

This is a short document about the Programming Task that I received during Interview of Little Sim World. As I mentioned, I can be available for 3 hours per weekday, and 8 hours per weekend (total 31 hours per week). Therefore, in reality, although I tried to spend more time, I could not utilize all 96 hours for the task (probably 30 hours at the highest) because I also have main job, so there are some aspects that need to be scoped down (mostly game design and aesthetic). However, required features are well implemented, code structure and design are strongly considered to offer modularity and consistency into the game, to help it more maintainable and scalable.

Player has 5 scripts to handle different responsibilities: *PlayerMovement* for controlling moving, *PlayerMoney* for managing money flow, *PlayerEquipment* for equipping cloths and storing their data, *PlayerInteraction* for shop interacting, and *PlayerInventory* for managing inventory list.

For now, there's a *MasterShop* that has 1 child is *ClothShop*. This can be easily expanded to *FoodShop* or *PetShop* (and more) with similar functionality. The main purposes for shops are clicking item to buy it, and dragging item from Inventory to sell.

Similar to shops, Items also have hierarchy for sharing same stats (for now just Cloth Item). They are also Scriptable Objects for storing data and easy referencing if needed. Of course, they are easy to expand for more Item types. *PlayerInventory* is storing a List of *ItemSO*.

In addition, item icons (*ItemInventory* and *ItemShop*) have scripts to store its Item data, as well as handle events such as: drag and drop, hover and click. *EquipmentPanel* and *ClothShopPanel* have On Drop event to handle equipping and selling actions.

To sum up, I think this is a really good task to estimate interviewing programmer's skills, as it's related to the game you're working on. I would say what I've done is not super great for the given time, but for long-run it would be really useful. There are still rooms for improvement, for example I haven't used much Events in this task, or pay much attention to the aesthetic of it. However, I believe as a team, we can give feedback and improve quality of each member to produce better product.