

Import all libraries

In [3]:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from matplotlib import style
import seaborn as sns
```

Read ipl.csv file and print first 5 records

In [6]:

```
df=pd.read_csv("ipl data.csv")
df.head()
```

Out[6]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result
0	1	2017	Hyderabad	2017-04-05	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal
1	2	2017	Pune	2017-04-06	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal
2	3	2017	Rajkot	2017-04-07	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal
3	4	2017	Indore	2017-04-08	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal
4	5	2017	Bangalore	2017-04-08	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	normal

Check total number of columns,entries note down your findings

In [8]:

```
len(df.columns)
```

Out[8]:

In [10]:

```
df.size
```

Out[10]:

11448

Total colums- 18 and total entries are 11448

Find null values

In [13]:

```
df.isnull()
```

Out[13]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applie
0	False	False	False	False	False	False	False	False	False	Fals
1	False	False	False	False	False	False	False	False	False	Fals
2	False	False	False	False	False	False	False	False	False	Fals
3	False	False	False	False	False	False	False	False	False	Fals
4	False	False	False	False	False	False	False	False	False	Fals
...
631	False	False	False	False	False	False	False	False	False	Fals
632	False	False	False	False	False	False	False	False	False	Fals
633	False	False	False	False	False	False	False	False	False	Fals
634	False	False	False	False	False	False	False	False	False	Fals
635	False	False	False	False	False	False	False	False	False	Fals

636 rows × 18 columns



Drop umpire3 column as it contains more than 75% of null values#

In [14]:

```
df.drop("umpire3",axis=1,inplace=True)
df.head()
```

Out[14]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result
0	1	2017	Hyderabad	2017-04-05	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal
1	2	2017	Pune	2017-04-06	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal
2	3	2017	Rajkot	2017-04-07	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal
3	4	2017	Indore	2017-04-08	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal
4	5	2017	Bangalore	2017-04-08	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	normal



Drop null values of city , winner ,player_of_match,umpire1,umpire2 column

In [15]:

```
df.dropna(subset=["city", "winner", "player_of_match", "umpire1", "umpire2"], inplace=True)
df.head()
```

Out[15]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result
0	1	2017	Hyderabad	2017-04-05	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal
1	2	2017	Pune	2017-04-06	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal
2	3	2017	Rajkot	2017-04-07	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal
3	4	2017	Indore	2017-04-08	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal
5	6	2017	Hyderabad	2017-04-09	Gujarat Lions	Sunrisers Hyderabad	Sunrisers Hyderabad	field	normal

which city hosted most number of matches?

draw bar plot and write down your insights

In [16]:

```
a = df.groupby("city").count()["id"]
a
b = a.sort_values(ascending=False).index[0]
b
```

Out[16]:

'Mumbai'

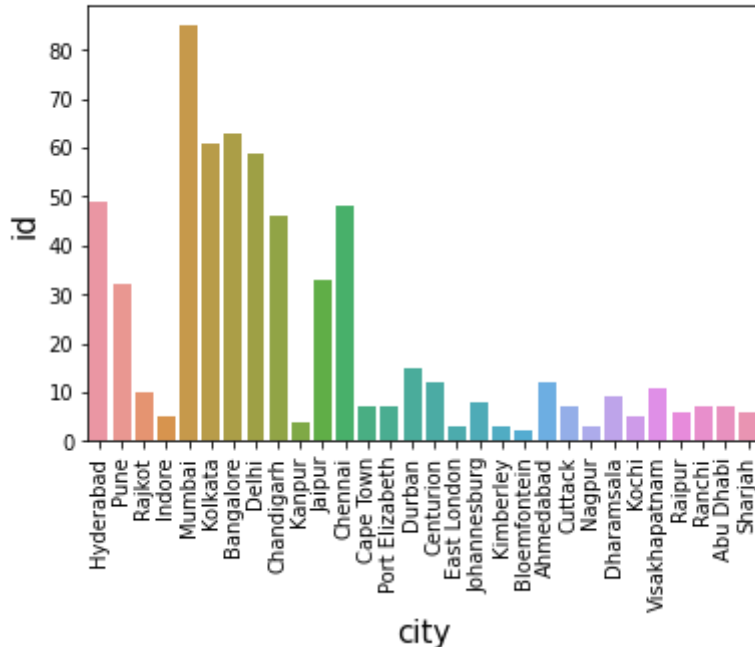
Most matches were played in mumbai(85).

draw bar plot and write down your insights

In [19]:

```
sns.countplot(x='city',data=df)
plt.title('Most Number of matches hosted in the city',fontsize=20)
plt.xlabel('city',fontsize=15)
plt.ylabel('id',fontsize=15)
plt.xticks(rotation=90)
plt.show()
```

Most Number of matches hosted in the city



According to the stats, Most matches were held in mumbai that are 85 matches. Above bar chart also represents the which city hosted most number of matches

Find all venue of mumbai city

In [20]:

```
v=df[df["city"] == "Mumbai"]["venue"].unique()
v
```

Out[20]:

```
array(['Wankhede Stadium', 'Dr DY Patil Sports Academy',
      'Brabourne Stadium'], dtype=object)
```

now compare in which venue of mumbai most number of matches played (draw bar plot and write down insights)

In [25]:

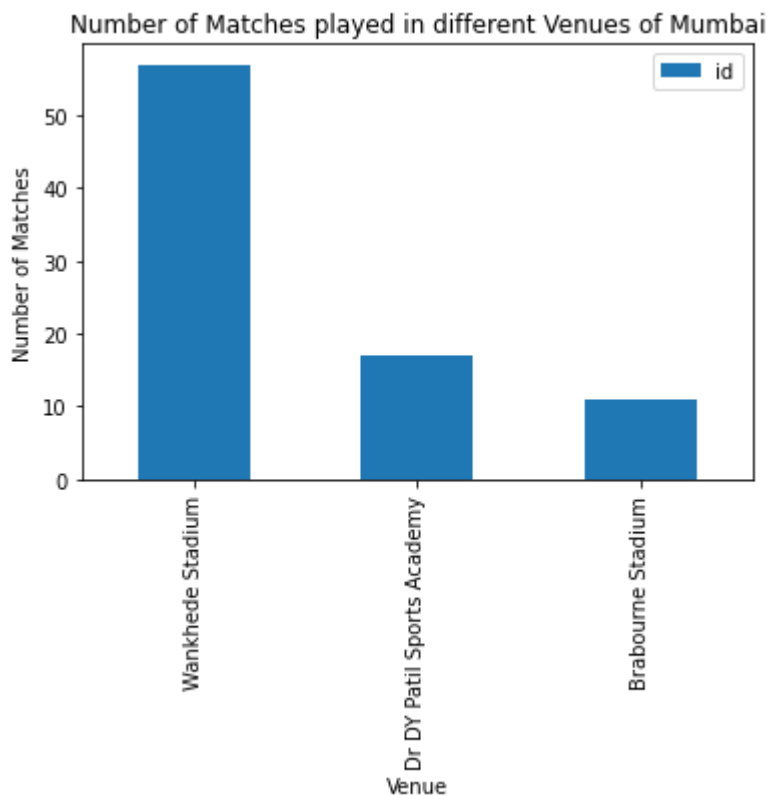
```
c=df[df.city== 'Mumbai']  
  
d= c.groupby('venue')[['id']].count().sort_values('id',ascending=False)[0:]  
d
```

Out[25]:

	id
venue	
Wankhede Stadium	57
Dr DY Patil Sports Academy	17
Brabourne Stadium	11

In [26]:

```
d.plot(kind='bar')  
plt.xlabel("Venue")  
plt.ylabel("Number of Matches")  
plt.title("Number of Matches played in different Venues of Mumbai")  
plt.show()
```



By this we come to know that in the venue of mumbai most number of matches played were in Wankhede stadium.

What is the preferred choice after winning a toss in mumbai

In [27]:

```
f=df[(df["city"] == "Mumbai") & (df["toss_decision"] != "field")]
g=f["toss_decision"].value_counts()
g
```

Out[27]:

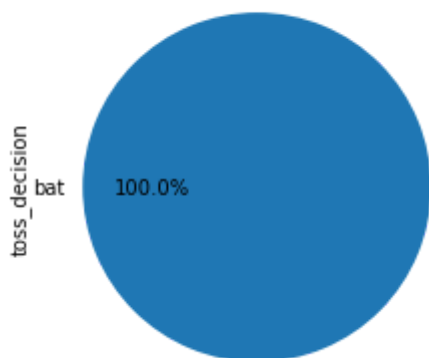
```
bat      34
Name: toss_decision, dtype: int64
```

Graphical representation of above question

In [28]:

```
g.plot(kind='pie',autopct='%1.1f%%')
plt.title("Preferred choice after winning a toss in Mumbai")
plt.show()
```

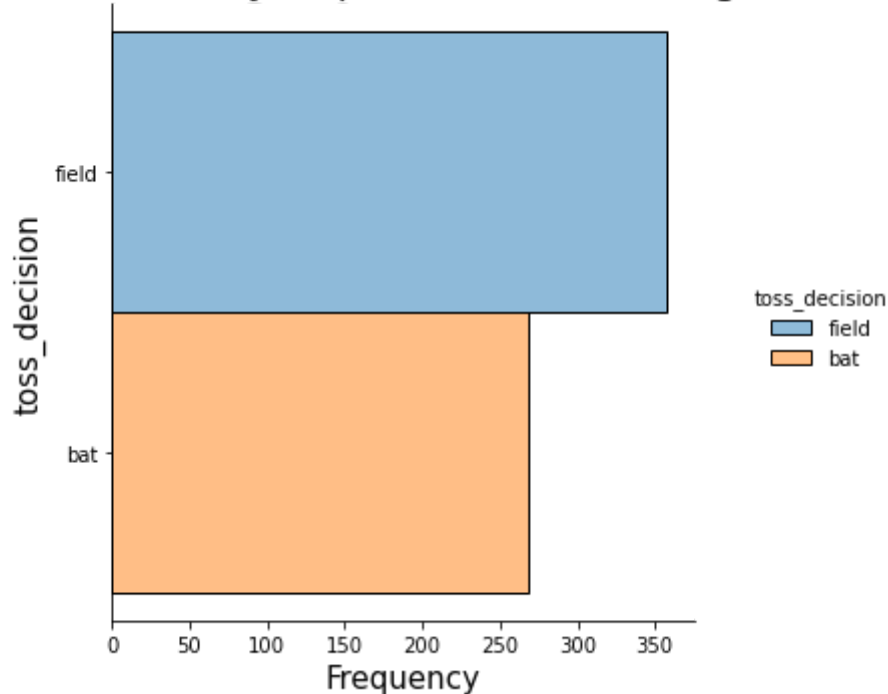
Preferred choice after winning a toss in Mumbai



In [29]:

```
sns.displot(y='toss_decision',data=df,hue='toss_decision')
plt.title('Decision taken by Captains after winning tosses ' , fontsize =20)
plt.xlabel('Frequency',fontsize=15)
plt.ylabel('toss_decision',fontsize= 15)
plt.show()
```

Decision taken by Captains after winning tosses



In [30]:

```
df['toss_decision'].head()
```

Out[30]:

```
0    field
1    field
2    field
3    field
5    field
Name: toss_decision, dtype: object
```

Which team won most number of toss

In [31]:

```
h= df["toss_winner"].value_counts()  
h
```

Out[31]:

Mumbai Indians	83
Kolkata Knight Riders	77
Delhi Daredevils	71
Royal Challengers Bangalore	67
Kings XI Punjab	67
Chennai Super Kings	66
Rajasthan Royals	61
Deccan Chargers	43
Sunrisers Hyderabad	34
Pune Warriors	20
Gujarat Lions	15
Kochi Tuskers Kerala	8
Rising Pune Supergiants	7
Rising Pune Supergiant	6

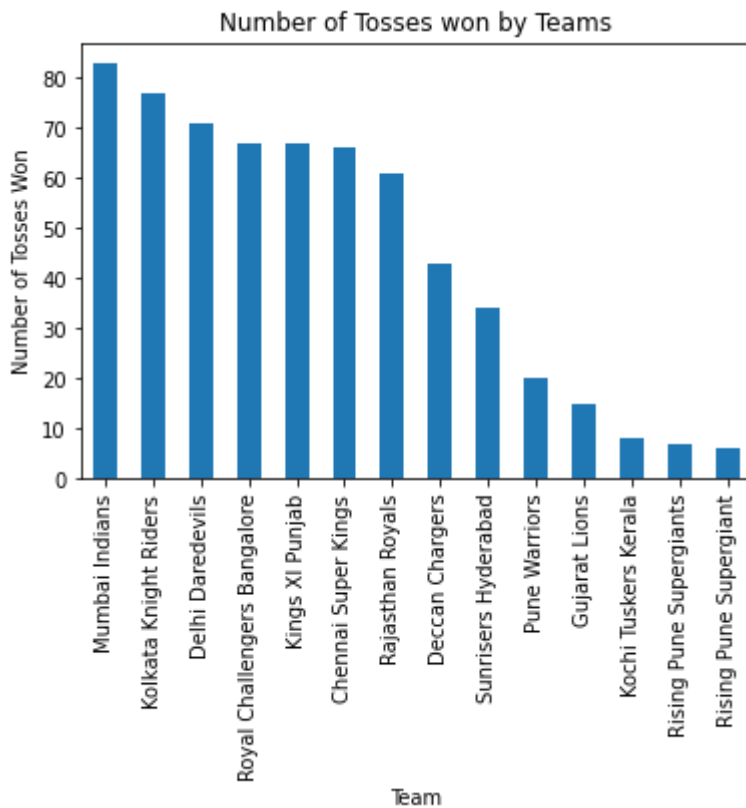
Name: toss_winner, dtype: int64

Mumbai Indians won most number of toss in the tournament.

Show graphical representation of above question

In [32]:

```
h.plot(kind='bar')
plt.xlabel("Team")
plt.ylabel("Number of Tosses Won")
plt.title("Number of Tosses won by Teams")
plt.show()
```



Find what mumbai indians preferred after winning a toss?

In [33]:

```
i= df[((df["team1"] == "Mumbai Indians") | (df["team2"] == "Mumbai Indians")) & (df["toss_decision"] == "win")]
j= i["toss_decision"].value_counts()
j
```

Out[33]:

```
bat      69
Name: toss_decision, dtype: int64
```

Head to head winning count of Mumbai Indians vs Chennai Super Kings

In [34]:

```
count= df[((df["team1"] == "Mumbai Indians") & (df["team2"] == "Chennai Super Kings")) | (df["team1"] == "Chennai Super Kings") & (df["team2"] == "Mumbai Indians"))]  
count
```

Out[34]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result	dl
66	67	2008	Chennai	2008-04-23	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
95	96	2008	Mumbai	2008-05-14	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
117	118	2009	Cape Town	2009-04-18	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	normal	
161	162	2009	Port Elizabeth	2009-05-16	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	
193	194	2010	Mumbai	2010-03-25	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
210	211	2010	Chennai	2010-04-06	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	
233	234	2010	Mumbai	2010-04-25	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	
256	257	2011	Mumbai	2011-04-22	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	normal	
307	308	2012	Chennai	2012-04-04	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
354	355	2012	Mumbai	2012-05-06	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
378	379	2012	Bangalore	2012-05-23	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal	
385	386	2013	Chennai	2013-04-06	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	
429	430	2013	Mumbai	2013-05-05	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	
453	454	2013	Delhi	2013-05-21	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	
456	457	2013	Kolkata	2013-05-26	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	
489	490	2014	Mumbai	2014-05-10	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	normal	

	id	season	city	date	team1	team2	toss_winner	toss_decision	result	dl
514	515	2014	Mumbai	2014-05-28	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	normal	
529	530	2015	Mumbai	2015-04-17	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	
558	559	2015	Chennai	2015-05-08	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	
572	573	2015	Mumbai	2015-05-19	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	

In [35]:

```
575 576 2015 Kolkata 2015-05-24 Mumbai Chennai
k= count["winner"].value_counts()
k
```

Out[35]:

```
Mumbai Indians      12
Chennai Super Kings    9
Name: winner, dtype: int64
```

Which team won most of the matches in mumbai?

In [36]:

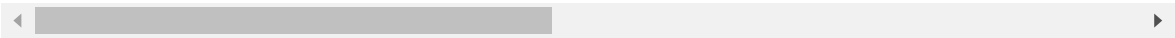
```
1= df[(df["city"] == "Mumbai") & (df["winner"].notnull())]
1
```

Out[36]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result
	6	7	2017	Mumbai	2017-04-09	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field norma
	9	10	2017	Mumbai	2017-04-12	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field norma
	15	16	2017	Mumbai	2017-04-16	Gujarat Lions	Mumbai Indians	Mumbai Indians	field norma
	23	24	2017	Mumbai	2017-04-22	Mumbai Indians	Delhi Daredevils	Delhi Daredevils	field norma
	27	28	2017	Mumbai	2017-04-24	Rising Pune Supergiant	Mumbai Indians	Mumbai Indians	field norma

	572	573	2015	Mumbai	2015-05-19	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat norma
	576	577	2016	Mumbai	2016-04-09	Mumbai Indians	Rising Pune Supergiants	Mumbai Indians	bat norma
	584	585	2016	Mumbai	2016-04-16	Mumbai Indians	Gujarat Lions	Gujarat Lions	field norma
	589	590	2016	Mumbai	2016-04-20	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field norma
	599	600	2016	Mumbai	2016-04-28	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field norma

85 rows × 17 columns



In [37]:

```
m= l["winner"].value_counts()  
m
```

Out[37]:

Mumbai Indians	45
Chennai Super Kings	8
Kings XI Punjab	5
Royal Challengers Bangalore	5
Rajasthan Royals	5
Deccan Chargers	3
Kolkata Knight Riders	3
Pune Warriors	3
Rising Pune Supergiant	2
Delhi Daredevils	2
Kochi Tuskers Kerala	1
Sunrisers Hyderabad	1
Rising Pune Supergiants	1
Gujarat Lions	1

Name: winner, dtype: int64

How many times each team won the toss and won the match in mumbai

In [38]:

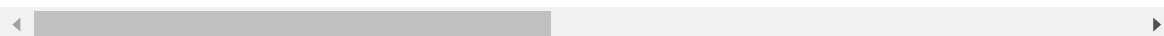
```
1= df[(df["city"] == "Mumbai") & (df["winner"].notnull())]  
1
```

Out[38]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	result
	6	7	2017	Mumbai	2017-04-09	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field norma
	9	10	2017	Mumbai	2017-04-12	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field norma
	15	16	2017	Mumbai	2017-04-16	Gujarat Lions	Mumbai Indians	Mumbai Indians	field norma
	23	24	2017	Mumbai	2017-04-22	Mumbai Indians	Delhi Daredevils	Delhi Daredevils	field norma
	27	28	2017	Mumbai	2017-04-24	Rising Pune Supergiant	Mumbai Indians	Mumbai Indians	field norma

	572	573	2015	Mumbai	2015-05-19	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat norma
	576	577	2016	Mumbai	2016-04-09	Mumbai Indians	Rising Pune Supergiants	Mumbai Indians	bat norma
	584	585	2016	Mumbai	2016-04-16	Mumbai Indians	Gujarat Lions	Gujarat Lions	field norma
	589	590	2016	Mumbai	2016-04-20	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field norma
	599	600	2016	Mumbai	2016-04-28	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field norma

85 rows × 17 columns



In [39]:

```
n = l.groupby(["toss_winner", "winner"]).count()["id"]  
n
```

Out[39]:

toss_winner	winner	
Chennai Super Kings	Chennai Super Kings	5
	Kings XI Punjab	1
	Mumbai Indians	1
Deccan Chargers	Deccan Chargers	3
	Kolkata Knight Riders	1
	Mumbai Indians	1
Delhi Daredevils	Royal Challengers Bangalore	1
	Delhi Daredevils	2
	Mumbai Indians	5
Gujarat Lions	Rajasthan Royals	2
	Gujarat Lions	1
Kings XI Punjab	Chennai Super Kings	1
	Mumbai Indians	2
	Pune Warriors	1
Kochi Tuskers Kerala	Kochi Tuskers Kerala	1
	Pune Warriors	1
Kolkata Knight Riders	Kolkata Knight Riders	1
	Mumbai Indians	2
Mumbai Indians	Chennai Super Kings	1
	Kings XI Punjab	4
	Kolkata Knight Riders	1
	Mumbai Indians	26
	Pune Warriors	1
	Rajasthan Royals	1
	Rising Pune Supergiant	2
	Rising Pune Supergiants	1
Pune Warriors	2	
Pune Warriors	Chennai Super Kings	1
	Mumbai Indians	2
Rajasthan Royals	Mumbai Indians	3
	Rajasthan Royals	2
	Sunrisers Hyderabad	1
Royal Challengers Bangalore	Mumbai Indians	2
	Royal Challengers Bangalore	2
Sunrisers Hyderabad	Mumbai Indians	1

Name: id, dtype: int64

Which venue hosted most number of matches

In [40]:

```
o= df["venue"].value_counts()  
o
```

Out[40]:

M Chinnaswamy Stadium	63
Eden Gardens	61
Feroz Shah Kotla	59
Wankhede Stadium	57
Rajiv Gandhi International Stadium, Uppal	49
MA Chidambaram Stadium, Chepauk	48
Punjab Cricket Association Stadium, Mohali	35
Sawai Mansingh Stadium	33
Dr DY Patil Sports Academy	17
Subrata Roy Sahara Stadium	17
Maharashtra Cricket Association Stadium	15
Kingsmead	15
Sardar Patel Stadium, Motera	12
SuperSport Park	12
Punjab Cricket Association IS Bindra Stadium, Mohali	11
Dr. Y.S. Rajasekhara Reddy ACA-VDCA Cricket Stadium	11
Brabourne Stadium	11
Saurashtra Cricket Association Stadium	10
Himachal Pradesh Cricket Association Stadium	9
New Wanderers Stadium	8
Newlands	7
St George's Park	7
Sheikh Zayed Stadium	7
JSCA International Stadium Complex	7
Barabati Stadium	7
Shaheed Veer Narayan Singh International Stadium	6
Sharjah Cricket Stadium	6
Holkar Cricket Stadium	5
Nehru Stadium	5
Green Park	4
Vidarbha Cricket Association Stadium, Jamtha	3
De Beers Diamond Oval	3
Buffalo Park	3
OUTsurance Oval	2

Name: venue, dtype: int64

Find how many matches chennai super kings played at M Chinnaswamy stadium?

In [41]:

```
p= df[(df["venue"] == "M Chinnaswamy Stadium") & ((df["team1"] == "Chennai Super Kings"))
p
```

Out[41]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	res
73	74	2008	Bangalore	2008-04-28	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norr
191	192	2010	Bangalore	2010-03-23	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norr
301	302	2011	Bangalore	2011-05-22	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norr
378	379	2012	Bangalore	2012-05-23	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	norr
451	452	2013	Bangalore	2013-05-18	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norr
509	510	2014	Bangalore	2014-05-24	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norr
537	538	2015	Bangalore	2015-04-22	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norr

In [42]:

```
q = p.count()["id"]
q
```

Out[42]:

7

Who won most matches at M Chinnaswamy stadium?

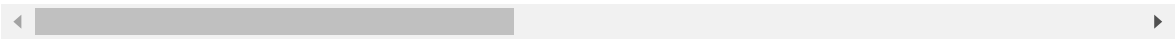
In [43]:

```
r= df[(df["venue"] == "M Chinnaswamy Stadium") & (df["winner"].notnull())]
r
```

Out[43]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	res
11	12	2017	Bangalore	2017-04-14	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norr
16	17	2017	Bangalore	2017-04-16	Rising Pune Supergiant	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norr
29	30	2017	Bangalore	2017-04-27	Royal Challengers Bangalore	Gujarat Lions	Gujarat Lions	field	norr
41	42	2017	Bangalore	2017-05-05	Kings XI Punjab	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norr
44	45	2017	Bangalore	2017-05-07	Royal Challengers Bangalore	Kolkata Knight Riders	Kolkata Knight Riders	field	norr
...
616	617	2016	Bangalore	2016-05-11	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norr
619	620	2016	Bangalore	2016-05-14	Royal Challengers Bangalore	Gujarat Lions	Gujarat Lions	field	norr
625	626	2016	Bangalore	2016-05-18	Royal Challengers Bangalore	Kings XI Punjab	Kings XI Punjab	field	norr
632	633	2016	Bangalore	2016-05-24	Gujarat Lions	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norr
635	636	2016	Bangalore	2016-05-29	Sunrisers Hyderabad	Royal Challengers Bangalore	Sunrisers Hyderabad	bat	norr

63 rows × 17 columns



In [44]:

```
s = r["winner"].value_counts()  
s
```

Out[44]:

Royal Challengers Bangalore	29
Mumbai Indians	8
Kolkata Knight Riders	6
Kings XI Punjab	5
Chennai Super Kings	4
Rajasthan Royals	3
Delhi Daredevils	3
Sunrisers Hyderabad	2
Rising Pune Supergiant	1
Gujarat Lions	1
Deccan Chargers	1

Name: winner, dtype: int64

Matches played in each year

In [45]:

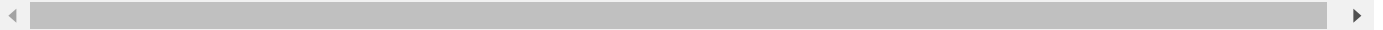
```
t=df["season"].value_counts()  
t
```

Out[45]:

2013	76
2012	74
2011	72
2010	60
2016	60
2017	58
2008	58
2009	57
2015	57
2014	53

Name: season, dtype: int64

Which city hosted most number of matches in 2013



In [46]:

```
u= df[(df["season"] == 2013)]  
v = u["city"].value_counts()  
v
```

Out[46]:

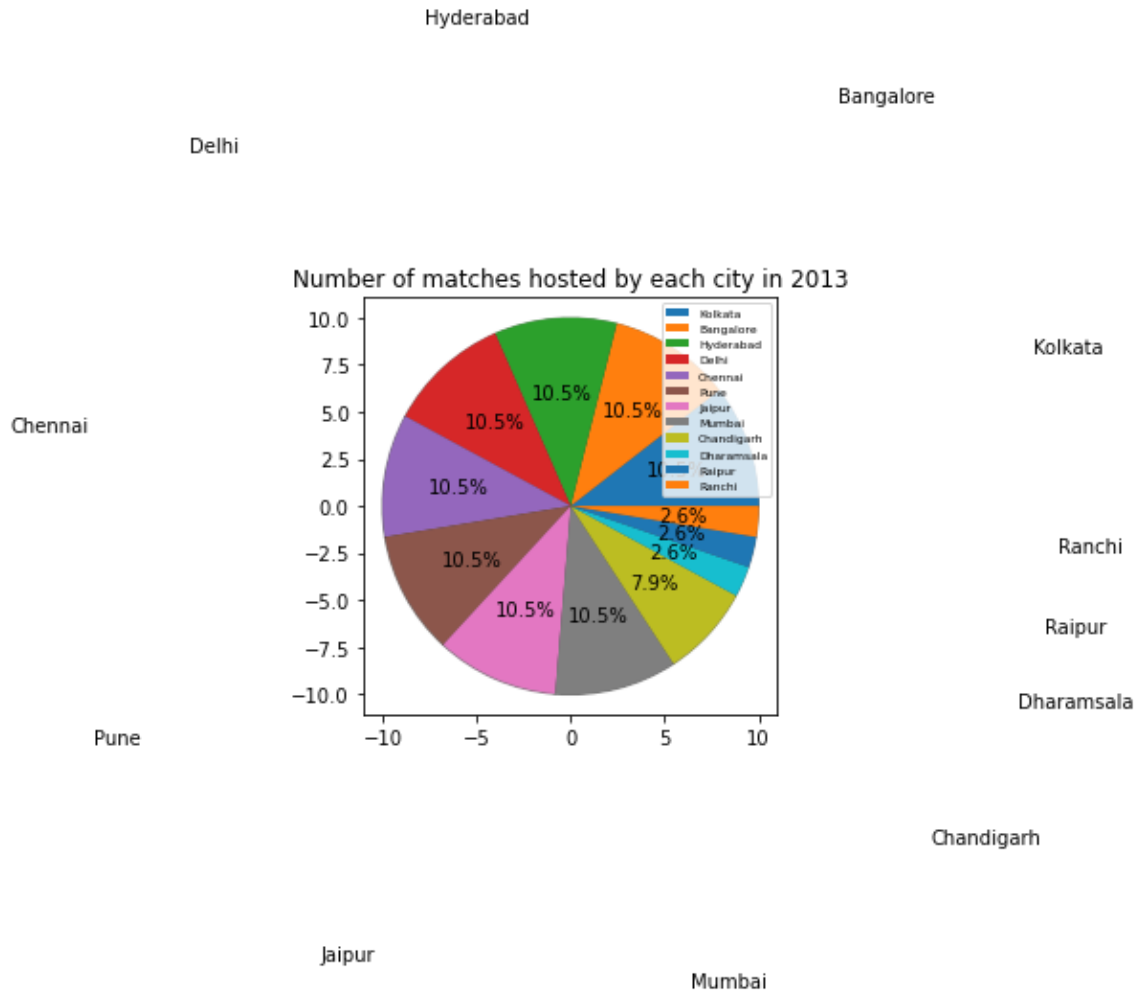
Kolkata	8
Bangalore	8
Hyderabad	8
Delhi	8
Chennai	8
Pune	8
Jaipur	8
Mumbai	8
Chandigarh	6
Dharamsala	2
Raipur	2
Ranchi	2

Name: city, dtype: int64

lets analyse ipl season held in 2013

In [47]:

```
u = df[(df["season"] == 2013) ]
v= u["city"].value_counts()
plt.pie(v.values, labels = v.index, autopct='%1.1f%%', radius=10, labeldistance=2.6, shadow=True)
plt.title("Number of matches hosted by each city in 2013")
plt.legend(prop={'size': 6})
plt.show()
```



Here we will create yearwise groups

In [48]:

```
w = df.groupby("season")
x = w.size()
x
```

Out[48]:

```
season
2008    58
2009    57
2010    60
2011    72
2012    74
2013    76
2014    53
2015    57
2016    60
2017    58
dtype: int64
```

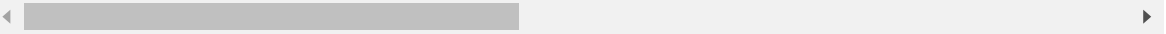

In [49]:

```
y = w.get_group(2013)
y
```

Out[49]:

	id	season	city	date	team1	team2	toss_winner	toss_decision	res
381	382	2013	Kolkata	2013-04-03	Delhi Daredevils	Kolkata Knight Riders	Kolkata Knight Riders	field	norn
382	383	2013	Bangalore	2013-04-04	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norn
383	384	2013	Hyderabad	2013-04-05	Sunrisers Hyderabad	Pune Warriors	Pune Warriors	field	norn
384	385	2013	Delhi	2013-04-06	Rajasthan Royals	Delhi Daredevils	Rajasthan Royals	bat	norn
385	386	2013	Chennai	2013-04-06	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	norn
...
452	453	2013	Hyderabad	2013-05-19	Kolkata Knight Riders	Sunrisers Hyderabad	Kolkata Knight Riders	bat	norn
453	454	2013	Delhi	2013-05-21	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norn
454	455	2013	Delhi	2013-05-22	Sunrisers Hyderabad	Rajasthan Royals	Sunrisers Hyderabad	bat	norn
455	456	2013	Kolkata	2013-05-24	Rajasthan Royals	Mumbai Indians	Rajasthan Royals	bat	norn
456	457	2013	Kolkata	2013-05-26	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	norn

76 rows × 17 columns



THANK YOU!!

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