

In [15]:

```
import pandas as pd
import numpy as np
```

In [14]:

```
df=pd.read_csv('Match.csv')
```

In [3]:

```
df.shape
```

Out[3]:

(69761, 21)

In [4]:

```
df.head()
```

Out[4]:

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_
0	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	1	DA Warner	S Dhawan	TS Mills	
1	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	2	DA Warner	S Dhawan	TS Mills	
2	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	3	DA Warner	S Dhawan	TS Mills	
3	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	4	DA Warner	S Dhawan	TS Mills	
4	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	5	DA Warner	S Dhawan	TS Mills	

5 rows × 21 columns



In []:

find team wise runs scored

In [86]:

```
team_wise=df.groupby('batting_team')['total_runs'].sum().sort_values(ascending=False)
```

In [87]:

```
team_wise
```

Out[87]:

```
batting_team
Mumbai Indians          11202
Kings XI Punjab         10763
Delhi Daredevils        10654
Royal Challengers Bangalore 10221
Kolkata Knight Riders    9924
Chennai Super Kings      9253
Deccan Chargers          8931
Rajasthan Royals         8039
Rising Pune Supergiant   2470
Gujarat Lions            2412
Sunrisers Hyderabad      2349
Kochi Tuskers Kerala     1760
Pune Warriors            1657
Name: total_runs, dtype: int64
```

Find Total Runs of Virat Kohli.

In [88]:

```
player_run=df.groupby('batsman')['batsman_runs'].sum().sort_values(ascending=False)
player_run['V Kohli']
```

Out[88]:

```
1428
```

Find Total Runs of Your Fav Player.

In [90]:

```
name=input("enter your fav player name :-")
print("Total run of ::", player_run[name])
```

```
enter your fav player name :-DA Warner
Total run of :: 1391
```

Extra Runs Given By All Bowlers in a League.

In [91]:

```
Extra_runs=df.groupby('bowler')['extra_runs'].sum()  
Extra_runs
```

Out[91]:

```
bowler  
A Choudhary      7  
A Flintoff       1  
A Kumble        62  
A Mishra        60  
A Mithun        19  
..             ..  
YA Abdulla      17  
YK Pathan       50  
YS Chahal       30  
Yuvraj Singh    11  
Z Khan         89  
Name: extra_runs, Length: 285, dtype: int64
```

Extra Runs Given By TS Mills.

In [79]:

```
bowler=df.groupby('bowler')['extra_runs'].sum().sort_values(ascending=False)
```

In [82]:

```
bowler['TS Mills']
```

Out[82]:

13

Catches Taken By Mandeep Singh.

In [93]:

```
mask=df[df['dismissal_kind']=='caught']
```

In [97]:

```
mask[mask['fielder']=='Mandeep Singh'][['batsman','dismissal_kind']] # you can use shape in
```

Out[97]:

	batsman	dismissal_kind
11	DA Warner	caught
2728	MJ McClenaghan	caught
3922	DT Christian	caught
4691	DR Smith	caught
6355	CR Woakes	caught
9751	SE Marsh	caught
69340	IK Pathan	caught

How Many Times DA Warner is dismissed by Mohammed Shami.

In [138]:

```
msk1=df['player_dismissed']=='DA Warner'  
mask2=df['bowler']=='Mohammed Shami'  
len(df[mask1 & mask2][['batsman','bowler']])
```

Out[138]:

1

In [101]:

```
df[mask1 & mask2][['batsman','bowler']]
```

Out[101]:

	batsman	bowler
9029	DA Warner	Mohammed Shami

Total Number of Wickets Taken by YS Chahal.

In [102]:

```
bowl=df[df['bowler']=='YS Chahal']
```

In [103]:

```
bowl['player_dismissed'].count()
```

Out[103]:

14

Find Number of Stump Out done by MS Dhoni.

In [105]:

```
m1=df['dismissal_kind']=='stumped'  
m2=df['fielder']=='MS Dhoni'  
df[m1 & m2][['batsman','dismissal_kind','fielder']]
```

Out[105]:

	batsman	dismissal_kind	fielder
3024	BB McCullum	stumped	MS Dhoni
4006	AB de Villiers	stumped	MS Dhoni
11944	CJ Anderson	stumped	MS Dhoni
28296	RV Uthappa	stumped	MS Dhoni
32944	DA Warner	stumped	MS Dhoni
35415	GC Smith	stumped	MS Dhoni
35445	AS Raut	stumped	MS Dhoni
49905	AT Rayudu	stumped	MS Dhoni
51089	MD Mishra	stumped	MS Dhoni
52411	CH Gayle	stumped	MS Dhoni
52422	DJ Hussey	stumped	MS Dhoni
52495	WP Saha	stumped	MS Dhoni
54962	MD Mishra	stumped	MS Dhoni
55630	MS Bisla	stumped	MS Dhoni
55677	EJG Morgan	stumped	MS Dhoni
55692	MK Tiwary	stumped	MS Dhoni
60699	AT Rayudu	stumped	MS Dhoni

In [31]:

```
len(df[m1 & m2 ]) # total 17 time stump out done my ms dhoni
```

Out[31]:

17

Total number sixes hit by MS Dhoni.

In [147]:

```
b1=df['batsman_runs']==6
b2=df['batsman']=='MS Dhoni'
len(df[b1 & b2][['batsman','batsman_runs']]) # 62 six hit my mahi, you can also use shape a
```

Out[147]:

62

Total numbers of balls faced by MI Players.

In [109]:

```
df.groupby('batting_team')['ball'].count().sort_values(ascending=False)
```

Out[109]:

batting_team	
Mumbai Indians	8662
Kings XI Punjab	8208
Delhi Daredevils	8197
Royal Challengers Bangalore	8188
Kolkata Knight Riders	7887
Deccan Chargers	7078
Chennai Super Kings	6987
Rajasthan Royals	6443
Rising Pune Supergiant	1900
Sunrisers Hyderabad	1679
Gujarat Lions	1675
Kochi Tuskers Kerala	1455
Pune Warriors	1402

Name: ball, dtype: int64

Find the total number of runs scored by Sachin Tendulkar.

In [51]:

```
df[df['batsman']=='SR Tendulkar']['batsman_runs'].sum()
```

Out[51]:

1578

Find the total number of balls faced by Schin Tendulkar.

In [59]:

```
df[df['batsman']=='SR Tendulkar']['ball'].count()
```

Out[59]:

1388

Find Sachin Tendulkar's dismissal types in IPL.

In [67]:

```
df[df['player_dismissed']=='SR Tendulkar']['dismissal_kind'].value_counts()
```

Out[67]:

caught	23
bowled	7
lbw	5
run out	2
caught and bowled	1
stumped	1

Name: dismissal_kind, dtype: int64

Find the bowlers who dismissed SR Tendulkar.

In [83]:

```
df[df['player_dismissed']=='SR Tendulkar']['bowler'].value_counts()
```

Out[83]:

PP Chawla	2
IK Pathan	2
R Sharma	2
R Vinay Kumar	2
PJ Sangwan	2
RP Singh	2
A Mishra	2
Joginder Sharma	1
JH Kallis	1
T Thushara	1
DW Steyn	1
SB Jakati	1
DE Bollinger	1
AL Menaria	1
RJ Harris	1
Yuvraj Singh	1
P Kumar	1
L Balaji	1
R Bhatia	1
AD Mascarenhas	1
Shoaib Akhtar	1
SK Raina	1
SK Warne	1
D du Preez	1
AB Agarkar	1
VS Malik	1
LR Shukla	1
PP Ojha	1
SK Trivedi	1
VY Mahesh	1
Shahid Afridi	1
Anand Rajan	1

Name: bowler, dtype: int64

How many times was Suresh Raina dismissed.

In [73]:

```
df[df['player_dismissed']=='SK Raina']['dismissal_kind'].shape
```

Out[73]:

(59,)

In [74]:

```
# this is another way to solve this problem  
len(df[df['player_dismissed']=='SK Raina']['dismissal_kind'])
```

Out[74]:

59

Which player scored the most runs in the dataset?

In [120]:

```
top_bats=df.groupby("batsman")['batsman_runs'].sum().sort_values(ascending=False)
top_bats.head(1)
```

Out[120]:

```
batsman
SK Raina    2159
Name: batsman_runs, dtype: int64
```

What is the Overall No Balls Runs for each team in the dataset?

In [145]:

```
No_ball_runs=df.groupby('batting_team')['noball_runs'].sum().sort_values(ascending=False)
```

In [146]:

```
No_ball_runs
```

Out[146]:

```
batting_team
Deccan Chargers          45
Rajasthan Royals         45
Delhi Daredevils         42
Mumbai Indians           42
Kolkata Knight Riders    39
Kings XI Punjab          36
Royal Challengers Bangalore 34
Chennai Super Kings      32
Kochi Tuskers Kerala     11
Gujarat Lions            10
Pune Warriors             9
Sunrisers Hyderabad      6
Rising Pune Supergiant   1
Name: noball_runs, dtype: int64
```

top ten batsman in term of scored

In [31]:

```
top_bats=df.groupby("batsman")['batsman_runs'].sum().sort_values(ascending=False).head(10)
top_bats
```

Out[31]:

```
batsman
SK Raina      2159
G Gambhir     1907
RG Sharma     1794
MS Dhoni      1585
SR Tendulkar   1578
RV Uthappa    1509
JH Kallis     1490
Yuvraj Singh  1469
AC Gilchrist  1446
SE Marsh      1439
Name: batsman_runs, dtype: int64
```

find the top 10 batsman with max no of six

In [136]:

```
six=df[df['batsman_runs']==6]
six.groupby('batsman')['batsman_runs'].count().sort_values(ascending=False).head(10)
```

Out[136]:

```
batsman
SK Raina      83
YK Pathan     80
Yuvraj Singh  75
CH Gayle      72
RG Sharma     72
AC Gilchrist  71
RV Uthappa    70
BB McCullum   63
MS Dhoni      62
V Sehwag      60
Name: batsman_runs, dtype: int64
```

find the batsman with most number of 4 and 6 in last 5 overs

In [46]:

```
temp_df=df[df['over']>15]
```

In [47]:

```
temp_df=temp_df[(temp_df['batsman_runs']==4) | (temp_df['batsman_runs']==6)]
```

In [52]:

```
temp_df.groupby('batsman')['batsman'].count().sort_values(ascending=False).head()
```

Out[52]:

```
batsman
MS Dhoni      100
RG Sharma     91
Yuvraj Singh  70
KA Pollard    64
KD Karthik    60
Name: batsman, dtype: int64
```

find V Kohli record against all teams

In [59]:

```
temp=df[df['batsman']=='V Kohli']
```

In [60]:

```
temp.groupby('bowling_team')['batsman_runs'].sum()
```

Out[60]:

```
bowling_team
Chennai Super Kings      188
Deccan Chargers          255
Delhi Daredevils         188
Gujarat Lions            74
Kings XI Punjab          164
Kochi Tuskers Kerala     50
Kolkata Knight Riders     72
Mumbai Indians           200
Pune Warriors            67
Rajasthan Royals         87
Rising Pune Supergiant   83
Name: batsman_runs, dtype: int64
```

Find V Kohli four and six against all teams

In [81]:

```
temp=df[(df['batsman']=='V Kohli') & ((df['batsman_runs']==4) | (df['batsman_runs']==6))]
```

In [78]:

```
temp.groupby('bowling_team')['batsman_runs'].count()
```

Out[78]:

```
bowling_team
Chennai Super Kings      25
Deccan Chargers          31
Delhi Daredevils         23
Gujarat Lions            9
Kings XI Punjab          23
Kochi Tuskers Kerala     7
Kolkata Knight Riders    8
Mumbai Indians           27
Pune Warriors            8
Rajasthan Royals         8
Rising Pune Supergiant   9
Name: batsman_runs, dtype: int64
```

create a function that can retrun the highest score of any batsman

In [79]:

```
def highest(batsman):
    temp=df[df['batsman']==batsman]
    return temp.groupby('match_id')['batsman_runs'].sum().sort_values(ascending=False).head
```

In [80]:

```
highest('MS Dhoni')
```

Out[80]:

66

Most Wickets taker bowlers

In [150]:

```
df.groupby('bowler')['player_dismissed'].count().sort_values(ascending=False)
```

Out[150]:

```
bowler
SL Malinga      77
IK Pathan       72
RP Singh        71
A Mishra        70
PP Ojha         65
..
M Manhas        0
LRPL Taylor     0
LPC Silva       0
C Ganapathy     0
SR Tendulkar    0
Name: player_dismissed, Length: 285, dtype: int64
```

In []: