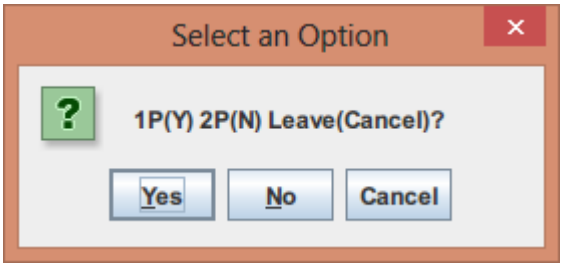
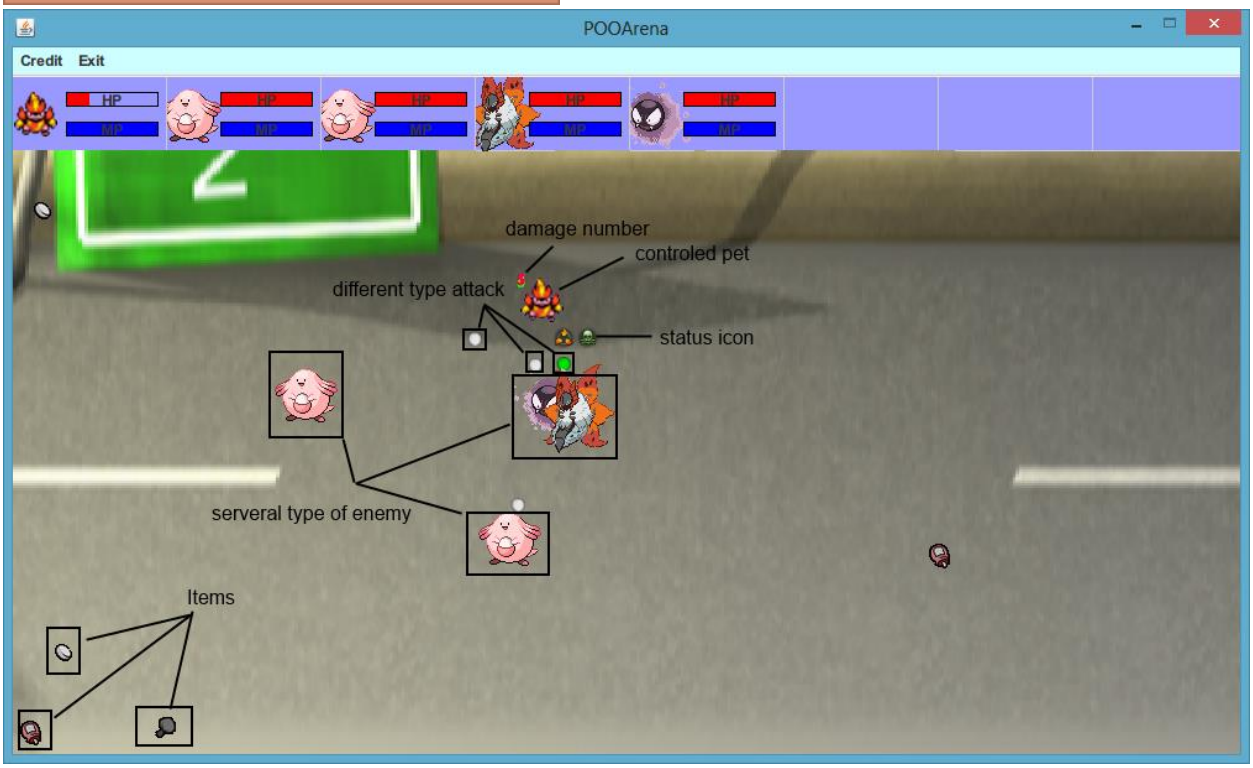
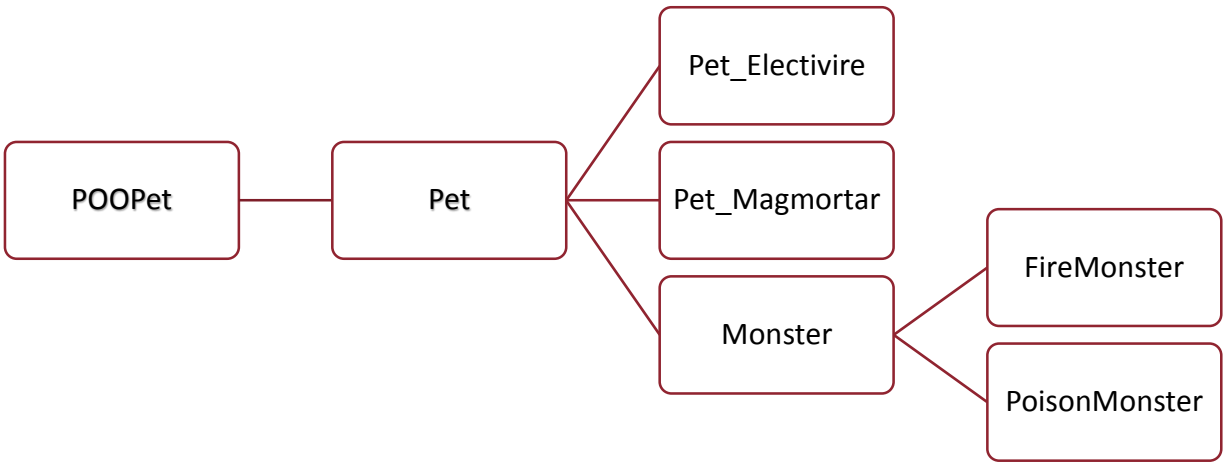
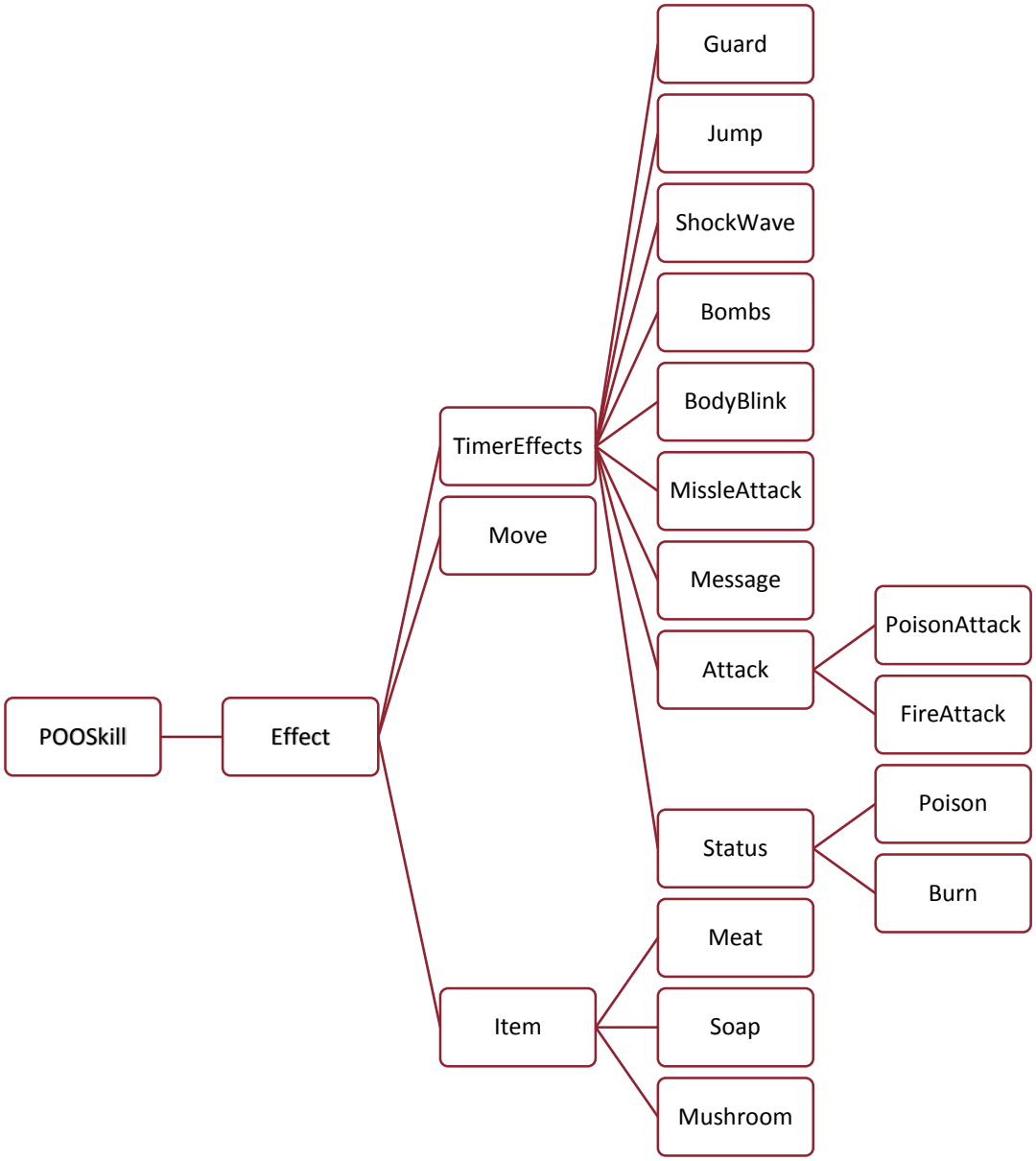
OOP HW4 REPORT





1 THE ARCHITECTURE


POOPet
Pet
Pet_Electivire
Pet_Magmortar
Monster
FireMonster
PoisonMonster


POOSkill
Effect
TimerEffects
Move
Item
Guard
Jump
ShockWave
Bombs
BodyBlink
MissleAttack
Message
Attack
Status
Meat
Soap
Mushroom
PoisonAttack
FireAttack
Poison
Burn

The other class is based on JPanel or JFrame, or some constant. "TimerEffect" is effect which use multiple frame to accomplish the task. Arena will have a list of TimerEffect and update it frame by frame. Class which is under effect but not under TimerEffects is effect which happens instantly. Pet also have its own timer and register for the effect, it will increase the timer frame by frame.

2 THE ADVANTAGE IN TERMS OF SOFTWARE ENGINEERING

1. The same interface for all TimerEffect

   There are only four function in timereffect, "require": check requirement for pet such as MP, "starttimer": start and initialization the timerEffect, "update": update the skill, "act": act the effect on certain pet. It is very flexible for co-developer to define their own timer function and comfortable to use the register and timer pet provided in the TimerEffect.
2. POOUtil, POOConstant, POOSkillConstant

   These tools provides the game a friendly interface for co-developer. POOSkillConstant give some constant as "IGNORE_GUARD", "SELF_DAMAGE"…for attack type. POOConstant provides STAT_LEFT, STAT_DOWN….

3 THE DISADVANTAGE IN TERMS OF SOFTWARE ENGINEERING

1. Pet need to be handled carefully

   It must initial all its component in the very beginning. Pet provides unlimited timer and register for effect, may break the memory limit. It doesn't limit the register saved object type, in some case, it may be harmful. Since actionkeys are defined in Pet class, the pet controlled by AI have to handle carefully the actionkeys since it doesn't have actionkeys.

   Besides, monster have to have its statcomp.

4 THE ADVANTAGE IN TERMS OF INTERESTINGNESS OF GAME

1. Frame based update

   This game may achieve games type like action game, shoot game, and other amazing game

type since it's update by frame. In my demo program, it have shoot element, items, action element (JUMP, GUARD).... So, I think it can provide more interaction to the player and more fun of course.

2. Combo Skills support

   Support use combo skills like guard->up->attack to use special attack.

3. 2 Player VS support

   Support Player VS Player. It game a brief control description in the very beginning of the game.

5 DISADVANTAGE IN TERMS OF INTERESTINGNESS OF GAME

1. Sometimes the combo keys are bugged
2. No 3D effect and only have simple video effect like object moving and so on. Need to support 3D model to make this game more interesting.

6 BONUS PART

1. Action game GUI
2. Combo Skill
3. Item System
4. Attack hit system
5. Status System(Burn, Poison)
6. Jumping, Guarding System
7. Blink and damage number emerge when being hit
8. Animated Pet
9. Simple AI
10. 2P support
11. Simple message about config