

# 5448 Project: Greedy Snake Game

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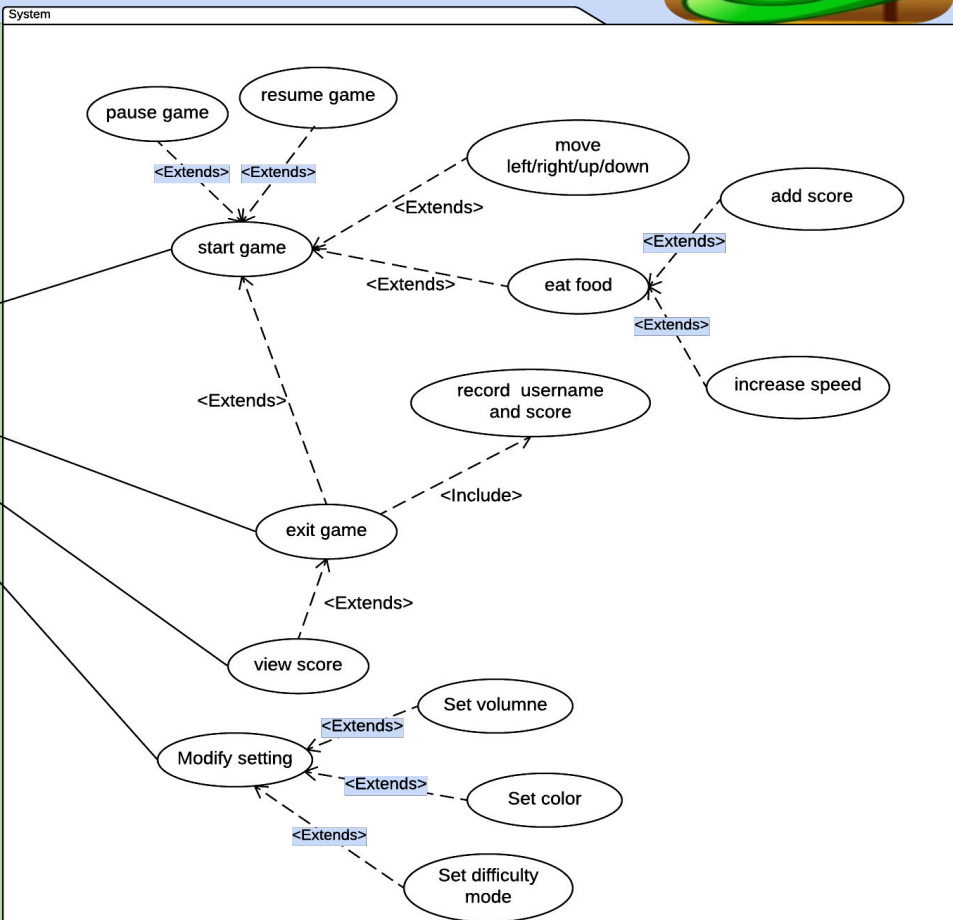
# Introduction

- Greedy Snake Game Briefs
  - Played by single player on Android.
  - Player can choose difficulty modes and modify the game interface.
  - Once the game begins, player controls the movement of the snake to eat food and avoid hitting. Two kinds of Food, the good and the bad.
- Platform: Android SDK
- Framework: MVC



# Features

- Setting modification  
(background color, volume, difficulty mode)
- Play Game
- Pause/resume Game
- Restart Game
- Exit Game
- View Scores



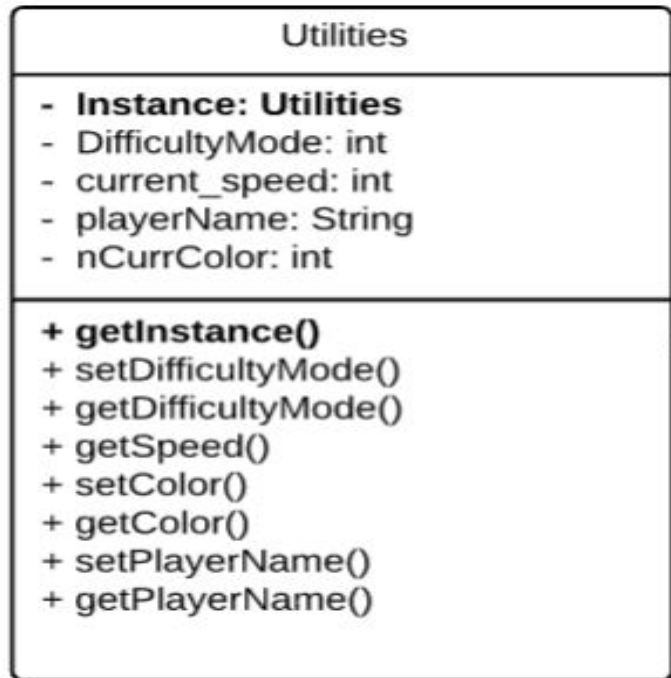


# Design Patterns

- Singleton
- Strategy
- Composite



### ● Singleton Design Pattern

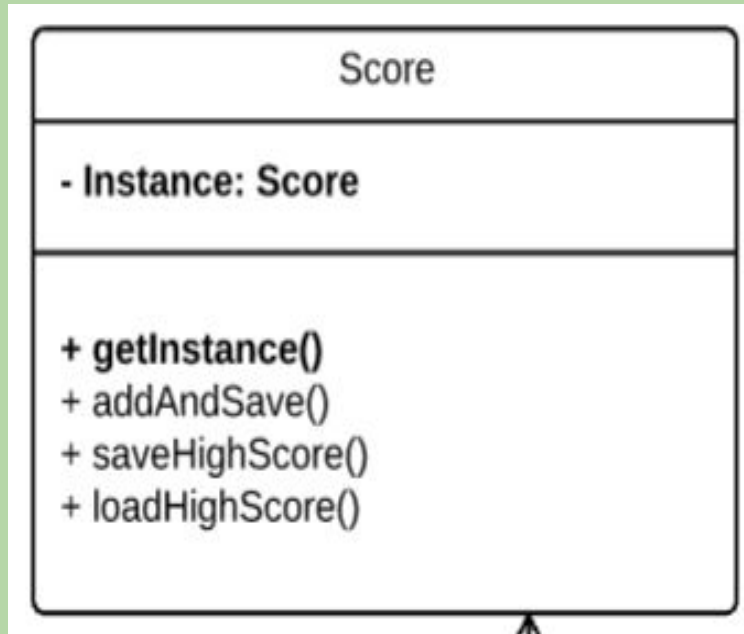


```
private static Utilities instance = null;

public static Utilities getInstance() {
    if (instance == null) { // first call
        instance = loadSettings();
        if (instance == null) { // could not load
            settings
                instance = new Utilities();
        }
    }
    return instance;
}
```



### ● Singleton Design Pattern

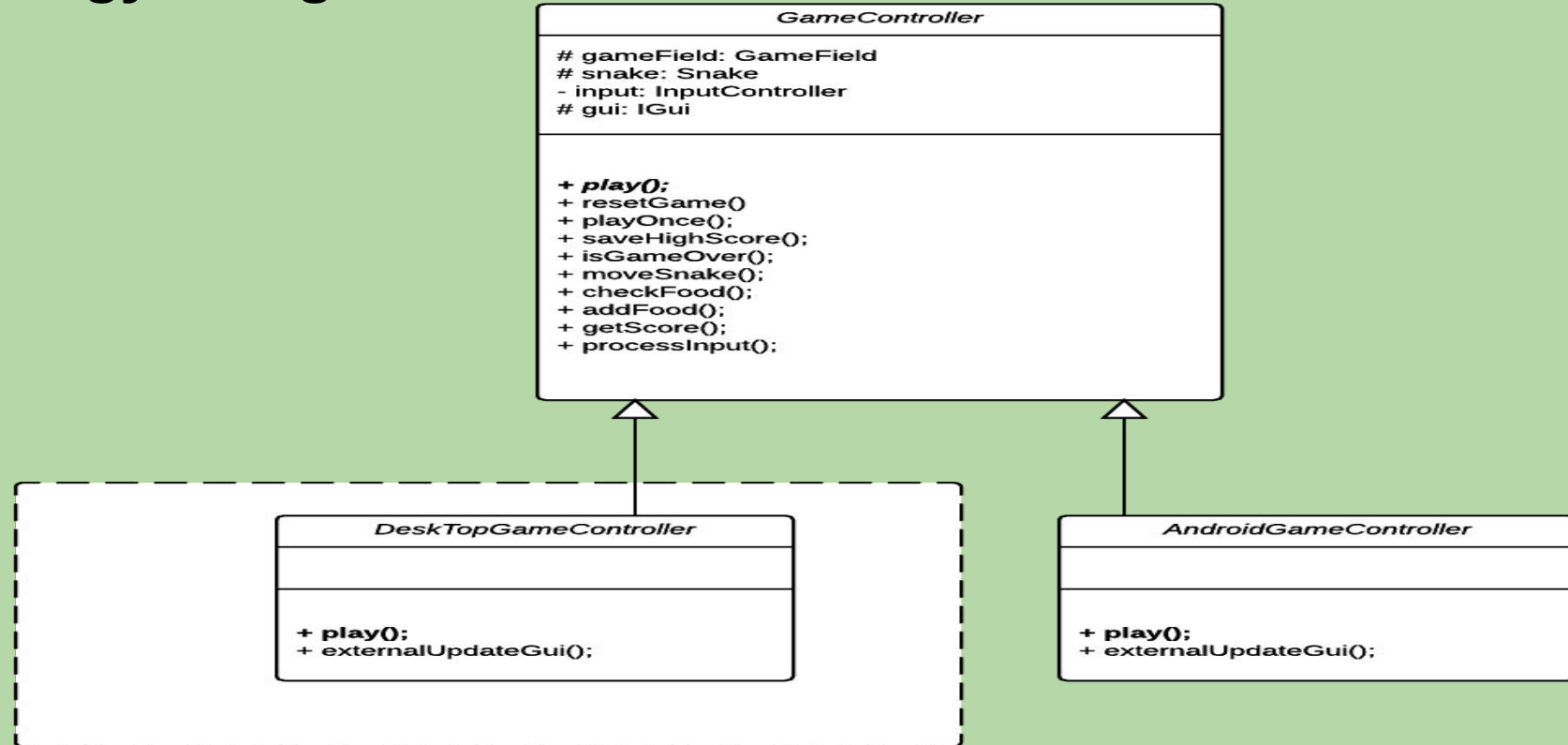


```
private static Score instance = null;

public static Score getInstance() {
    if (instance == null) { // first call
        instance = loadHighScore();
        if (instance == null) { // could not load
            highscore
                instance = new Score();
        }
    }
    return instance;
}
```



### ● Strategy Design Pattern





- **Composite Design Pattern**







# Demo

<https://youtu.be/BcOKsWhyHDA>



# What we have learned

- Design and UML
- MVC framework
- Design Patterns
- Teamwork

# Final Presentation

## Object-Oriented Design Patterns



**Thank You**