Assignment 3 : Design Rationale, REQ3

NonMultiTurnBuffitem. NonMultiTurnBuffItem interface added and consume action stores this interface. NonMultiTurnBuffItem has method to consume the item. Consume action now manages 2 items, MultiTurnBuffItem and NonMultiTurnBuffItem. The difference between both interface is that NonMultiTurnBuffItem will not be added into Consumed item manager after consumed, instead, the item will be removed after used.
Since there will only be 2 types of consume action, multi turn and non multi turn buff, consume action manages both interfaces and it is not split. By doing this, only 1 class are needed which makes class design simpler.

Bottle implements NonMultiTurnBuffitem. Bottle implements NonMultiTurnBuffItem interface because all drinkable water does not have multi turn effect (healing water and power water).

Bottle stores Drinkable interface. Bottle have array list and it can store as many drinkable. Drinkable has method drink and parameter actor to add the buff to the given actor.

Only one bottle can exist in a single time. Bottle has private constructor and getInstance method to ensure only one bottle exists. When bottle has not created, getInstance creates new bottle and returns itself (that bottle). When bottle already exists, it returns the existing bottle which is stored as attribute.

How refill action is created and what does it store. Health fountain creates healing water and creates refill action and passes healing water as the parameter when actor is on top of the fountain. Refill action will store drinkable. By doing so, when player performs refill action, it can directly append drinkable into bottle. This makes refill action simpler and does not need to create any new classes.

Bottle acting like a stack. Bottle stores an array as attribute which stores drinkable item. When the bottle is consumed, it takes the first item in the array and removes that item from the array. Then it calls drink method in drinkable to perform buff. To add drinkable item into bottle, add method from the array can be used to add drinkable item to the back of the array. This makes bottle act like a stack.

Increase base damage of the player. When player drinks power water, power water method adds new capability status.INCREASE_BASE_DAMAGE_BY_15 to that player. New attribute called base Damage are created in the player. When player has capability INCREASE_BASE_DAMAGE_BY_15, it will remove that capability from the player and increase base damage by 15 and it is computed inside player playTurn method every turn.