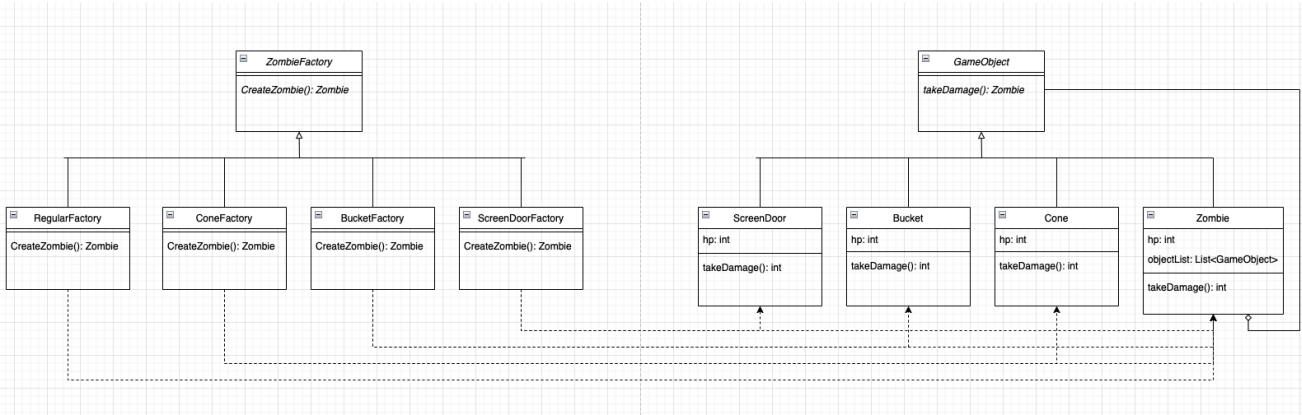hw4.md

Homework 4

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1

2

The program is using factory method pattern + composite pattern.

Pattern	Class
Factory	ZombieFactory
Concrete Factory	RegularFactory, ConeFactory, BucketFactory, ScreenDoorFactory
Product	GameObject
Concrete Product	Zombie, Cone, Bucket, ScreenDoor

Pattern	Class
Component	GameObject
Leaf	Cone, Bucket, ScreenDoor

Pattern	Class
Composite	Zombie

3

In case IDE doesn't support the code, following are the UNIX commands needed to execute the program.

```
cd src/
javac Main.java
java Main
```

Please follow console prompt for correct input. This program cannot handle weird input.

4

In `takeDamage()`, take the remaining damage on the object itself after damaging all child objects.

5

Modify `takeDamage(int damage)` to `takeDamage(String damageType, int damage)`. In `ScreenDoor` class, if damage type is watermelon, simply return 0.

takeDamage() returns remaining hp of the object

Please read the implementation to see how simply returning 0 will correctly output result while maintaining ScreenDoor object