

```
In [1]: import pandas as pd
import numpy as np
```

```
In [2]: df = pd.read_csv("Match.csv")
df
```

Out[2]:

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penalty_runs	batsman_r
	0	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	1	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	
	1	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	2	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	
	2	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	3	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	
	3	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	4	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	
	4	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	5	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	

69756	295	2	Deccan Chargers	Pune Warriors	16	4	JP Duminy	DT Christian	R Sharma	0 ...	0	0	0	0	0	
69757	295	2	Deccan Chargers	Pune Warriors	16	5	JP Duminy	DT Christian	R Sharma	0 ...	0	0	0	0	0	
69758	295	2	Deccan Chargers	Pune Warriors	16	6	JP Duminy	DT Christian	R Sharma	0 ...	0	0	0	0	0	
69759	295	2	Deccan Chargers	Pune Warriors	16	7	JP Duminy	DT Christian	R Sharma	0 ...	0	0	0	0	0	
69760	295	2	Deccan Chargers	Pune Warriors	17	1	DT Christian	JP Duminy	Yuvraj Singh	0 ...	0	0	0	0	0	

69761 rows × 21 columns

```
In [3]: df.head()
```

Out[3]:

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penalty_runs	batsman_r
0	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	1	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	0	
1	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	2	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	0	
2	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	3	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	0	
3	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	4	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	0	
4	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	5	DA Warner	S Dhawan	TS Mills	0 ...	0	0	0	0	0	

5 rows × 21 columns

```
In [4]: df.shape
```

Out[4]: (69761, 21)

```
In [5]: df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 69761 entries, 0 to 69760
Data columns (total 21 columns):
#   Column                Non-Null Count  Dtype
---  -
0   match_id              69761 non-null  int64
1   inning                69761 non-null  int64
2   batting_team          69761 non-null  object
3   bowling_team          69761 non-null  object
4   over                  69761 non-null  int64
5   ball                  69761 non-null  int64
6   batsman               69761 non-null  object
7   non_striker           69761 non-null  object
8   bowler                69761 non-null  object
9   is_super_over         69761 non-null  int64
10  wide_runs             69761 non-null  int64
11  bye_runs              69761 non-null  int64
12  legbye_runs           69761 non-null  int64
13  noball_runs           69761 non-null  int64
14  penalty_runs          69761 non-null  int64
15  batsman_runs           69761 non-null  int64
16  extra_runs            69761 non-null  int64
17  total_runs            69761 non-null  int64
18  player_dismissed      3516 non-null   object
19  dismissal_kind         3516 non-null   object
20  fielder                2529 non-null   object
dtypes: int64(13), object(8)
memory usage: 11.2+ MB
```

```
In [6]: df[["player_dismissed"]].value_counts()
```

```
Out[6]: player_dismissed
RG Sharma      59
SK Raina       59
AC Gilchrist   57
G Gambhir      56
Yuvraj Singh   55
..
A Choudhary     1
BAW Mendis      1
H Das           1
GR Napier       1
Jaskaran Singh  1
Length: 354, dtype: int64
```

```
In [7]: df[["fielder"]].value_counts()
```

```
Out[7]: fielder
RV Uthappa     61
KD Karthik     57
MS Dhoni       55
AC Gilchrist   54
KC Sangakkara  46
..
RA Jadeja (sub)  1
Misbah-ul-Haq  1
AD Mascarenhas  1
M Kaif (sub)    1
KS Williamson   1
Length: 352, dtype: int64
```

```
In [8]: df[["dismissal_kind"]].value_counts()
```

```
Out[8]: dismissal_kind
caught          2029
bowled          650
run out         379
lbw             223
stumped         121
caught and bowled 106
hit wicket       4
retired hurt      4
dtype: int64
```

Find Team wise runs scored.

```
In [9]: df.groupby(["batting_team"])["total_runs"].sum()

Out[9]: batting_team
Chennai Super Kings      9253
Deccan Chargers          8931
Delhi Daredevils         10654
Gujarat Lions            2412
Kings XI Punjab          10763
Kochi Tuskers Kerala     1760
Kolkata Knight Riders    9924
Mumbai Indians           11202
Pune Warriors            1657
Rajasthan Royals         8039
Rising Pune Supergiant   2470
Royal Challengers Bangalore 10221
Sunrisers Hyderabad     2349
Name: total_runs, dtype: int64

In [ ]:
```

Find Total Runs of Virat Kohli.

```
In [10]: # trbb = TOTAL RUNS BY BATSMAN

trbb = df.groupby(["batsman"])["batsman_runs"]

for i in trbb:
    print(i)

('A Chopra', 20477      0
20478      1
20482      0
20484      1
20490      0
..
27982      0
27983      0
27984      4
27986      1
27988      0
Name: batsman_runs, Length: 75, dtype: int64)
('A Choudhary', 246      6
247      0
7019      1
7020      1
7022      1
7024      1
7026      0
7027      1
Name: batsman_runs, Length: 10, dtype: int64)

In [11]: trbb.get_group("V Kohli").sum()

Out[11]: 1428

In [ ]:
```

Find Total Runs of Your Fav Player.

```
In [12]: trbb.get_group("AB de Villiers").sum()

Out[12]: 1115

In [ ]:
```

Extra Runs Given By All Bowlers in a League.

```
In [13]: df.groupby(["bowler"])["extra_runs"].sum()

Out[13]: 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

In [ ]:
```

Extra Runs Given By TS Mills.

```
In [14]: # erbb = EXTRA RUNS BY BOWLERS

erbb = df.groupby(["bowler"])[ "extra_runs" ]

for i in erbb:
    print(i)
67425      0
67426      0
67427      0
67428      0
Name: extra_runs, Length: 270, dtype: int64
('A Symonds', 14987      0
14988      4
14989      0
14990      1
14991      5
..
66820      0
66821      0
66822      0
66823      0
66824      0
Name: extra_runs, Length: 540, dtype: int64
('A Uniyal', 41231      1
41232      0
41233      0
..... ^

In [15]: erbb.get_group("TS Mills").sum()

Out[15]: 13

In [ ]:
```

Catches Taken By Mandeep Singh.

```
In [16]: df[(df["fielder"]=="Mandeep Singh") & (df["dismissal_kind"]=="caught")].loc[:, "player_dismissed":]

Out[16]:
```

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

```
In [17]: df[(df["fielder"]=="Mandeep Singh") & (df["dismissal_kind"]=="caught")].loc[:, "dismissal_kind"].count()

Out[17]: 7

In [ ]:
```

How Many Times DA Warner is dismissed by Mohammed Shami.

```
In [18]: df[(df["player_dismissed"]=="DA Warner") & (df["bowler"]=="Mohammed Shami")]

Out[18]:
```

match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penalty_runs	bat
9029	39	1	Sunrisers Hyderabad	Delhi Daredevils	6	2	DA Warner	S Dhawan	Mohammed Shami	0	...	0	0	0	0

1 rows × 21 columns

```
In [19]: df[(df["player_dismissed"]=="DA Warner") & (df["bowler"]=="Mohammed Shami")].loc[:, "player_dismissed"].count()

Out[19]: 1

In [ ]:
```

Total Number of Wickets Taken by YS Chahal.

In [20]: df[(df["bowler"]=="YS Chahal") & (df["player_dismissed"])].loc[:, "bowler":10]

Out[20]:

	bowler	player_dismissed
94	YS Chahal	MC Henriques
1176	YS Chahal	CR Brathwaite
1851	YS Chahal	AR Patel
2822	YS Chahal	KA Pollard
4691	YS Chahal	DR Smith
4708	YS Chahal	SK Raina
4776	YS Chahal	BB McCullum
6311	YS Chahal	YK Pathan
6323	YS Chahal	MK Pandey
6325	YS Chahal	C de Grandhomme
8709	YS Chahal	KA Pollard
9777	YS Chahal	M Vohra
9792	YS Chahal	GJ Maxwell
10615	YS Chahal	G Gambhir

In [21]: df[(df["bowler"]=="YS Chahal") & (df["player_dismissed"])].loc[:, "player_dismissed"].count()

Out[21]: 14

In []:

Find Number of Stump Out done by MS Dhoni.

In [22]: df[(df["fielder"]=="MS Dhoni") & (df["dismissal_kind"]=="stumped")].loc[:, "player_dismissed":]

Out[22]:

	player_dismissed	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 [23]: df[(df["fielder"]=="MS Dhoni") & (df["dismissal_kind"]=="stumped")].loc[:, "dismissal_kind"].count()

Out[23]: 17

In []:

How Many Times S Dhawan Got Out by lbw.

In [24]: df[(df["batsman"]=="S Dhawan") & (df["dismissal_kind"]=="lbw")].loc[:, "player_dismissed":]

Out[24]:

	player_dismissed	dismissal_kind	fielder
31390	S Dhawan	lbw	NaN
46812	S Dhawan	lbw	NaN

In [25]: df[(df["batsman"]=="S Dhawan") & (df["dismissal_kind"]=="lbw")].loc[:, "dismissal_kind"].count()

Out[25]: 2

In []:

Total number sixes hit by MS Dhoni.

```
In [26]: df[(df["batsman"]=="MS Dhoni") & (df["batsman_runs"]== 6)].loc[:, "batsman":9]
```

Out[26]:

	batsman	batsman_runs
2081	MS Dhoni	6
3905	MS Dhoni	6
5975	MS Dhoni	6
5993	MS Dhoni	6
5999	MS Dhoni	6
...
67428	MS Dhoni	6
68290	MS Dhoni	6
68335	MS Dhoni	6
68344	MS Dhoni	6
68345	MS Dhoni	6

62 rows × 2 columns

```
In [27]: df[(df["batsman"]=="MS Dhoni") & (df["batsman_runs"]== 6)].loc[:, "batsman_runs"].count()
```

Out[27]: 62

```
In [ ]:
```

Total numbers of balls faced by MI Players.

```
In [28]: # bpbt = BALL PLAYED BY BATTING TEAM

bpbt = df.groupby(["batting_team"])["ball"]

for i in bpbt:
    print(i)
```

```
('Chennai Super Kings', 14087    1
14088    2
14089    3
14090    4
14091    5
..
68341    2
68342    3
68343    4
68344    5
68345    6
Name: ball, Length: 6987, dtype: int64)
('Deccan Chargers', 14800    1
14801    2
14802    3
14803    4
14804    5
..
69756    4
69757    5
..
14800    1
14801    2
14802    3
14803    4
14804    5
..
69756    4
69757    5
..)
```

```
In [29]: bpbt.count()
```

Out[29]:

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

Name: ball, dtype: int64

```
In [30]: bpbt.get_group("Mumbai Indians").count()
```

Out[30]: 8662

```
In [ ]:
```

Total numbers of balls faced by KKR Players.

```
In [31]: bpbt.get_group("Kolkata Knight Riders").count()
```

Out[31]: 7887

```
In [ ]:
```

Find the total number of runs scored by Sachin Tendulkar.

```
In [32]: trbb.get_group("SR Tendulkar").sum()
```

Out[32]: 1578

```
In [ ]:
```

Find the total number of balls faced by Sachin Tendulkar.

```
In [33]: # bpbp = BALL PLAYED BY PLAYERS(BATSMAN)

bpbp = df.groupby(["batsman"])[ "ball" ]

for i in bpbp:
    print(i)
```

27496 1
27497 2
27498 3
27499 4
27500 5
27501 6
27502 7
27503 1
27504 2
27508 6
27509 7
27514 5
27517 2
27518 3
27522 1
27524 3
27526 5
27527 6
27528 1
27530 2

```
In [34]: bpbp.count()
```

Out[34]: batsman
A Chopra 75
A Choudhary 20
A Flintoff 57
A Kumble 49
A Mishra 224
...
YV Takawale 91
Yashpal Singh 67
Younis Khan 7
Yuvraj Singh 1145
Z Khan 83
Name: ball, Length: 383, dtype: int64

```
In [35]: bpbp.get_group("SR Tendulkar").count()
```

Out[35]: 1388

```
In [ ]:
```

Find Sachin Tendulkar's dismissal types in IPL.

```
In [151]: df[df['player_dismissed']=='SR Tendulkar']['dismissal_kind'].value_counts()
```

Out[151]: caught 23
bowled 7
lbw 5
run out 2
caught and bowled 1
stumped 1
Name: dismissal_kind, dtype: int64

```
In [ ]:
```

Find the bowlers who dismissed SR Tendulkar.

```
In [149]: bsrt = df[df['player_dismissed']=='SR Tendulkar']['bowler'].value_counts()  
bsrt
```

```
Out[149]: 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
```

```
In [150]: bsrt.count()
```

```
Out[150]: 32
```

How many times was Suresh Raina dismissed.

```
In [42]: # srd = SURESH RAINA DISMISSED  
  
srd = df[(df["batsman"]=="SK Raina")].groupby(["dismissal_kind"])  
  
for i in srd:  
    print(i)
```

('bowled',		match_id	inning	batting_team		bowling_team	over	\
11389	49	1		Gujarat Lions		Delhi Daredevils	6	
42743	182	1		Chennai Super Kings		Kolkata Knight Riders	10	
46726	198	2		Chennai Super Kings		Rajasthan Royals	10	
61890	262	1		Chennai Super Kings		Pune Warriors	10	
67425	285	1		Chennai Super Kings		Rajasthan Royals	19	
		ball	batsman	non_striker	bowler	is_super_over	... bye_runs	\
11389	5	SK Raina	Ishan Kishan	PJ Cummins	0	...	0	
42743	1	SK Raina	S Badrinath	BJ Hodge	0	...	0	
46726	4	SK Raina	MS Dhoni	SK Warne	0	...	0	
61890	6	SK Raina	MEK Hussey	AC Thomas	0	...	0	
67425	3	SK Raina	MS Dhoni	A Singh	0	...	0	
		legbye_runs	noball_runs	penalty_runs	batsman_runs	extra_runs	\	
11389		0	0	0	0	0		
42743		0	0	0	0	0		
46726		0	0	0	0	0		
61890		0	0	0	0	0		
67425		0	0	0	0	0		

```
In [43]: srd.count().loc[:, "batsman"]
```

```
Out[43]: dismissal_kind  
bowled      5  
caught      44  
caught and bowled  3  
lbw         1  
run out     6  
Name: batsman, dtype: int64
```

```
In [44]: srd.count().loc[:, "batsman"].sum()
```

```
Out[44]: 59
```

```
In [ ]:
```

Display player details who hit the maximum no of sixes in the current IPL tournament.


```
In [71]: sixs = df[df['batsman_runs']==6]

In [70]: sixs.groupby('batsman')['batsman_runs'].count().sort_values(ascending=False).head(5)

Out[70]: batsman
SK Raina      83
YK Pathan     80
Yuvraj Singh  75
CH Gayle      72
RG Sharma     72
Name: batsman_runs, dtype: int64

In [ ]:
```

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

```
In [73]: onbr=df.groupby('batting_team')['noball_runs'].sum().sort_values(ascending=False)

In [74]: onbr

Out[74]: 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
```

Which player scored the most runs in the dataset?

```
In [50]: # psr = PLAYER SCORED RUNS

psr = df.groupby('batsman')['batsman_runs'].sum()
psr

Out[50]: batsman
A Chopra      53
A Choudhary   25
A Flintoff    62
A Kumble      35
A Mishra     219
...
YV Takawale   88
Yashpal Singh 47
Younis Khan   3
Yuvraj Singh 1469
Z Khan        70
Name: batsman_runs, Length: 383, dtype: int64

In [51]: # tsr = TOTAL SURESH RAINA RUNS

tsr = psr.idxmax()
tsr

Out[51]: 'SK Raina'

In [52]: print(f'The Player Who Scored Most Runs in this IPL Dataset is {tsr} with {psr[tsr]} runs.')

The Player Who Scored Most Runs in this IPL Dataset is SK Raina with 2159 runs.

In [ ]:
```

=====

Total Number of Wickets Taken by JJ Bumrah.

```
In [82]: bum = df[(df["bowler"]=="JJ Bumrah") & (df["player_dismissed"])].loc[:, "player_dismissed"]
bum
Out[82]: 1474      CA Lynn
2227      BCJ Cutting
2236      NV Ojha
2239      Rashid Khan
2700      KM Jadhav
5157      GJ Maxwell
5672      RR Pant
5754      K Rabada
6542      MS Dhoni
6556      MK Tiwary
7870      SK Raina
7963      AJ Tye
7964      JP Faulkner
8592      SR Watson
10343     RR Pant
11065     MC Henriques
11665     GJ Maxwell
13122     MK Tiwary
13415     CA Lynn
13439     RV Uthappa
13512     SA Yadav
13752     RA Tripathi
13839     MS Dhoni
Name: player_dismissed, dtype: object
```

```
In [81]: bum.count()
```

```
Out[81]: 23
```

```
In [ ]:
```

What is the Overall White Runs Given by each team in the dataset?

```
In [85]: owbr=df.groupby('batting_team')['wide_runs'].sum().sort_values(ascending=False)
owbr
```

```
Out[85]: batting_team
Mumbai Indians      438
Kolkata Knight Riders  363
Kings XI Punjab     335
Delhi Daredevils     330
Chennai Super Kings  296
Royal Challengers Bangalore  290
Rajasthan Royals     230
Deccan Chargers     216
Kochi Tuskers Kerala   82
Rising Pune Supergiant  58
Gujarat Lions         50
Pune Warriors         49
Sunrisers Hyderabad   46
Name: wide_runs, dtype: int64
```

```
In [ ]:
```

List of Players Who Got Dismissed By Retired Hurt

```
In [58]: df[(df["dismissal_kind"]=="retired hurt").loc[:, "player_dismissed": "dismissal_kind"]
```

```
Out[58]:
```

	player_dismissed	dismissal_kind
8712	KH Pandya	retired hurt
14576	DJ Thorneley	retired hurt
41338	Harbhajan Singh	retired hurt
43622	VVS Laxman	retired hurt

```
In [ ]:
```

Find MS Dhoni record against all teams

```
In [86]: rec = df[df['batsman']=='MS Dhoni']
```

```
In [90]: rec.groupby('bowling_team')['batsman_runs'].sum()
```

```
Out[90]: bowling_team
Deccan Chargers                240
Delhi Daredevils               155
Gujarat Lions                  31
Kings XI Punjab               222
Kochi Tuskers Kerala           14
Kolkata Knight Riders          206
Mumbai Indians                 257
Pune Warriors                  26
Rajasthan Royals              126
Royal Challengers Bangalore    216
Sunrisers Hyderabad           92
Name: batsman_runs, dtype: int64
```

```
In [ ]:
```

Find HH Pandya four and six against all teams

```
In [143]: ofs = df[(df['batsman']=="HH Pandya") & ((df['batsman_runs']==4) | (df['batsman_runs']==6))]
```

In [144]: ofs

Out[144]:

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penalty_runs	bat
366	2	1	Mumbai Indians	Rising Pune Supergiant	20	1	HH Pandya	TG Southee	AB Dinda	0	...	0	0	0	0	
367	2	1	Mumbai Indians	Rising Pune Supergiant	20	2	HH Pandya	TG Southee	AB Dinda	0	...	0	0	0	0	
368	2	1	Mumbai Indians	Rising Pune Supergiant	20	3	HH Pandya	TG Southee	AB Dinda	0	...	0	0	0	0	
369	2	1	Mumbai Indians	Rising Pune Supergiant	20	4	HH Pandya	TG Southee	AB Dinda	0	...	0	0	0	0	
370	2	1	Mumbai Indians	Rising Pune Supergiant	20	5	HH Pandya	TG Southee	AB Dinda	0	...	0	0	0	0	
1659	7	2	Mumbai Indians	Kolkata Knight Riders	17	6	HH Pandya	N Rana	CR Woakes	0	...	0	0	0	0	
1665	7	2	Mumbai Indians	Kolkata Knight Riders	18	6	HH Pandya	N Rana	TA Boult	0	...	0	0	0	0	
1671	7	2	Mumbai Indians	Kolkata Knight Riders	19	6	HH Pandya	Harbhajan Singh	AS Rajpoot	0	...	0	0	0	0	
1674	7	2	Mumbai Indians	Kolkata Knight Riders	20	2	HH Pandya	Harbhajan Singh	TA Boult	0	...	0	0	0	0	
1677	7	2	Mumbai Indians	Kolkata Knight Riders	20	5	HH Pandya	Harbhajan Singh	TA Boult	0	...	0	0	0	0	
2831	12	2	Mumbai Indians	Royal Challengers Bangalore	19	6	HH Pandya	KH Pandya	TS Mills	0	...	0	0	0	0	
3808	16	2	Mumbai Indians	Gujarat Lions	19	2	HH Pandya	RG Sharma	AJ Tye	0	...	0	0	0	0	
5274	22	2	Mumbai Indians	Kings XI Punjab	15	4	HH Pandya	N Rana	I Sharma	0	...	0	0	0	0	
5275	22	2	Mumbai Indians	Kings XI Punjab	15	5	HH Pandya	N Rana	I Sharma	0	...	0	0	0	0	
5276	22	2	Mumbai Indians	Kings XI Punjab	15	6	HH Pandya	N Rana	I Sharma	0	...	0	0	0	0	
5614	24	1	Mumbai Indians	Delhi Daredevils	17	1	HH Pandya	KA Pollard	CH Morris	0	...	0	0	0	0	
5628	24	1	Mumbai Indians	Delhi Daredevils	19	3	HH Pandya	Harbhajan Singh	K Rabada	0	...	0	0	0	0	
6666	28	2	Mumbai Indians	Rising Pune Supergiant	18	5	HH Pandya	RG Sharma	JD Unadkat	0	...	0	0	0	0	
6667	28	2	Mumbai Indians	Rising Pune Supergiant	18	6	HH Pandya	RG Sharma	JD Unadkat	0	...	0	0	0	0	
8741	37	2	Mumbai Indians	Royal Challengers Bangalore	18	7	HH Pandya	RG Sharma	A Choudhary	0	...	0	0	0	0	
10304	44	1	Mumbai Indians	Delhi Daredevils	18	3	HH Pandya	KA Pollard	CJ Anderson	0	...	0	0	0	0	
10318	44	1	Mumbai Indians	Delhi Daredevils	20	3	HH Pandya	KA Pollard	PJ Cummins	0	...	0	0	0	0	
10319	44	1	Mumbai Indians	Delhi Daredevils	20	4	HH Pandya	KA Pollard	PJ Cummins	0	...	0	0	0	0	
10321	44	1	Mumbai Indians	Delhi Daredevils	20	6	HH Pandya	KA Pollard	PJ Cummins	0	...	0	0	0	0	
11807	50	2	Mumbai Indians	Kings XI Punjab	14	2	HH Pandya	KA Pollard	R Tewatia	0	...	0	0	0	0	
11817	50	2	Mumbai Indians	Kings XI Punjab	15	6	HH Pandya	KA Pollard	AR Patel	0	...	0	0	0	0	
11822	50	2	Mumbai Indians	Kings XI Punjab	16	5	HH Pandya	KA Pollard	MJ Henry	0	...	0	0	0	0	
11823	50	2	Mumbai Indians	Kings XI Punjab	16	6	HH Pandya	KA Pollard	MJ Henry	0	...	0	0	0	0	
13178	56	2	Mumbai Indians	Rising Pune Supergiant	9	6	HH Pandya	PA Patel	SN Thakur	0	...	0	0	0	0	
13180	56	2	Mumbai Indians	Rising Pune Supergiant	10	2	HH Pandya	PA Patel	A Zampa	0	...	0	0	0	0	
13690	59	1	Mumbai Indians	Rising Pune Supergiant	13	2	HH Pandya	KH Pandya	A Zampa	0	...	0	0	0	0	

31 rows × 21 columns



In [145]: ofs.groupby('bowling_team')['batsman_runs'].count()

Out[145]:

bowling_team	
Delhi Daredevils	6
Gujarat Lions	1
Kings XI Punjab	7
Kolkata Knight Riders	5
Rising Pune Supergiant	10
Royal Challengers Bangalore	2

Name: batsman_runs, dtype: int64

In []:

Top 10 Wicket Takers

In [98]: `df.groupby('bowler')['player_dismissed'].count().sort_values(ascending=False).head(10)`

Out[98]:

bowler	
SL Malinga	77
IK Pathan	72
RP Singh	71
A Mishra	70
PP Ojha	65
JA Morkel	64
Harbhajan Singh	62
PP Chawla	62
Z Khan	62
SK Warne	59

Name: player_dismissed, dtype: int64

In []:

Orange Cap Holder Of The Season

In [101]: `och=df.groupby("batsman")['batsman_runs'].sum().sort_values(ascending=False).head(1)`
`och`

Out[101]:

batsman	
SK Raina	2159

Name: batsman_runs, dtype: int64

In []:

Purple Cap Holder Of The Season

In [103]: `df.groupby('bowler')['player_dismissed'].count().sort_values(ascending=False).head(1)`

Out[103]:

bowler	
SL Malinga	77

Name: player_dismissed, dtype: int64

In []:

Top 8 Best Fielder Of the Season with Maximum Points

In [107]: `df.groupby('fielder')['player_dismissed'].count().sort_values(ascending=False).head(8)`

Out[107]:

fielder	
RV Uthappa	61
KD Karthik	57
MS Dhoni	55
AC Gilchrist	54
KC Sangakkara	46
AB de Villiers	44
SK Raina	40
RG Sharma	39

Name: player_dismissed, dtype: int64

In []:

Teams Who Have Played Super Over

In [120]: `iso = df[df['is_super_over']==1]`

In [123]: `iso.groupby('batting_team')['is_super_over'].count()`

Out[123]:

batting_team	
Chennai Super Kings	5
Gujarat Lions	8
Kings XI Punjab	4
Kolkata Knight Riders	7
Mumbai Indians	5
Rajasthan Royals	4

Name: is_super_over, dtype: int64

In []:

Players List of Mumbai Indians

```
In [125]: plmi = df[df["batting_team"]=="Mumbai Indians"]
```

```
In [130]: plmi.groupby('batsman')['batting_team'].count()
```

```
Out[130]: batsman
A Nehra                13
A Symonds             143
AC Blizzard           47
AG Murtaza              5
AM Nayar              348
AM Rahane             147
AN Ahmed               8
AP Tare               41
AT Rayudu             661
C Madan               21
C Nanda                1
CRD Fernando          3
DJ Bravo             401
DJ Jacobs             91
DJ Thornely            54
DR Smith              41
DS Kulkarni           39
GR Napier             16
HH Pandya             172
Harbhajan Singh       185
JC Buttler            186
JEC Franklin          8
JJ Bumrah             12
JP Duminy             468
KA Pollard            535
KH Pandya             186
KV Sharma             42
L Ronchi              37
LMP Simmons           116
MA Khote              22
MG Johnson            17
MJ McClenaghan        16
MK Pandey             10
MM Patel              1
Mohammad Ashraful     12
N Rana                277
PA Patel              308
PR Shah               92
R McLaren             71
R Sathish             111
RG Sharma             509
RR Raje               18
RV Uthappa            291
S Dhawan              226
SD Chitnis            10
SL Malinga             9
SM Pollock            116
SR Tendulkar          1388
SS Tiwary              397
ST Jayasuriya         573
STR Binny             5
TG Southee            3
TL Suman              36
VS Yeligati           2
YV Takawale           91
Z Khan                24
Name: batting_team, dtype: int64
```

```
In [136]: len(plmi.groupby('batsman')['batting_team'].count())
```

```
Out[136]: 56
```

```
In [ ]:
```

Penalty Runs Given

```
In [138]: df[df["penalty_runs"]==5]
```

```
Out[138]:
```

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penalty_runs	batsm
15476	66	2	Delhi Daredevils	Deccan Chargers	12	6	V Sehwag	S Dhawan	PP Ojha	0	...	0	0	0	5	

1 rows × 21 columns

```
In [ ]:
```

Top 10 Batsman got Dismissed Frequently

In [140]:

Out[140]:

player_dismissed	
RG Sharma	59
SK Raina	59
AC Gilchrist	57
G Gambhir	56
Yuvraj Singh	55
RV Uthappa	54
YK Pathan	53
V Kohli	51
PA Patel	49
S Dhawan	48

Name: batsman, dtype: int64

In []:

In []:

In []:

In []: