

FIT2099 ASSIGNMENT 1

By Joel Atta, Jack Patton & Yepu Hao

Req 1:

Class Diagram:

Sequence Diagram:

Design Rationale:

Req 2:

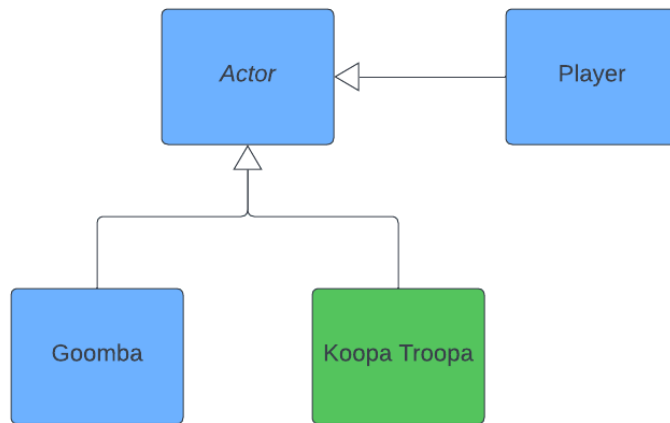
Class Diagram:

Sequence Diagram:

Design Rationale:

Req 3:

Class Diagram: Enemies



Draft diagram with key entities. Koopa Troopa is a new class that extends from Actor.

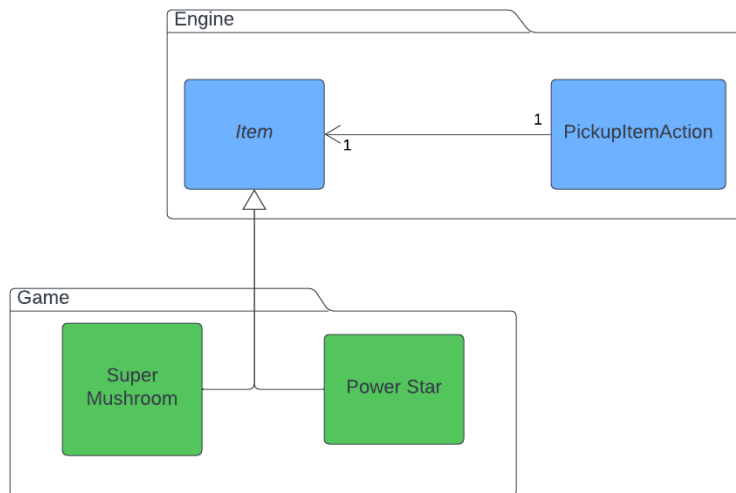
Sequence Diagram:

Design Rationale:

Within the program, the other enemy type (Goomba) already inherits from the Actor class. Therefore, it only makes sense that the other enemy within the game also inherits from the Actor class as it shares many of the same attributes with the other enemy. It is possible to create an Enemy abstract class that extends from the Actor class for further abstraction, but generally multi-layer abstract classes are not the best idea and so we chose to avoid it in this scenario. We may however implement an interface that enforces some of the common behaviours that the enemy classes share as a means to differentiate them from the player. This can also be achieved by placing them within the same package.

Req 4: Magical Items

Class Diagram:



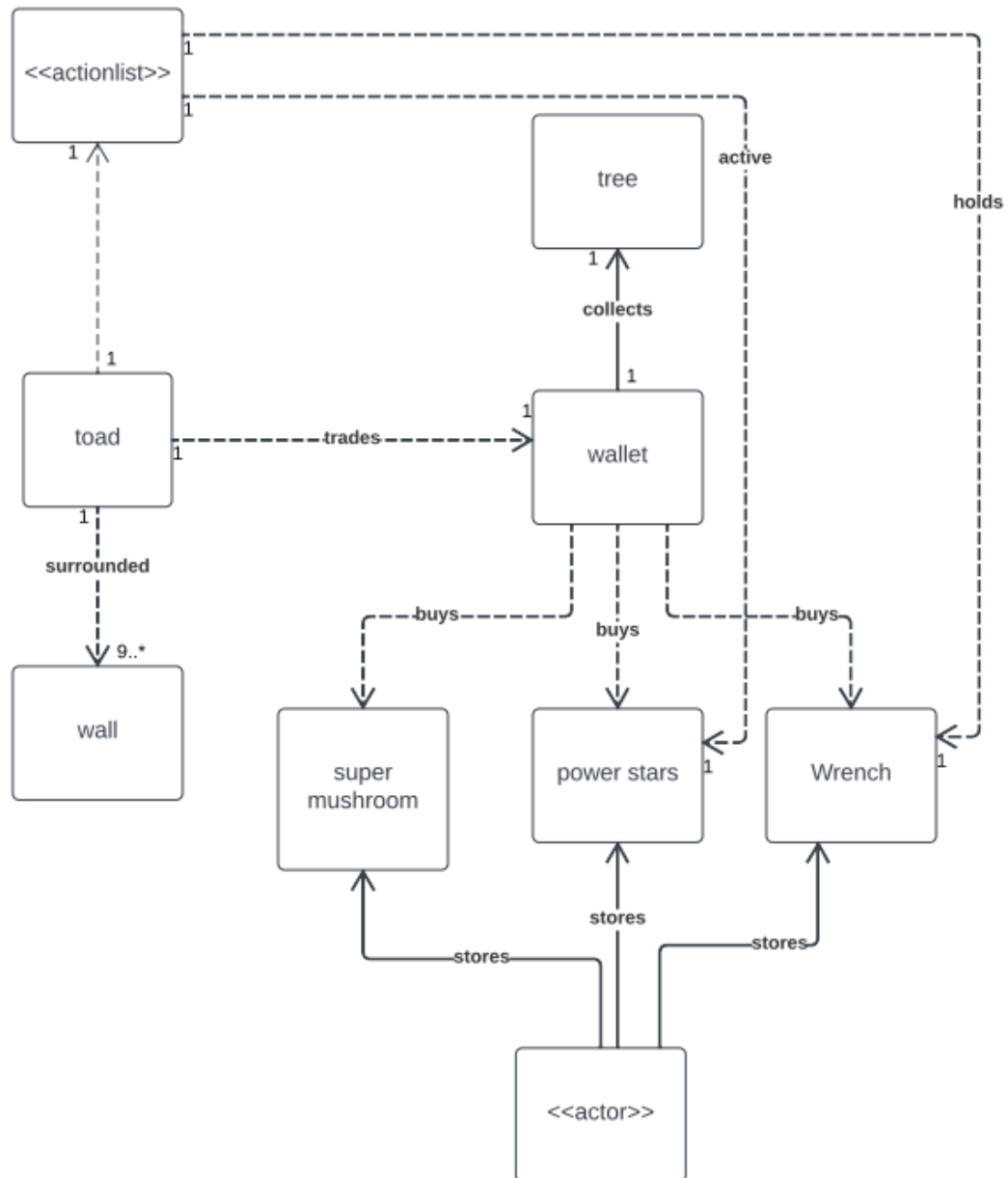
Draft diagram with key entities. Super Mushroom & Power Star are children of the Item class in the engine package.

Sequence Diagram:

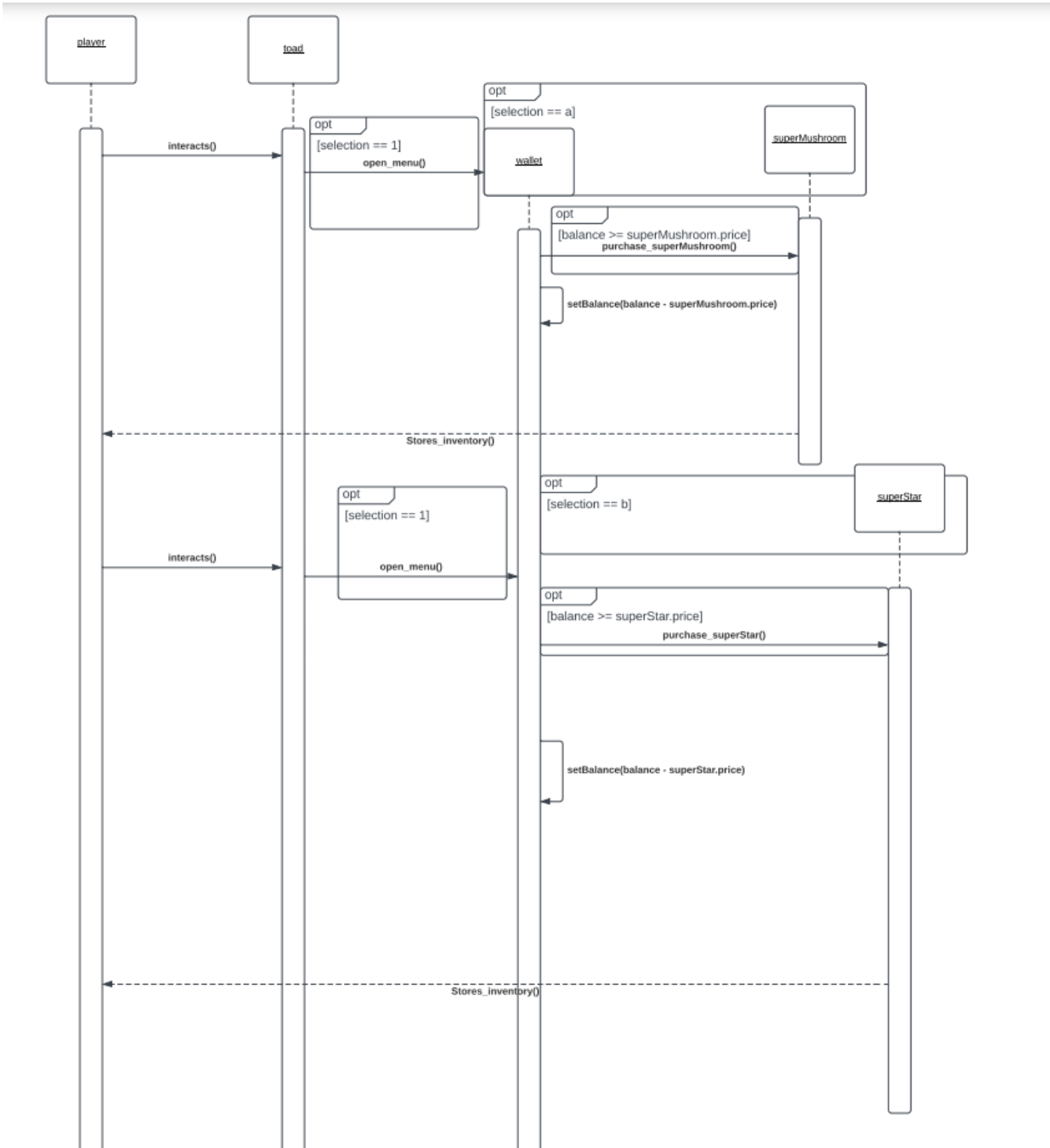
Design Rationale:

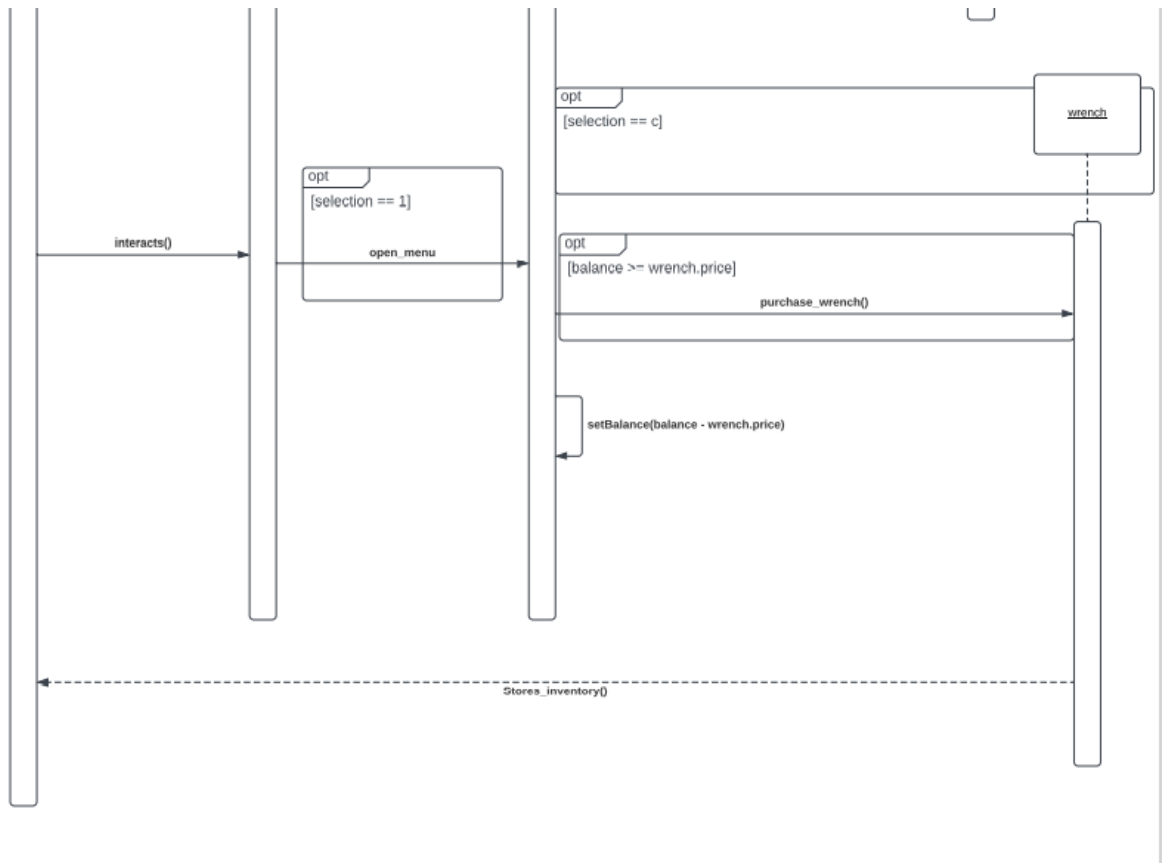
Req 5 + Re6:

Class Diagram:

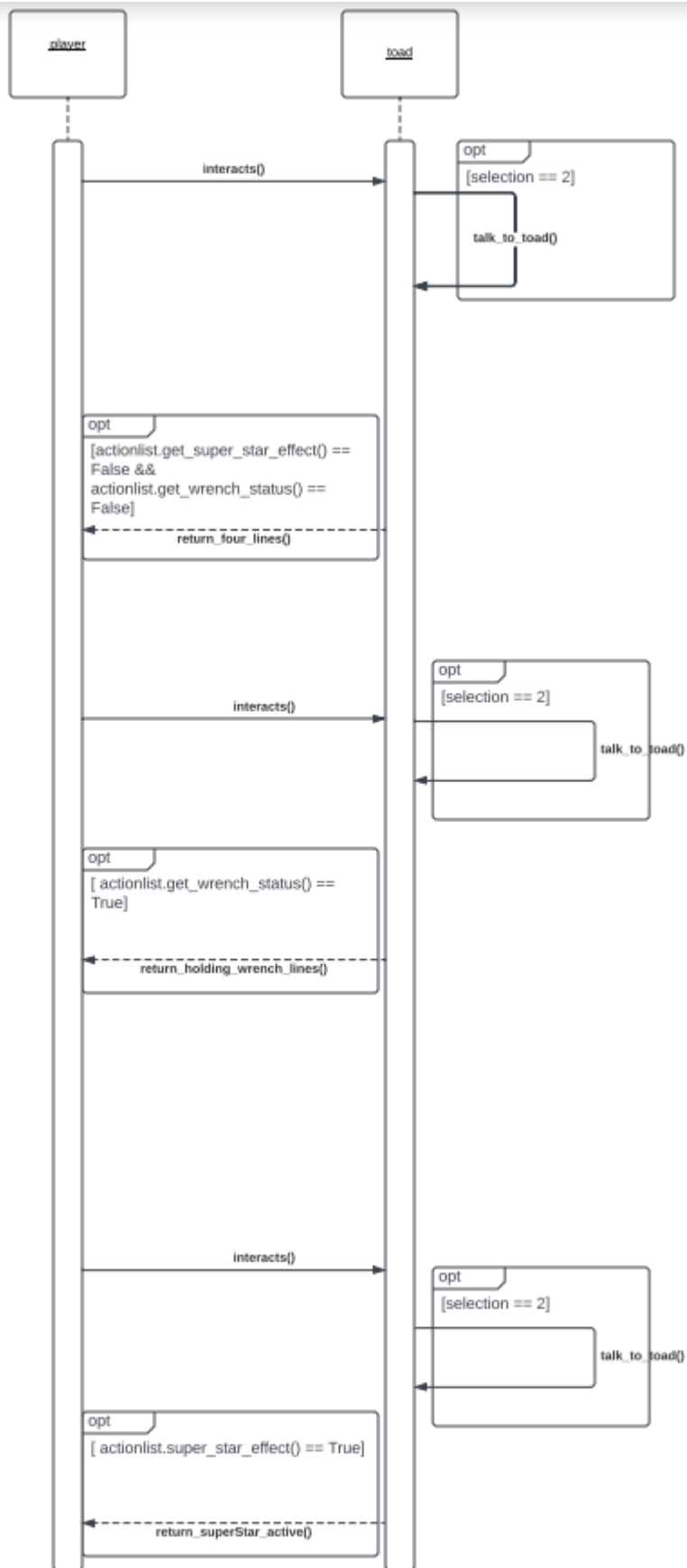


Sequence Diagram (re5):





Sequence diagram (re6)



Design Rationale:

Req 7:

Class Diagram:

Sequence Diagram:

Design Rationale: