItemData ScriptableObjects, allowing easy creation and extension of new items. The InventoryUIHandler manages UI slots, item dragging, and persistence through JSON-based saving and loading, ensuring player progress is maintained across sessions. The PlayerController handles movement, interaction, combat, and inventory pickup, integrating input actions with game mechanics. A WinConditionChecker verifies if the player possesses all required items to trigger victory, encouraging exploration and item collection. Together, these systems provide a cohesive gameplay loop centered on item management and player engagement.

Thought Process During the Interview

During the interview, my primary goal was to clearly communicate my understanding of each script's purpose and how they interconnect. I focused on demonstrating the modular design, explaining how each component encapsulates specific responsibilities—for example, separating UI concerns from player control logic. I aimed to show awareness of Unity best practices such as using ScriptableObjects for data, leveraging the new Input System for responsiveness, and implementing saving/loading through a data service interface. I also highlighted areas for improvement and potential optimizations, such as type consistency in physics components and expanding combat features. I balanced technical detail with clarity to ensure the interviewer could follow my reasoning and see my problem-solving approach.

Personal Assessment

Overall, I believe I performed well in articulating the architecture and functionality of the system. I was able to connect the dots between disparate components and showcase a solid grasp of Unity systems and design patterns. If anything, I could improve by providing more specific examples of how I would enhance the system or handle edge cases. Additionally, I can work on pacing my explanations to allow more time for dialogue. Nonetheless, I am confident my responses conveyed both my technical competency and my collaborative mindset.