

**ANKARA UNIVERSITY**  
**COMPUTER ENGINEERING DEPARTMENT**  
**Computer Programming II**  
**Spring 2022-23**  
**Programming Assignment 3**

**Assist. Prof. Dr. İrem ÜLKÜ**

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Write a C program in which the standings of football leagues are given as input and the teams that could be the possible champions and relegated are returned as output. In football, a win brings 3 points, a draw 1 point and a defeat 0 points. The team with the highest score becomes the champion, while the 3 teams with the lowest score are relegated. Each team plays two matches among themselves. The number of matches each team must play can be calculated. By looking at the remaining match numbers of the teams in your program, the teams that are likely to become champions and the teams that are likely to be relegated will be determined. For simplicity, it is assumed that team names do not contain numbers. In the remaining matches, which team will play with whom will not be taken into account.

**I/O Format:**

**Input format:** Text

**Output format:** Text

**Example:**

**Input:**

Man. City	35	85	→ Team Name, Number of Matches Played, Score
Arsenal	36	81	
Newcastle	35	66	
Man. United	35	66	
Liverpool	36	65	
Brighton	34	58	
Tottenham	36	57	
Aston Villa	36	57	
Brentford	36	53	
Fulham	36	51	
Chelsea	35	43	
Crystal Palace	36	43	
Wolverhampton	36	40	
Bournemouth	36	39	
West Ham	36	37	
Nottm Forest	36	34	
Everton	36	32	
Leeds	36	31	
Leicester	36	30	
Southampton	36	24	

**Output:**

Man. City → Team That Can Be Champion  
Arsenal → Team That Can Be Champion  
West Ham → Team That Can Be Relegated  
Nottm Forest → Team That Can Be Relegated  
Everton → Team That Can Be Relegated  
Leeds → Team That Can Be Relegated  
Leicester → Team That Can Be Relegated  
Southampton → Team That Can Be Relegated

Man. City and Arsenal are the teams that are likely to become champions. The remaining number of matches is 2 for both teams and the total points they can get is 6. The first place team has a score of 85. If Arsenal won the remaining 2 games and Man. City loses the remaining games, theoretically, Arsenal still has a chance to become a champion.

All 3 teams from the bottom are relegated and the highest scoring team, Leeds United, has 31 points. The number of matches remaining is 2 and the highest number of points Leeds can collect is 37. In the light of this information, the teams with the possibility of relegation are shown.

**Submission:**

1-Name your C source file as <student\_id>.c; replace <student\_id> with your student id number.

2-Upload your C file using the interface provided in e-kampüs course page.

**Compiling Process**

Compiling your program and to use the input file

//normal compile process

**gcc yourfilename.c -o yourprogramname**

//running compiled program

**./yourprogramname**

//to use .txt file as input

**./yourprogramname<input.txt>**

// to use .txt file as input and to print the results to .txt file

**./yourprogramname<input.txt>output.txt**

// to compare two files

**diff -w filename1 filename2**

Please, PAY ATTENTION TO THE I/O FORMAT!