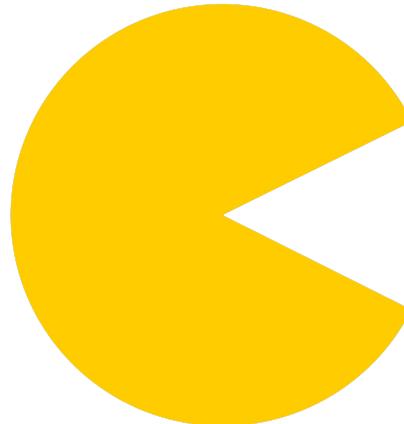
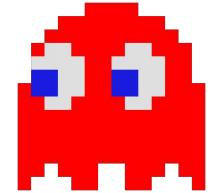


# 설계패턴 Term Project

## Pacman

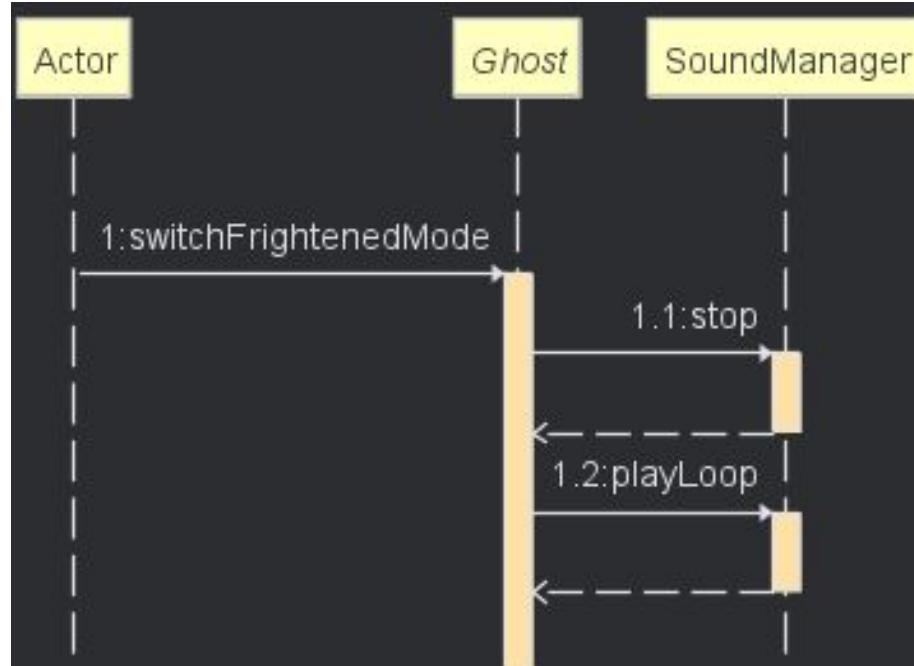


Team5  
20216064 양시훈  
20202203 박호근  
20200278 유윤재



# 기능 확장 - 사운드 추가

Singleton 패턴, SRP

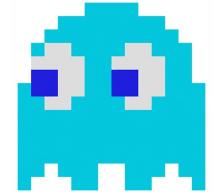


```
private static int frightenedCnt; //공포 상태의 유령 개수 (먹힌 상태의 유령도 포함됨)
private static int eatenCnt; //먹힌 상태의 유령 개수 7 usages
```

# 기능 확장 - 라이프

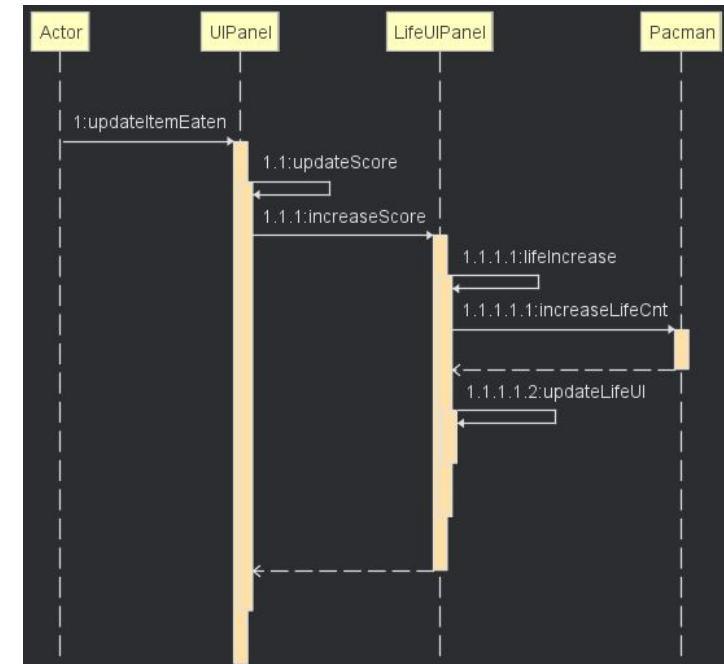
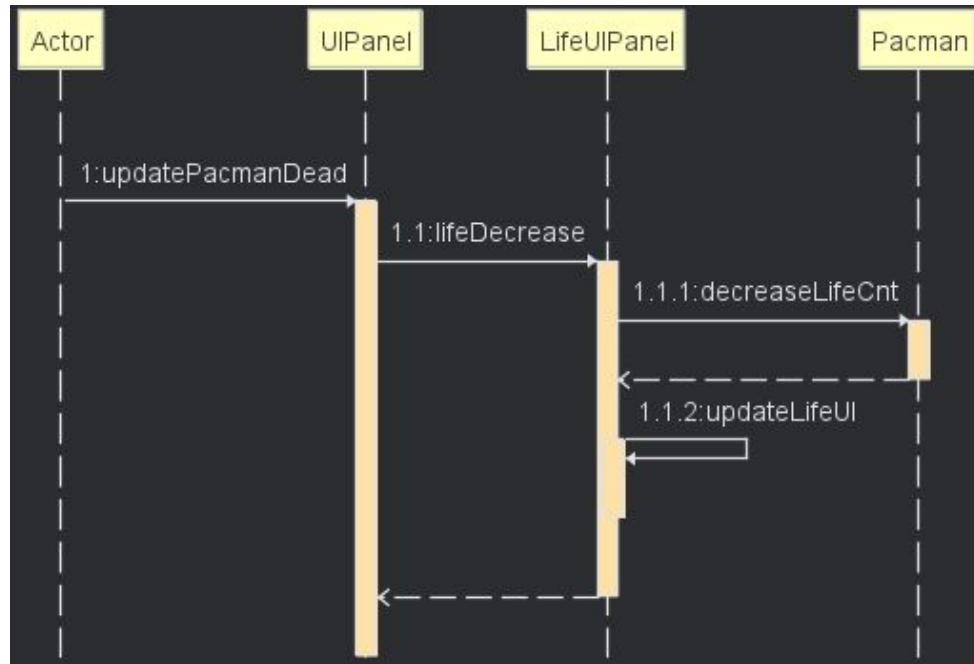
Observer 패턴

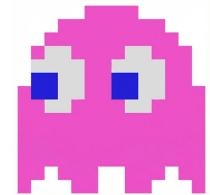




# 기능 확장 - 라이프

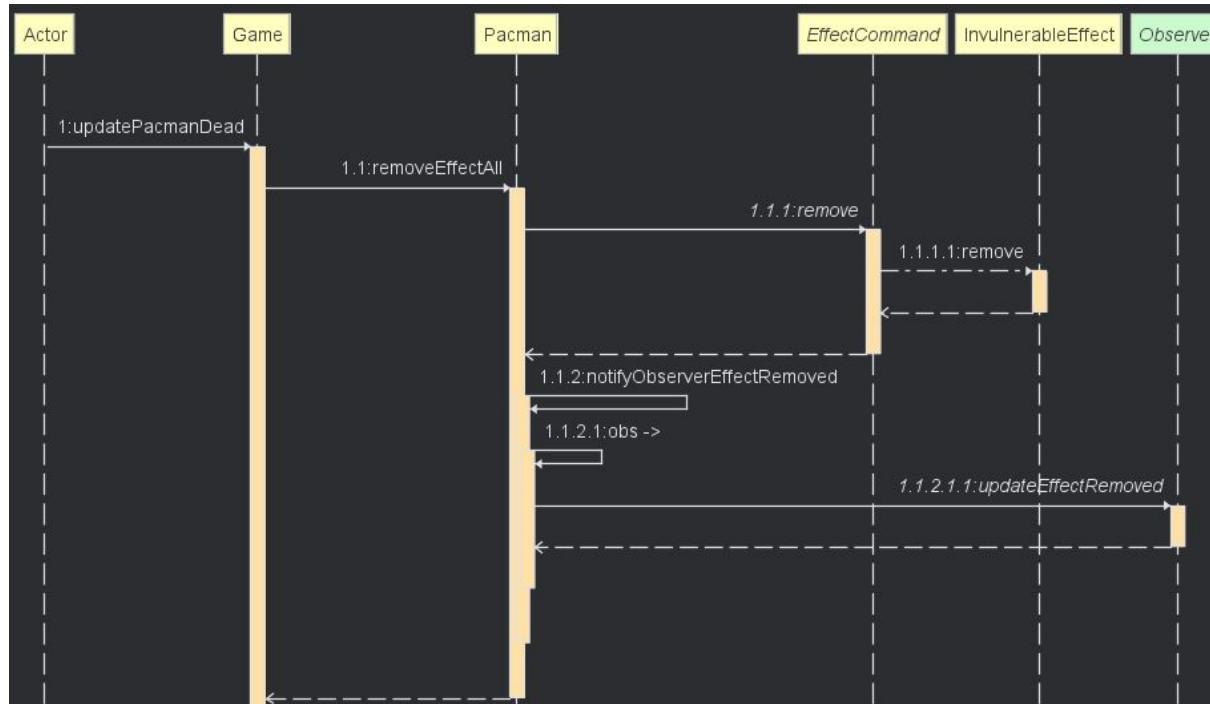
Observer 패턴

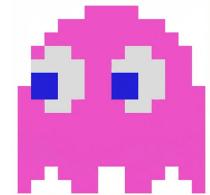




# 기능 확장 - 사망 시 게임 재개 기능

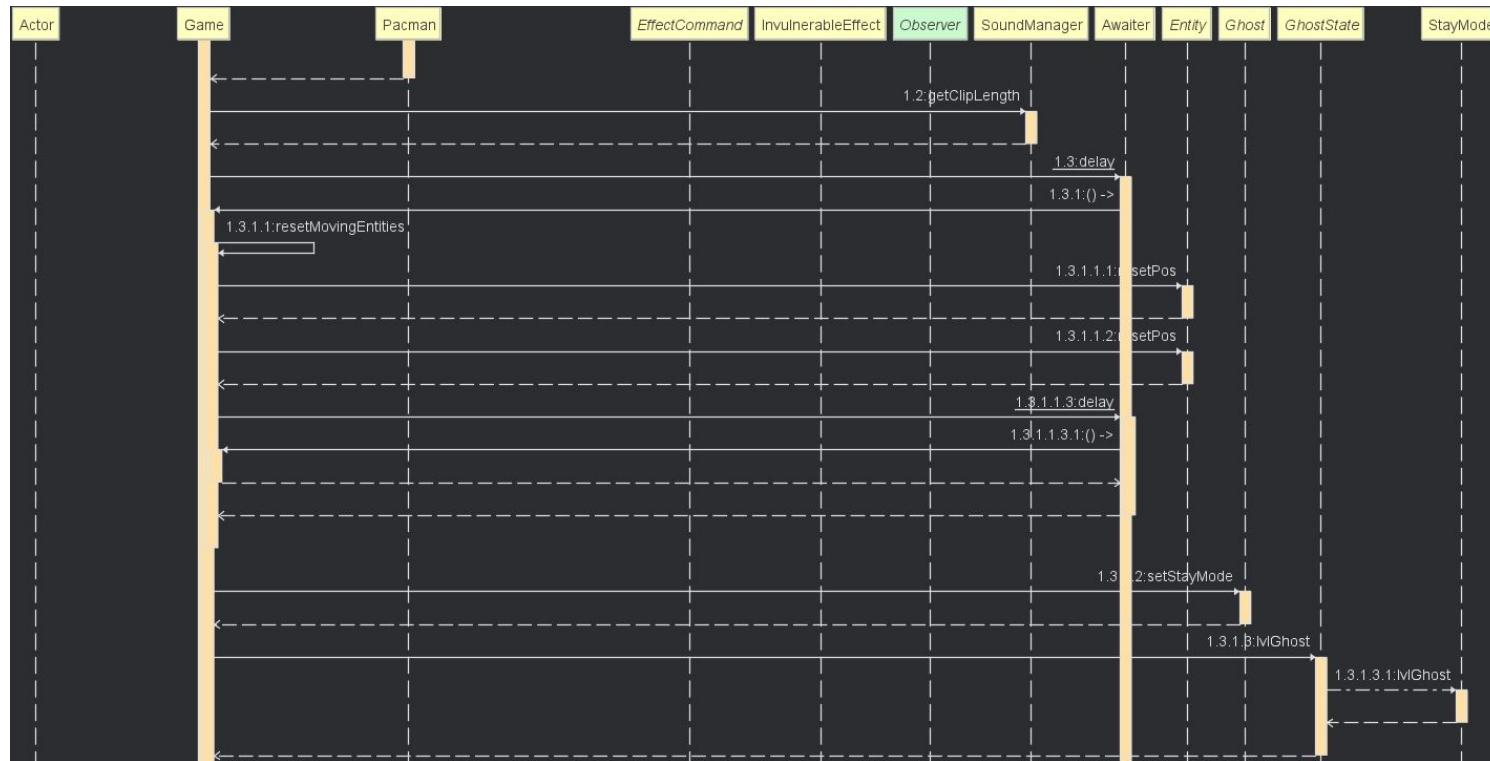
## Observer 패턴



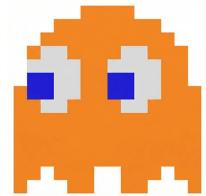


# 기능 확장 - 사망 시 게임 재개 기능

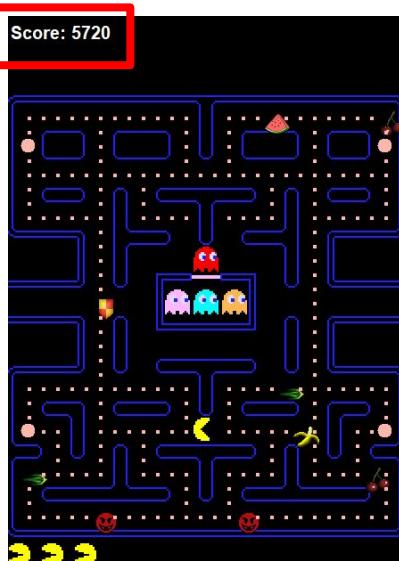
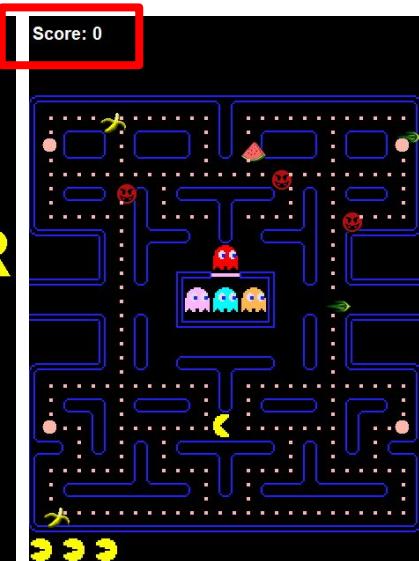
## Observer 패턴

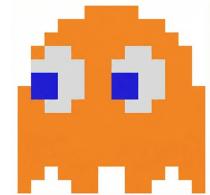


# 기능 확장 - GameOver, GameClear 기능



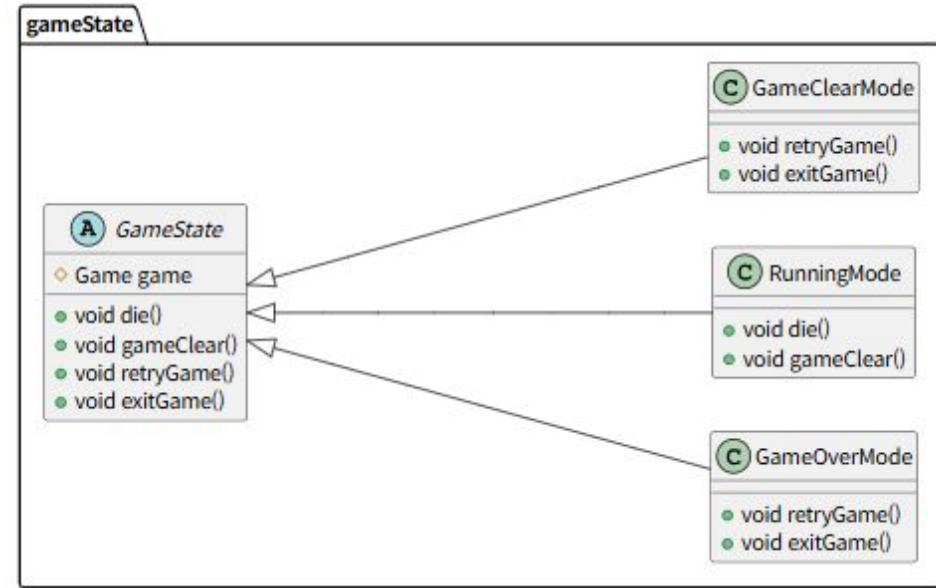
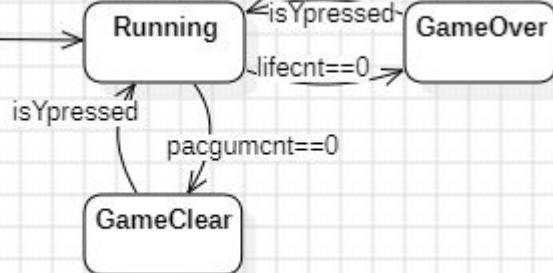
State 패턴





# 기능 확장 - GameOver, GameClear 기능

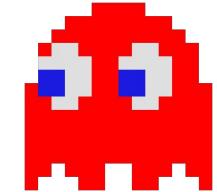
State 패턴



```
//각각의 상태 별로 렌더링할 화면을 지정  
public Graphics2D screen(int width, int height, Graphics2D g){return g;}  
//현재의 상태를 int로 반환 (running == 0 , gameclear == 1, gameover ==2)  
public int state_now(){return 0;} 2개 사용 위치 3개 재정의 ↳ ArcRoot
```

# 기능 확장 - 아이템 추가, 팩맨에 특수 효과 적용

Factory, Command 패턴, Observer 패턴



speed up: speed +1  
5 second



cherry: score + 200



apple: score + 500



watermelon: score + 1000



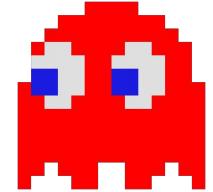
banana: speed -1  
2 second



demon: confuse(방향키 반대로 적용)  
5 second

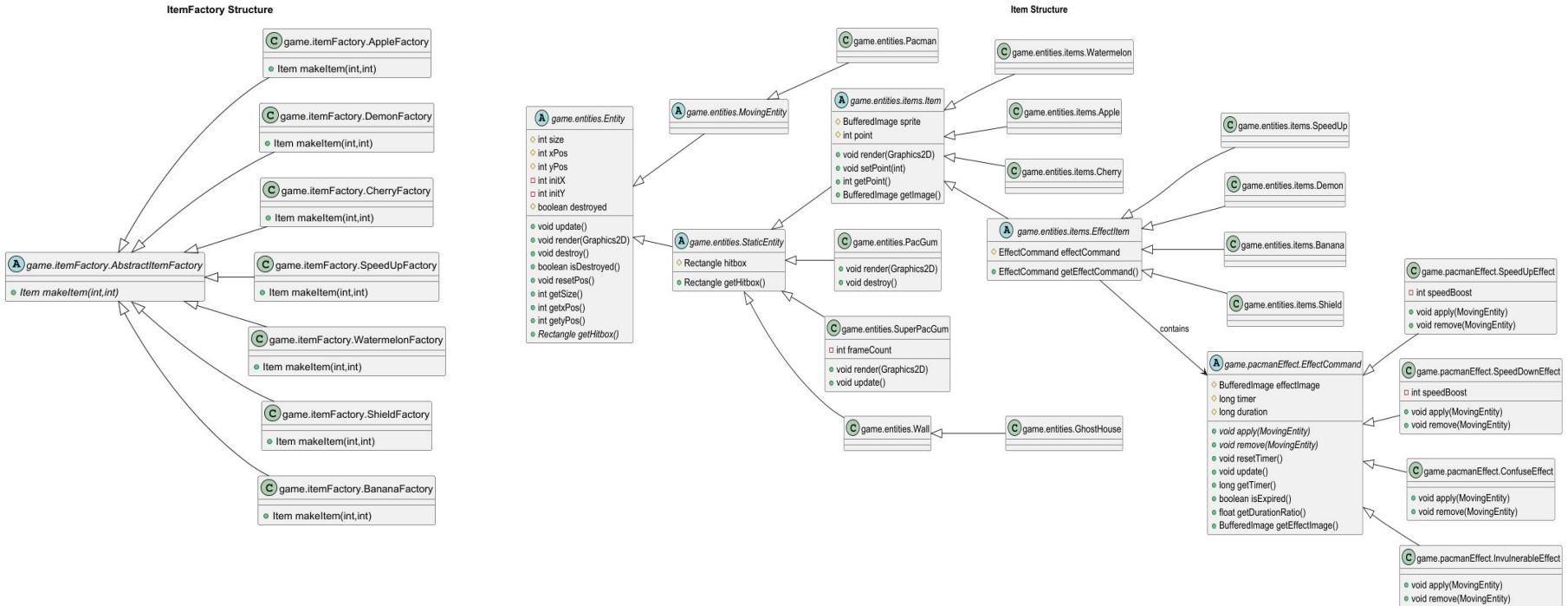


shield: invulnerable(무적)  
5 second

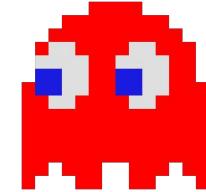


# 기능 확장 - 아이템 추가, 팩맨에 특수 효과 적용

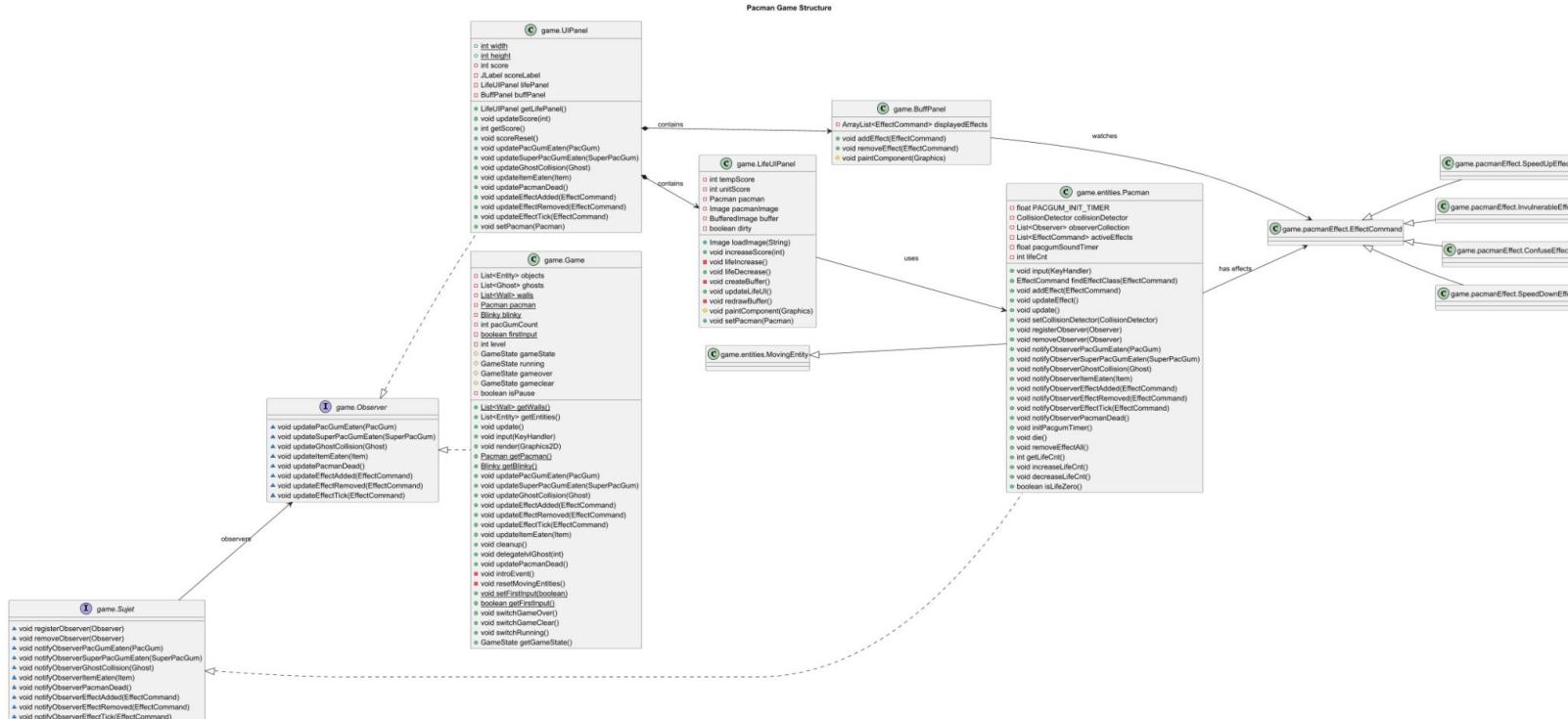
Factory, Command 패턴, Observer 패턴



기능 확장 - 아이템 추가, 팩맨에 특수 효과 적용



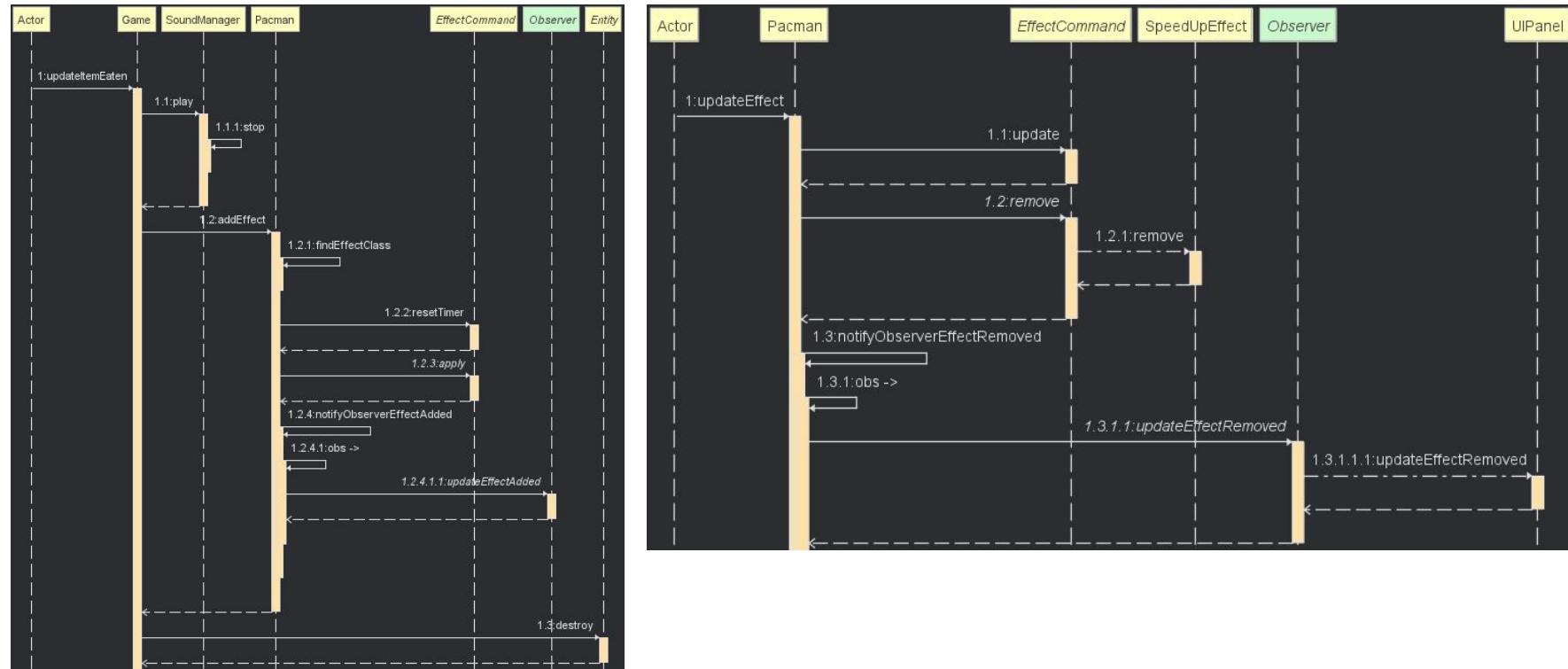
# Factory, Command 패턴, Observer 패턴

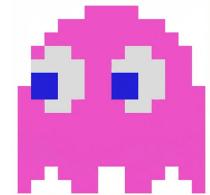




# 기능 확장 - 아이템 추가, 팩맨에 특수 효과 적용

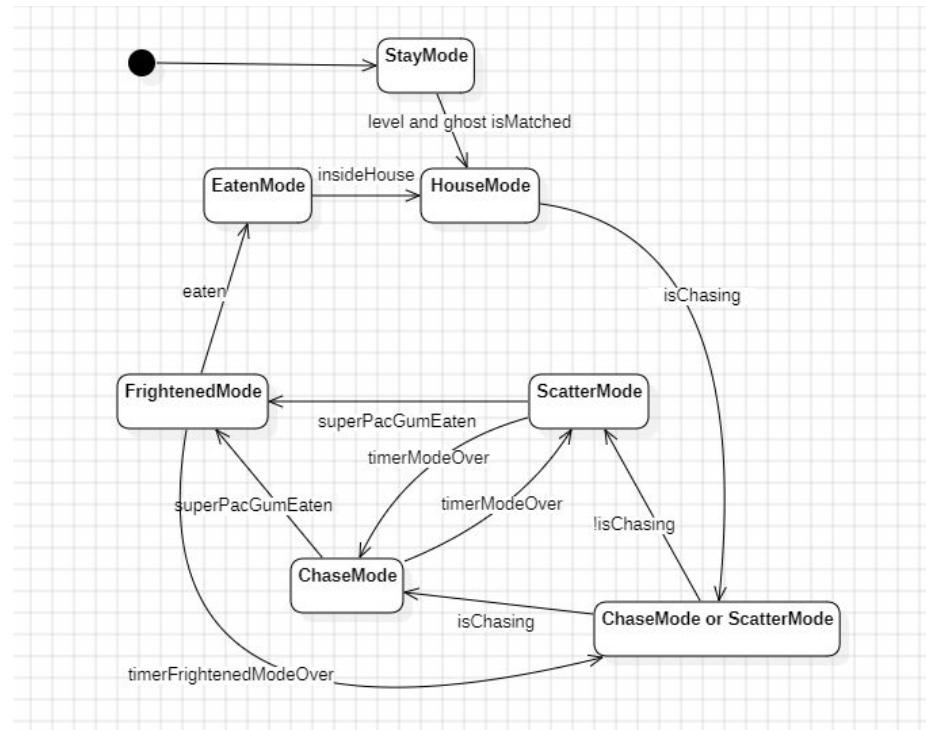
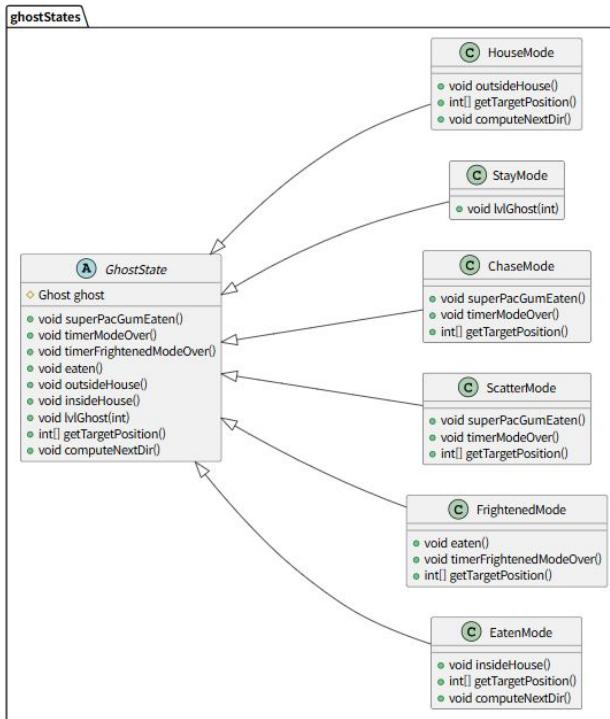
Factory, Command 패턴, Observer 패턴





# 기능 확장 - 레벨 별 난이도 설정

## State, Factory 패턴



# 실시간 데모 시연

