Game Design Document

Inventory Management Sample

Interview test for NG+

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Overview

This was a very engaging project. At the same time I was in my comfort zone, I wanted to push myself to deliver as much of an unique concept as I could while respecting the 48h delivery period. The timing was tight, but I believe my efforts were worth it. Below are some considerations, explanations and thoughts on the development process.

External Assets Used

I have decided to use no pre-made scripts on this project, not even those I had previously written. While, in retrospect, this increased the development time considerably, it gave me an opportunity to exemplify what I'm *currently* capable of, instead of just things I have done before. I am satisfied with this choice.

That being said, I did use an asset pack for almost all of the visuals included in this project:

Ninja Adventure Asset Pack by pixel-boy.

A few of the sprites I needed along the way and couldn't find in the pack, I made myself. Those are the ones included under the "Sprites" folder, directly under Assets. I tried to keep these to a minimum though, to focus on scripting and UI behavior.

Systems Overview

Game Manager

A convention I always use in order to keep a centralized and modular system is creating a persistent game manager to store the references to other managers used throughout the game. In turn, those managers will keep the necessary references to their systems.

Inventory Management

This system obviously took most of the development time. The Inventory Manager is the "boss" here. You should be able to trace back any methods back to it.

I've used Scriptable Objects to store the base data for the items that can be stored in the inventory. This system is easily expandable and reliable. Individual classes are used to manage instantiated item data.

On the UI side, there are two "inventories": One in the main game UI, called Tool Menu, and another in the bag UI, which holds the inventory proper. The tool menu stores the first occupied weapon slot in the inventory, and the three first available food items. To use the weapon, you can press space. To use the food items, you can press the 1, 2 and 3 keys on the top of the keyboard. You can also click the buttons on the UI for the same effect.

The inventory is arranged in pockets of 3 types: Food, Weapons, and Miscellaneous. One thing I'm not happy about is the fact I'm always using strings to reference the pocket types. If this was a larger project, I'd have found a more elegant solution.

In order to be able to rearrange items, you must open the bag menu(the chest icon on the bottom right) and click the blue icon next to each pocket name to expand their view and disable their scrolling – except for the weapons, which only have three slots. Then, you can click and hold on an item for a brief moment, and drag into the desired slot. Dragging the item to the trash can removes it.

The bag UI, although functional, is not very fluid. I would’ve liked to add some animations and visual polish to this screen.

Movement and Tilemaps

Both of these are extremely simple. Although the tilemaps prefab is correctly setup, there is only a simple test map. The player movement is equally simple and although collisions work, I would like them to be more fluid. There are basic animations included for every player action.

Conclusion

I am satisfied with what I was able to accomplish for this interview. It was tight, but I gave it my best shot. I prioritized having a robust and modular base instead of additional features, and I think this was a wise choice.

I found the assignment to be clear enough, and with just the right balance of open-endedness and direction in order to foster my creativity and allow me to show my skills.

This document already has over double the amount of words requested, so I’m going to stop here for brevity’s sake. I am excited to discuss these results further with you. I sincerely enjoyed working on this project and I hope it was what you were looking for. Cheers!

GitHub Repository