

Game of Pong

Overview and starting development

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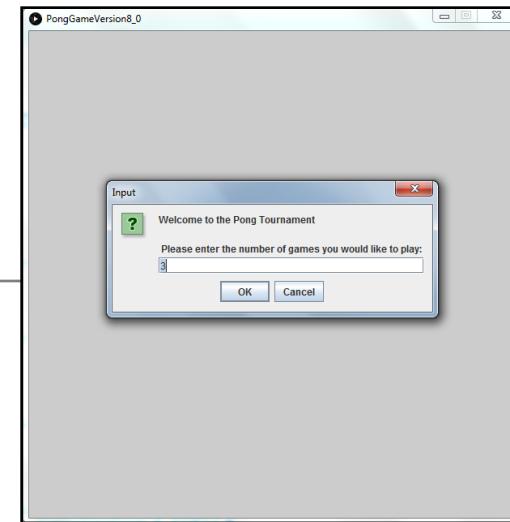
Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

Department of Computing and Mathematics
<http://www.wit.ie/>



Demo of Pong

PongGame - Overview

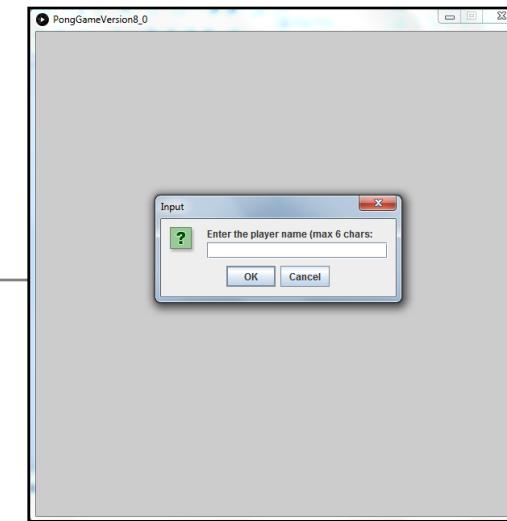


Player decides the **NUMBER OF GAMES** of Pong they would like to play in their **TOURNAMENT**.

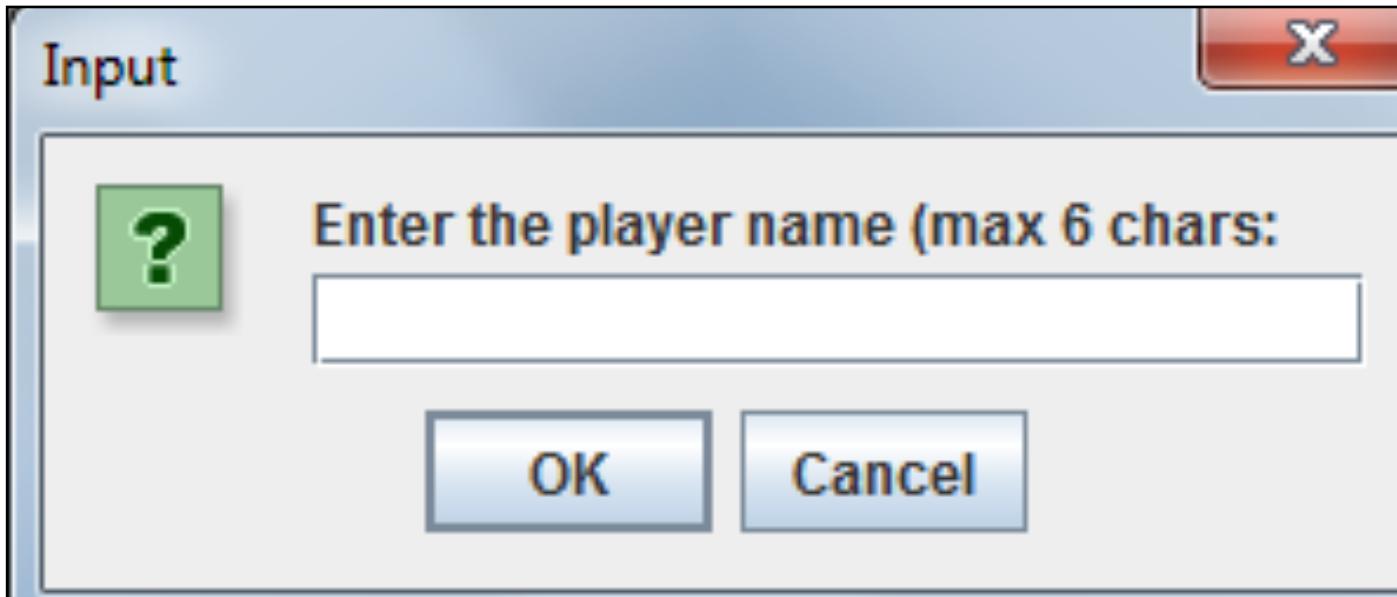


PongGame - Overview

Enter **PLAYER NAME**

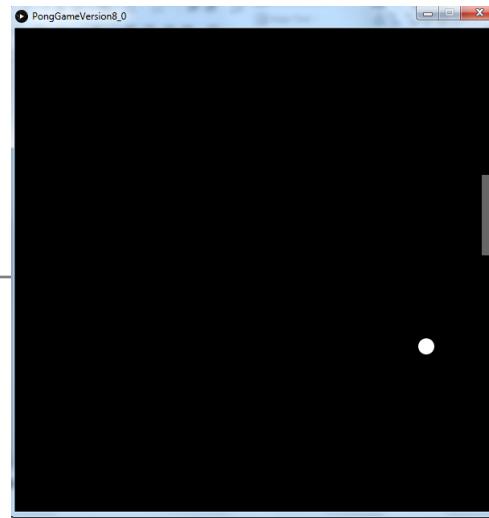


<= 6 chars, pong truncates the String



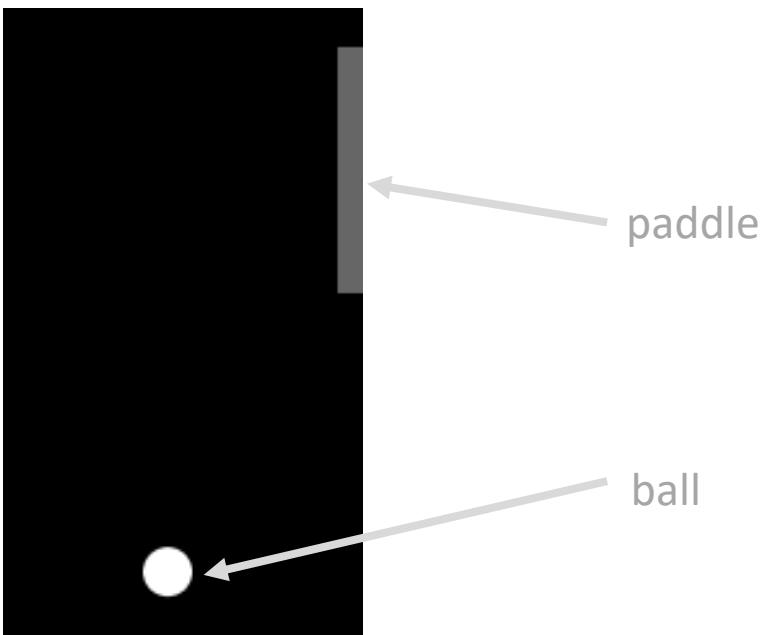
PongGame - Overview

When the ball is **hit** by the paddle
→ **score increased by 1.**

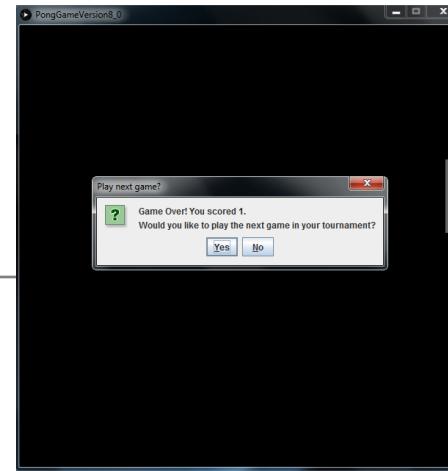


When the paddle **misses** the ball
→ a **life is lost.**

Number of lives in a game
→ 3

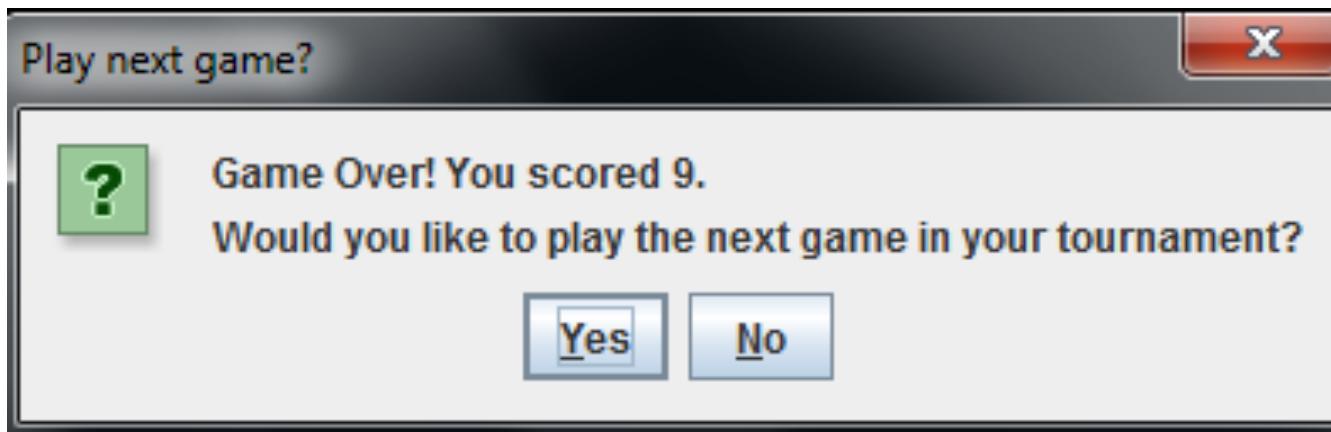


PongGame - Overview

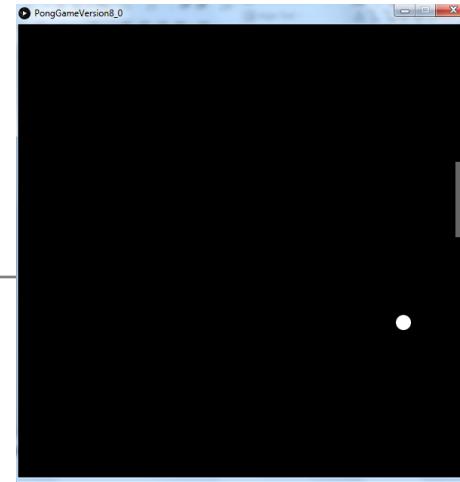


When a **game ends**
and there are more games left to play in the **tournament**:

- **Score is displayed.**
- Player is asked if they want to **continue** with the tournament



PongGame - Overview



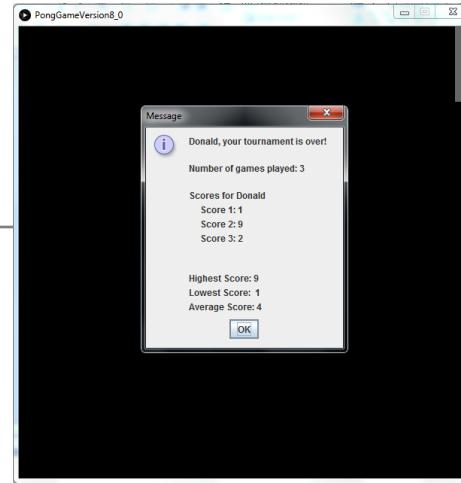
If the player **continues** with the tournament:

- Game score is stored in an array.
- A new game is started

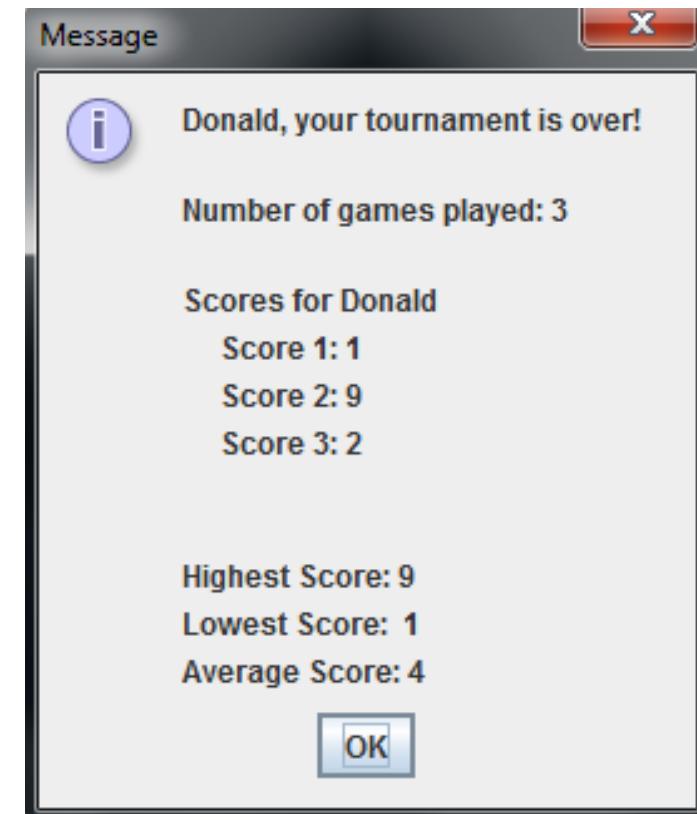
- 
- number of **lives** lost → 0
 - **Score** → 0

PongGame - Overview

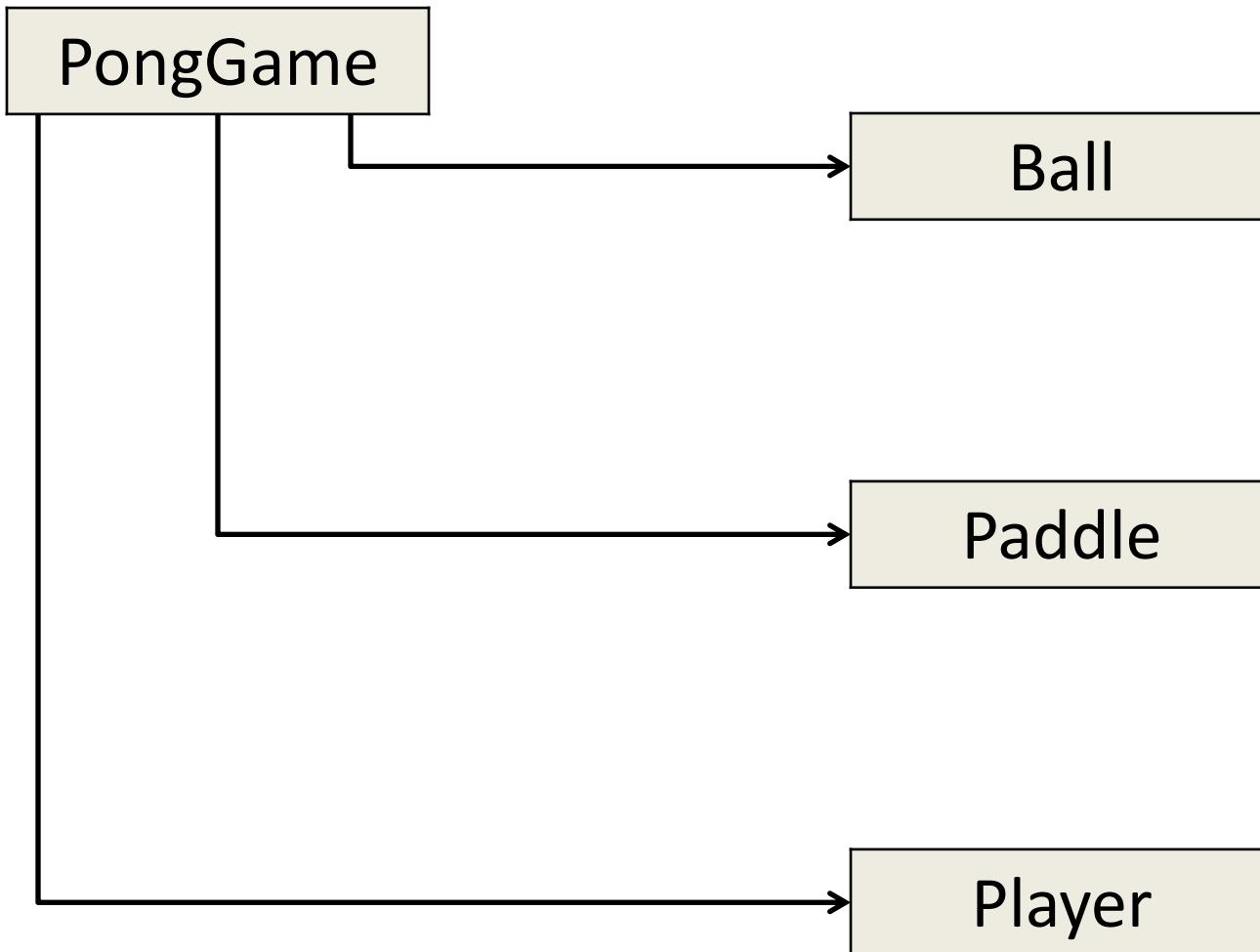
When a game ends
and **NO more games are left** in the tournament:



- **For each game in the tournament**
Display player **name** and **score**
- **Display tournament statistics**
(i.e. highest, lowest and average score).



PongGame - Overview CLASSES



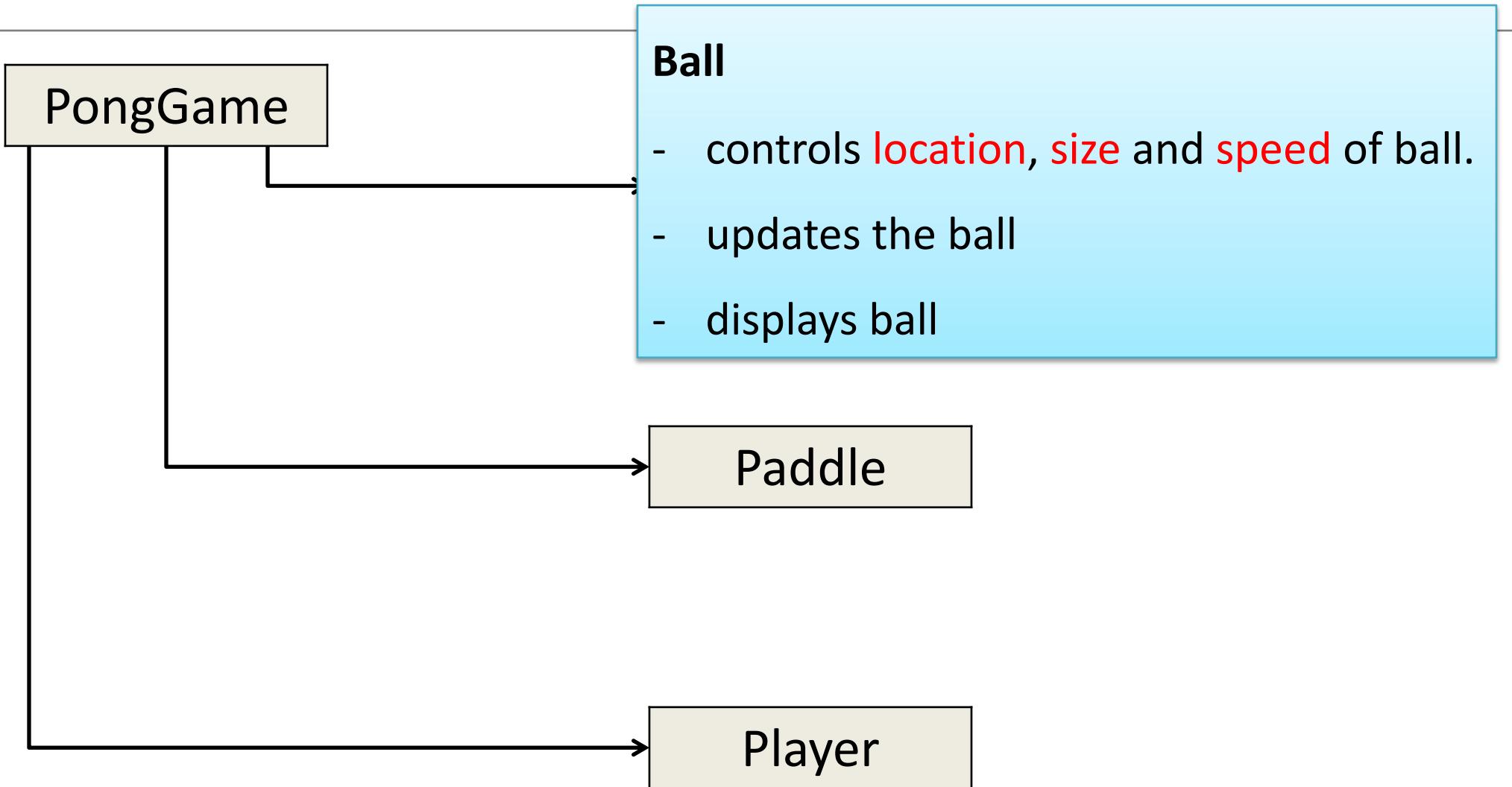
PongGame - Overview

PongGame

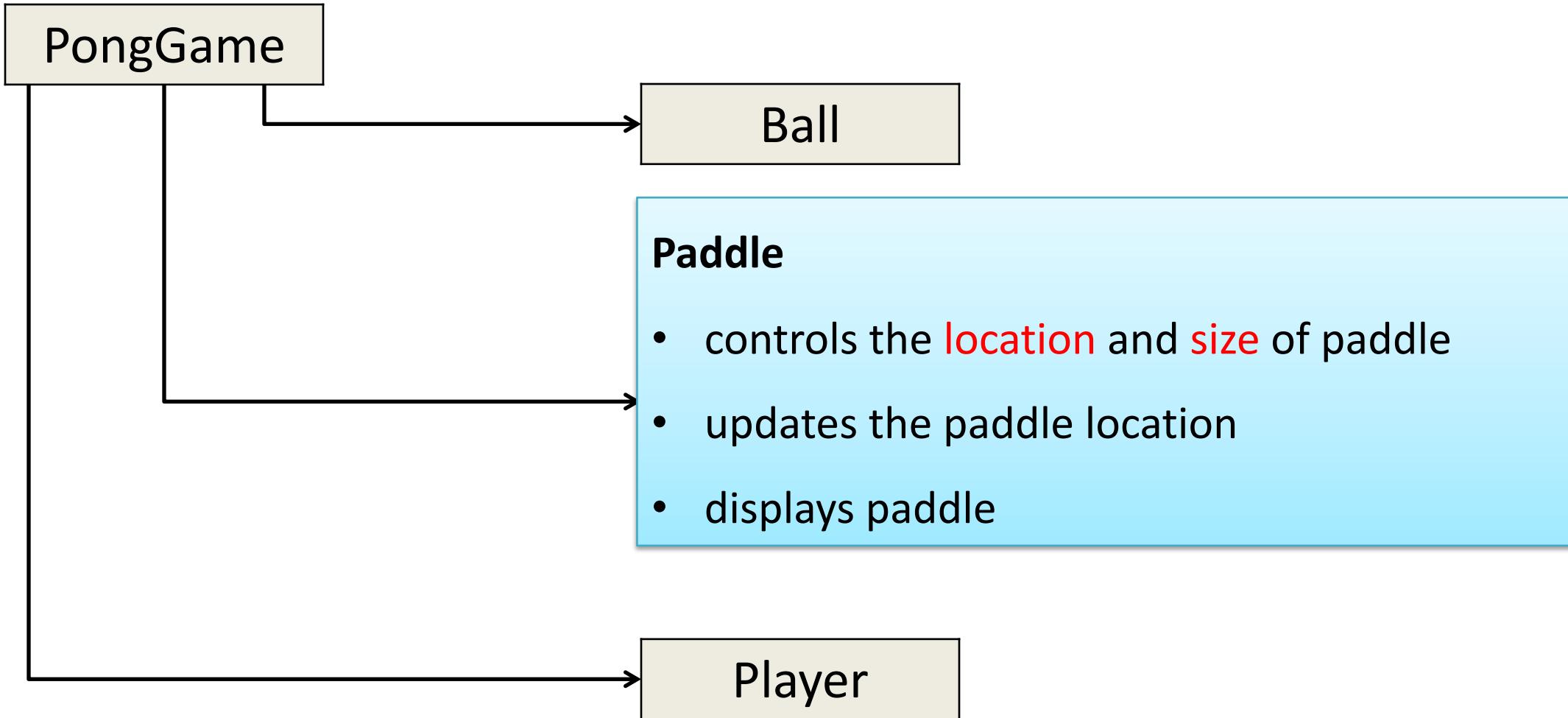
- has **setup()** and **draw()**
- starts the game
- handles player input
- manages collision detection
between Ball and Paddle
- ends the game
- outputs the player **statistics**



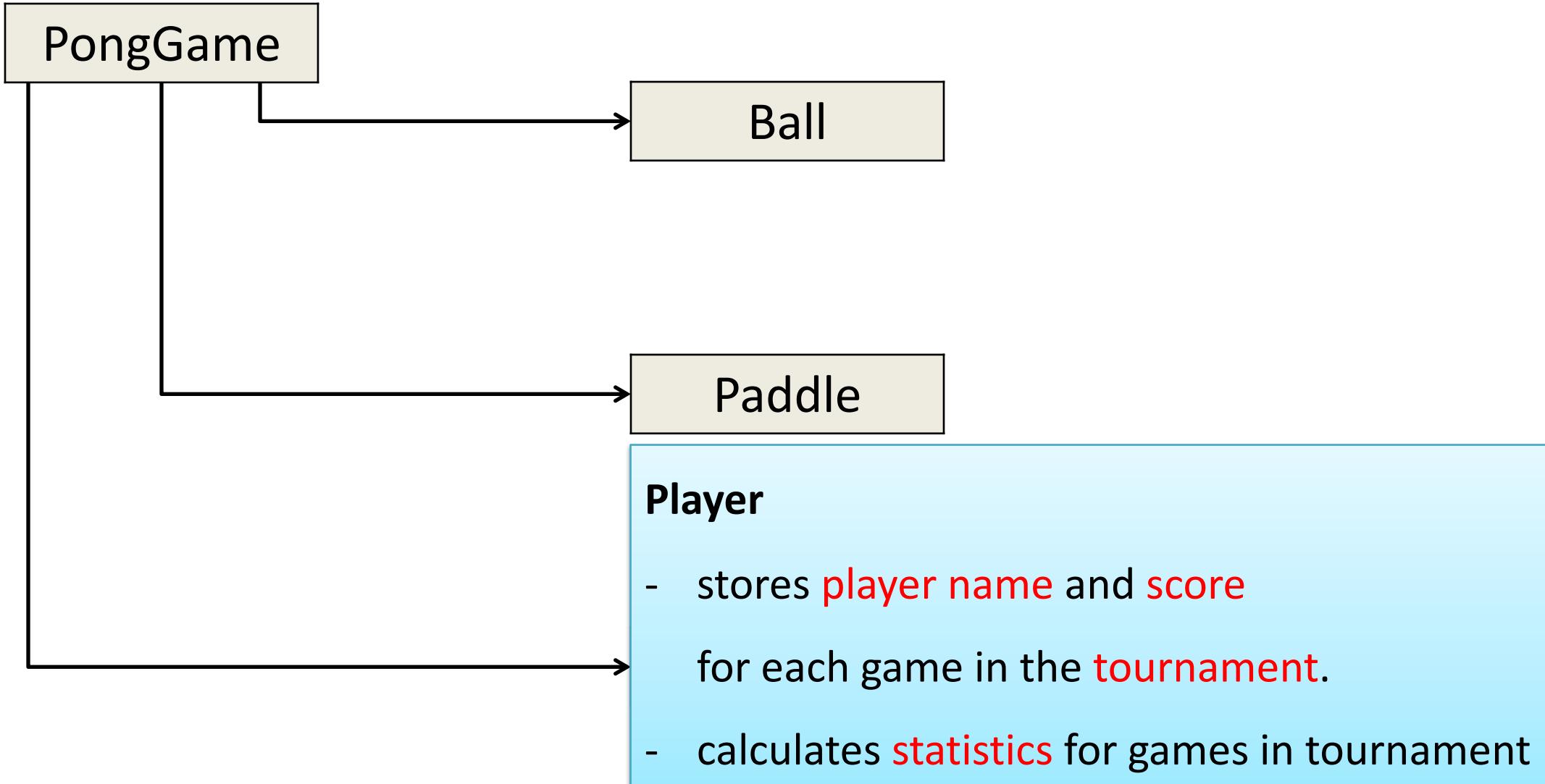
PongGame - Overview



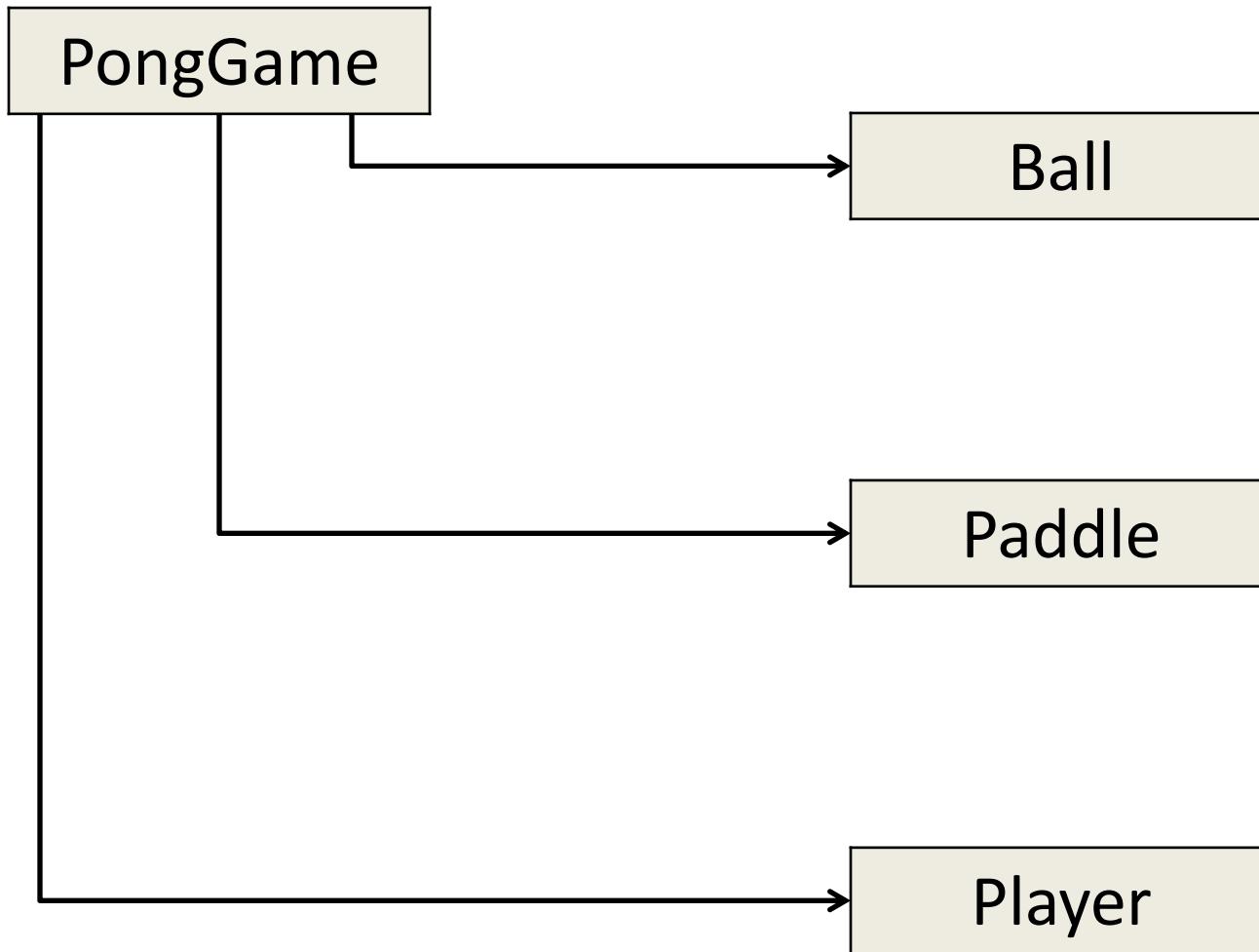
PongGame - Overview



PongGame - Overview



PongGame - Overview CLASSES



Pong Versions - introduction

v1 - **Ball moving** from left to right of screen. Can bounce off top or bottom

v2 - **Mouse controling the Paddle**

v3 - **Collision detection** (ball bounces back). Changes made only to PongGame

v4 - **Game Over** (when 3 lives gone), Score (lives Lost). Output to Console. Changes made only to PongGame.

v5 - **Tournament** (no of games per tournament default is 5). Changes made only to PongGame.

v6 - new **Player class using arrays** (no statistics)

v7 - Player class using arrays (with **statistics** (Tournament Over - highest, lowest, average score))

v8 - **JOptionPane for I/O** instead of console

v9 - alternative algorithm using **Pythagoras Theorem**
