

```
In [13]: import numpy as np
import pandas as pd
matchdata=pd.read_csv('match_data.csv')
matchdata
matchinfodata=pd.read_csv('match_info_data.csv')
matchinfodata
```

```
C:\Users\asus\AppData\Local\Temp\ipykernel_1980\560542871.py:3: DtypeWarning: Columns
(1) have mixed types. Specify dtype option on import or set low_memory=False.
    matchdata=pd.read_csv('match_data.csv')
```

Out[13]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>
<b>0</b>	1370353	2023	Ahmedabad	5/29/2023	Gujarat Titans	Chennai Super Kings	Chennai Super Kings	field
<b>1</b>	1370352	2023	Ahmedabad	5/26/2023	Gujarat Titans	Mumbai Indians	Mumbai Indians	field
<b>2</b>	1370351	2023	Chennai	5/24/2023	Mumbai Indians	Lucknow Super Giants	Mumbai Indians	bat
<b>3</b>	1370350	2023	Chennai	5/23/2023	Chennai Super Kings	Gujarat Titans	Gujarat Titans	field
<b>4</b>	1359543	2023	Mumbai	5/21/2023	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field
...	...	...	...	...	...	...	...	...
<b>1019</b>	335986	2007/08	Kolkata	4/20/2008	Kolkata Knight Riders	Deccan Chargers	Deccan Chargers	bat
<b>1020</b>	335985	2007/08	Mumbai	4/20/2008	Mumbai Indians	Royal Challengers Bangalore	Mumbai Indians	bat
<b>1021</b>	335984	2007/08	Delhi	4/19/2008	Delhi Daredevils	Rajasthan Royals	Rajasthan Royals	bat
<b>1022</b>	335983	2007/08	Chandigarh	4/19/2008	Kings XI Punjab	Chennai Super Kings	Chennai Super Kings	bat
<b>1023</b>	335982	2007/08	Bangalore	4/18/2008	Royal Challengers Bangalore	Kolkata Knight Riders	Royal Challengers Bangalore	field

1024 rows × 18 columns

In [6]:

```
import numpy as np
import pandas as pd
matchdata.head()
```

Out[6]:

	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker	non_striker
0	1370353	2023	5/29/2023	Narendra Modi Stadium, Ahmedabad	1	0.1	Gujarat Titans	Chennai Super Kings	WP Saha	
1	1370353	2023	5/29/2023	Narendra Modi Stadium, Ahmedabad	1	0.2	Gujarat Titans	Chennai Super Kings	WP Saha	
2	1370353	2023	5/29/2023	Narendra Modi Stadium, Ahmedabad	1	0.3	Gujarat Titans	Chennai Super Kings	WP Saha	
3	1370353	2023	5/29/2023	Narendra Modi Stadium, Ahmedabad	1	0.4	Gujarat Titans	Chennai Super Kings	Shubman Gill	
4	1370353	2023	5/29/2023	Narendra Modi Stadium, Ahmedabad	1	0.5	Gujarat Titans	Chennai Super Kings	WP Saha	

5 rows × 23 columns

In [9]:

```
import numpy as np
import pandas as pd
matchdata.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 243817 entries, 0 to 243816
Data columns (total 23 columns):
 #   Column           Non-Null Count  Dtype  
--- 
 0   match_id         243817 non-null   int64  
 1   season           243817 non-null   object  
 2   start_date       243817 non-null   object  
 3   venue            243817 non-null   object  
 4   innings          243817 non-null   int64  
 5   ball              243817 non-null   float64 
 6   batting_team     243817 non-null   object  
 7   bowling_team     243817 non-null   object  
 8   striker           243817 non-null   object  
 9   non_striker      243817 non-null   object  
 10  bowler            243817 non-null   object  
 11  runs_off_bat    243817 non-null   int64  
 12  extras            243817 non-null   int64  
 13  wides             7652 non-null    float64 
 14  noballs           1018 non-null   float64 
 15  byes              628 non-null    float64 
 16  legbyes           3778 non-null   float64 
 17  penalty           2 non-null     float64 
 18  wicket_type       12067 non-null  object  
 19  player_dismissed 12067 non-null  object  
 20  other_wicket_type 0 non-null    float64 
 21  other_player_dismissed 0 non-null   float64 
 22  cricsheet_id     243817 non-null  int64  
dtypes: float64(8), int64(5), object(10)
memory usage: 42.8+ MB
```

```
In [14]: import numpy as np
import pandas as pd
Chennai = matchinfodata[matchinfodata['city'] == 'Chennai']
Chennai
```

Out[14]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>result</b>	<b>umpire1</b>	<b>umpire2</b>
<b>2</b>	1370351	2023	Chennai	5/24/2023	Mumbai Indians	Lucknow Super Giants	Mumbai Indians	bat	normal		
<b>3</b>	1370350	2023	Chennai	5/23/2023	Chennai Super Kings	Gujarat Titans	Gujarat Titans	field	normal		
<b>14</b>	1359535	2023	Chennai	5/14/2023	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	normal		
<b>19</b>	1359529	2023	Chennai	5/10/2023	Chennai Super Kings	Delhi Capitals	Chennai Super Kings	bat	normal		
<b>25</b>	1359523	2023	Chennai	5/6/2023	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	normal		
...	...	...	...	...	...	...	...	...	...	...	...
<b>993</b>	336013	2007/08	Chennai	5/10/2008	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	field	normal		
<b>998</b>	336007	2007/08	Chennai	5/6/2008	Chennai Super Kings	Deccan Chargers	Deccan Chargers	field	normal		
<b>1004</b>	336001	2007/08	Chennai	5/2/2008	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	normal		
<b>1013</b>	335993	2007/08	Chennai	4/26/2008	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	bat	normal		
<b>1016</b>	335989	2007/08	Chennai	4/23/2008	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	normal		

76 rows × 18 columns

```
In [15]: import numpy as np
import pandas as pd
Chennaiwin=Chennai[Chennai['winner'] =='Chennai Super Kings']
Chennaiwin
```

Out[15]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
3	1370350	2023	Chennai	5/23/2023	Chennai Super Kings	Gujarat Titans	Gujarat Titans	field	norm
19	1359529	2023	Chennai	5/10/2023	Chennai Super Kings	Delhi Capitals	Chennai Super Kings	bat	norm
25	1359523	2023	Chennai	5/6/2023	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norm
45	1359503	2023	Chennai	4/21/2023	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norm
68	1359480	2023	Chennai	4/3/2023	Chennai Super Kings	Lucknow Super Giants	Lucknow Super Giants	field	norm
278	1178425	2019	Chennai	5/1/2019	Chennai Super Kings	Delhi Capitals	Delhi Capitals	field	norm
287	1178416	2019	Chennai	4/23/2019	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norm
305	1178398	2019	Chennai	4/9/2019	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	field	norm
309	1178393	2019	Chennai	4/6/2019	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm
317	1175367	2019	Chennai	3/31/2019	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	field	norm
327	1175356	2019	Chennai	3/23/2019	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norm
383	1136565	2018	Chennai	4/10/2018	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	field	norm
521	829797	2015	Chennai	5/10/2015	Chennai Super Kings	Rajasthan Royals	Chennai Super Kings	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
529	829779	2015	Chennai	5/4/2015	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm
539	829765	2015	Chennai	4/28/2015	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
542	829753	2015	Chennai	4/25/2015	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm
562	829711	2015	Chennai	4/11/2015	Chennai Super Kings	Sunrisers Hyderabad	Chennai Super Kings	bat	norm
564	829707	2015	Chennai	4/9/2015	Chennai Super Kings	Delhi Daredevils	Delhi Daredevils	field	norm
638	598062	2013	Chennai	5/14/2013	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
657	598041	2013	Chennai	5/2/2013	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm
664	598034	2013	Chennai	4/28/2013	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
668	598030	2013	Chennai	4/25/2013	Chennai Super Kings	Sunrisers Hyderabad	Sunrisers Hyderabad	bat	norm
672	598026	2013	Chennai	4/22/2013	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
686	598012	2013	Chennai	4/13/2013	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	field	norm
703	548380	2012	Chennai	5/25/2012	Delhi Daredevils	Chennai Super Kings	Delhi Daredevils	field	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
720	548364	2012	Chennai	5/12/2012	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	field	norm
732	548352	2012	Chennai	5/4/2012	Chennai Super Kings	Deccan Chargers	Chennai Super Kings	bat	norm
749	548332	2012	Chennai	4/21/2012	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
753	548330	2012	Chennai	4/19/2012	Chennai Super Kings	Pune Warriors	Pune Warriors	field	norm
763	548318	2012	Chennai	4/12/2012	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
776	501271	2011	Chennai	5/28/2011	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm
786	501261	2011	Chennai	5/18/2011	Chennai Super Kings	Kochi Tuskers Kerala	Chennai Super Kings	bat	norm
794	501253	2011	Chennai	5/12/2011	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
807	501240	2011	Chennai	5/4/2011	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
811	501236	2011	Chennai	5/1/2011	Chennai Super Kings	Deccan Chargers	Chennai Super Kings	bat	norm
821	501226	2011	Chennai	4/25/2011	Chennai Super Kings	Pune Warriors	Pune Warriors	field	norm
835	501211	2011	Chennai	4/16/2011	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
	<b>848</b>	501198	2011	Chennai	4/8/2011	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat norm
	<b>862</b>	419153	2009/10	Chennai	4/13/2010	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	bat norm
	<b>872</b>	419142	2009/10	Chennai	4/6/2010	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat norm
	<b>876</b>	419137	2009/10	Chennai	4/3/2010	Chennai Super Kings	Rajasthan Royals	Chennai Super Kings	bat norm
	<b>881</b>	419133	2009/10	Chennai	3/31/2010	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat norm
	<b>993</b>	336013	2007/08	Chennai	5/10/2008	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	field norm
	<b>1013</b>	335993	2007/08	Chennai	4/26/2008	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	bat norm
	<b>1016</b>	335989	2007/08	Chennai	4/23/2008	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field norm

In [16]: `import numpy as np  
import pandas as pd  
Chennaiwincount=len(Chennaiwin)  
Chennaiwincount`

Out[16]: 45

In [18]: `import numpy as np  
import pandas as pd  
Chennailost=Chennai[Chennai['winner'] !='Chennai Super Kings']  
Chennailost`

Out[18]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
2	1370351	2023	Chennai	5/24/2023	Mumbai Indians	Lucknow Super Giants	Mumbai Indians	bat	norm
14	1359535	2023	Chennai	5/14/2023	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
32	1359515	2023	Chennai	4/30/2023	Chennai Super Kings	Punjab Kings	Chennai Super Kings	bat	norm
57	1359491	2023	Chennai	4/12/2023	Rajasthan Royals	Chennai Super Kings	Chennai Super Kings	field	norm
189	1254077	2021	Chennai	4/25/2021	Delhi Capitals	Sunrisers Hyderabad	Delhi Capitals	bat	norm
191	1254074	2021	Chennai	4/23/2021	Mumbai Indians	Punjab Kings	Punjab Kings	field	norm
194	1254071	2021	Chennai	4/21/2021	Punjab Kings	Sunrisers Hyderabad	Punjab Kings	bat	norm
195	1254070	2021	Chennai	4/20/2021	Mumbai Indians	Delhi Capitals	Mumbai Indians	bat	norm
198	1254067	2021	Chennai	4/18/2021	Royal Challengers Bangalore	Kolkata Knight Riders	Royal Challengers Bangalore	bat	norm
199	1254066	2021	Chennai	4/17/2021	Mumbai Indians	Sunrisers Hyderabad	Mumbai Indians	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
<b>202</b>	1254063	2021	Chennai	4/14/2021	Royal Challengers Bangalore	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norm
<b>203</b>	1254062	2021	Chennai	4/13/2021	Mumbai Indians	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
<b>205</b>	1254060	2021	Chennai	4/11/2021	Kolkata Knight Riders	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norm
<b>207</b>	1254058	2021	Chennai	4/9/2021	Mumbai Indians	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norm
<b>271</b>	1181764	2019	Chennai	5/7/2019	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
<b>284</b>	1178419	2019	Chennai	4/26/2019	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norm
<b>524</b>	829789	2015	Chennai	5/8/2015	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
<b>683</b>	598015	2013	Chennai	4/15/2013	Chennai Super Kings	Pune Warriors	Pune Warriors	bat	norm
<b>697</b>	598002	2013	Chennai	4/6/2013	Chennai Super Kings	Mumbai Indians	Mumbai Indians	bat	norm
<b>702</b>	548381	2012	Chennai	5/27/2012	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	bat	norm
<b>737</b>	548347	2012	Chennai	4/30/2012	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
<b>740</b>	548343	2012	Chennai	4/28/2012	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
775	548306	2012	Chennai	4/4/2012	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	norm
777	501270	2011	Chennai	5/27/2011	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norm
859	419155	2009/10	Chennai	4/15/2010	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
893	419121	2009/10	Chennai	3/21/2010	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	field	norm
904	419110	2009/10	Chennai	3/14/2010	Chennai Super Kings	Deccan Chargers	Deccan Chargers	bat	norm
975	336033	2007/08	Chennai	5/24/2008	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
979	336029	2007/08	Chennai	5/21/2008	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
998	336007	2007/08	Chennai	5/6/2008	Chennai Super Kings	Deccan Chargers	Deccan Chargers	field	norm
1004	336001	2007/08	Chennai	5/2/2008	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm

In [19]:

```
import numpy as np
import pandas as pd
Chennailostcount=len(Chennailost)
Chennailostcount
```

Out[19]:

31

In [21]:

```
import numpy as np
import pandas as pd
print("Chennai Super Kings Wins in M. A. Chidambaram Stadium:", Chennaiwincount)
print("Chennai Super Kings Losses in M. A. Chidambaram Stadium:", Chennailostcount)
```

Chennai Super Kings Wins in M. A. Chidambaram Stadium: 45

Chennai Super Kings Losses in M. A. Chidambaram Stadium: 31

```
In [23]: import numpy as np
import pandas as pd
tossfield=Chennai[Chennai['toss_decision'] =='field']
tossfield
```

Out[23]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
<b>3</b>	1370350	2023	Chennai	5/23/2023	Chennai Super Kings	Gujarat Titans	Gujarat Titans	field	norm
<b>25</b>	1359523	2023	Chennai	5/6/2023	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norm
<b>45</b>	1359503	2023	Chennai	4/21/2023	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norm
<b>57</b>	1359491	2023	Chennai	4/12/2023	Rajasthan Royals	Chennai Super Kings	Chennai Super Kings	field	norm
<b>68</b>	1359480	2023	Chennai	4/3/2023	Chennai Super Kings	Lucknow Super Giants	Lucknow Super Giants	field	norm
<b>191</b>	1254074	2021	Chennai	4/23/2021	Mumbai Indians	Punjab Kings	Punjab Kings	field	norm
<b>202</b>	1254063	2021	Chennai	4/14/2021	Royal Challengers Bangalore	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norm
<b>203</b>	1254062	2021	Chennai	4/13/2021	Mumbai Indians	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
<b>205</b>	1254060	2021	Chennai	4/11/2021	Kolkata Knight Riders	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norm
<b>207</b>	1254058	2021	Chennai	4/9/2021	Mumbai Indians	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
<b>278</b>	1178425	2019	Chennai	5/1/2019	Chennai Super Kings	Delhi Capitals	Delhi Capitals	field	norm
<b>284</b>	1178419	2019	Chennai	4/26/2019	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norm
<b>287</b>	1178416	2019	Chennai	4/23/2019	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norm
<b>305</b>	1178398	2019	Chennai	4/9/2019	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	field	norm
<b>317</b>	1175367	2019	Chennai	3/31/2019	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	field	norm
<b>327</b>	1175356	2019	Chennai	3/23/2019	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norm
<b>383</b>	1136565	2018	Chennai	4/10/2018	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	field	norm
<b>539</b>	829765	2015	Chennai	4/28/2015	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
<b>564</b>	829707	2015	Chennai	4/9/2015	Chennai Super Kings	Delhi Daredevils	Delhi Daredevils	field	norm
<b>664</b>	598034	2013	Chennai	4/28/2013	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	field	norm
<b>686</b>	598012	2013	Chennai	4/13/2013	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	field	norm
<b>703</b>	548380	2012	Chennai	5/25/2012	Delhi Daredevils	Chennai Super Kings	Delhi Daredevils	field	norm
<b>720</b>	548364	2012	Chennai	5/12/2012	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	field	norm
<b>753</b>	548330	2012	Chennai	4/19/2012	Chennai Super Kings	Pune Warriors	Pune Warriors	field	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
775	548306	2012	Chennai	4/4/2012	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	norm
777	501270	2011	Chennai	5/27/2011	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norm
821	501226	2011	Chennai	4/25/2011	Chennai Super Kings	Pune Warriors	Pune Warriors	field	norm
893	419121	2009/10	Chennai	3/21/2010	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	field	norm
993	336013	2007/08	Chennai	5/10/2008	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	field	norm
998	336007	2007/08	Chennai	5/6/2008	Chennai Super Kings	Deccan Chargers	Deccan Chargers	field	norm
1016	335989	2007/08	Chennai	4/23/2008	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	norm

In [24]:

```
import numpy as np
import pandas as pd
tossfieldcount=len(tossfield)
tossfieldcount
```

Out[24]: 31

In [25]:

```
import numpy as np
import pandas as pd
tossbat=Chennai[Chennai['toss_decision'] =='bat']
tossbat
```

Out[25]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
<b>2</b>	1370351	2023	Chennai	5/24/2023	Mumbai Indians	Lucknow Super Giants	Mumbai Indians	bat	norm
<b>14</b>	1359535	2023	Chennai	5/14/2023	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
<b>19</b>	1359529	2023	Chennai	5/10/2023	Chennai Super Kings	Delhi Capitals	Chennai Super Kings	bat	norm
<b>32</b>	1359515	2023	Chennai	4/30/2023	Chennai Super Kings	Punjab Kings	Chennai Super Kings	bat	norm
<b>189</b>	1254077	2021	Chennai	4/25/2021	Delhi Capitals	Sunrisers Hyderabad	Delhi Capitals	bat	norm
<b>194</b>	1254071	2021	Chennai	4/21/2021	Punjab Kings	Sunrisers Hyderabad	Punjab Kings	bat	norm
<b>195</b>	1254070	2021	Chennai	4/20/2021	Mumbai Indians	Delhi Capitals	Mumbai Indians	bat	norm
<b>198</b>	1254067	2021	Chennai	4/18/2021	Royal Challengers Bangalore	Kolkata Knight Riders	Royal Challengers Bangalore	bat	norm
<b>199</b>	1254066	2021	Chennai	4/17/2021	Mumbai Indians	Sunrisers Hyderabad	Mumbai Indians	bat	norm
<b>271</b>	1181764	2019	Chennai	5/7/2019	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
<b>309</b>	1178393	2019	Chennai	4/6/2019	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
521	829797	2015	Chennai	5/10/2015	Chennai Super Kings	Rajasthan Royals	Chennai Super Kings	bat	norm
524	829789	2015	Chennai	5/8/2015	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
529	829779	2015	Chennai	5/4/2015	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm
542	829753	2015	Chennai	4/25/2015	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm
562	829711	2015	Chennai	4/11/2015	Chennai Super Kings	Sunrisers Hyderabad	Chennai Super Kings	bat	norm
638	598062	2013	Chennai	5/14/2013	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
657	598041	2013	Chennai	5/2/2013	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	bat	norm
668	598030	2013	Chennai	4/25/2013	Chennai Super Kings	Sunrisers Hyderabad	Sunrisers Hyderabad	bat	norm
672	598026	2013	Chennai	4/22/2013	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
683	598015	2013	Chennai	4/15/2013	Chennai Super Kings	Pune Warriors	Pune Warriors	bat	norm
697	598002	2013	Chennai	4/6/2013	Chennai Super Kings	Mumbai Indians	Mumbai Indians	bat	norm
702	548381	2012	Chennai	5/27/2012	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
732	548352	2012	Chennai	5/4/2012	Chennai Super Kings	Deccan Chargers	Chennai Super Kings	bat	norm
737	548347	2012	Chennai	4/30/2012	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
740	548343	2012	Chennai	4/28/2012	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	bat	norm
749	548332	2012	Chennai	4/21/2012	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
763	548318	2012	Chennai	4/12/2012	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
776	501271	2011	Chennai	5/28/2011	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm
786	501261	2011	Chennai	5/18/2011	Chennai Super Kings	Kochi Tuskers Kerala	Chennai Super Kings	bat	norm
794	501253	2011	Chennai	5/12/2011	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
807	501240	2011	Chennai	5/4/2011	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
811	501236	2011	Chennai	5/1/2011	Chennai Super Kings	Deccan Chargers	Chennai Super Kings	bat	norm
835	501211	2011	Chennai	4/16/2011	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norm
848	501198	2011	Chennai	4/8/2011	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
859	419155	2009/10	Chennai	4/15/2010	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
862	419153	2009/10	Chennai	4/13/2010	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	bat	norm
872	419142	2009/10	Chennai	4/6/2010	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
876	419137	2009/10	Chennai	4/3/2010	Chennai Super Kings	Rajasthan Royals	Chennai Super Kings	bat	norm
881	419133	2009/10	Chennai	3/31/2010	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
904	419110	2009/10	Chennai	3/14/2010	Chennai Super Kings	Deccan Chargers	Deccan Chargers	bat	norm
975	336033	2007/08	Chennai	5/24/2008	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
979	336029	2007/08	Chennai	5/21/2008	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
1004	336001	2007/08	Chennai	5/2/2008	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
1013	335993	2007/08	Chennai	4/26/2008	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	bat	norm

In [26]:

```
import numpy as np
import pandas as pd
tossbatcount=len(tossbat)
tossbatcount
```

Out[26]: 45

In [27]:

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

```
print("Matches where Chennai Super Kings chose to field:", tossfieldcount)
print("Matches where Chennai Super Kings chose to bat:", tossbatcount)
```

Matches where Chennai Super Kings chose to field: 31  
Matches where Chennai Super Kings chose to bat: 45

In [28]:

```
import numpy as np
import pandas as pd
tossfieldwin= Chennai[(Chennai['toss_decision'] =='field') & (Chennai['winner'] =='Chennai Super Kings')]
print(tossfieldwin)
```

	id	season	city	date	team1	\
3	1370350	2023	Chennai	5/23/2023	Chennai Super Kings	
25	1359523	2023	Chennai	5/6/2023	Mumbai Indians	
45	1359503	2023	Chennai	4/21/2023	Sunrisers Hyderabad	
68	1359480	2023	Chennai	4/3/2023	Chennai Super Kings	
278	1178425	2019	Chennai	5/1/2019	Chennai Super Kings	
287	1178416	2019	Chennai	4/23/2019	Sunrisers Hyderabad	
305	1178398	2019	Chennai	4/9/2019	Kolkata Knight Riders	
317	1175367	2019	Chennai	3/31/2019	Chennai Super Kings	
327	1175356	2019	Chennai	3/23/2019	Royal Challengers Bangalore	
383	1136565	2018	Chennai	4/10/2018	Kolkata Knight Riders	
539	829765	2015	Chennai	4/28/2015	Chennai Super Kings	
564	829707	2015	Chennai	4/9/2015	Chennai Super Kings	
664	598034	2013	Chennai	4/28/2013	Chennai Super Kings	
686	598012	2013	Chennai	4/13/2013	Chennai Super Kings	
703	548380	2012	Chennai	5/25/2012	Delhi Daredevils	
720	548364	2012	Chennai	5/12/2012	Chennai Super Kings	
753	548330	2012	Chennai	4/19/2012	Chennai Super Kings	
821	501226	2011	Chennai	4/25/2011	Chennai Super Kings	
993	336013	2007/08	Chennai	5/10/2008	Chennai Super Kings	
1016	335989	2007/08	Chennai	4/23/2008	Chennai Super Kings	

		team2	toss_winner	toss_decision	\
3		Gujarat Titans	Gujarat Titans	field	
25		Chennai Super Kings	Chennai Super Kings	field	
45		Chennai Super Kings	Chennai Super Kings	field	
68		Lucknow Super Giants	Lucknow Super Giants	field	
278		Delhi Capitals	Delhi Capitals	field	
287		Chennai Super Kings	Chennai Super Kings	field	
305		Chennai Super Kings	Chennai Super Kings	field	
317		Rajasthan Royals	Rajasthan Royals	field	
327		Chennai Super Kings	Chennai Super Kings	field	
383		Chennai Super Kings	Chennai Super Kings	field	
539		Kolkata Knight Riders	Kolkata Knight Riders	field	
564		Delhi Daredevils	Delhi Daredevils	field	
664		Kolkata Knight Riders	Kolkata Knight Riders	field	
686	827	Royal Challengers Bangalore	Chennai Super Kings	field	
703		Chennai Super Kings	Delhi Daredevils	field	
720		Delhi Daredevils	Chennai Super Kings	field	
753		Pune Warriors	Pune Warriors	field	
821		Pune Warriors	Pune Warriors	field	
993		Kings XI Punjab	Kings XI Punjab	field	
1016		Mumbai Indians	Mumbai Indians	field	

	result	dl_applied	winner	win_by_runs	win_by_wickets	\
3	normal	0	Chennai Super Kings	15	0	
25	normal	0	Chennai Super Kings	0	6	
45	normal	0	Chennai Super Kings	0	7	
68	normal	0	Chennai Super Kings	12	0	
278	normal	0	Chennai Super Kings	80	0	
287	normal	0	Chennai Super Kings	0	6	
305	normal	0	Chennai Super Kings	0	7	
317	normal	0	Chennai Super Kings	8	0	
327	normal	0	Chennai Super Kings	0	7	
383	normal	0	Chennai Super Kings	0	5	
539	normal	0	Chennai Super Kings	2	0	
564	normal	0	Chennai Super Kings	1	0	
664	normal	0	Chennai Super Kings	14	0	
686	normal	0	Chennai Super Kings	0	4	
703	normal	0	Chennai Super Kings	86	0	

720	normal	0	Chennai Super Kings	0	9
753	normal	0	Chennai Super Kings	13	0
821	normal	0	Chennai Super Kings	25	0
993	normal	0	Chennai Super Kings	18	0
1016	normal	0	Chennai Super Kings	6	0
					\
	player_of_match			venue	
3	RD Gaikwad	MA Chidambaram Stadium, Chepauk, Chennai			
25	M Pathirana	MA Chidambaram Stadium, Chepauk, Chennai			
45	RA Jadeja	MA Chidambaram Stadium, Chepauk, Chennai			
68	MM Ali	MA Chidambaram Stadium, Chepauk, Chennai			
278	MS Dhoni	MA Chidambaram Stadium			
287	SR Watson	MA Chidambaram Stadium			
305	DL Chahar	MA Chidambaram Stadium			
317	MS Dhoni	MA Chidambaram Stadium			
327	Harbhajan Singh	MA Chidambaram Stadium			
383	SW Billings	MA Chidambaram Stadium			
539	DJ Bravo	MA Chidambaram Stadium, Chepauk			
564	A Nehra	MA Chidambaram Stadium, Chepauk			
664	MEK Hussey	MA Chidambaram Stadium, Chepauk			
686	RA Jadeja	MA Chidambaram Stadium, Chepauk			
703	M Vijay	MA Chidambaram Stadium, Chepauk			
720	BW Hilfenhaus	MA Chidambaram Stadium, Chepauk			
753	KMDN Kulasekara	MA Chidambaram Stadium, Chepauk			
821	MEK Hussey	MA Chidambaram Stadium, Chepauk			
993	L Balaji	MA Chidambaram Stadium, Chepauk			
1016	ML Hayden	MA Chidambaram Stadium, Chepauk			
	umpire1	umpire2	umpire3		
3	AK Chaudhary	CB Gaffaney	BNJ Oxenford		
25	BNJ Oxenford	Navdeep Singh	KN Ananthapadmanabhan		
45	HAS Khalid	VK Sharma	Nitin Menon		
68	A Totre	BNJ Oxenford	UV Gandhe		
278	AY Dandekar	Nitin Menon	IJ Gould		
287	AK Chaudhary	NJ Llong	VA Kulkarni		
305	C Shamshuddin	RJ Tucker	UV Gandhe		
317	CK Nandan	YC Barde	BNJ Oxenford		
327	AY Dandekar	BNJ Oxenford	Nitin Menon		
383	AK Chaudhary	CB Gaffaney	A Nand Kishore		
539	RM Deshpande	VA Kulkarni	RK Illingworth		
564	RK Illingworth	VA Kulkarni	RM Deshpande		
664	Aleem Dar	SJA Taufel	C Shamshuddin		
686	Asad Rauf	AK Chaudhary	S Asnani		
703	BR Doctrove	SJA Taufel	BF Bowden		
720	S Das	BR Doctrove	S Asnani		
753	Asad Rauf	S Das	S Asnani		
821	Aleem Dar	RB Tiffin	SS Hazare		
993	AV Jayaprakash	BG Jerling	I Shivram		
1016	DJ Harper	GA Pratapkumar	BF Bowden		

In [29]:

```
import numpy as np
import pandas as pd
tossfieldwincount=len(tossfieldwin)
tossfieldwincount
```

Out[29]:

20

In [30]:

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

```
tossfieldlost= Chennai[(Chennai['toss_decision'] =='field') & (Chennai['winner'] !='Cr
tossfieldlost
```

Out[30]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>result</b>
57	1359491	2023	Chennai	4/12/2023	Rajasthan Royals	Chennai Super Kings	Chennai Super Kings	field	norma
191	1254074	2021	Chennai	4/23/2021	Mumbai Indians	Punjab Kings	Punjab Kings	field	norma
202	1254063	2021	Chennai	4/14/2021	Royal Challengers Bangalore	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norma
203	1254062	2021	Chennai	4/13/2021	Mumbai Indians	Kolkata Knight Riders	Kolkata Knight Riders	field	norma
205	1254060	2021	Chennai	4/11/2021	Kolkata Knight Riders	Sunrisers Hyderabad	Sunrisers Hyderabad	field	norma
207	1254058	2021	Chennai	4/9/2021	Mumbai Indians	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norma
284	1178419	2019	Chennai	4/26/2019	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norma
775	548306	2012	Chennai	4/4/2012	Chennai Super Kings	Mumbai Indians	Mumbai Indians	field	norma
777	501270	2011	Chennai	5/27/2011	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norma
893	419121	2009/10	Chennai	3/21/2010	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	field	norma
998	336007	2007/08	Chennai	5/6/2008	Chennai Super Kings	Deccan Chargers	Deccan Chargers	field	norma

```
In [31]: import numpy as np  
import pandas as pd  
tossfieldlostcount=len(tossfieldlost)  
tossfieldlostcount
```

```
Out[31]: 11
```

```
In [32]: import numpy as np  
import pandas as pd  
tossbatwin= Chennai[(Chennai['toss_decision'] =='bat') & (Chennai['winner'] =='Chennai')]  
print(tossbatwin)
```

	id	season	city	date	team1	\		
19	1359529	2023	Chennai	5/10/2023	Chennai Super Kings			
309	1178393	2019	Chennai	4/6/2019	Chennai Super Kings			
521	829797	2015	Chennai	5/10/2015	Chennai Super Kings			
529	829779	2015	Chennai	5/4/2015	Chennai Super Kings			
542	829753	2015	Chennai	4/25/2015	Chennai Super Kings			
562	829711	2015	Chennai	4/11/2015	Chennai Super Kings			
638	598062	2013	Chennai	5/14/2013	Chennai Super Kings			
657	598041	2013	Chennai	5/2/2013	Chennai Super Kings			
668	598030	2013	Chennai	4/25/2013	Chennai Super Kings			
672	598026	2013	Chennai	4/22/2013	Chennai Super Kings			
732	548352	2012	Chennai	5/4/2012	Chennai Super Kings			
749	548332	2012	Chennai	4/21/2012	Chennai Super Kings			
763	548318	2012	Chennai	4/12/2012	Chennai Super Kings			
776	501271	2011	Chennai	5/28/2011	Chennai Super Kings			
786	501261	2011	Chennai	5/18/2011	Chennai Super Kings			
794	501253	2011	Chennai	5/12/2011	Chennai Super Kings			
807	501240	2011	Chennai	5/4/2011	Chennai Super Kings			
811	501236	2011	Chennai	5/1/2011	Chennai Super Kings			
835	501211	2011	Chennai	4/16/2011	Chennai Super Kings			
848	501198	2011	Chennai	4/8/2011	Chennai Super Kings			
862	419153	2009/10	Chennai	4/13/2010	Chennai Super Kings			
872	419142	2009/10	Chennai	4/6/2010	Chennai Super Kings			
876	419137	2009/10	Chennai	4/3/2010	Chennai Super Kings			
881	419133	2009/10	Chennai	3/31/2010	Chennai Super Kings			
1013	335993	2007/08	Chennai	4/26/2008	Chennai Super Kings			
				team2		toss_winner	toss_decision	\
19				Delhi Capitals		Chennai Super Kings	bat	
309				Kings XI Punjab		Chennai Super Kings	bat	
521				Rajasthan Royals		Chennai Super Kings	bat	
529			Royal Challengers Bangalore			Chennai Super Kings	bat	
542				Kings XI Punjab		Chennai Super Kings	bat	
562				Sunrisers Hyderabad		Chennai Super Kings	bat	
638				Delhi Daredevils		Chennai Super Kings	bat	
657				Kings XI Punjab		Chennai Super Kings	bat	
668				Sunrisers Hyderabad		Sunrisers Hyderabad	bat	
672				Rajasthan Royals		Rajasthan Royals	bat	
732				Deccan Chargers		Chennai Super Kings	bat	
749				Rajasthan Royals		Rajasthan Royals	bat	
763		Royal Challengers Bangalore			Royal Challengers Bangalore		Royal Challengers Bangalore	bat
776		Royal Challengers Bangalore				Chennai Super Kings	bat	
786			Kochi Tuskers Kerala			Chennai Super Kings	bat	
794				Delhi Daredevils		Chennai Super Kings	bat	
807				Rajasthan Royals		Rajasthan Royals	bat	
811				Deccan Chargers		Chennai Super Kings	bat	
835		Royal Challengers Bangalore				Chennai Super Kings	bat	
848				Kolkata Knight Riders		Chennai Super Kings	bat	
862				Kolkata Knight Riders		Kolkata Knight Riders	bat	
872				Mumbai Indians		Chennai Super Kings	bat	
876				Rajasthan Royals		Chennai Super Kings	bat	
881		Royal Challengers Bangalore			Royal Challengers Bangalore		Royal Challengers Bangalore	bat
1013				Kolkata Knight Riders		Kolkata Knight Riders	bat	
	result	dl_applied		winner	win_by_runs	win_by_wickets	\	
19	normal	0	Chennai Super Kings		27	0		
309	normal	0	Chennai Super Kings		22	0		
521	normal	0	Chennai Super Kings		12	0		
529	normal	0	Chennai Super Kings		24	0		
542	normal	0	Chennai Super Kings		97	0		

562	normal	0	Chennai Super Kings	45	0
638	normal	0	Chennai Super Kings	33	0
657	normal	0	Chennai Super Kings	15	0
668	normal	0	Chennai Super Kings	0	5
672	normal	0	Chennai Super Kings	0	5
732	normal	0	Chennai Super Kings	10	0
749	normal	0	Chennai Super Kings	0	7
763	normal	0	Chennai Super Kings	0	5
776	normal	0	Chennai Super Kings	58	0
786	normal	0	Chennai Super Kings	11	0
794	normal	0	Chennai Super Kings	18	0
807	normal	0	Chennai Super Kings	0	8
811	normal	0	Chennai Super Kings	19	0
835	normal	0	Chennai Super Kings	21	0
848	normal	0	Chennai Super Kings	2	0
862	normal	0	Chennai Super Kings	0	9
872	normal	0	Chennai Super Kings	24	0
876	normal	0	Chennai Super Kings	23	0
881	normal	0	Chennai Super Kings	0	5
1013	normal	0	Chennai Super Kings	0	9

	player_of_match		venue	\
19	RA Jadeja	MA Chidambaram Stadium, Chepauk, Chennai		
309	Harbhajan Singh	MA Chidambaram Stadium		
521	RA Jadeja	MA Chidambaram Stadium, Chepauk		
529	SK Raina	MA Chidambaram Stadium, Chepauk		
542	BB McCullum	MA Chidambaram Stadium, Chepauk		
562	BB McCullum	MA Chidambaram Stadium, Chepauk		
638	MS Dhoni	MA Chidambaram Stadium, Chepauk		
657	SK Raina	MA Chidambaram Stadium, Chepauk		
668	MS Dhoni	MA Chidambaram Stadium, Chepauk		
672	MEK Hussey	MA Chidambaram Stadium, Chepauk		
732	SK Raina	MA Chidambaram Stadium, Chepauk		
749	F du Plessis	MA Chidambaram Stadium, Chepauk		
763	F du Plessis	MA Chidambaram Stadium, Chepauk		
776	M Vijay	MA Chidambaram Stadium, Chepauk		
786	WP Saha	MA Chidambaram Stadium, Chepauk		
794	MS Dhoni	MA Chidambaram Stadium, Chepauk		
807	MEK Hussey	MA Chidambaram Stadium, Chepauk		
811	JA Morkel	MA Chidambaram Stadium, Chepauk		
835	MEK Hussey	MA Chidambaram Stadium, Chepauk		
848	S Anirudha	MA Chidambaram Stadium, Chepauk		
862	R Ashwin	MA Chidambaram Stadium, Chepauk		
872	SK Raina	MA Chidambaram Stadium, Chepauk		
876	M Vijay	MA Chidambaram Stadium, Chepauk		
881	M Vijay	MA Chidambaram Stadium, Chepauk		
1013	JDP Oram	MA Chidambaram Stadium, Chepauk		

	umpire1	umpire2	umpire3
19	CB Gaffaney	NA Patwardhan	AK Chaudhary
309	KN Ananthapadmanabhan	RJ Tucker	C Shamshuddin
521	M Erasmus	CK Nandan	CB Gaffaney
529	C Shamshuddin	K Srinath	JD Cloete
542	JD Cloete	C Shamshuddin	PG Pathak
562	RK Illingworth	VA Kulkarni	RM Deshpande
638	C Shamshuddin	RJ Tucker	S Das
657	M Erasmus	VA Kulkarni	NJ Llong
668	Aleem Dar	S Das	C Shamshuddin
672	S Asnani	AK Chaudhary	Asad Rauf
732	HDPK Dharmasena	BNJ Oxenford	Aleem Dar

749	Aleem Dar	BNJ Oxenford	AK Chaudhary
763	HDPK Dharmasena	RJ Tucker	S Ravi
776	Asad Rauf	SJA Taufel	HDPK Dharmasena
786	HDPK Dharmasena	RE Koertzen	K Hariharan
794	AM Saheba	SL Shastri	Asad Rauf
807	SS Hazare	RB Tiffin	Aleem Dar
811	Aleem Dar	RB Tiffin	SS Hazare
835	HDPK Dharmasena	AL Hill	K Hariharan
848	BR Doctrove	PR Reiffel	S Asnani
862	SS Hazare	SJA Taufel	HDPK Dharmasena
872	S Asnani	DJ Harper	K Hariharan
876	RE Koertzen	RB Tiffin	BG Jerling
881	BG Jerling	RE Koertzen	RB Tiffin
1013	BF Bowden	AV Jayaprakash	SJ Davis

```
In [33]: import numpy as np
import pandas as pd
tossbatwincount=len(tossbatwin)
tossbatwincount
```

Out[33]: 25

```
In [34]: import numpy as np
import pandas as pd
tossbatlost=Chennai[(Chennai['toss_decision'] =='bat') & (Chennai['winner'] !='Chennai')
tossbatlost
```

Out[34]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
2	1370351	2023	Chennai	5/24/2023	Mumbai Indians	Lucknow Super Giants	Mumbai Indians	bat	norm
14	1359535	2023	Chennai	5/14/2023	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
32	1359515	2023	Chennai	4/30/2023	Chennai Super Kings	Punjab Kings	Chennai Super Kings	bat	norm
189	1254077	2021	Chennai	4/25/2021	Delhi Capitals	Sunrisers Hyderabad	Delhi Capitals	bat	norm
194	1254071	2021	Chennai	4/21/2021	Punjab Kings	Sunrisers Hyderabad	Punjab Kings	bat	norm
195	1254070	2021	Chennai	4/20/2021	Mumbai Indians	Delhi Capitals	Mumbai Indians	bat	norm
198	1254067	2021	Chennai	4/18/2021	Royal Challengers Bangalore	Kolkata Knight Riders	Royal Challengers Bangalore	bat	norm
199	1254066	2021	Chennai	4/17/2021	Mumbai Indians	Sunrisers Hyderabad	Mumbai Indians	bat	norm
271	1181764	2019	Chennai	5/7/2019	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
524	829789	2015	Chennai	5/8/2015	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norm
683	598015	2013	Chennai	4/15/2013	Chennai Super Kings	Pune Warriors	Pune Warriors	bat	norm

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>resu</b>
697	598002	2013	Chennai	4/6/2013	Chennai Super Kings	Mumbai Indians	Mumbai Indians	bat	norm
702	548381	2012	Chennai	5/27/2012	Kolkata Knight Riders	Chennai Super Kings	Chennai Super Kings	bat	norm
737	548347	2012	Chennai	4/30/2012	Chennai Super Kings	Kolkata Knight Riders	Chennai Super Kings	bat	norm
740	548343	2012	Chennai	4/28/2012	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	bat	norm
859	419155	2009/10	Chennai	4/15/2010	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm
904	419110	2009/10	Chennai	3/14/2010	Chennai Super Kings	Deccan Chargers	Deccan Chargers	bat	norm
975	336033	2007/08	Chennai	5/24/2008	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	bat	norm
979	336029	2007/08	Chennai	5/21/2008	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	norm
1004	336001	2007/08	Chennai	5/2/2008	Chennai Super Kings	Delhi Daredevils	Chennai Super Kings	bat	norm

In [35]:

```
import numpy as np
import pandas as pd
tossbatlostcount=len(tossbatlost)
tossbatlostcount
```

Out[35]:

20

In [36]:

```
import numpy as np
import pandas as pd
print("Toss Decision: Bat | Match Win Count:", tossbatwincount)
print("Toss Decision: Bat | Match Lost Count:", tossbatlostcount)
print("Toss Decision: Field | Match Win Count:", tossfieldwincount)
print("Toss Decision: Field | Match Lost Count:", tossfieldlostcount)
```

```
print("Total Match CSK Win Count:", Chennaiwincount)
print("CTotal Match CSK Lost Count:", Chennailostcount)
```

```
Toss Decision: Bat | Match Win Count: 25
Toss Decision: Bat | Match Lost Count: 20
Toss Decision: Field | Match Win Count: 20
Toss Decision: Field | Match Lost Count: 11
Total Match CSK Win Count: 45
CTotal Match CSK Lost Count: 31
```

In [37]:

```
import numpy as np
import pandas as pd
total_matches=len(Chennai)
total_wins=len(Chennai[Chennai['winner'] =='Chennai Super Kings'])

average_win=total_wins/total_matches

print("Average number of matches won by Chennai Super Kings in Chennai:", average_wir
```

```
Average number of matches won by Chennai Super Kings in Chennai: 0.5921052631578947
```

In [38]:

```
import numpy as np
import pandas as pd
total_matches=len(Chennai)
total_losses=len(Chennai[Chennai['winner'] !='Chennai Super Kings'])

average_loss=total_losses/total_matches

print("Average number of matches lost by Chennai Super Kings in Chennai:", average_lc
```

```
Average number of matches lost by Chennai Super Kings in Chennai: 0.4078947368421052
5
```

In [40]:

```
import numpy as np
import pandas as pd
unique_cities=matchinfodata['city'].unique()
print("List of all cities:", unique_cities)
```

```
List of all cities: ['Ahmedabad' 'Chennai' 'Mumbai' 'Bengaluru' 'Kolkata' 'Delhi' 'Dharamsala'
 'Hyderabad' 'Lucknow' 'Jaipur' 'Chandigarh' 'Guwahati' 'Navi Mumbai'
 'Pune' 'Dubai' 'Sharjah' 'Abu Dhabi' 'nan' 'Visakhapatnam' 'Indore'
 'Bangalore' 'Kanpur' 'Rajkot' 'Raipur' 'Ranchi' 'Cuttack' 'Kochi'
 'Nagpur' 'Johannesburg' 'Centurion' 'Durban' 'Bloemfontein'
 'Port Elizabeth' 'Kimberley' 'East London' 'Cape Town']
```

In [41]:

```
import numpy as np
import pandas as pd
city_match_count=matchinfodata['city'].value_counts().reset_index()
city_match_count.columns= ['City', 'Total Matches']

print("Total Matches played in each city:")
print(city_match_count)
```

Total Matches played in each city:

	City	Total Matches
0	Mumbai	166
1	Kolkata	86
2	Delhi	85
3	Chennai	76
4	Hyderabad	71
5	Bangalore	65
6	Chandigarh	61
7	Jaipur	52
8	Pune	51
9	Abu Dhabi	37
10	Ahmedabad	28
11	Bengaluru	22
12	Durban	15
13	Dubai	13
14	Visakhapatnam	13
15	Centurion	12
16	Dharamsala	11
17	Sharjah	10
18	Rajkot	10
19	Indore	9
20	Navi Mumbai	9
21	Johannesburg	8
22	Cuttack	7
23	Port Elizabeth	7
24	Cape Town	7
25	Ranchi	7
26	Lucknow	7
27	Raipur	6
28	Kochi	5
29	Kanpur	4
30	Nagpur	3
31	Kimberley	3
32	East London	3
33	Bloemfontein	2
34	Guwahati	2

In [42]:

```
import numpy as np
import pandas as pd
Mumbai = matchinfodata[matchinfodata['city'] == 'Mumbai']
Mumbai
```

Out[42]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>rest</b>
4	1359543	2023	Mumbai	5/21/2023	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	norm
17	1359531	2023	Mumbai	5/12/2023	Mumbai Indians	Gujarat Titans	Gujarat Titans	field	norm
20	1359528	2023	Mumbai	5/9/2023	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norm
33	1359516	2023	Mumbai	4/30/2023	Rajasthan Royals	Mumbai Indians	Rajasthan Royals	bat	norm
43	1359505	2023	Mumbai	4/22/2023	Punjab Kings	Mumbai Indians	Mumbai Indians	field	norm
...	...	...	...	...	...	...	...	...	...
988	336018	2007/08	Mumbai	5/14/2008	Mumbai Indians	Chennai Super Kings	Mumbai Indians	field	norm
997	336008	2007/08	Mumbai	5/7/2008	Mumbai Indians	Rajasthan Royals	Mumbai Indians	field	norm
1000	336004	2007/08	Mumbai	5/4/2008	Mumbai Indians	Delhi Daredevils	Delhi Daredevils	field	norm
1010	335994	2007/08	Mumbai	4/27/2008	Mumbai Indians	Deccan Chargers	Deccan Chargers	field	norm
1020	335985	2007/08	Mumbai	4/20/2008	Mumbai Indians	Royal Challengers Bangalore	Mumbai Indians	bat	norm

166 rows × 18 columns

In [43]:

```
import numpy as np
import pandas as pd
Mumbaiwin=Mumbai[Mumbai['winner'] =='Chennai Super Kings']
Mumbaiwin
```

Out[43]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>result</b>
62	1359486	2023	Mumbai	4/8/2023	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norma
126	1304068	2022	Mumbai	4/12/2022	Chennai Super Kings	Royal Challengers Bangalore	Royal Challengers Bangalore	field	norma
188	1254076	2021	Mumbai	4/25/2021	Chennai Super Kings	Royal Challengers Bangalore	Chennai Super Kings	bat	norma
193	1254072	2021	Mumbai	4/21/2021	Chennai Super Kings	Kolkata Knight Riders	Kolkata Knight Riders	field	norma
196	1254069	2021	Mumbai	4/19/2021	Chennai Super Kings	Rajasthan Royals	Rajasthan Royals	field	norma
200	1254065	2021	Mumbai	4/16/2021	Punjab Kings	Chennai Super Kings	Chennai Super Kings	field	norma
328	1136620	2018	Mumbai	5/27/2018	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norma
331	1136617	2018	Mumbai	5/22/2018	Sunrisers Hyderabad	Chennai Super Kings	Chennai Super Kings	field	norma
387	1136561	2018	Mumbai	4/7/2018	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norma
554	829729	2015	Mumbai	4/17/2015	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	norma
568	734045	2014	Mumbai	5/28/2014	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	field	norma
593	733995	2014	Mumbai	5/10/2014	Mumbai Indians	Chennai Super Kings	Chennai Super Kings	field	norma
779	501268	2011	Mumbai	5/24/2011	Royal Challengers Bangalore	Chennai Super Kings	Chennai Super Kings	field	norma
819	501228	2011	Mumbai	4/27/2011	Pune Warriors	Chennai Super Kings	Pune Warriors	bat	norma
849	419165	2009/10	Mumbai	4/25/2010	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	norma

<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>result</b>
851	419163	2009/10	Mumbai	4/22/2010	Chennai Super Kings	Deccan Chargers	Chennai Super Kings	bat normal
967	336039	2007/08	Mumbai	5/31/2008	Chennai Super Kings	Kings XI Punjab	Kings XI Punjab	bat normal

```
In [44]: import numpy as np
import pandas as pd
Mumbaiwincount=len(Mumbaiwin)
Mumbaiwincount
```

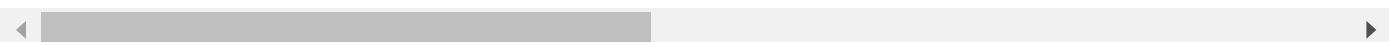
Out[44]: 17

```
In [45]: import numpy as np
import pandas as pd
Mumbailost=Mumbai[Mumbai['winner'] !='Chennai Super Kings']
Mumbailost
```

Out[45]:

	<b>id</b>	<b>season</b>	<b>city</b>	<b>date</b>	<b>team1</b>	<b>team2</b>	<b>toss_winner</b>	<b>toss_decision</b>	<b>rest</b>
4	1359543	2023	Mumbai	5/21/2023	Sunrisers Hyderabad	Mumbai Indians	Mumbai Indians	field	norm
17	1359531	2023	Mumbai	5/12/2023	Mumbai Indians	Gujarat Titans	Gujarat Titans	field	norm
20	1359528	2023	Mumbai	5/9/2023	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	norm
33	1359516	2023	Mumbai	4/30/2023	Rajasthan Royals	Mumbai Indians	Rajasthan Royals	bat	norm
43	1359505	2023	Mumbai	4/22/2023	Punjab Kings	Mumbai Indians	Mumbai Indians	field	norm
...	...	...	...	...	...	...	...	...	...
988	336018	2007/08	Mumbai	5/14/2008	Mumbai Indians	Chennai Super Kings	Mumbai Indians	field	norm
997	336008	2007/08	Mumbai	5/7/2008	Mumbai Indians	Rajasthan Royals	Mumbai Indians	field	norm
1000	336004	2007/08	Mumbai	5/4/2008	Mumbai Indians	Delhi Daredevils	Delhi Daredevils	field	norm
1010	335994	2007/08	Mumbai	4/27/2008	Mumbai Indians	Deccan Chargers	Deccan Chargers	field	norm
1020	335985	2007/08	Mumbai	4/20/2008	Mumbai Indians	Royal Challengers Bangalore	Mumbai Indians	bat	norm

149 rows × 18 columns



In [46]:

```
import numpy as np
import pandas as pd
Mumbailostcount=len(Mumbailost)
Mumbailostcount
```

Out[46]:

149

In [48]:

```
import numpy as np
import pandas as pd
print("Chennai Super Kings Wins in Mumbai Stadium:", Mumbaiwincount)
print("Chennai Super Kings Losses in Mumbai Stadium:", Mumbailostcount)
```

Chennai Super Kings Wins in Mumbai Stadium: 17

Chennai Super Kings Losses in Mumbai Stadium: 149

In [ ]: