

# Game Programmer Task - Blue Gravity

This game features three main systems: Dialogue, Shop, and Inventory. Interaction with NPCs triggers a dialogue window, which can be initiated with a right mouse click, that also advances to the next dialogue. If the NPC is associated with a shop, the shop interface opens automatically after the dialogue finishes.

The shop interface, integrated with the inventory, allows for both: purchasing and selling. Left-click to buy, and right-click to sell items. The inventory can be accessed by pressing the "i" key. It contains item slots and equipped item slots. To equip an item, right-click it. Equipping multiple items of the same type (e.g., two hats) is not possible. Right-clicking an equipped item unequips it.

For efficient and effective UI management, Unity's EventSystem and interfaces like IPointerClickHandler were used. Player states were controlled using flags within the Player Manager, managed by the UI Manager, mainly.

The development process began with the Player and its functionalities, extending to the NPC and its direct relationship with the shop system. The shop and inventory systems were modeled together due to their interrelated nature. Singleton and Composite Design patterns were employed for this project.

My performance was highly satisfying, reflecting six months of dedicated specialization in Unity development. Inspiration from 'Stardew Valley' and 'Undertale' helped the design process, providing a strong existing foundation. Previously used code includes Scene Field.

The systems were designed considering that the game is single-level. It was fun! All assets used during this Task were completely free to use for commercial or non-commercial purposes.

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