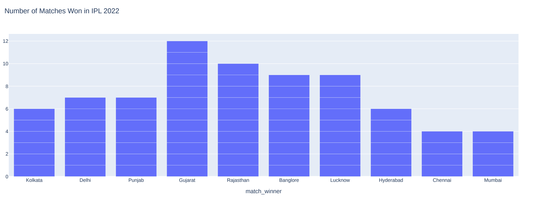
In [1]:
```
import pandas as pd
import plotly.express as px
import plotly.graph_objects as pg
```

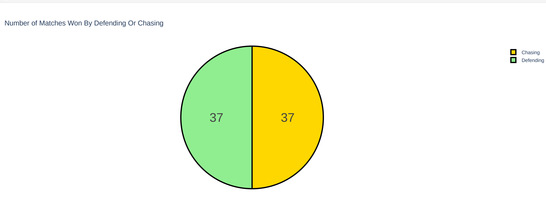
In [2]:
```
#read the data from the CSV file -- table with 5 rows and 20 columns
data = pd.read_csv("D:\Projects_Unlimited\DataScience_IPL-Analysis\Book_ipl22_ver_33.csv")
print(data.head())
```

```
   match_id                 date                    venue  \
0         1  March 26,2022        Wankhede Stadium, Mumbai
1         2  March 27,2022       Brabourne Stadium, Mumbai
2         3  March 27,2022  Dr DY Patil Sports Academy, Mumbai
3         4  March 28,2022        Wankhede Stadium, Mumbai
4         5  March 29,2022  Maharashtra Cricket Association Stadium,Pune

      team1       team2  stage toss_winner toss_decision  first_ings_score  \
0   Chennai     Kolkata  Group     Kolkata         Field               131
1     Delhi      Mumbai  Group       Delhi         Field               177
2  Banglore      Punjab  Group      Punjab         Field               205
3   Gujarat    Lucknow  Group     Gujarat         Field               158
4  Hyderabad  Rajasthan  Group   Hyderabad         Field               210

   first_ings_wkts  second_ings_score  second_ings_wkts match_winner   won_by  \
0                5                133                 4      Kolkata  Wickets
1                5                179                 6        Delhi  Wickets
2                2                208                 5       Punjab  Wickets
3                6                161                 5      Gujarat  Wickets
4                6                149                 7    Rajasthan     Runs

  margin player_of_the_match      top_scorer  highscore      best_bowling  \
0      6      Umesh Yadav          MS Dhoni         50     Dwayne Bravo
1      4    Kuldeep Yadav      Ishan Kishan         81    Kuldeep Yadav
2      5      Odean Smith  Faf du Plessis         88  Mohammed Siraj
3      5   Mohammed Shami     Deepak Hooda         55  Mohammed Shami
4     61       Sanju Samson   Aiden Markram         57  Yuzvendra Chahal

  best_bowling_figure
0                3-20
1                3-18
2                2-59
3                3-25
4                3-22
```

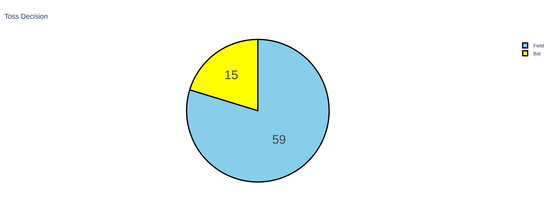
In [3]:
```
#no. of matches won by each team in IPL 2022 -- bar graph
figure = pg.bar(data, x=data["match_winner"],
                title="Number of Matches Won in IPL 2022")
figure.show()
```



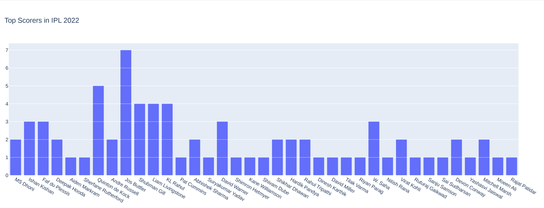
In [4]:
```
#whether most of the teams win by defending or chasing -- pie chart
data["won_by"] = data["won_by"].map({"Wickets": "Chasing", "Runs": "Defending"})
won_by = data["won_by"].value_counts()
label = won_by.index
counts = won_by.values
colors = ['gold','lightgreen']
fig = pg.Figure(data=[pg.Pie(labels=label, values=counts)])
fig.update_layout(title_text='Number of Matches Won By Defending Or Chasing')
fig.update_traces(hoverinfo='label+percent', textinfo='value', textfont_size=30, marker=dict(colors=colors, line=dict(color='black', width=3)))
fig.show()
```



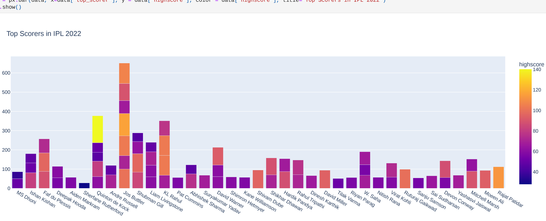
In [5]:
```
#let's see what most teams prefer after winning toss
toss = data["toss_decision"].value_counts()
label = toss.index
counts = toss.values
colors = ['skyblue','yellow']

fig = pg.Figure(data=[pg.Pie(labels=label, values=counts)])
fig.update_layout(title_text='Toss Decision')
fig.update_traces(hoverinfo='label+percent',
                  textinfo='value', textfont_size=30,
                  marker=dict(colors=colors,
                              line=dict(color='black', width=3)))
fig.show()
```



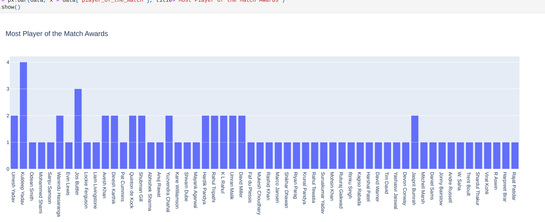
In [6]:
```
#let's see the top scorers of most IPL 2022 matches
figure = px.bar(data, x=data["top_scorer"], title="Top Scorers in IPL 2022")
figure.show()
```



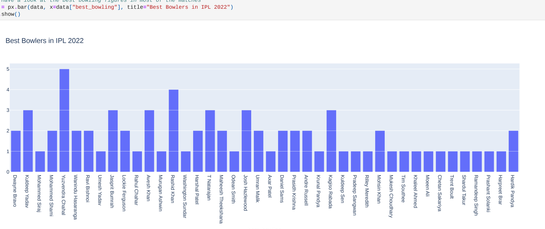
In [7]:
```
#runs scored by top scorers
figure = px.bar(data, x=data["top_scorer"], y = data["highscore"], color = data["highscore"], title="Top Scorers in IPL 2022")
figure.show()
```



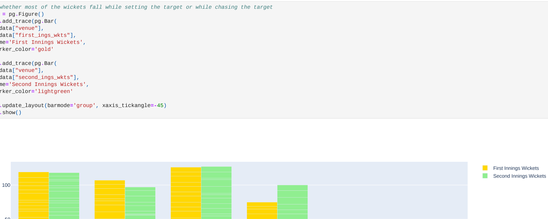
In [8]:
```
#most player of the match awards in IPL 2022
figure = px.bar(data, x = data["player_of_the_match"], title="Most Player of the Match Awards")
figure.show()
```



In [9]:
```
#let's have a look at the best bowling figures in most of the matches
figure = px.bar(data, x=data["best_bowling"], title="Best Bowlers in IPL 2022")
figure.show()
```



In [10]:
```
#know whether most of the wickets fall while setting the target or while chasing the target
figure = pg.Figure()
figure.add_trace(pg.Bar(
    x=data["venue"],
    y=data["first_ings_wkts"],
    name='First Innings Wickets',
    marker_color='gold'
))
figure.add_trace(pg.Bar(
    x=data["venue"],
    y=data["second_ings_wkts"],
    name='Second Innings Wickets',
    marker_colors='lightgreen'
))
figure.update_layout(barmode='group', xaxis_tickangle=-45)
figure.show()
```



In [ ]: