Project Overview and Reflection

For this technical task, I developed a 2D exploration game in Unity 6. The player controls a mouse named Nibbles who searches for cheese on the moon, using tools crafted by his robotic cat companion aboard the spaceship. The game includes multiple types of movement, item collection, inventory management, item equipment, a crafting shop, save/load functionality, dialogue interactions, Cinemachine-based cameras, animations, and sound systems. The art was created using AI and a UI pack from the Asset Store.

From the beginning, my goal was to create a modular and testable structure. I prioritized the core gameplay loop—movement, item collection, and player feedback—before progressing to sound, saving/loading, and UI polish. I used ScriptableObjects for item data and events to keep systems decoupled and maintainable. The save/load system uses JSON serialization and Application.persistentDataPath to persist inventory data across sessions.

During the interview phase, I focused on writing clean, consistent code that followed Unity best practices, such as separating logic from visuals. For example, I used SpriteResolver to dynamically update equipment visuals, and exposed relevant values in the Inspector to allow for easy iteration and balancing. Cinemachine was used to ensure smooth camera transitions during gameplay.

I believe I performed well given the time constraints. The game is functional, readable, and structured in a way that allows for future expansion. With more time, I would have added a tutorial sequence, alien enemies, comet hazards, and additional dialogue content. The biggest challenge was managing scope while ensuring the game was stable and polished. I deliberately chose quality and user experience over quantity of content.

Overall, this task allowed me to showcase my knowledge of Unity 6, especially in terms of system design, tool usage, and modular architecture. I'm pleased with the result and confident in the approach I took.