EDS ACTIVITY = 1

NAME = NACHIKET DEO

PRN = 202401040288

ROLL NO = CS41- 08

Solution:

df['total_wickets'] =df['team1_wkts'] + df[' team2_wkts']

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'] ==

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

Solution:

india_matches =df[(df['team1'] =='India') |
(df['team2'] =='India')]
avg_score_india =india_matches[['team1_runs',
' team2_runs']].mean().mean()

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.

Solution:

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?

Solution:

teams =pd.concat([df['team1'],
df[' team2 ']])
teams.value_counts().idxmax()

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.

Solution:

```python
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:

df.sort_values(by='total_runs', ascending=False)

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

Solution:

df[' win_margin_runs'].mean()

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(ascendi
ng=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.

Solution:

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