Design and event flow of the system:

The level flow is designed very simply. The player is able to move around, running into “Health Potions” that are then collected and added to their inventory. The player has 100 health, displayed in a bar in the bottom left hand corner of the screen. There are 6 enemies on the map represented by red cubes, which move towards the player, each dealing 20 damage on collision with the player and then despawning. To win the level the player must survive these 6 enemies. As they deal more damage then the player has health, the player has to use at least two health potions after taking damage to get more then 120 health and survive. To do this they need to run into the potions and then press the heal button in the upper right hand side of the screen.

How events improve modularity and gameplay responsiveness:

Events make up the bulk of the functions of the inventory system, allowing the player to pick up multiple items and display what items the player has on them. The current event system would allow for easy expansion of the number of items the player has access to with minimal difficulty. It also lets the play know how much of an item the player has picked up. The part of the script that allows the player to take damage and their health system is also a modular event, with anything tagged as an enemy able to deal damage rather then one entity.

Reflection on development challenges:

The biggest challenge was the implementation of the health system. I tried placing it in several different already existing scripts to get it to integrate properly and be able to tell the variables it needed to change, before finally settling on placing it partially in the inventory script and partially in the movement script that acts as the player controller, which allowed the player to use the potions and take damage without any annoying difficulties with the scripts not communicating right. The only other major challenge was getting the health bar to update correctly, which was not working in the fixedupdate for the player. However, simply calling the SetHealth function from the healthbar whenever TakeDamage occurred got the health bar UI to update to reflect the player’s health status correctly.