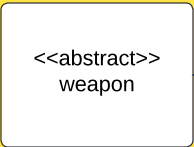
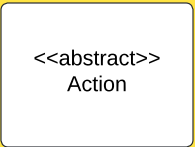
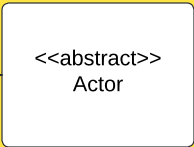


Q2 Jump Up, Super Star!
Player should choose to whether to jump into the higher level of the ground or not.

For different grounds, it has different method to check the success rate. According to the LSP, when checking the type of the Ground, the jumpAction should access all the child classes of the Ground. That means all the child classes will return specified method or attributes. In our design, set different attributes for the rate for each type of the ground.

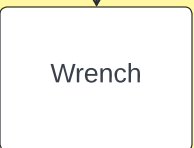
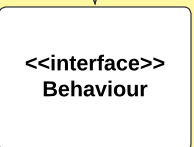
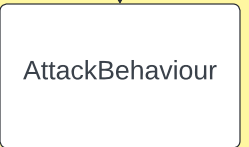
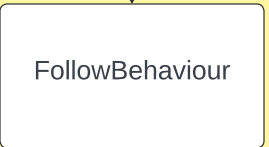
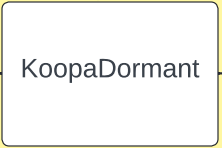
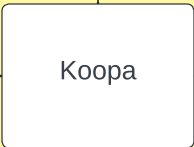
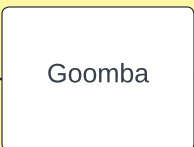
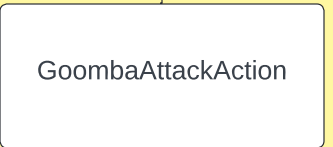
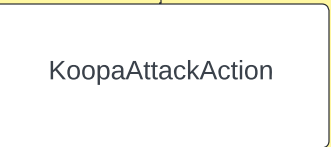
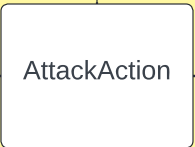
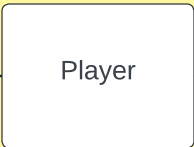


Q3 Enemy
Player can attack the goomba,koopa and the dormant koopa. At the same time, only Goomba and Koopa could attack the player.

Since the Goomba and Koopa are different enemies with different attack method, set 2 classes for each of them.

According to the SRP, the enemies' attack actions should not take extra responsibilities,so set 2 classes for each enemy's attack action.

According to the ISP, the enemy cannot do moving and attacking at the same time. So we need to modify the FollowBehaviour and AttackBeviour that only one beaviour can be behave when the enemy is meeting the player or not.



extends

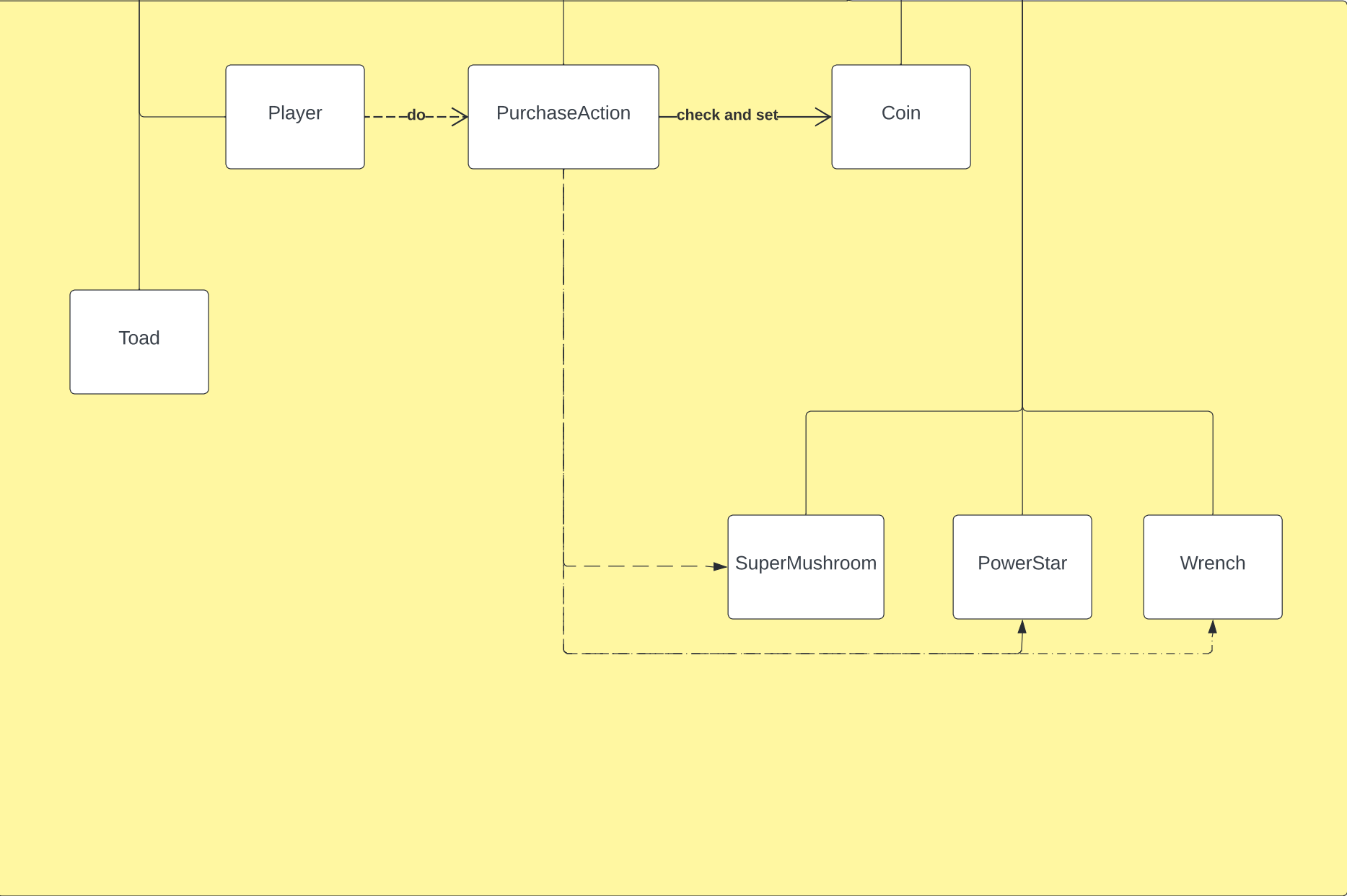
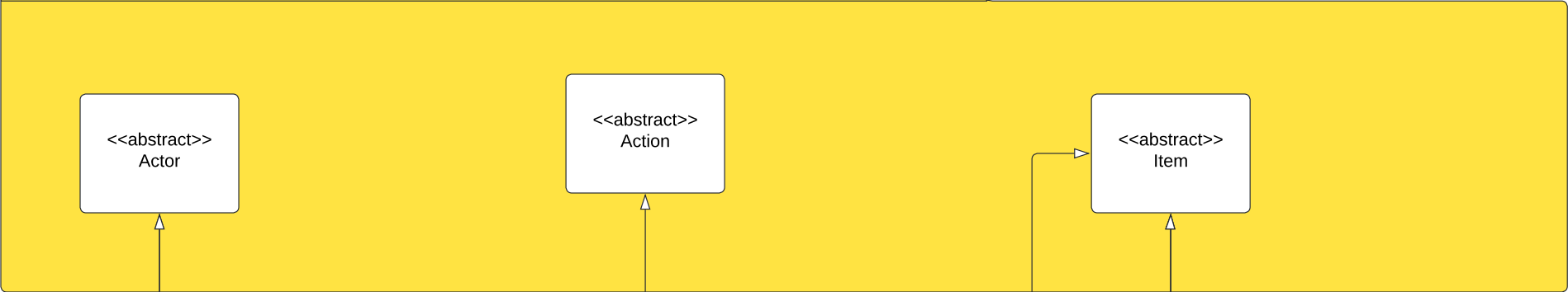
1...1

1...1

hurt by

destroy

check



Q5 Trading
Player meets the toad, and could use the coin to buy items.

When the player has enough coin to buys item. The item will directly be added into the inventory. And the coin number will be reset to a new number with setCoin().

According to the SRP, the PurchaseAction should be independent to the other actions, so we create it as a extension to the actions class.

Design Rationale:
When doing the purchaseAction, it will get player's coin number to check if player can buy a specified item. After done purchasing, the coin will be reset and add item to the inventory.

Toad will keep asking for use's input until user decides to not buy anything.