

Inventory and Save/Load System

During the interview, I was tasked with creating a functional gameplay and inventory system complete with save/load functionality and UI interaction. My focus was on building modular, scalable systems that could be easily extended later.

I began with the **player controller**, implementing smooth movement and animation logic using Unity's Animator system. I also added interaction logic for picking up items and triggering actions like consuming bananas. These actions were visually and mechanically synced to reinforce the connection between gameplay and inventory.

For the **inventory**, I designed a **slot-based UI** that responds dynamically to user input. Players can add, remove, or move items between slots, with full drag-and-drop support and real-time UI updates. Each item is represented by a custom **InventoryItem** class derived from a base **Item**, allowing easy extension for consumables, equipment, or quest items.

The **save/load system** serializes inventory state to JSON, storing each item's unique identifier, quantity, and most importantly — its **slot index**. This ensures the inventory is restored exactly as the player left it. I used a simplified **ItemSlotSave** struct for serialization, and loaded items back via an **ItemDatabase** lookup to reconstruct the correct references.

My thought process during the interview was to approach the system like a production feature — prioritizing clarity, reusability, and user experience. I used UnityEvents for UI updates to decouple logic and visuals, making the system more maintainable.

Personal Assessment

I'm proud of the clarity and completeness of the system in such a short time. It covers all major gameplay and inventory features and performs well in both UX and code design. With more time, I'd refine the UI visuals and polish interaction feedback. Overall, I believe I delivered a solid, functional prototype that demonstrates both technical skill and thoughtful design.

HOW TO PLAY:

WASD - player movement.

B - open/close inventory UI.

E- pick up bananas on the ground when they are near you.

Drag an item outside the inventory to get a delete UI confirmation.

Hover the item for a small description.

Right click item to consume -1 of it.

Game save/load automatically.