edu.monash.fit2099.engine

items

PowerStar

SuperMushroom

<> Item

actions

UseItemAction → **<> Action**

actors

Actor

UseItemAction will implement a method that calls methods within the item that sets up what occurs when the item is consumed. It will have an attribute for the Actor who is using the item, and will be set up so that the effects of using the item are applied to the actor using these methods.
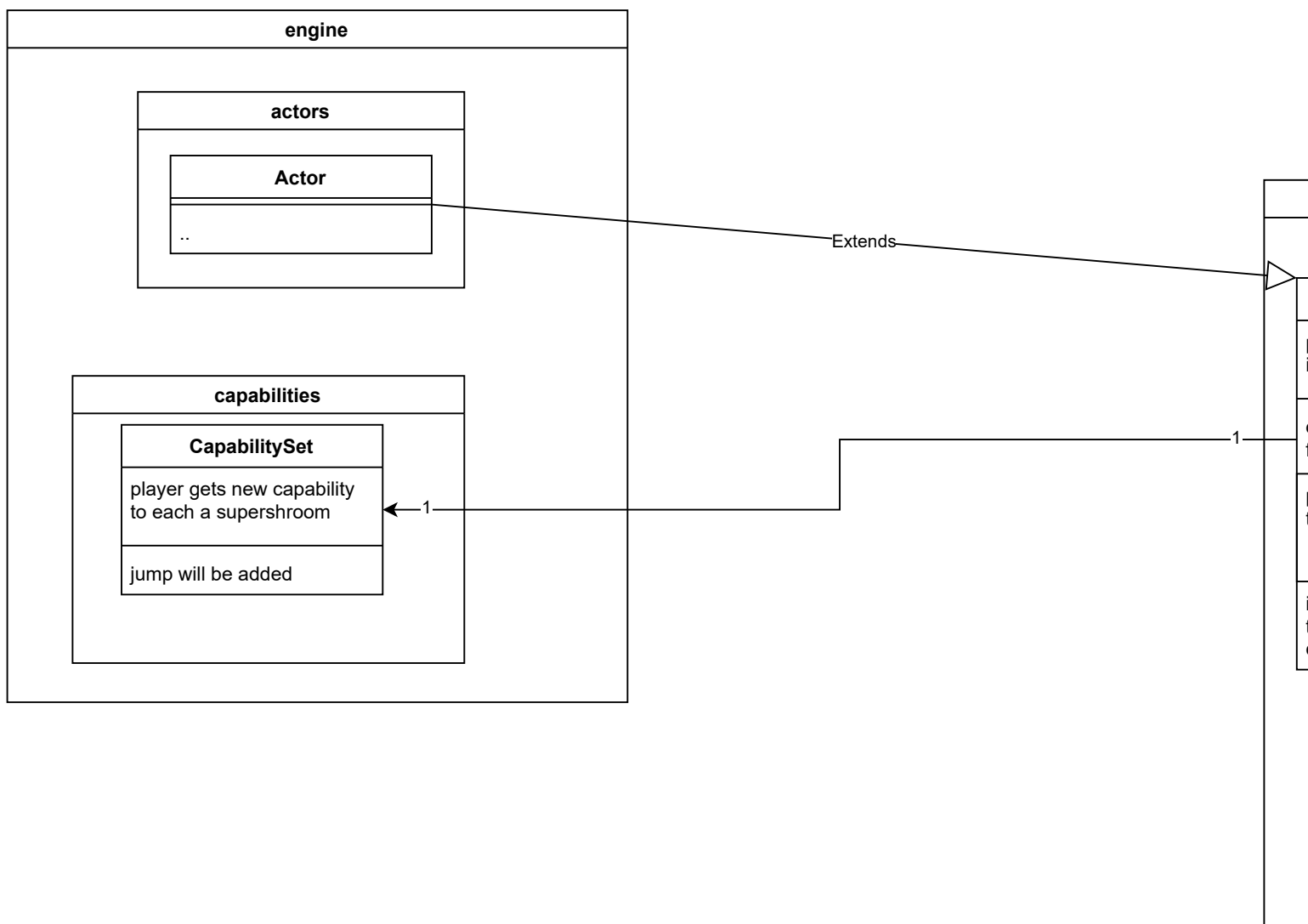
In the AttackAction class the execute() method - when a target is hit - will check if the Actor is under the effects of an item (stored in a boolean value to represent whether the actor is under the effects of an item). If yes, it will call a method from Actor that resets attributes back to how they were before the item was used.

Task 4: Super Mushroom

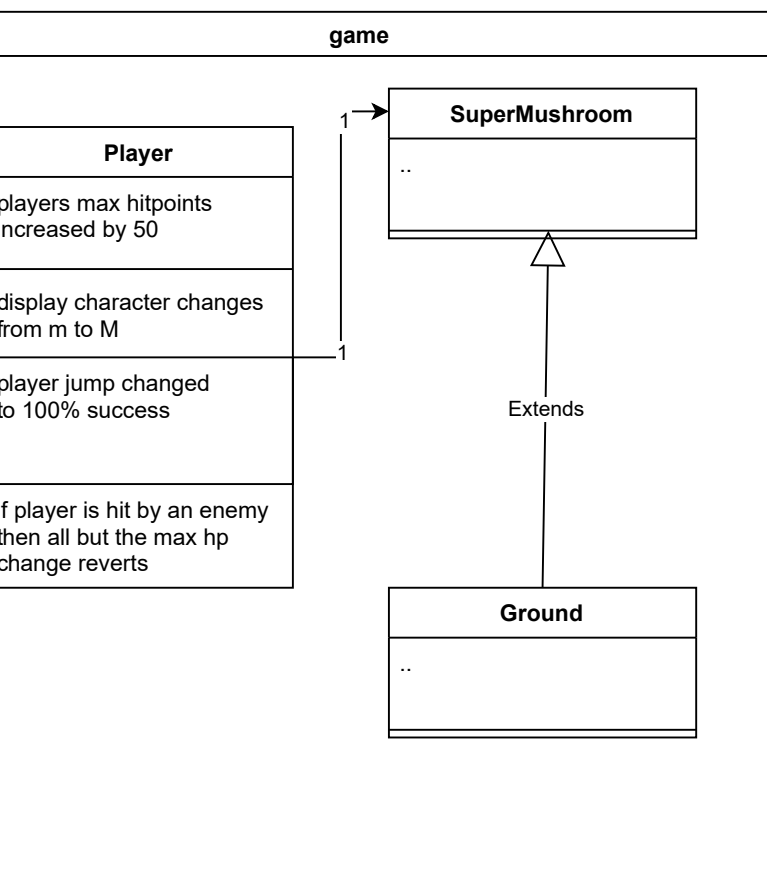Anyone that consumes Super Mushroom ˄ will experience the following features:

- increase max HP by 50
- the display character evolves to the uppercase letter (e.g., from m to M).
- it can jump freely with a 100% success rate and no fall damage.

The effect will last until it receives any damage (e.g., hit by the enemy). Once the effect wears off, the display character returns to normal (lowercase), but the maximum HP stays.

```
┌─────────────────────────────────────────────────────┐
│                      engine                          │
│  ┌───────────────────────────────┐                   │
│  │            actors             │                    │
│  │  ┌─────────────────────────┐  │                    │
│  │  │          Actor          │  │                    │
│  │  ├─────────────────────────┤  │                Extends
│  │  │ ..                      │  │                    │
│  │  └─────────────────────────┘  │                    │
│  └───────────────────────────────┘                   │
│                                                      │
│  ┌───────────────────────────────┐                   │
│  │         capabilities          │                    │
│  │  ┌─────────────────────────┐  │                    │
│  │  │     CapabilitySet       │  │                    │
│  │  ├─────────────────────────┤  │          1         │
│  │  │ player gets new capability │◄──1                │
│  │  │ to each a supershroom   │  │                    │
│  │  ├─────────────────────────┤  │                    │
│  │  │ jump will be added      │  │                    │
│  │  └─────────────────────────┘  │                    │
│  └───────────────────────────────┘                   │
└─────────────────────────────────────────────────────┘
```

Task 4: Power Star

Power Star ＊ cannot stay in the game forever
be removed from the game within 10 turns (re

game

SuperMushroom

..

1 →

Player

players max hitpoints
increased by 50

display character changes
from m to M

player jump changed
to 100% success

1

f player is hit by an enemy
then all but the max hp
change reverts

Extends

Ground

..

r. It will fade away and
gardless it is on the

ground or in the actor's inventory). Anyone tha
Star will be healed by 200 hit points and will b
invincible effect replaces fading duration (aka,
stops), and it lasts for another 10 turns.

- Higher Grounds. The actor does not ne
  level ground (can walk normally). If the a
  ground, it will automatically destroy (cor
- Convert to coins. For every destroyed g
  ($5).
- Immunity. All enemy attacks become us
- Attacking enemies. When active, a succ
  instantly kill enemies.

```
┌─────────────────────────────────────────┐
│                 engine                    │
├─────────────────────────────────────────┤
│     ┌───────────────────────────────┐    │
│     │            actors              │    │
│     ├───────────────────────────────┤    │
│     │   ┌───────────────────────┐    │    │
│     │   │         Actor         │    │    │
│     │   ├───────────────────────┤    │    │
│     │   │                       │    │    │
│     │   │  ..                   │    │    │
│     │   └───────────────────────┘    │    │
│     └───────────────────────────────┘    │
│                                           │
│                                           │
└─────────────────────────────────────────┘
```
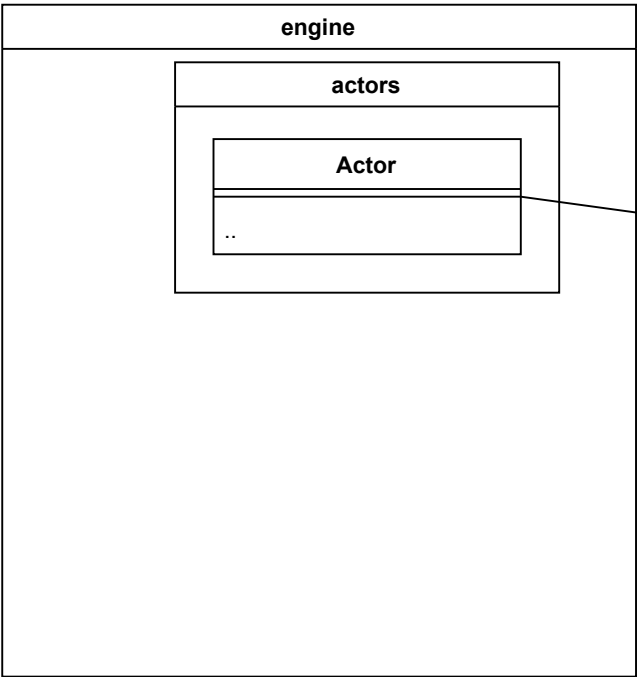
Extends

at consumes a Power
ecome invincible. The
fading turn's ticker

ed to jump to higher
actor steps on high
nvert) ground to Dirt.
round, it drops a Coin

eless (0 damage).
cessful attack will

game

Player

if player picks up star then
play will be healed by 200
hit points and will become
invincible

attacks will insta kill
enemies.
to do this attack power can
temporarily be set very high

PowerStar

will destroy itself after
10 turns on the ground

..

Extends

Ground

destroying ground drops
a coin in this mode

..

1

1

*

*