In [3]: import pandas as pd
 import matplotlib
 from matplotlib import pyplot as plt
 import numpy as np
 x = pd.read\_csv('matches.csv')
 x

## Out[3]:

	id	Season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applied	winner	win_by_runs	wir
0	1	IPL- 2017	Hyderabad	05- 04- 2017	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal	0	Sunrisers Hyderabad	35	
1	2	IPL- 2017	Pune	06- 04- 2017	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal	0	Rising Pune Supergiant	0	
2	3	IPL- 2017	Rajkot	07- 04- 2017	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal	0	Kolkata Knight Riders	0	
3	4	IPL- 2017	Indore	08- 04- 2017	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal	0	Kings XI Punjab	0	
4	5	IPL- 2017	Bangalore	08- 04- 2017	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	normal	0	Royal Challengers Bangalore	15	
751	11347	IPL- 2019	Mumbai	05- 05- 2019	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	normal	0	Mumbai Indians	0	
752	11412	IPL- 2019	Chennai	07- 05- 2019	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	0	Mumbai Indians	0	
753	11413	IPL- 2019	Visakhapatnam	08- 05- 2019	Sunrisers Hyderabad	Delhi Capitals	Delhi Capitals	field	normal	0	Delhi Capitals	0	

	id	Season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applied	winner	win_by_runs	wir	
754	11414	IPL- 2019	Visakhapatnam	10- 05- 2019	Delhi Capitals	Chennai Super Kings	Chennai Super Kings	field	normal	0	Chennai Super Kings	0		
755	11415	IPL- 2019	Hyderabad	12- 05- 2019	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	0	Mumbai Indians	1		
756 rows × 18 columns											_			
4										•				

In [5]: x.head()

## Out[5]:

	id	Season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applied	winner	win_by_runs	win_by_wickets
0	1	IPL- 2017	Hyderabad	05- 04- 2017	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal	0	Sunrisers Hyderabad	35	0
1	2	IPL- 2017	Pune	06- 04- 2017	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal	0	Rising Pune Supergiant	0	7
2	3	IPL- 2017	Rajkot	07- 04- 2017	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal	0	Kolkata Knight Riders	0	10
3	4	IPL- 2017	Indore	08- 04- 2017	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal	0	Kings XI Punjab	0	6
4	5	IPL- 2017	Bangalore	08- 04- 2017	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	normal	0	Royal Challengers Bangalore	15	0
4													<b>&gt;</b>

In [6]: x.tail()

Out[6]:

id	Season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applied	winner	win_by_runs	win_by_wicket
11347	IPL- 2019	Mumbai	05- 05- 2019	Kolkata Knight Riders	Mumbai Indians	Mumbai Indians	field	normal	0	Mumbai Indians	0	
11412	IPL- 2019	Chennai	07- 05- 2019	Chennai Super Kings	Mumbai Indians	Chennai Super Kings	bat	normal	0	Mumbai Indians	0	
11413	IPL- 2019	Visakhapatnam	08- 05- 2019	Sunrisers Hyderabad	Delhi Capitals	Delhi Capitals	field	normal	0	Delhi Capitals	0	
11414	IPL- 2019	Visakhapatnam	10- 05- 2019	Delhi Capitals	Chennai Super Kings	Chennai Super Kings	field	normal	0	Chennai Super Kings	0	
11415	IPL- 2019	Hyderabad	12- 05- 2019	Mumbai Indians	Chennai Super Kings	Mumbai Indians	bat	normal	0	Mumbai Indians	1	
	11347 11412 11413 11414	11347 IPL- 2019 11412 IPL- 2019 11413 IPL- 2019 11414 IPL- 2019	11347       IPL- 2019       Mumbai         11412       IPL- 2019       Chennai         11413       IPL- 2019       Visakhapatnam         11414       IPL- 2019       Visakhapatnam         11415       IPL- IPL- IPL- IPL- IPL- IPL- IPL- IPL-	11347         IPL- 2019         Mumbai         05- 05- 2019           11412         IPL- 2019         Chennai         07- 05- 2019           11413         IPL- 2019         Visakhapatnam         08- 05- 2019           11414         IPL- 2019         Visakhapatnam         10- 05- 2019           11415         IPL- 2019         Hyderabad         05- 2019	11347         IPL- 2019         Mumbai         05- 05- 2019         Kolkata Knight Riders           11412         IPL- 2019         Chennai         07- 05- 2019         Chennai Super Kings           11413         IPL- 2019         Visakhapatnam         08- 05- 2019         Sunrisers Hyderabad           11414         IPL- 2019         Visakhapatnam         10- 05- 2019         Delhi Capitals           11415         IPL- 2019         Hyderabad         05- 12019         Mumbai Indians	11347         IPL- 2019         Mumbai         05- 05- 2019         Kolkata Knight Riders         Mumbai Indians           11412         IPL- 2019         Chennai         07- 05- 2019         Chennai Super Kings         Mumbai Indians           11413         IPL- 2019         Visakhapatnam         08- 05- 2019         Sunrisers Hyderabad         Delhi Capitals           11414         IPL- 2019         Visakhapatnam         10- 05- 2019         Delhi Capitals         Chennai Super Kings           11415         IPL- 2019         Hyderabad         05- 1019         Mumbai Indians         Chennai Super	11347 IPL- 2019 Mumbai 05- 2019 Kolkata Knight Riders Mumbai Indians  Mumbai Indians  Mumbai Indians  Mumbai Indians  Mumbai Indians  Chennai Super Kings  11412 IPL- 2019 Visakhapatnam 08- 2019 Sunrisers Hyderabad Capitals  Chennai Capitals  Chennai Super Kings  Chennai Super Kings  Chennai Capitals  Chennai Super Kings  Chennai Super Kings	11347 IPL- 2019 Mumbai D5- 2019 Kolkata Knight Riders Mumbai Indians Mumbai Indians Indians  field  11412 IPL- 2019 Chennai D5- 2019 Kings Mumbai Indians Super Kings  bat  11413 IPL- 2019 Visakhapatnam D6- 2019 Sunrisers Delhi Capitals Capitals Capitals  field  11414 IPL- 2019 Visakhapatnam D5- 2019 Chennai Super Kings  field  11414 IPL- 2019 Visakhapatnam D5- 2019 Chennai Super Kings  Chennai Super Kings  field  11414 IPL- 2019 Visakhapatnam D5- 2019 Chennai Super Kings  Chennai Super Kings  field  11415 IPL- 2019 Hyderabad  12- 2019 Mumbai Indians Super Mumbai Super Indians Super Indians Super Indians	11347 IPL- 2019 Mumbai 05- 2019 Kolkata Knight Riders Mumbai Indians Mumbai Indians Mumbai Indians field normal  11412 IPL- 2019 Chennai 05- 2019 Kings Mumbai Indians Super Kings  11413 IPL- 2019 Visakhapatnam 08- 2019 Sunrisers Hyderabad Capitals Capitals  11414 IPL- 2019 Visakhapatnam 05- 2019 Delhi Capitals Chennai Super Kings  11414 IPL- 2019 Visakhapatnam 05- 2019 Delhi Capitals Chennai Super Kings  11414 IPL- 2019 Visakhapatnam 05- 2019 Chennai Super Kings  11415 IPL- 2019 Hyderabad 12- 2019 Mumbai Super Kings  11415 Delhi Super Kings  11415 Delhi Super Kings  11416 Delhi Super Kings  11417 Delhi Super Kings  11418 Delhi Super Kings	11347 IPL- 2019 Mumbai 05- Kolkata Knight Indians Mumbai Indians field normal 0  11412 IPL- 2019 Chennai 05- 2019 Kings Mumbai Indians Chennai Super Kings bat normal 0  11413 IPL- 2019 Visakhapatnam 08- 2019 Kings Delhi Capitals Capitals Capitals Capitals Super Kings Field normal 0  11414 IPL- 2019 Visakhapatnam 05- 2019 Delhi Capitals Super Kings Super Kings Super Kings Field normal 0  11415 IPL- Hyderabad 05- Mumbai Indians Super Kings Delhi Normal 0	11347 IPL- 2019 Mumbai 05- Kolkata Knight Riders Indians India	11347 IPL- 2019 Mumbai 05- Kolkata Knight Riders Mumbai Indians Mumbai Indians field normal 0 Mumbai Indians 0  11412 IPL- 2019 Chennai 05- 2019 Kings Mumbai Indians Super Kings bat normal 0 Mumbai Indians 0  11413 IPL- 2019 Visakhapatnam 08- 2019 Visakhapatnam 08- 2019 Visakhapatnam 05- 2019 Delhi Capitals Capitals Capitals Chennai Super Kings Field normal 0 Chennai Super Kings 0  11414 IPL- 2019 Visakhapatnam 10- 2019 Visakhapatnam 05- 2019 Capitals Chennai Super Kings Super Kings Field normal 0 Super Kings 0  11414 IPL- 2019 Visakhapatnam 10- 2019 Chennai Super Kings Super Kings Super Kings Super Kings 1  11415 IPL- 2019 Hyderabad 05- Mumbai Indians Super Mumbai Super Mumbai Super Indians Super Indians 1  11415 IPL- 2019 Hyderabad 05- Mumbai Indians Super Mumbai Super Indians Super Indians 1

4

In [8]: x.shape

Out[8]: (756, 18)

In [10]: y=x.iloc[2:5,2:4]
y

Out[10]:

	city	date
2	Rajkot	07-04-2017
3	Indore	08-04-2017
4	Rangalore	08-04-2017

```
In [11]: y=x.iloc[0:2,0:3] y
```

## Out[11]:

```
        id
        Season
        city

        0
        1
        IPL-2017
        Hyderabad

        1
        2
        IPL-2017
        Pune
```

```
In [29]: z=x.iloc[0:2,0:3]
z
```

## Out[29]:

```
        id
        Season
        city

        0
        1
        IPL-2017
        Hyderabad

        1
        2
        IPL-2017
        Pune
```

```
In [30]: x['player_of_match'].value_counts()
```

```
Out[30]: CH Gayle
                            21
         AB de Villiers
                            20
         RG Sharma
                            17
         MS Dhoni
                            17
         DA Warner
                            17
         PD Collingwood
                            1
         NV Ojha
         AC Voges
                             1
         J Theron
                             1
         S Hetmyer
```

Name: player\_of\_match, Length: 226, dtype: int64

```
In [31]: |x['player_of_match'].value_counts()[0:5]
Out[31]: CH Gayle
                           21
         AB de Villiers
                           20
         RG Sharma
                           17
         MS Dhoni
                           17
         DA Warner
                           17
         Name: player_of_match, dtype: int64
In [12]: x = pd.read_csv('matches.csv')
         y=x.loc[0:10,('city')]
         z=x.loc[0:10,('win by runs')]
         plt.bar(y,z)
         plt.bar(y,z,color='blue')
         plt.title('Bar graph')
         plt.grid(True)
         plt.show()
```

