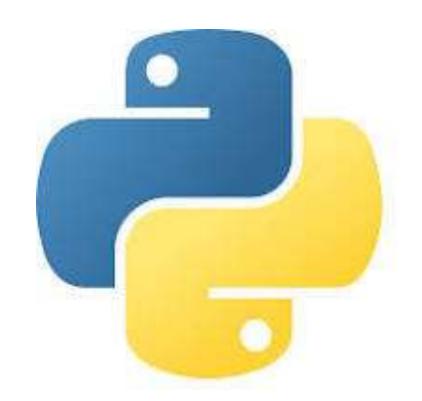


### EDS ACTIVITY = 1

NAME = NACHIKET DEO

PRN = 202401040288

ROLL NO = CS41-08



#### PROBLEM 1:

CREATE A NEW COLUMN'TOTAL\_WICKETS" (SUM OF WICKETS LOST).

#### Solution:

### Problem 2: Which team has won the most matches?

Solution:

df['Winner'].value\_counts().idxmax()

### PROBLEM 3: FIND THE MATCH WITH THE HIGHEST TOTAL RUNS

#### Solution:

 $df['Win_Chase'] = ((df['Toss_Decision'] == 'Field') & (df['Toss_Winner'] == df['Winner'])).sum()$ 

 $df['Win_Defend'] = ((df['Toss_Decision'] == 'Bat') & (df['Toss_Winner'] == 'Bat') & (df['To$ 

df['Winner'])).sum()

### Problem 4: Count matches won by each team.

Solution:

df['winner'].value\_counts()

### Problem 5: Calculate the average score of Team India

### PROBLEM 6: FIND THE MATCH WITH THE HIGHEST TOTAL SCORE.

#### • SOLUTION:

• DF['TOTAL\_SCORE'] =DF['SCORE\_TEAM1'] +DF['SCORE\_TEAM2'] DF.LOC[DF['TOTAL\_SCORE'].IDXMAX()]

# Problem 7: Find all matches played at "Lords" stadium.

Solution:

df[df['venue'] == 'Lords']

### Problem 8: Check for any missing/null values.

Solution:

df.isnull().sum()

#### **Problem 9:**

Find number of final matches and their winners.

```
df[df['match_type'] == 'Final']
  [' winner '].value_counts()
```

# Problem 10: Which player has won the most Player of the Match awards?

Solution:

df['Player\_of\_the\_Match'].value\_counts().idxmax()

## Problem 11: Which team has played the most matches?

# Problem 12: Find the total number of matches played.

Solution:

total\_matches =df.shape[0]

#### Problem 13:

### Load the Cricket World Cup dataset using Pandas.

```
import pandas as pd
df =pd.read_csv('cricket_world_cup.csv') # assuming
filename
df.head()
```

# Problem 14: Sort the matches by total runs (highest first).

Solution:

# Problem 15: What is the average win margin by runs?

Solution:

df['win\_margin\_runs'].mean()

#### PROBLEM 16:

Display the first 10 rows to understand the structure of the dataset.

Solution:
df.head(10)

#### Problem 17:

Find how many matches were won by batting second

Solution:

df[df['win\_by\_wickets'] >0].shape[0]

# Problem 18: Find average first innings score by venue.

Solution:

df.groupby('venue')

['team1\_runs'].mean().sort \_values(ascending=False)

### Problem 19: List all unique teams.

Solution: teams = pd.unique(df[['team1', 'team2']].values.ravel())

### Problem 20: Plot the top 5 highest run totals in a bar chart.

```
df.nlargest(5, 'total_runs')[['match_id',
  ' total _runs']].plot .bar(x='match_id')
```