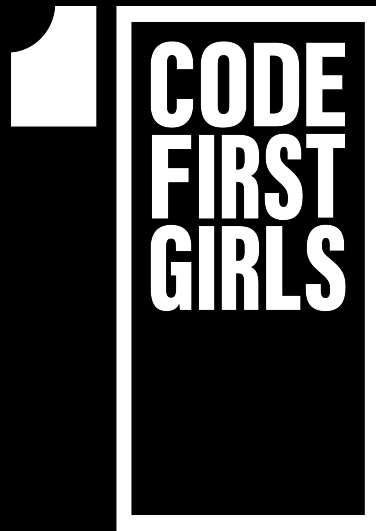


PRACTICE CODING

LESSON 12



NANODEGREE → ENGINEERING MODULE

AGENDA



- 01 Tournament Winner - teams coding challenge
- 02 Team presentations
- 03 Project work in groups

TOURNAMENT WINNER



CODE CHALLENGE DESCRIPTION

- We are running a tournament in a round robin format.
- In a Round Robin tournament every team plays every other team .
- Only two teams compete against each other at a time.
- For each competition one team is the **'home team'** and the other one is the **'away team'**.
- In each competition there is one winner and one loser — no ties!
- A team receives **3 points** if they win and **0 points** if they lose.
- The winner of the tournament is the team that receives the most amount of points.

ROUND ROBIN TOURNAMENT

A round-robin tournament is a competition in which each contestant meets all other contestants in turn.

A round-robin contrasts with an elimination tournament, in which participants are eliminated after a certain number of losses.

TOURNAMENT WINNER



INPUTS

- You are given an array of pairs that represent the teams, which compete against each other and the result of each competition.
- The competitions array has elements `[home_team, away_team]`
- The results array contains info about the winner of each corresponding competition in the competitions array.
E.g **results[idx] relates to the winner of competitions[idx]**.
- In the result array:
1 means the home team won,
0 means the away team won.

INPUT EXAMPLE

```
competitions = [  
  
    ['Panthers', 'Lionesses'],  
  
    ['Lionesses', 'Dolphins'],  
  
    ['Dolphins', 'Panthers'],  
  
]  
  
results = [0, 0, 1]
```

TOURNAMENT WINNER



INPUTS

```
competitions = [  
    ['Panthers', 'Lionesses'], # Lionesses away-team won - 3 points  
    ['Lionesses', 'Dolphins'], # Dolphins away team won - 3 point  
    ['Dolphins', 'Panthers'], # Dolphins home team won - 3 points  
]  
  
results = [0, 0, 1]
```

IMPORTANT

- It is guaranteed that one team will win the tournament and that each team will compete against all other teams exactly once.
- It is also guaranteed that the tournament will always have at least two teams.

TOURNAMENT WINNER



TASK

- **Write a function that returns the winner of the tournament.**
- Split into groups and try to solve this challenge together. Each team will present their approach and solutions to the group.
- Use provided test cases to check correctness of your function output.
- You have **45 min maximum to solve this challenge**. When the time is up, please present your team solution EVEN IF IT IS UNFINISHED.
- Your instructor will share the code at the end of the hour.
- **Hint:** do not overcomplicate this problem. How would you solve it by hand? Consider that approach and try to translate it into code.

IMPORTANT

- It is guaranteed that one team will win the tournament and that each team will compete against all other teams exactly once.
- It is also guaranteed that the tournament will always have at least two teams.

TOURNAMENT WINNER



TEAM PRESENTATIONS



TOURNAMENT WINNER



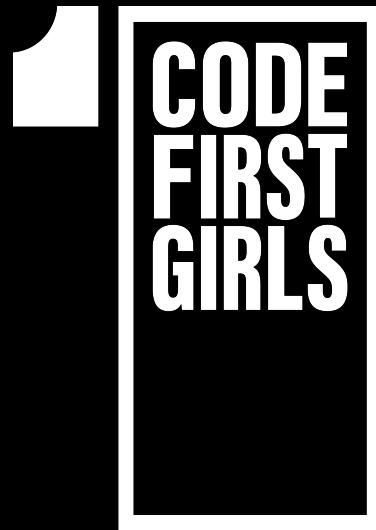
EXAMPLE SOLUTION

Your instructor will talk you through the approach and solution to this problem.



PROJECT WORK

- For the remaining time work in your designated groups on your projects
- Instructors are available to help if you have any questions or would like to bounce some ideas around with regards to implementation.



THANK YOU!