

```
In [1]: #Loading the required libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
In [2]: #Loading the IPL matches dataset
df = pd.read_csv('ipl_dataset.csv')
```

```
In [3]: #Having a glance at the first five record of dataset
df.head()
```

```
Out[3]:
```

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin	man_
0	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kolkata Knight Riders	131.0	133.0	Kolkata Knight Riders	Field	KKR	6 wickets	
1	https://stats.espncricinfo.com/ci/engine/match...	Mumbai Indians	Delhi Capitals	177.0	179.0	Delhi Capitals	Field	Capitals	4 wickets	
2	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Punjab Kings	205.0	208.0	Punjab Kings	Field	Punjab	5 wickets	
3	https://stats.espncricinfo.com/ci/engine/match...	Lucknow Super Giants	Gujarat Titans	158.0	161.0	Gujarat Titans	Field	Titans	5 wickets	Mol
4	https://stats.espncricinfo.com/ci/engine/match...	Rajasthan Royals	Sunrisers Hyderabad	210.0	149.0	Sunrisers Hyderabad	Field	Royals	61 runs	

```
In [4]: #Information about dataset  
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 958 entries, 0 to 957  
Data columns (total 12 columns):  
#   Column                Non-Null Count  Dtype    
---  -  
0   full_scorecard        958 non-null   object   
1   team1                 958 non-null   object   
2   team2                 950 non-null   object   
3   team1_score           930 non-null   float64  
4   team2_score           948 non-null   float64  
5   toss_winner           950 non-null   object   
6   toss_choice           958 non-null   object   
7   winner               958 non-null   object   
8   margin               958 non-null   object   
9   man_of_the_match      950 non-null   object   
10  stadium              950 non-null   object   
11  place                874 non-null   object   
dtypes: float64(2), object(10)  
memory usage: 89.9+ KB
```

```
In [5]: #identify no. of rows and columns  
df.shape
```

```
Out[5]: (958, 12)
```

```
In [6]: #Getting the general information about data  
df.describe()
```

```
Out[6]:
```

	team1_score	team2_score
count	930.000000	948.000000
mean	163.149462	149.282700
std	29.695734	30.606165
min	67.000000	2.000000
25%	145.000000	132.000000
50%	164.000000	151.000000
75%	183.000000	170.000000
max	263.000000	226.000000

```
In [7]: #identify duplicate values  
df.duplicated().any()
```

```
Out[7]: False
```

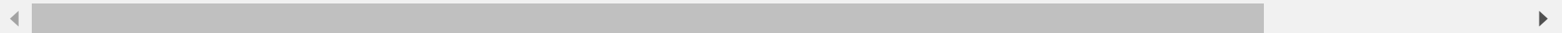
```
In [8]: #identify the null values  
df.isnull().sum()
```

```
Out[8]: full_scorecard      0  
team1                      0  
team2                      8  
team1_score                28  
team2_score                10  
toss_winner                8  
toss_choice                0  
winner                    0  
margin                    0  
man_of_the_match          8  
stadium                   8  
place                     84  
dtype: int64
```

In [9]: *#identify the null values in team2 column*
df[df['team2'].isna()]

Out[9]:

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin	man
342	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
458	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
661	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
663	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	NaN	NaN	NaN	NaN	No Toss	No	No result	
725	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
846	https://stats.espncricinfo.com/ci/engine/match...	Mumbai Indians	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
852	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	
945	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	NaN	NaN	NaN	NaN	No Toss	Match	abandoned without a ball bowled	



```
In [10]: #Drop the null values in team2 column having insufficient data  
df.dropna(subset={'team2'},inplace=True)
```

```
In [11]: #checking null values  
df.team2.isna().sum()
```

```
Out[11]: 0
```

```
In [12]: df.isnull().sum()
```

```
Out[12]: full_scorecard      0  
team1                      0  
team2                      0  
team1_score                20  
team2_score                2  
toss_winner                0  
toss_choice                0  
winner                     0  
margin                     0  
man_of_the_match           0  
stadium                    0  
place                      76  
dtype: int64
```

```
In [13]: #identify the null values in team1_score column  
df[df['team1_score'].isna()]
```

Out[13]:

		full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
242	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Rajasthan Royals		NaN	41.0	Rajasthan Royals	Field	No	No result
259	https://stats.espncricinfo.com/ci/engine/match...	Rajasthan Royals	Delhi Daredevils		NaN	60.0	Delhi Daredevils	Field	Royals	10 runs
285	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Rajasthan Royals		NaN	146.0	Rajasthan Royals	Field	Daredevils	4 runs
418	https://stats.espncricinfo.com/ci/engine/match...	Rising Pune Supergiants	Kolkata Knight Riders		NaN	66.0	Rising Pune Supergiants	Bat	KKR	8 wickets
423	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Kings XI Punjab		NaN	120.0	Kings XI Punjab	Field	RCB	82 runs
462	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Rajasthan Royals		NaN	NaN	8 (1 nb)	No Toss	No	No result
466	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore		NaN	115.0	Royal Challengers Bangalore	Field	RCB	7 wickets
483	https://stats.espncricinfo.com/ci/engine/match...	Kings XI Punjab	Royal Challengers Bangalore		NaN	84.0	Royal Challengers Bangalore	Field	Kings	22 runs
485	https://stats.espncricinfo.com/ci/engine/match...	Sunrisers Hyderabad	Royal Challengers Bangalore		NaN	83.0	Sunrisers Hyderabad	Bat	RCB	6 wickets
514	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kolkata Knight Riders		NaN	114.0	Chennai Super Kings	Bat	Super	34 runs
623	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Chennai Super Kings		NaN	82.0	Chennai Super Kings	Field	RCB	24 runs
631	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Delhi Daredevils		NaN	100.0	Delhi Daredevils	Field	Daredevils	8 wickets
723	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kochi Tuskers Kerala		NaN	135.0	Kochi Tuskers Kerala	Field	Kochi	7 wickets

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
763	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	105.0	Royal Challengers Bangalore	Field	RCB	4 wickets
773	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Pune Warriors	NaN	NaN	5	No Toss	No	No result
842	https://stats.espncricinfo.com/ci/engine/match...	Kings XI Punjab	Delhi Daredevils	NaN	58.0	Delhi Daredevils	Field	Daredevils	10 wickets
873	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kings XI Punjab	NaN	174.0	Chennai Super Kings	Bat	Super	12 runs
927	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	124.0	Kolkata Knight Riders	Bat	KKR	5 runs
938	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Kings XI Punjab	NaN	94.0	Delhi Daredevils	Bat	Kings	6 runs
953	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Mumbai Indians	NaN	126.0	Mumbai Indians	Field	Mumbai	9 wickets

```
In [14]: #drop the teams with no result
df.drop([242,462,773],inplace= True)
```



```
In [15]: df[df['team1_score'].isna()]
```

Out[15]:

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
259	https://stats.espncricinfo.com/ci/engine/match...	Rajasthan Royals	Delhi Daredevils	NaN	60.0	Delhi Daredevils	Field	Royals	10 runs
285	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Rajasthan Royals	NaN	146.0	Rajasthan Royals	Field	Daredevils	4 runs
418	https://stats.espncricinfo.com/ci/engine/match...	Rising Pune Supergiants	Kolkata Knight Riders	NaN	66.0	Rising Pune Supergiants	Bat	KKR	8 wickets
423	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Kings XI Punjab	NaN	120.0	Kings XI Punjab	Field	RCB	82 runs
466	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	115.0	Royal Challengers Bangalore	Field	RCB	7 wickets
483	https://stats.espncricinfo.com/ci/engine/match...	Kings XI Punjab	Royal Challengers Bangalore	NaN	84.0	Royal Challengers Bangalore	Field	Kings	22 runs
485	https://stats.espncricinfo.com/ci/engine/match...	Sunrisers Hyderabad	Royal Challengers Bangalore	NaN	83.0	Sunrisers Hyderabad	Bat	RCB	6 wickets
514	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kolkata Knight Riders	NaN	114.0	Chennai Super Kings	Bat	Super	34 runs
623	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Chennai Super Kings	NaN	82.0	Chennai Super Kings	Field	RCB	24 runs
631	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Delhi Daredevils	NaN	100.0	Delhi Daredevils	Field	Daredevils	8 wickets
723	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kochi Tuskers Kerala	NaN	135.0	Kochi Tuskers Kerala	Field	Kochi	7 wickets
763	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	105.0	Royal Challengers Bangalore	Field	RCB	4 wickets

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
842	https://stats.espncricinfo.com/ci/engine/match...	Kings XI Punjab	Delhi Daredevils	NaN	58.0	Delhi Daredevils	Field	Daredevils	10 wickets
873	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kings XI Punjab	NaN	174.0	Chennai Super Kings	Bat	Super	12 runs
927	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	124.0	Kolkata Knight Riders	Bat	KKR	5 runs
938	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Kings XI Punjab	NaN	94.0	Delhi Daredevils	Bat	Kings	6 runs
953	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Mumbai Indians	NaN	126.0	Mumbai Indians	Field	Mumbai	9 wickets

In [16]: `df.team1_score.isnull()`

Out[16]:

```

0      False
1      False
2      False
3      False
4      False
...
953     True
954     False
955     False
956     False
957     False
Name: team1_score, Length: 947, dtype: bool

```

In [17]: `#fill the values according to winner teams`
`df.at[259, 'team1_score'] = 70`

```
In [18]: df[df['team1_score'].isna()]
```

Out[18]:

		full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
285	https://stats.espncricinfo.com/ci/engine/match...		Delhi Daredevils	Rajasthan Royals	NaN	146.0	Rajasthan Royals	Field	Daredevils	4 runs
418	https://stats.espncricinfo.com/ci/engine/match...		Rising Pune Supergiants	Kolkata Knight Riders	NaN	66.0	Rising Pune Supergiants	Bat	KKR	8 wickets
423	https://stats.espncricinfo.com/ci/engine/match...		Royal Challengers Bangalore	Kings XI Punjab	NaN	120.0	Kings XI Punjab	Field	RCB	82 runs
466	https://stats.espncricinfo.com/ci/engine/match...		Kolkata Knight Riders	Royal Challengers Bangalore	NaN	115.0	Royal Challengers Bangalore	Field	RCB	7 wickets
483	https://stats.espncricinfo.com/ci/engine/match...		Kings XI Punjab	Royal Challengers Bangalore	NaN	84.0	Royal Challengers Bangalore	Field	Kings	22 runs
485	https://stats.espncricinfo.com/ci/engine/match...		Sunrisers Hyderabad	Royal Challengers Bangalore	NaN	83.0	Sunrisers Hyderabad	Bat	RCB	6 wickets
514	https://stats.espncricinfo.com/ci/engine/match...		Chennai Super Kings	Kolkata Knight Riders	NaN	114.0	Chennai Super Kings	Bat	Super	34 runs
623	https://stats.espncricinfo.com/ci/engine/match...		Royal Challengers Bangalore	Chennai Super Kings	NaN	82.0	Chennai Super Kings	Field	RCB	24 runs
631	https://stats.espncricinfo.com/ci/engine/match...		Kolkata Knight Riders	Delhi Daredevils	NaN	100.0	Delhi Daredevils	Field	Daredevils	8 wickets
723	https://stats.espncricinfo.com/ci/engine/match...		Chennai Super Kings	Kochi Tuskers Kerala	NaN	135.0	Kochi Tuskers Kerala	Field	Kochi	7 wickets
763	https://stats.espncricinfo.com/ci/engine/match...		Kolkata Knight Riders	Royal Challengers Bangalore	NaN	105.0	Royal Challengers Bangalore	Field	RCB	4 wickets
842	https://stats.espncricinfo.com/ci/engine/match...		Kings XI Punjab	Delhi Daredevils	NaN	58.0	Delhi Daredevils	Field	Daredevils	10 wickets

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
873	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kings XI Punjab	NaN	174.0	Chennai Super Kings	Bat	Super	12 runs
927	https://stats.espncricinfo.com/ci/engine/match...	Kolkata Knight Riders	Royal Challengers Bangalore	NaN	124.0	Kolkata Knight Riders	Bat	KKR	5 runs
938	https://stats.espncricinfo.com/ci/engine/match...	Delhi Daredevils	Kings XI Punjab	NaN	94.0	Delhi Daredevils	Bat	Kings	6 runs
953	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Mumbai Indians	NaN	126.0	Mumbai Indians	Field	Mumbai	9 wickets

In [19]: *#fill the values according to winner teams*
df.at[953, 'team1_score'] = 70

In [20]: df.at[285, 'team1_score'] = 150

In [21]: df.at[418, 'team1_score'] = 60

In [22]: df.at[423, 'team1_score'] = 202

In [23]: df.at[466, 'team1_score'] = 100

In [24]: df.at[483, 'team1_score'] = 106

In [25]: *#fill the values according to winner teams*

```
df.at[485, 'team1_score'] = 70
df.at[514, 'team1_score'] = 148
df.at[623, 'team1_score'] = 106
df.at[631, 'team1_score'] = 70
df.at[723, 'team1_score'] = 120
df.at[763, 'team1_score'] = 100
df.at[842, 'team1_score'] = 68
df.at[873, 'team1_score'] = 186
df.at[927, 'team1_score'] = 129
df.at[938, 'team1_score'] = 100
```

In [26]: `df.isna().sum()`

```
Out[26]: full_scorecard      0
team1                      0
team2                      0
team1_score                0
team2_score                0
toss_winner                0
toss_choice                0
winner                    0
margin                    0
man_of_the_match          0
stadium                   0
place                     74
dtype: int64
```

In [27]: *#identify the null value in place column*

```
df.place.isnull().any()
```

Out[27]: True

```
In [28]: df[df['place'].isnull()]
```


Out[28]:

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin
103	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Mumbai Indians	156.0	136.0	Chennai Super Kings	Bat	Super	20 runs
105	https://stats.espncricinfo.com/ci/engine/match...	Rajasthan Royals	Punjab Kings	185.0	183.0	Punjab Kings	Field	Royals	2 runs
106	https://stats.espncricinfo.com/ci/engine/match...	Sunrisers Hyderabad	Delhi Capitals	134.0	139.0	Sunrisers Hyderabad	Bat	Capitals	8 wickets
108	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Chennai Super Kings	156.0	157.0	Chennai Super Kings	Field	Super	6 wickets
110	https://stats.espncricinfo.com/ci/engine/match...	Punjab Kings	Sunrisers Hyderabad	125.0	120.0	Sunrisers Hyderabad	Field	Punjab	5 runs
...
506	https://stats.espncricinfo.com/ci/engine/match...	Mumbai Indians	Chennai Super Kings	141.0	142.0	Mumbai Indians	Bat	Super	7 wickets
509	https://stats.espncricinfo.com/ci/engine/match...	Mumbai Indians	Delhi Daredevils	125.0	126.0	Mumbai Indians	Bat	Daredevils	6 wickets
510	https://stats.espncricinfo.com/ci/engine/match...	Sunrisers Hyderabad	Chennai Super Kings	145.0	146.0	Sunrisers Hyderabad	Bat	Super	5 wickets
511	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Kings XI Punjab	124.0	127.0	Kings XI Punjab	Field	Kings	5 wickets
513	https://stats.espncricinfo.com/ci/engine/match...	Sunrisers Hyderabad	Mumbai Indians	172.0	157.0	Mumbai Indians	Field	Sunrisers	15 runs

74 rows × 12 columns

```
In [29]: #identify the rows of null value
df[(df["place"].isnull())&(df["stadium"] == "Sharjah Cricket Stadium")].index
```

```
Out[29]: Int64Index([108, 110, 114, 117, 119, 121, 124, 127, 131, 132, 137, 142, 149,
                  150, 156, 161, 164, 167, 174, 179, 185, 189, 495, 500, 502, 504,
                  509, 510],
                  dtype='int64')
```

```
In [30]: #fill the null values according to place and stadium
for i in [108, 110, 114, 117, 119, 121, 124, 127, 131, 132, 137, 142,
          149, 150, 156, 161, 164, 167, 174,
          179, 185, 189, 495, 500, 502, 504, 509, 510]:
    df['place'][i]='Sharjah'
```

C:\Users\Akshay\AppData\Local\Temp\ipykernel_14496\319142245.py:5: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy (https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)
df['place'][i]='Sharjah'

```
In [31]: #identify the rows of null value
df[(df["place"].isnull())&(df["stadium"] == "Dubai International Cricket Stadium")].index
```

```
Out[31]: Int64Index([103, 105, 106, 112, 113, 116, 118, 122, 123, 126, 128, 130, 133,
                  135, 136, 139, 140, 143, 145, 147, 151, 152, 155, 158, 159, 162,
                  163, 166, 169, 171, 173, 176, 177, 180, 182, 184, 187, 190, 193,
                  498, 499, 503, 505, 506, 511, 513],
                  dtype='int64')
```

```
In [32]: #fill the null values according to place and stadium
for i in [103, 105, 106, 112, 113, 116, 118, 122, 123, 126, 128, 130, 133,
         135, 136, 139, 140, 143, 145, 147, 151, 152, 155, 158, 159, 162,
         163, 166, 169, 171, 173, 176, 177, 180, 182, 184, 187, 190, 193,
         498, 499, 503, 505, 506, 511, 513]:
    df['place'][i]='Dubai'
```

C:\Users\Akshay\AppData\Local\Temp\ipykernel_14496\183724314.py:6: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy (https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)

```
df['place'][i]='Dubai'
```

```
In [33]: df[df['place'].isnull()].index
```

```
Out[33]: Int64Index([], dtype='int64')
```

```
In [34]: df.isnull().sum()
```

```
Out[34]: full_scorecard      0
team1                        0
team2                        0
team1_score                  0
team2_score                  0
toss_winner                  0
toss_choice                  0
winner                      0
margin                      0
man_of_the_match            0
stadium                     0
place                       0
dtype: int64
```

```
In [35]: #data is cleaned there is no null and duplicated values  
df[df['place'].isnull()].any()
```

```
Out[35]: full_scorecard      False  
team1                      False  
team2                      False  
team1_score                False  
team2_score                False  
toss_winner                False  
toss_choice                False  
winner                    False  
margin                    False  
man_of_the_match          False  
stadium                   False  
place                     False  
dtype: bool
```

```
In [36]: #Top 10 player of the match  
df['man_of_the_match'].value_counts()[0:10]
```

```
Out[36]: AB de Villiers      25  
Chris Gayle                 22  
David Warner                18  
Rohit Sharma                18  
MS Dhoni                   17  
Shane Watson                16  
Yusuf Pathan                16  
Kieron Pollard              14  
Virat Kohli                 14  
Suresh Raina                14  
Name: man_of_the_match, dtype: int64
```

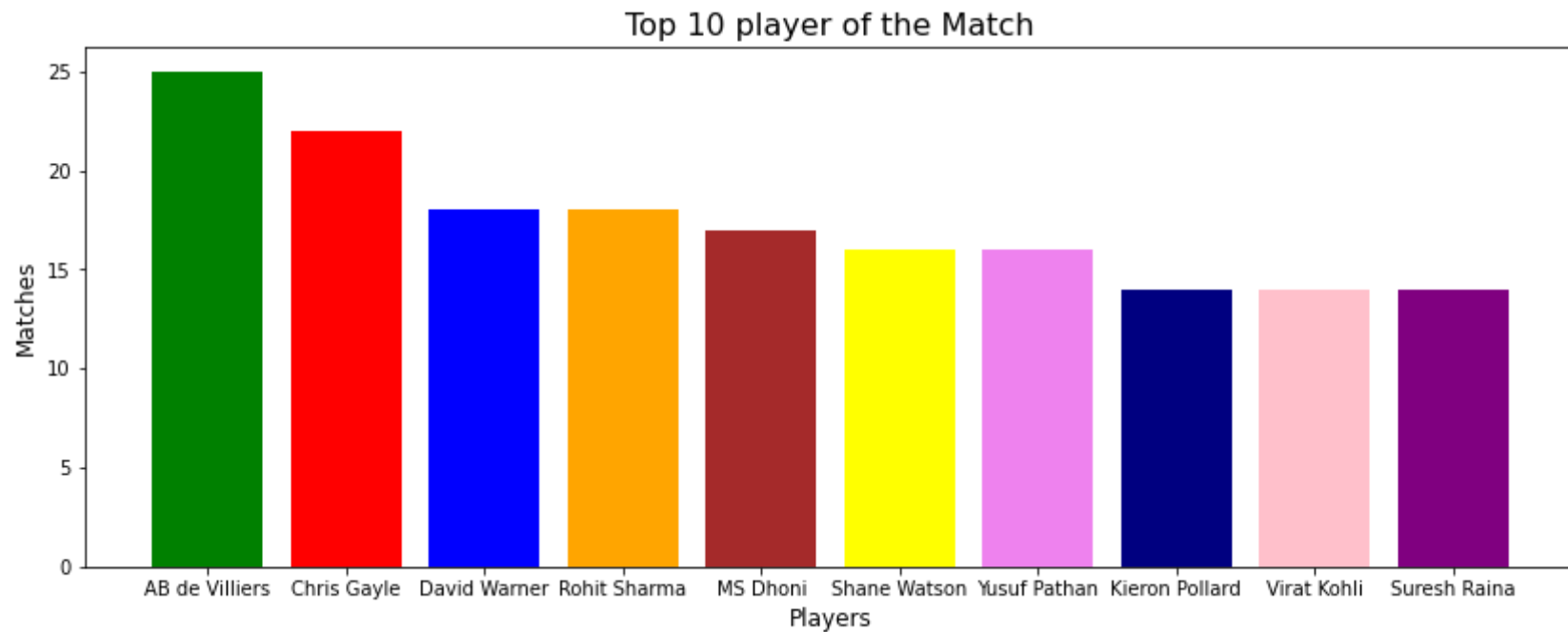
```
In [37]: #Taking the key and values  
x=df['man_of_the_match'].value_counts()[0:10].keys()  
x
```

```
Out[37]: Index(['AB de Villiers', 'Chris Gayle', 'David Warner', 'Rohit Sharma',  
              'MS Dhoni', 'Shane Watson', 'Yusuf Pathan', 'Kieron Pollard',  
              'Virat Kohli', 'Suresh Raina'],  
             dtype='object')
```

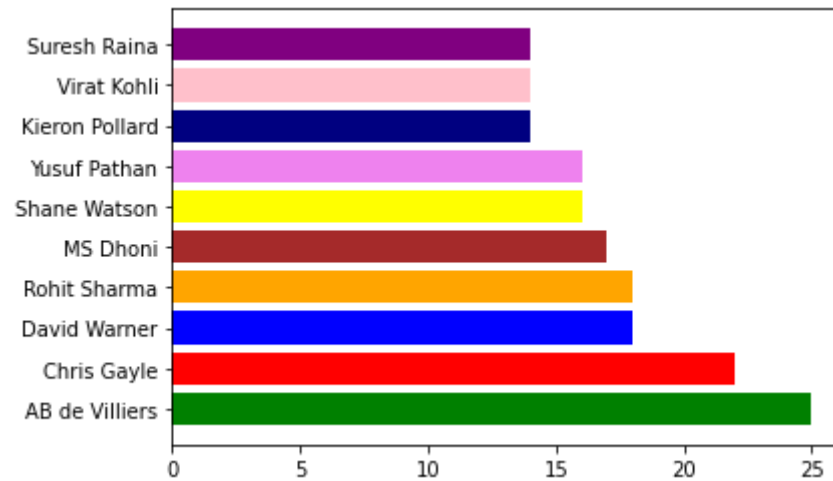
```
In [38]: y=df['man_of_the_match'].value_counts()[0:10].values  
y
```

```
Out[38]: array([25, 22, 18, 18, 17, 16, 16, 14, 14, 14], dtype=int64)
```

```
In [39]: #Top 10 players of the match
plt.figure(figsize=(14,5))
plt.bar(x,y,color=['g','r','blue','orange','brown','yellow','violet','navy','pink','purple'])
plt.title('Top 10 player of the Match',fontsize=16)
plt.xlabel('Players',fontsize=12)
plt.ylabel('Matches',fontsize=12)
plt.show()
```



```
In [40]: plt.barh(x,y,color=['g','r','blue','orange','brown','yellow','violet','navy','pink','purple'])
plt.show()
```



```
In [41]: #name of the teams
df.winner.unique()
```

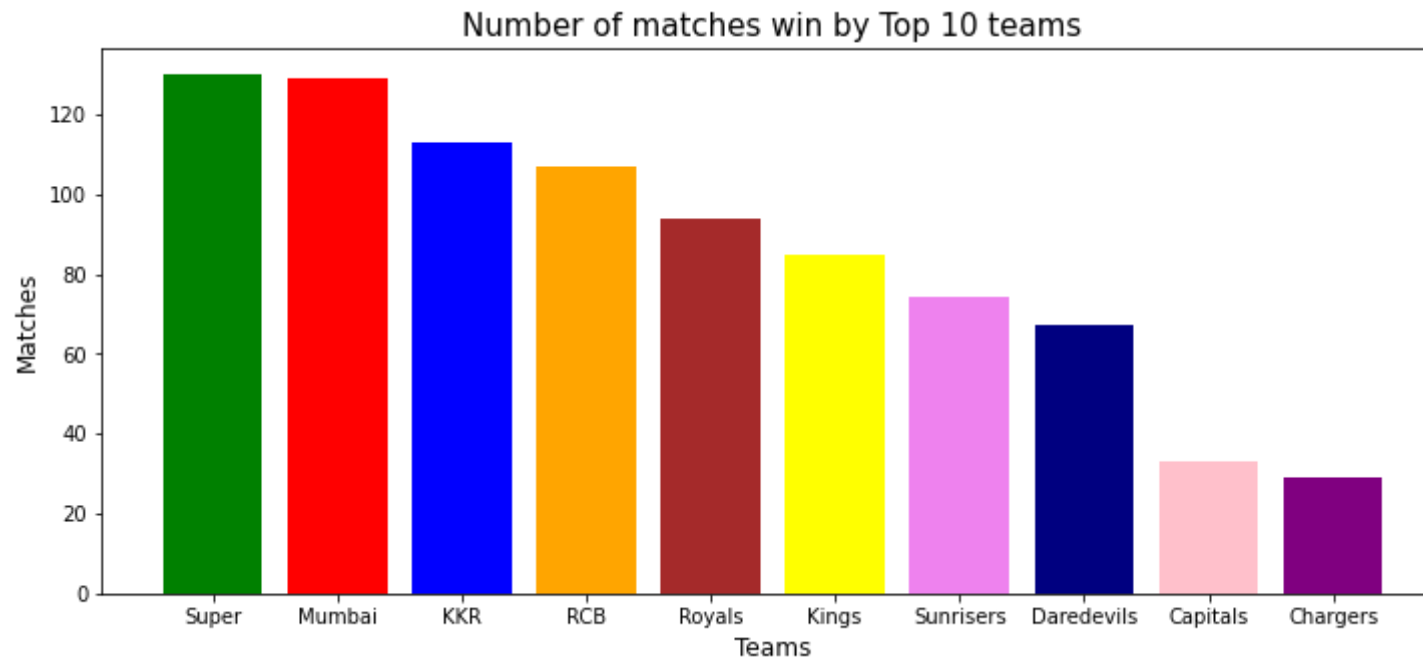
```
Out[41]: array(['KKR', 'Capitals', 'Punjab', 'Titans', 'Royals', 'RCB', 'Super',
                'Sunrisers', 'Mumbai', 'Tied', 'Kings', 'Daredevils', 'Supergiant',
                'Guj', 'Supergiants', 'No', 'Warriors', 'Chargers', 'Kochi'],
              dtype=object)
```

```
In [42]: #Total number of matches win by Top 10 teams  
df['winner'].value_counts()[0:10]
```

```
Out[42]: Super      130  
Mumbai      129  
KKR         113  
RCB         107  
Royals       94  
Kings        85  
Sunrisers    74  
Daredevils   67  
Capitals     33  
Chargers     29  
Name: winner, dtype: int64
```



```
In [43]: plt.figure(figsize=(12,5))
plt.bar(df['winner'].value_counts()[0:10].keys(),df['winner'].value_counts()[0:10]
        ,color=['g','r','blue','orange','brown','yellow','violet','navy','pink','purple'])
plt.title('Number of matches win by Top 10 teams',fontsize=15)
plt.xlabel('Teams',fontsize = 12)
plt.ylabel('Matches',fontsize=12)
plt.show()
```



```
In [44]: df.head()
```

```
Out[44]:
```

	full_scorecard	team1	team2	team1_score	team2_score	toss_winner	toss_choice	winner	margin	man_
0	https://stats.espncricinfo.com/ci/engine/match...	Chennai Super Kings	Kolkata Knight Riders	131.0	133.0	Kolkata Knight Riders	Field	KKR	6 wickets	
1	https://stats.espncricinfo.com/ci/engine/match...	Mumbai Indians	Delhi Capitals	177.0	179.0	Delhi Capitals	Field	Capitals	4 wickets	
2	https://stats.espncricinfo.com/ci/engine/match...	Royal Challengers Bangalore	Punjab Kings	205.0	208.0	Punjab Kings	Field	Punjab	5 wickets	
3	https://stats.espncricinfo.com/ci/engine/match...	Lucknow Super Giants	Gujarat Titans	158.0	161.0	Gujarat Titans	Field	Titans	5 wickets	Mol
4	https://stats.espncricinfo.com/ci/engine/match...	Rajasthan Royals	Sunrisers Hyderabad	210.0	149.0	Sunrisers Hyderabad	Field	Royals	61 runs	

```
In [45]: #Toss choice by the teams
x=df['toss_choice'].value_counts().keys()
x
```

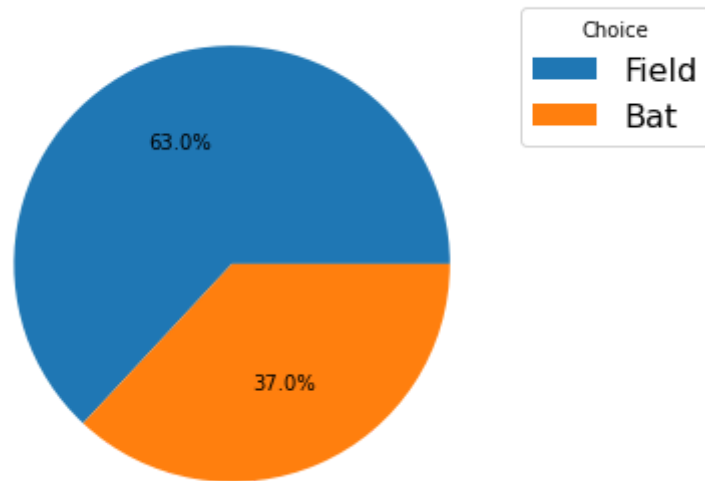
```
Out[45]: Index(['Field', 'Bat'], dtype='object')
```

```
In [46]: y=df['toss_choice'].value_counts().values
y
```

```
Out[46]: array([597, 350], dtype=int64)
```

```
In [47]: #Total percentage of toss choice by the teams
plt.figure(figsize=(12,5))
plt.pie(y,autopct='%0.1f%%')
plt.legend(x,bbox_to_anchor=(1,1),title='Choice',fontsize=16)
plt.title('Toss choice by the teams',fontsize=16)
plt.show()
```

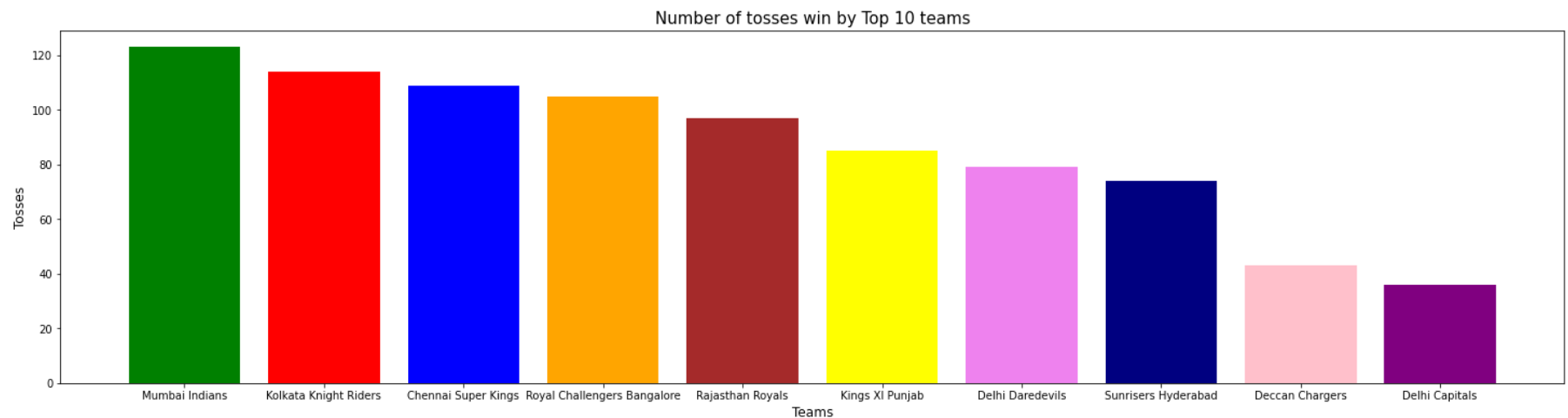
Toss choice by the teams



```
In [48]: #Top 10 toss winner teams
df['toss_winner'].value_counts()[0:10]
```

```
Out[48]: Mumbai Indians           123
Kolkata Knight Riders           114
Chennai Super Kings            109
Royal Challengers Bangalore     105
Rajasthan Royals                97
Kings XI Punjab                85
Delhi Daredevils                79
Sunrisers Hyderabad            74
Deccan Chargers                43
Delhi Capitals                  36
Name: toss_winner, dtype: int64
```

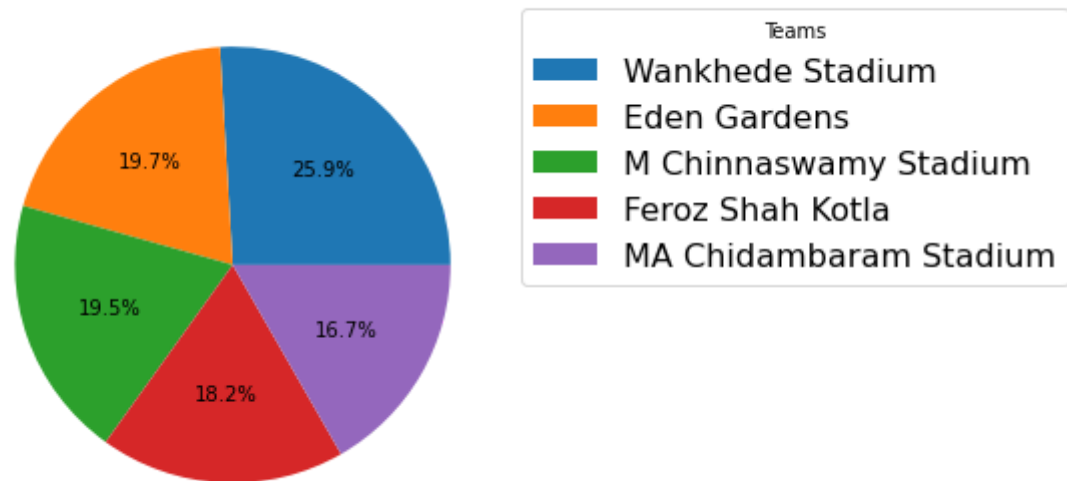
```
In [49]: plt.figure(figsize=(25,6))
plt.bar(df['toss_winner'].value_counts()[0:10].keys(),df['toss_winner'].value_counts()[0:10]
        ,color=['g','r','blue','orange','brown','yellow','violet','navy','pink','purple'])
plt.title('Number of tosses win by Top 10 teams',fontsize=15)
plt.xlabel('Teams',fontsize = 12)
plt.ylabel('Tosses',fontsize=12)
plt.show()
```



```
In [50]: #Total no. of matches in top 5 stadiums
df['stadium'].value_counts()[0:5]
x=df['stadium'].value_counts()[0:5].index
y=df['stadium'].value_counts()[0:5].values
```

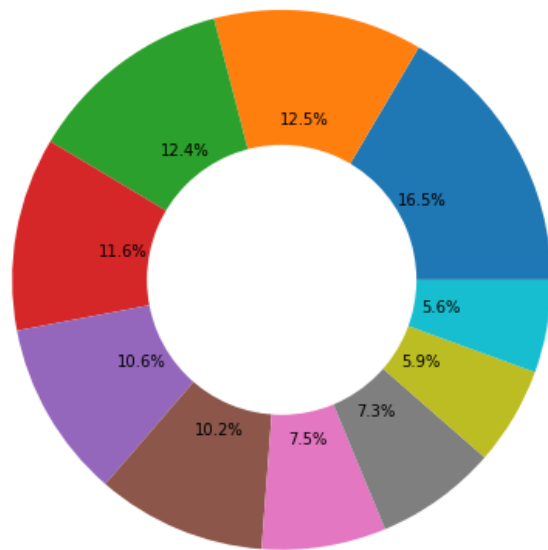
```
In [51]: plt.figure(figsize=(12,5))
plt.pie(y,autopct='%0.1f%%')
plt.legend(x,bbox_to_anchor=(1,1),title='Teams',fontsize=16)
plt.title('Percentage of matches in top 5 stadiums',fontsize=16)
plt.show()
```

Percentage of matches in top 5 stadiums



```
In [52]: #Total no. of matches in top 10 stadiums
df['stadium'].value_counts()[0:10]
x=df['stadium'].value_counts()[0:10].index
y=df['stadium'].value_counts()[0:10].values
```

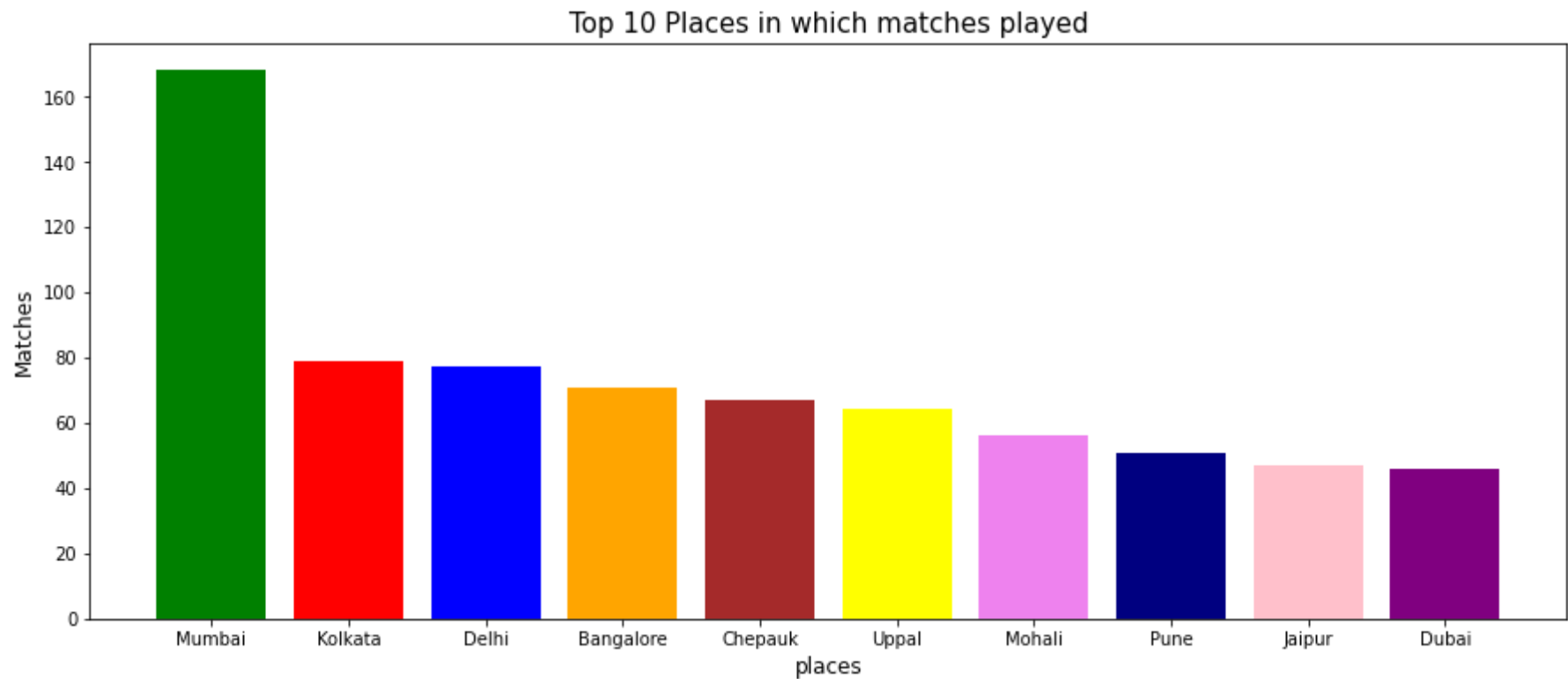
```
In [53]: #Percentage of matches in top 10 stadiums
plt.pie(y,autopct='%0.1f%%',radius=2)
plt.legend(x,bbox_to_anchor=(5,2),title=('Teams'))
plt.pie([1],colors=['w'],radius=1)
plt.show()
```



```
In [54]: #Top 10 Places in which matches played  
df['place'].value_counts()[0:10]
```

```
Out[54]: Mumbai      168  
Kolkata      79  
Delhi       77  
Bangalore    71  
Chepauk      67  
Uppal        64  
Mohali       56  
Pune         51  
Jaipur       47  
Dubai        46  
Name: place, dtype: int64
```

```
In [55]: plt.figure(figsize=(15,6))
plt.bar(df['place'].value_counts()[0:10].keys(),df['place'].value_counts()[0:10]
        ,color=['g','r','blue','orange','brown','yellow','violet','navy','pink','purple'])
plt.title('Top 10 Places in which matches played',fontsize=15)
plt.xlabel('places',fontsize = 12)
plt.ylabel('Matches',fontsize=12)
plt.show()
```



```
In [ ]:
```