

## Bonus Lecture - 2

### Game Theory Basics

RECAP

# Introduction

A game could be:

↖ Chess, Snooker

1. Sequential / Non - Sequential →

A buzzer quiz

2. Partial / Impartial

3. Secrecy / Complete Information → Chess

4. Finite / Infinite

↘ Poker

General game problems?

A basic problem

What if 1, 2, 3 ... or  $K$  coins were  
allowed to be picked up?

Keeper Loser



Let's look at a problem that  
requires general observation

# Sequential NIM

Intuition / Solution

Let's implement

## 2. Stepping Number

Intuition / Solution

Let's implement

# *Thank You!*

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!