

Blue Gravity Assessment

Important Note:

I want to note that when I talk with Acmonor#4868 on discord, I wrote to him that I want to postpone the task starting time because I had a game design lecture for the whole day. I'm 25 years old and I graduated from a University already, but I'm going there as a guest student. He scheduled an automatic mail after 10-12 hours and I asked him to delay it for another 24 hours. He saw it late so mail was already sent to me, so I couldn't work on the first day of the assessment.

Graphics

I created a simple looking game because I'm not a graphic designer so I don't have the luxury to create my own assets. Because of that I need to find them on the internet. But finding free assets that also fit together is really hard. So I want a simple looking game so I can get away with a few asset packs. Here is what I used:

[Pixel Art Top Down](#)

[Easy UI Emerald](#)

[Tasty Characters - Sea Pack](#)

Especially the UI and Tasty Characters pack fits very nicely. Environment can be improved, it's too low resolution and creates a bad contradiction with the character pack.

It's hard to tell who's the shopkeeper, so some UI would be very beneficial here. Like adding some kind of sign on top of the green guy. I created the interaction hint sign, and to be honest I quite like it. It's simple and elegant and it has a small animation.

Sound

I wanted to include sounds but it would be too time consuming so I passed that. But it would greatly improve the game feel, like playing cash sound when interacting with a shopkeeper. Or when buying or selling items.

Design

I chose a simple style for graphics, so I wanted to create the same for gameplay itself. Shopkeeper UI is simple, you choose via clicking right or left arrow buttons and if you want to buy an item you click on top of it. Buying an item can also be improved by adding a buy sign on top of the item image. I did this for selling item. You can toggle inventory by pressing "i", and when you click on the item you own, you sell it. If you hover on top of the item, it shows the selling image.

Interacting with the chest gives you money. You can drag boxes around via moving. You can reassign buttons for interaction and inventory in InputManager.

Programming

I've written every script inside the project, even though there are some premade scripts inside the Pixel Art Top Down, none are important. I've imported the DOTween library.

I created a save system. It writes to Json and saves to disk. It can save owned items, save resources like money. It's based on scriptable objects architecture, I have few variants of it and actually I use another variant in my [Unity Asset Store Package](#). With this architecture you need to change your coding paradigm too, it violates the OOP a little, because data doesn't live inside the object anymore, at least some of them. But that allows for cool things like IntMonitor, whose only purpose is to subscribe to the event of some int variable. It's not a new thing, it's a Unity version of the mediator pattern. InputChannel, SaveableRuntimeIntVariable work under this pattern. I would like to improve the Inventory UI system, now it iterates over all the items and checks all of them whether we have them or not. I would change this so instead of iterating everytime, it caches them some way.

I've a little editor script so you can open the save file location easily. It works both for macOS and Windows.

Another cool system is Interaction. Interactable class has a HintPanel, when Interactor gets nearby it's enabled. It gets an IInteractable interface and when Interactor interacts with it, it calls an Interact method. Every class implements it differently so it's very easy to write some cool effects. I've written two, one for ShopKeeper and another for ChestOpener.

I've used DOTween for creating some character animations, as well as the chest opening effect. I've created an image extension class for easily changing image's alpha.