

Programming Task - [REDACTED]

Description:

The goal of this task is to simulate the Champions League starting at the group stage. 32 teams should be distributed to 8 groups by draw with specific rules. After that the matches should be calculated where the amount of goals for each team should be determined randomly (Random(4)).

Please make sure to display the results of all matches.

Now it's time to determine the winner and the runner-up of each group under real-world conditions, by calculating the table for each group. (Position, Team, Points, Goals) Those teams are then used to draw the matches for the next rounds.

The results of the matches should also be calculated randomly just like the ones from the group stage (0 – 3 goals). If both teams have scored the same amount of goals after both matches and the away goals rule doesn't help, one of the teams receives a random goal to decide which team wins. This also applies to the final match.

Exact Ruleset:

The exact rules can be found attached to this mail or here:

<https://www.uefa.com/newsfiles/19071.pdf>

The relevant articles are 6, 7 and 8.

Important:

The paragraphs for the qualification (6.01 and 6.02) are irrelevant.

The UEFA-Cup (6.06) can be ignored. Those teams are simply omitted.

The UEFA-Ranking can also be ignored as the teams were already assigned a number from 1 to 4 (see below) which indicates to which pot they were drawn.

Output:

It is sufficient to display the results of the draw and the matches in a single console window. Example output can be found down below in green. You should display the following rows in between marked with black in the example.

Group Stage Draw

Group 1
Bayern
Rapid
Barcelona
Thun
Etc.

Group Stage Results

Gruppe 1
Bayern-Rapid 2:1
Etc.

Group Stage Tables

Group 1

1. Bayern 6 Punkte 12:11 Goals

Etc.

Last 16 Draw

Bayern – Juventus

Etc.

Last 16 Results

Bayern – Juventus 2:1, 1:2 (Juve wins by an additional goal)

Etc.

Quarter Final Draw

Quarter Final Results

Semi-Final Draw

Semi-Final Results

Final Result

Bonus:

Feel free to choose a more interesting way to present the results, for example by displaying the teams of each group slowly step by step.

Data:

A list of participating teams can be found down below. You can append the country code to each team name during the presentation. They can also be used to check if teams share the same country which may not be allowed in some cases. (e.g. „Clubs from the same association will not be drawn into the same group.“)

The number corresponds to one of the four seed groups (“seeded”), see article 8.05.

Juventus
ITA
1
Bayern
DEU
2
Club Brugge
BEL
3
Rapid
ÖST
4
Barcelona
SPA
1
Bremen
DEU
2
Udinese
ITA

3
Panathinaikos
GRI
4
Milan
ITA
1
PSV
HOL
2
Schalke
DEU
3
Fenerbahçe
TÜR
4
Liverpool
ENG
1
Chelsea
ENG
2
Betis
SPA
3
Anderlecht
BEL
4
Arsenal
ENG
1
Ajax
HOL
2
Thun
SCH
3
Sparta TSC
4
Villarreal
SPA
1
Benfica
POR
2
Lille
FRA
3
Man. United
ENG
4
Lyon
FRA

1

Real Madrid

SPA

2

Rosenborg

NOR

3

Olympiacos

GRI

4

Internazionale

ITA

1

Rangers

SCO

2

Artmedia

SLO

3

Porto

POR

4