EDS ASSIGNMENT 2

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DIVISION - C

1. Finding the team that has scored the most goals

2. Finding the Group with most teams

3. Finding the teams that are from 'Italy'

4. Finding the team with the best win: match ratio

5. Finding the team with poorest goals: match ratio

6. Finding Top 3 successful teams in UCL history

This is the CSV:

A	B	C	D	E	F	G	H	I
1	Napoli	Italy	10	7	26	0	22	
2	Liverpool	England	8	5	19	6	15	
3	Atletico	Spain	6	1	5	0	5	
4	Bayern	Germany	10	8	22	6	25	
5	Inter	Italy	12	7	19	3	24	
6	Barca	Spain	6	2	12	5	7	
7	Spurs	England	8	3	8	0	12	
8	Chelsea	England	10	5	12	2	16	
9	Milan	Italy	12	5	15	7	18	
10	Real Madrid	Spain	12	8	26	14	26	
11	Man City	England	12	7	31	0	26	
12	BVB	Germany	8	3	11	1	12	
13	Sevilla	Spain	6	1	6	0	12	
14	Benfica	Portugal	10	6	26	2	21	
15	PSG	France	8	4	16	0	14	
16	Juve	Italy	6	1	19	2	3	

```
print("DATASET 1")

# opening the file
file1 = open("ucldataset.csv","r")

# making empty list, dict and tup to store data
teams = []
groups = []
nations= {}
played = ()
won = ()
goals = ()
cups = []

# converting tuples to lists for performing operations
plist = list(played)
wlist = list(won)
glist = list(goals)

# extracting data from csv file
while True:
    data = file1.readline()

    if not data:
        break
    #print(data)

    # storing the data in the data structures
    temp = data.split(",")

    teams.append(temp[1])
    groups.append(temp[2])
    nations.update({temp[1]:temp[3]})
    plist.append(int(temp[4]))
    wlist.append(int(temp[5]))
    glist.append(int(temp[6]))
    cups.append(int(temp[7]))

file1.close()

# converting lists back to tuples
played = tuple(plist)
won = tuple(wlist)
goals = tuple(glist)

#printing the data
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print("Teams = ",teams)
print("\nGroups = ",groups)
print("\nNations = ",nations)
print("\nPlayed = ",played)
print("\nWon = ",won)
print("\nGoals = ",goals)
print("\nCups = ",cups)
```

Output:

```
DATASET 1
Teams =  ['Napoli', 'Liverpool', 'Atletico', 'Bayern',
'Inter', 'Barcelona', 'Tottenham', 'Chelsea ', 'Milan', 'Real
Madrid', 'Man City', 'Dortmund', 'Sevilla', 'Benfica',
'Paris', 'Juventus']

Groups =  ['A', 'A', 'B', 'C', 'C', 'C', 'C', 'E', 'E', 'F',
'G', 'G', 'G', 'H', 'H', 'H']

Nations =  {'Napoli': 'Italy', 'Liverpool': 'England',
'Atletico': 'Spain', 'Bayern': 'Germany', 'Inter': 'Italy',
'Barcelona': 'Spain', 'Tottenham': 'England', 'Chelsea ':
'England', 'Milan': 'Italy', 'Real Madrid': 'Spain', 'Man
City': 'England', 'Dortmund': 'Germany', 'Sevilla': 'Spain',
'Benfica': 'Portugal', 'Paris': 'France', 'Juventus': 'Italy'}

Played =  (10, 8, 6, 10, 12, 6, 8, 10, 12, 12, 12, 8, 6, 10,
8, 6)

Won =  (7, 5, 1, 8, 7, 2, 3, 5, 5, 8, 7, 3, 1, 6, 4, 1)

Goals =  (26, 19, 5, 22, 19, 12, 8, 12, 15, 26, 31, 11, 6, 26,
16, 9)

Cups =  [0, 6, 0, 6, 3, 5, 0, 2, 7, 14, 0, 1, 0, 2, 0, 2]
```

```
# QUERIES 1 to 6

# 1. Finding the team that has scored the most goals
max_g = max(glist)
max_gteam = teams[glist.index(max_g)]
print("1)Most goal scoring team
is:",max_gteam,"with",max_g,"goals")
print()


# 2. Finding the Group with most teams
from collections import Counter
most_common_grp,freq = Counter(groups).most_common(1)[0]
print("2)Group with maximum teams is:
Group",most_common_grp,"having",freq,"teams")
print()


# 3.Finding the teams that are from 'Italy'
counter = dict(Counter(teams))
tnames = list(counter.keys())
no_ita = 0
ita = []

for team in tnames:
    if nations[team] == 'Italy':
        no_ita += 1
        ita.append(team)
    else:
        continue

print("3)Total number of Italian Teams:",no_ita,"\nList of
Italian teams:",ita)
print()


# 4.Finding the team with the best win:match ratio
ratio1 = []
for w,p in zip(wlist,plist):
    ratio1.append(w/p)

best_ratio = max(ratio1)
best_ratio_team = teams[ratio1.index(best_ratio)]
print("4)Team with best Win:Play ratio
is:",best_ratio_team,"with ratio:",best_ratio)
print()
```

```
# 5.Finding the team with poorest goals:match ratio
ratio2 = []
for g,p in zip(glist,plist):
    ratio2.append(g/p)

worst_ratio = min(ratio2)
worst_ratio_team = teams[ratio2.index(worst_ratio)]
print("5)Team with poorest Goals:Play ratio
is:",worst_ratio_team,"with ratio:",worst_ratio)
print()


# 6.Finding Top 3 succesful teams in UCL history
max_c = max(cups)
max_cteam = teams[cups.index(max_c)]
print("6)Most successful team
is:",max_cteam,"with",max_c,"Titles")
print()
```

Output:

```
1)Most goal scoring team is: Man City with 31 goals

2)Group with maximum teams is: Group C having 4 teams

3)Total number of Italian Teams: 4
List of Italian teams: ['Napoli', 'Inter', 'Milan',
'Juventus']

4)Team with best Win:Play ratio is: Bayern with
ratio: 0.8

5)Team with poorest Goals:Play ratio is: Atletico
with ratio: 0.8333333333333334

6)Most successful team is: Real Madrid with 14 Titles
```

File link:

/content/drive/MyDrive/ucl.csv