In [2]:
```
#Libraries
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
```

In [3]:
```
#Reading the csv files
df_14=pd.read_csv("C:/Users/kkonar2/OneDrive - University of Illinois at Chicago/Docume
df_18=pd.read_csv("C:/Users/kkonar2/OneDrive - University of Illinois at Chicago/Docume

#Sorting the values based on highest to lowest Wins
df_14=df_14.sort_values(by=['Win'], ascending=False)
df_18=df_18.sort_values(by=['Win'], ascending=False)
df_14.head()
```

Out[3]:

	Position	Team	Games Played	Win	Draw	Loss	Goals For	Goals Against	Goal Difference	Points
0	1	Germany	7	6	1	0	18	4	14	19
2	3	Netherlands	7	5	2	0	15	4	11	17
1	2	Argentina	7	5	1	1	8	4	4	16
4	5	Colombia	5	4	0	1	12	4	8	12
5	6	Belgium	5	4	0	1	6	3	3	12

In [4]:
```
print(df_14)
```

```
    Position                  Team  Games Played  Win  Draw  Loss  \
0          1               Germany             7    6     1     0
2          3           Netherlands             7    5     2     0
1          2             Argentina             7    5     1     1
4          5              Colombia             5    4     0     1
5          6               Belgium             5    4     0     1
3          4                Brazil             7    3     2     2
6          7                France             5    3     1     1
7          8            Costa Rica             5    2     3     0
9         10                Mexico             4    2     1     1
10        11           Switzerland             4    2     0     2
11        12               Uruguay             4    2     0     2
8          9                 Chile             4    2     1     1
18        19               Croatia             3    1     0     2
22        23                 Spain             3    1     0     2
21        22                 Italy             3    1     0     2
20        21           Ivory Coast             3    1     0     2
19        20  Bosnia and Herzegovina             3    1     0     2
16        17               Ecuador             3    1     1     1
17        18              Portugal             3    1     1     1
15        16               Nigeria             4    1     1     2
14        15         United States             4    1     1     2
13        14               Algeria             4    1     1     2
12        13                Greece             4    1     2     1
23        24                Russia             3    0     2     1
24        25                 Ghana             3    0     1     2
25        26               England             3    0     1     2
```

26	27	South Korea	3	0	1	2
27	28	Iran	3	0	1	2
28	29	Japan	3	0	1	2
29	30	Australia	3	0	0	3
30	31	Honduras	3	0	0	3
31	32	Cameroon	3	0	0	3

	Goals For	Goals Against	Goal Difference	Points
0	18	4	14	19
2	15	4	11	17
1	8	4	4	16
4	12	4	8	12
5	6	3	3	12
3	11	14	-3	11
6	10	3	7	10
7	5	2	3	9
9	5	3	2	7
10	7	7	0	6
11	4	6	-2	6
8	6	4	2	7
18	6	6	0	3
22	4	7	-3	3
21	2	3	-1	3
20	4	5	-1	3
19	4	4	0	3
16	3	3	0	4
17	4	7	-3	4
15	3	5	-2	4
14	5	6	-1	4
13	7	7	0	4
12	3	5	-2	5
23	2	3	-1	2
24	4	6	-2	1
25	2	4	-2	1
26	3	6	-3	1
27	1	4	-3	1
28	2	6	-4	1
29	3	9	-6	0
30	1	8	-7	0
31	1	9	-8	0

In [5]:
```
print(df_18)
```

	Position	Team	Games Played	Win	Draw	Loss	Goals For	\
0	1	France	7	6	1	0	14	
2	3	Belgium	7	6	0	1	16	
4	5	Uruguay	5	4	0	1	7	
1	2	Croatia	7	4	2	1	14	
3	4	England	7	3	1	3	12	
5	6	Brazil	5	3	1	1	8	
6	7	Sweden	5	3	0	2	6	
8	9	Colombia	4	2	1	1	6	
9	10	Mexico	4	2	0	2	3	
7	8	Russia	5	2	2	1	11	
18	19	Germany	3	1	0	2	2	
25	26	Tunisia	3	1	0	2	5	
24	25	South Korea	3	1	0	2	3	
23	24	Serbia	3	1	0	2	2	
22	23	Saudi Arabia	3	1	0	2	2	

```
21         22         Poland              3    1     0     2           2
20         21           Peru              3    1     0     2           2
19         20        Nigeria              3    1     0     2           3
16         17           Iran              3    1     1     1           2
17         18        Senegal              3    1     1     1           4
15         16          Japan              4    1     1     2           6
14         15      Argentina              4    1     1     2           6
13         14    Switzerland              4    1     2     1           5
12         13       Portugal              4    1     2     1           6
11         12          Spain              4    1     3     0           7
10         11        Denmark              4    1     3     0           3
26         27      Australia              3    0     1     2           2
27         28     Costa Rica              3    0     1     2           2
28         29        Iceland              3    0     1     2           2
29         30        Morocco              3    0     1     2           2
30         31          Egypt              3    0     0     3           2
31         32         Panama              3    0     0     3           2

    Goals Against Goal Difference  Points
0               6               8      19
2               6              10      18
4               3               4      12
1               9               5      14
3               8               4      10
5               3               5      10
6               4               2       9
8               3               3       7
9               6              -3       6
7               7               4       8
18              4              -2       3
25              8              -3       3
24              3               0       3
23              4              -2       3
22              7              -5       3
21              5              -3       3
20              2               0       3
19              4              -1       3
16              2               0       4
17              4               0       4
15              7              -1       4
14              9              -3       4
13              5               0       5
12              6               0       5
11              6               1       6
10              2               1       6
26              5              -3       1
27              5              -3       1
28              5              -3       1
29              4              -2       1
30              6              -4       0
31             11              -9       0
```

In [6]:

```
df_14['Year']=2014
df_14.head()
```

Out[6]:

	Position	Team	Games Played	Win	Draw	Loss	Goals For	Goals Against	Goal Difference	Points	Year
0	1	Germany	7	6	1	0	18	4	14	19	2014

	Position	Team	Games Played	Win	Draw	Loss	Goals For	Goals Against	Goal Difference	Points	Year
2	3	Netherlands	7	5	2	0	15	4	11	17	2014
1	2	Argentina	7	5	1	1	8	4	4	16	2014
4	5	Colombia	5	4	0	1	12	4	8	12	2014
5	6	Belgium	5	4	0	1	6	3	3	12	2014

In [7]:
```
df_18['Year']=2018
df_18.head()
```

Out[7]:

	Position	Team	Games Played	Win	Draw	Loss	Goals For	Goals Against	Goal Difference	Points	Year
0	1	France	7	6	1	0	14	6	8	19	2018
2	3	Belgium	7	6	0	1	16	6	10	18	2018
4	5	Uruguay	5	4	0	1	7	3	4	12	2018
1	2	Croatia	7	4	2	1	14	9	5	14	2018
3	4	England	7	3	1	3	12	8	4	10	2018

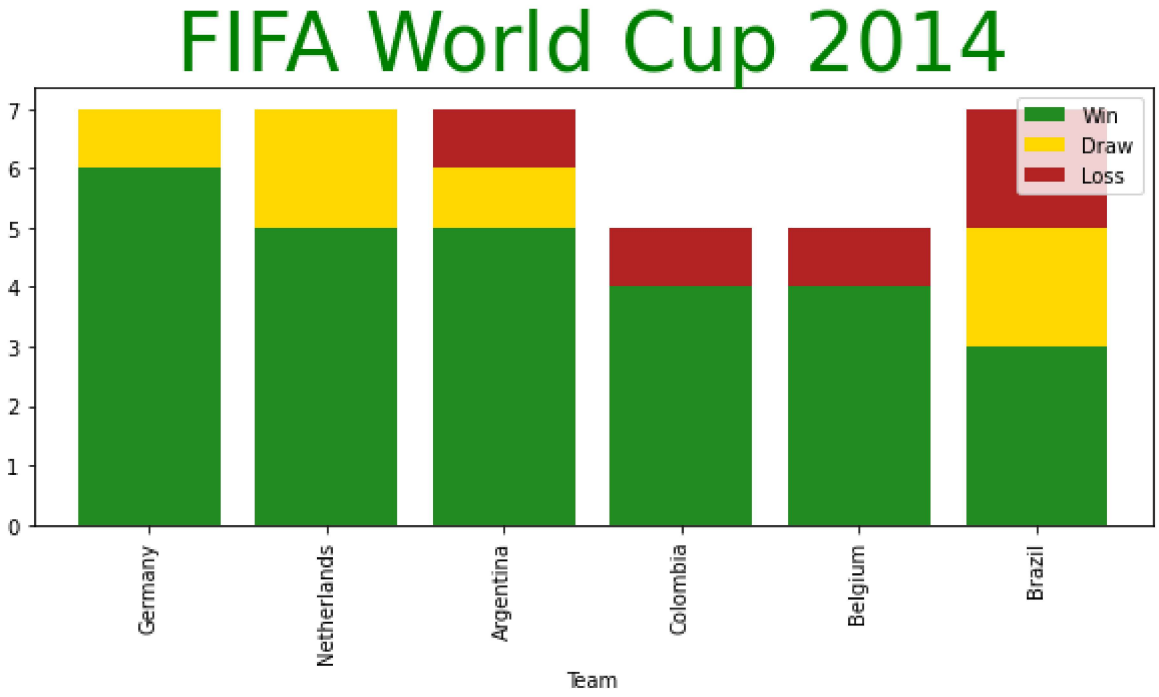
In [8]:
```
#Combining the 2014 and 2018 FIFA world cup datasets
df=pd.concat([df_14[0:6],df_18[0:6]])
df
```

Out[8]:

	Position	Team	Games Played	Win	Draw	Loss	Goals For	Goals Against	Goal Difference	Points	Year
0	1	Germany	7	6	1	0	18	4	14	19	2014
2	3	Netherlands	7	5	2	0	15	4	11	17	2014
1	2	Argentina	7	5	1	1	8	4	4	16	2014
4	5	Colombia	5	4	0	1	12	4	8	12	2014
5	6	Belgium	5	4	0	1	6	3	3	12	2014
3	4	Brazil	7	3	2	2	11	14	−3	11	2014
0	1	France	7	6	1	0	14	6	8	19	2018
2	3	Belgium	7	6	0	1	16	6	10	18	2018
4	5	Uruguay	5	4	0	1	7	3	4	12	2018
1	2	Croatia	7	4	2	1	14	9	5	14	2018
3	4	England	7	3	1	3	12	8	4	10	2018
5	6	Brazil	5	3	1	1	8	3	5	10	2018

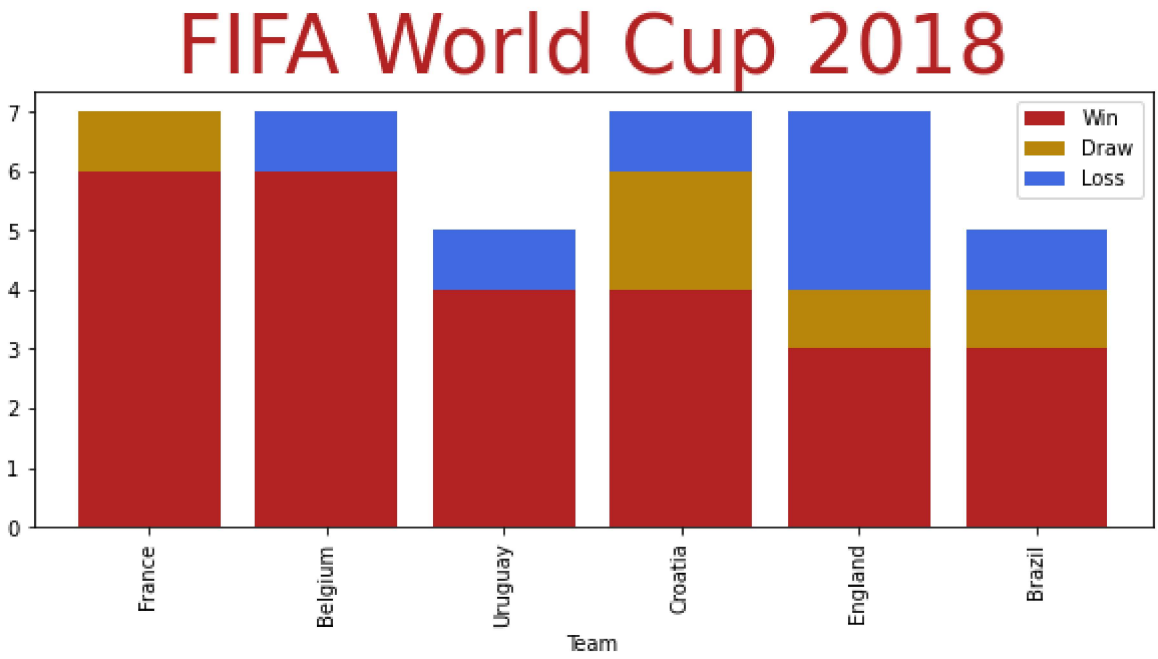
In [9]:
```
df1= pd.DataFrame(df)
```

```
df_14[0:6].plot(x='Team', y=["Win","Draw","Loss"],
                width=0.8, stacked=True, kind="bar",
                figsize=(10,4),color=['forestgreen','gold','firebrick'])
plt.title(label="FIFA World Cup 2014",
          fontsize=40,
          color="green")
plt.show()
#Bar graph depicting the Results from top 6 teams in the 2014 FIFA World Cup
```



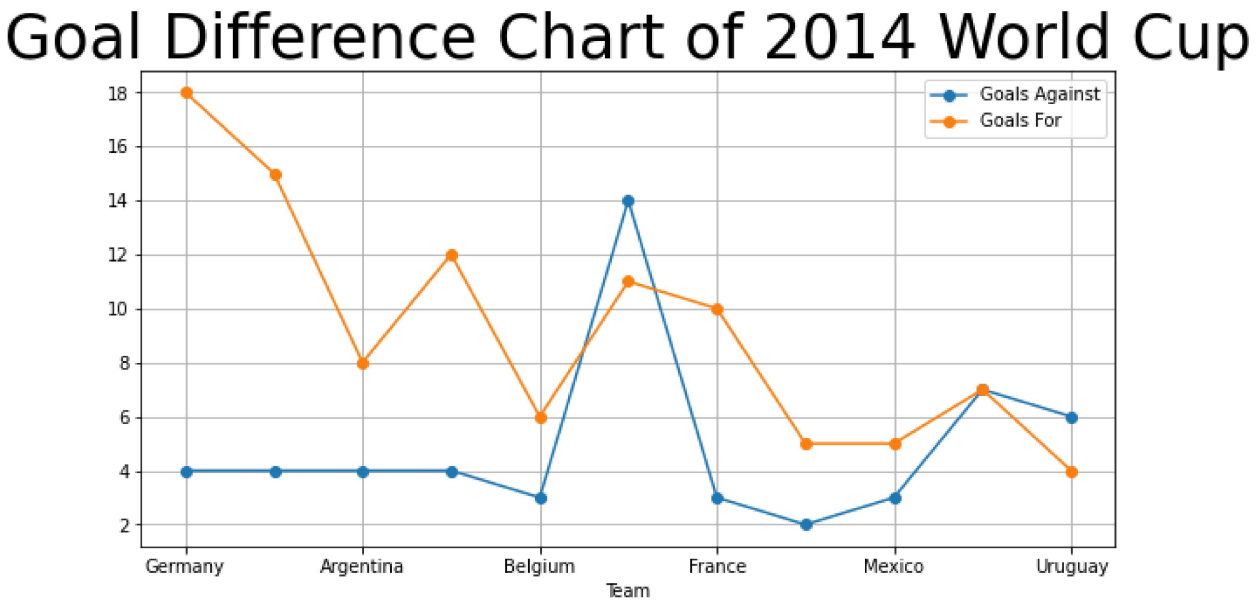
In [10]:

```
df_18[0:6].plot(x='Team', y=["Win","Draw","Loss"],
                width=0.8, stacked=True, kind="bar",
                figsize=(10,4),color=['firebrick','darkgoldenrod','royalblue'])
plt.title(label="FIFA World Cup 2018",
          fontsize=40,
          color="firebrick")
plt.show()
#Bar graph depicting the Results from top 6 teams in the 2014 FIFA World Cup
```



In [11]:

```
df_14[0:11].plot(x='Team', y=['Goals Against','Goals For'],marker='o',figsize=(10,5))
plt.grid(True)
plt.title(label="Goal Difference Chart of 2014 World Cup",
          fontsize=35)
plt.show()
```



In [12]:

```
win_sum=df['Win'].sum()
print("Total Number of Games Won = "+str(win_sum))
loss_sum=df['Loss'].sum()
print("Total Number of Games lost = "+str(loss_sum))
draw_sum=df['Draw'].sum()
print("Total Number of Games in Draw = "+str(draw_sum))
```

```
Total Number of Games Won = 53
Total Number of Games lost = 12
Total Number of Games in Draw = 11
```

In [16]:
```
y=np.array([win_sum,loss_sum,draw_sum])
mylabels=["Win","Loss","Draw"]
explode = [0.1,0,0.03]
textprops = {"fontsize":20}
plt.pie(y, labels = mylabels, explode=explode,radius = 2.0,shadow = True,textprops =tex
plt.show()
#Pie Chart showing the proportion of results from both 2014 and '18 FIFA world cups'
```