

```
In [347...]: import pandas as pd
```

```
import matplotlib.pyplot as plt
```

```
import seaborn as sns
```

```
In [349...]: df=pd.read_csv(r"D:\Python DA\IPL\auction.csv")
```

```
In [350...]: df
```

Out[350...]

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
0	Daryl Mitchell	Overseas	All-Rounder	Chennai Super Kings	140000000
1	Sameer Rizvi	Indian	Batter	Chennai Super Kings	84000000
2	Shardul Thakur	Indian	All-Rounder	Chennai Super Kings	40000000
3	Mustafizur Rahman	Overseas	Bowler	Chennai Super Kings	20000000
4	Rachin Ravindra	Overseas	All-Rounder	Chennai Super Kings	18000000
5	Avanish Rao Aravelly	Indian	Wicket-Keeper	Chennai Super Kings	2000000
6	Kumar Kushagra	Indian	Wicket-Keeper	Delhi Capitals	72000000
7	Jhye Richardson	Overseas	Bowler	Delhi Capitals	50000000
8	Harry Brook	Overseas	Batter	Delhi Capitals	40000000
9	Sumit Kumar	Indian	All-Rounder	Delhi Capitals	10000000
10	Shai Hope	Overseas	Wicket-Keeper	Delhi Capitals	7500000
11	Tristan Stubbs	Overseas	Wicket-Keeper	Delhi Capitals	5000000
12	Ricky Bhui	Indian	Wicket-Keeper	Delhi Capitals	2000000
13	Swastik Chhikara	Indian	Batter	Delhi Capitals	2000000
14	Rasikh Dar	Indian	Bowler	Delhi Capitals	2000000
15	Spencer Johnson	Overseas	Bowler	Gujarat Titans	100000000
16	Shahrukh Khan	Indian	All-Rounder	Gujarat Titans	74000000
17	Umesh Yadav	Indian	Bowler	Gujarat Titans	58000000
18	Robin Minz	Indian	Wicket-Keeper	Gujarat Titans	36000000
19	Sushant Mishra	Indian	Bowler	Gujarat Titans	22000000
20	Kartik Tyagi	Indian	Bowler	Gujarat Titans	6000000
21	Azmatullah Omarzai	Overseas	All-Rounder	Gujarat Titans	5000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
22	Manav Suthar	Indian	Bowler	Gujarat Titans	2000000
23	Mitchell Starc	Overseas	Bowler	Kolkata Knight Riders	247500000
24	Mujeeb Rahman	Overseas	Bowler	Kolkata Knight Riders	20000000
25	Sherfane Rutherford	Overseas	Batter	Kolkata Knight Riders	15000000
26	Gus Atkinson	Overseas	Bowler	Kolkata Knight Riders	10000000
27	Manish Pandey	Indian	Batter	Kolkata Knight Riders	5000000
28	K.S. Bharat	Indian	Wicket-Keeper	Kolkata Knight Riders	5000000
29	Chetan Sakariya	Indian	Bowler	Kolkata Knight Riders	5000000
30	Angkrish Raghuvanshi	Indian	Batter	Kolkata Knight Riders	2000000
31	Ramandeep Singh	Indian	All-Rounder	Kolkata Knight Riders	2000000
32	Sakib Hussain	Indian	Bowler	Kolkata Knight Riders	2000000
33	Shivam Mavi	Indian	Bowler	Lucknow Super Giants	64000000
34	M. Siddharth	Indian	Bowler	Lucknow Super Giants	24000000
35	David Willey	Overseas	All-Rounder	Lucknow Super Giants	20000000
36	Ashton Turner	Overseas	Batter	Lucknow Super Giants	10000000
37	Arshin Kulkarni	Indian	All-Rounder	Lucknow Super Giants	2000000
38	Mohd. Arshad Khan	Indian	All-Rounder	Lucknow Super Giants	2000000
39	Gerald Coetzee	Overseas	All-Rounder	Mumbai Indians	50000000
40	Nuwan Thushara	Overseas	Bowler	Mumbai Indians	48000000
41	Dilshan Madushanka	Overseas	Bowler	Mumbai Indians	46000000
42	Mohammad Nabi	Overseas	All-Rounder	Mumbai Indians	15000000
43	Shreyas Gopal	Indian	Bowler	Mumbai Indians	2000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
44	Shivalik Sharma	Indian	All-Rounder	Mumbai Indians	2000000
45	Anshul Kamboj	Indian	All-Rounder	Mumbai Indians	2000000
46	Naman Dhir	Indian	All-Rounder	Mumbai Indians	2000000
47	Harshal Patel	Indian	All-Rounder	Punjab Kings	117500000
48	Rilee Rossouw	Overseas	Batter	Punjab Kings	80000000
49	Chris Woakes	Overseas	All-Rounder	Punjab Kings	42000000
50	Tanay Thyagarajann	Indian	All-Rounder	Punjab Kings	2000000
51	Vishwanath Pratap Singh	Indian	All-Rounder	Punjab Kings	2000000
52	Ashutosh Sharma	Indian	All-Rounder	Punjab Kings	2000000
53	Shashank Singh	Indian	Batter	Punjab Kings	2000000
54	Prince Choudhary	Indian	Bowler	Punjab Kings	2000000
55	Rovman Powell	Overseas	Batter	Rajasthan Royals	74000000
56	Shubham Dubey	Indian	Batter	Rajasthan Royals	58000000
57	Nandre Burger	Overseas	Bowler	Rajasthan Royals	5000000
58	Tom Kohler-Cadmore	Overseas	Wicket-Keeper	Rajasthan Royals	4000000
59	Abid Mushtaq	Indian	All-Rounder	Rajasthan Royals	2000000
60	Alzarri Joseph	Overseas	Bowler	Royal Challengers Bengaluru	115000000
61	Yash Dayal	Indian	Bowler	Royal Challengers Bengaluru	50000000
62	Lockie Ferguson	Overseas	Bowler	Royal Challengers Bengaluru	20000000
63	Tom Curran	Overseas	All-Rounder	Royal Challengers Bengaluru	15000000
64	Saurav Chuahan	Indian	Batter	Royal Challengers Bengaluru	2000000
65	Swapnil Singh	Indian	All-Rounder	Royal Challengers Bengaluru	2000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
66	Pat Cummins	Overseas	All-Rounder	Sunrisers Hyderabad	205000000
67	Travis Head	Overseas	Batter	Sunrisers Hyderabad	68000000
68	Jaydev Unadkat	Indian	Bowler	Sunrisers Hyderabad	16000000
69	Wanindu Hasaranga	Overseas	All-Rounder	Sunrisers Hyderabad	15000000
70	Jhathavedh Subramanyan	Indian	Bowler	Sunrisers Hyderabad	2000000
71	Akash Singh	Indian	Bowler	Sunrisers Hyderabad	2000000

In [254...]

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 72 entries, 0 to 71
Data columns (total 5 columns):
 #   Column      Non-Null Count  Dtype  
--- 
 0   PLAYER      72 non-null    object  
 1   NATIONALITY 72 non-null    object  
 2   TYPE         72 non-null    object  
 3   TEAM         72 non-null    object  
 4   PRICE PAID  72 non-null    int64  
dtypes: int64(1), object(4)
memory usage: 2.9+ KB
```

In [256...]

```
pd.set_option('display.max_rows', 100)
df
```

Out[256...]

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
0	Daryl Mitchell	Overseas	All-Rounder	Chennai Super Kings	140000000
1	Sameer Rizvi	Indian	Batter	Chennai Super Kings	84000000
2	Shardul Thakur	Indian	All-Rounder	Chennai Super Kings	40000000
3	Mustafizur Rahman	Overseas	Bowler	Chennai Super Kings	20000000
4	Rachin Ravindra	Overseas	All-Rounder	Chennai Super Kings	18000000
5	Avanish Rao Aravelly	Indian	Wicket-Keeper	Chennai Super Kings	2000000
6	Kumar Kushagra	Indian	Wicket-Keeper	Delhi Capitals	72000000
7	Jhye Richardson	Overseas	Bowler	Delhi Capitals	50000000
8	Harry Brook	Overseas	Batter	Delhi Capitals	40000000
9	Sumit Kumar	Indian	All-Rounder	Delhi Capitals	10000000
10	Shai Hope	Overseas	Wicket-Keeper	Delhi Capitals	7500000
11	Tristan Stubbs	Overseas	Wicket-Keeper	Delhi Capitals	5000000
12	Ricky Bhui	Indian	Wicket-Keeper	Delhi Capitals	2000000
13	Swastik Chhikara	Indian	Batter	Delhi Capitals	2000000
14	Rasikh Dar	Indian	Bowler	Delhi Capitals	2000000
15	Spencer Johnson	Overseas	Bowler	Gujarat Titans	100000000
16	Shahrukh Khan	Indian	All-Rounder	Gujarat Titans	74000000
17	Umesh Yadav	Indian	Bowler	Gujarat Titans	58000000
18	Robin Minz	Indian	Wicket-Keeper	Gujarat Titans	36000000
19	Sushant Mishra	Indian	Bowler	Gujarat Titans	22000000
20	Kartik Tyagi	Indian	Bowler	Gujarat Titans	6000000
21	Azmatullah Omarzai	Overseas	All-Rounder	Gujarat Titans	5000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
22	Manav Suthar	Indian	Bowler	Gujarat Titans	2000000
23	Mitchell Starc	Overseas	Bowler	Kolkata Knight Riders	247500000
24	Mujeeb Rahman	Overseas	Bowler	Kolkata Knight Riders	20000000
25	Sherfane Rutherford	Overseas	Batter	Kolkata Knight Riders	15000000
26	Gus Atkinson	Overseas	Bowler	Kolkata Knight Riders	10000000
27	Manish Pandey	Indian	Batter	Kolkata Knight Riders	5000000
28	K.S. Bharat	Indian	Wicket-Keeper	Kolkata Knight Riders	5000000
29	Chetan Sakariya	Indian	Bowler	Kolkata Knight Riders	5000000
30	Angkrish Raghuvanshi	Indian	Batter	Kolkata Knight Riders	2000000
31	Ramandeep Singh	Indian	All-Rounder	Kolkata Knight Riders	2000000
32	Sakib Hussain	Indian	Bowler	Kolkata Knight Riders	2000000
33	Shivam Mavi	Indian	Bowler	Lucknow Super Giants	64000000
34	M. Siddharth	Indian	Bowler	Lucknow Super Giants	24000000
35	David Willey	Overseas	All-Rounder	Lucknow Super Giants	20000000
36	Ashton Turner	Overseas	Batter	Lucknow Super Giants	10000000
37	Arshin Kulkarni	Indian	All-Rounder	Lucknow Super Giants	2000000
38	Mohd. Arshad Khan	Indian	All-Rounder	Lucknow Super Giants	2000000
39	Gerald Coetzee	Overseas	All-Rounder	Mumbai Indians	50000000
40	Nuwan Thushara	Overseas	Bowler	Mumbai Indians	48000000
41	Dilshan Madushanka	Overseas	Bowler	Mumbai Indians	46000000
42	Mohammad Nabi	Overseas	All-Rounder	Mumbai Indians	15000000
43	Shreyas Gopal	Indian	Bowler	Mumbai Indians	2000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
44	Shivalik Sharma	Indian	All-Rounder	Mumbai Indians	2000000
45	Anshul Kamboj	Indian	All-Rounder	Mumbai Indians	2000000
46	Naman Dhir	Indian	All-Rounder	Mumbai Indians	2000000
47	Harshal Patel	Indian	All-Rounder	Punjab Kings	117500000
48	Rilee Rossouw	Overseas	Batter	Punjab Kings	80000000
49	Chris Woakes	Overseas	All-Rounder	Punjab Kings	42000000
50	Tanay Thyagarajann	Indian	All-Rounder	Punjab Kings	2000000
51	Vishwanath Pratap Singh	Indian	All-Rounder	Punjab Kings	2000000
52	Ashutosh Sharma	Indian	All-Rounder	Punjab Kings	2000000
53	Shashank Singh	Indian	Batter	Punjab Kings	2000000
54	Prince Choudhary	Indian	Bowler	Punjab Kings	2000000
55	Rovman Powell	Overseas	Batter	Rajasthan Royals	74000000
56	Shubham Dubey	Indian	Batter	Rajasthan Royals	58000000
57	Nandre Burger	Overseas	Bowler	Rajasthan Royals	5000000
58	Tom Kohler-Cadmore	Overseas	Wicket-Keeper	Rajasthan Royals	4000000
59	Abid Mushtaq	Indian	All-Rounder	Rajasthan Royals	2000000
60	Alzarri Joseph	Overseas	Bowler	Royal Challengers Bengaluru	115000000
61	Yash Dayal	Indian	Bowler	Royal Challengers Bengaluru	50000000
62	Lockie Ferguson	Overseas	Bowler	Royal Challengers Bengaluru	20000000
63	Tom Curran	Overseas	All-Rounder	Royal Challengers Bengaluru	15000000
64	Saurav Chuahan	Indian	Batter	Royal Challengers Bengaluru	2000000
65	Swapnil Singh	Indian	All-Rounder	Royal Challengers Bengaluru	2000000

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
66	Pat Cummins	Overseas	All-Rounder	Sunrisers Hyderabad	205000000
67	Travis Head	Overseas	Batter	Sunrisers Hyderabad	68000000
68	Jaydev Unadkat	Indian	Bowler	Sunrisers Hyderabad	16000000
69	Wanindu Hasaranga	Overseas	All-Rounder	Sunrisers Hyderabad	15000000
70	Jhathavedh Subramanyan	Indian	Bowler	Sunrisers Hyderabad	2000000
71	Akash Singh	Indian	Bowler	Sunrisers Hyderabad	2000000

```
In [258...]: df.sort_values(by='PRICE PAID', ascending=False).head(10)
```

	PLAYER	NATIONALITY	TYPE	TEAM	PRICE PAID
23	Mitchell Starc	Overseas	Bowler	Kolkata Knight Riders	247500000
66	Pat Cummins	Overseas	All-Rounder	Sunrisers Hyderabad	205000000
0	Daryl Mitchell	Overseas	All-Rounder	Chennai Super Kings	140000000
47	Harshal Patel	Indian	All-Rounder	Punjab Kings	117500000
60	Alzarri Joseph	Overseas	Bowler	Royal Challengers Bengaluru	115000000
15	Spencer Johnson	Overseas	Bowler	Gujarat Titans	100000000
1	Sameer Rizvi	Indian	Batter	Chennai Super Kings	84000000
48	Rilee Rossouw	Overseas	Batter	Punjab Kings	80000000
16	Shahrukh Khan	Indian	All-Rounder	Gujarat Titans	74000000
55	Rovman Powell	Overseas	Batter	Rajasthan Royals	74000000

```
In [260...]: df1 = df.set_index('TEAM')
df1
```

Out[260...]

TEAM	PLAYER	NATIONALITY	TYPE	PRICE PAID
<b>Chennai Super Kings</b>	Daryl Mitchell	Overseas	All-Rounder	140000000
<b>Chennai Super Kings</b>	Sameer Rizvi	Indian	Batter	84000000
<b>Chennai Super Kings</b>	Shardul Thakur	Indian	All-Rounder	40000000
<b>Chennai Super Kings</b>	Mustafizur Rahman	Overseas	Bowler	20000000
<b>Chennai Super Kings</b>	Rachin Ravindra	Overseas	All-Rounder	18000000
<b>Chennai Super Kings</b>	Avanish Rao Aravelly	Indian	Wicket-Keeper	2000000
<b>Delhi Capitals</b>	Kumar Kushagra	Indian	Wicket-Keeper	72000000
<b>Delhi Capitals</b>	Jhye Richardson	Overseas	Bowler	50000000
<b>Delhi Capitals</b>	Harry Brook	Overseas	Batter	40000000
<b>Delhi Capitals</b>	Sumit Kumar	Indian	All-Rounder	10000000
<b>Delhi Capitals</b>	Shai Hope	Overseas	Wicket-Keeper	7500000
<b>Delhi Capitals</b>	Tristan Stubbs	Overseas	Wicket-Keeper	5000000
<b>Delhi Capitals</b>	Ricky Bhui	Indian	Wicket-Keeper	2000000
<b>Delhi Capitals</b>	Swastik Chhikara	Indian	Batter	2000000
<b>Delhi Capitals</b>	Rasikh Dar	Indian	Bowler	2000000
<b>Gujarat Titans</b>	Spencer Johnson	Overseas	Bowler	100000000
<b>Gujarat Titans</b>	Shahrukh Khan	Indian	All-Rounder	74000000
<b>Gujarat Titans</b>	Umesh Yadav	Indian	Bowler	58000000
<b>Gujarat Titans</b>	Robin Minz	Indian	Wicket-Keeper	36000000
<b>Gujarat Titans</b>	Sushant Mishra	Indian	Bowler	22000000
<b>Gujarat Titans</b>	Kartik Tyagi	Indian	Bowler	6000000

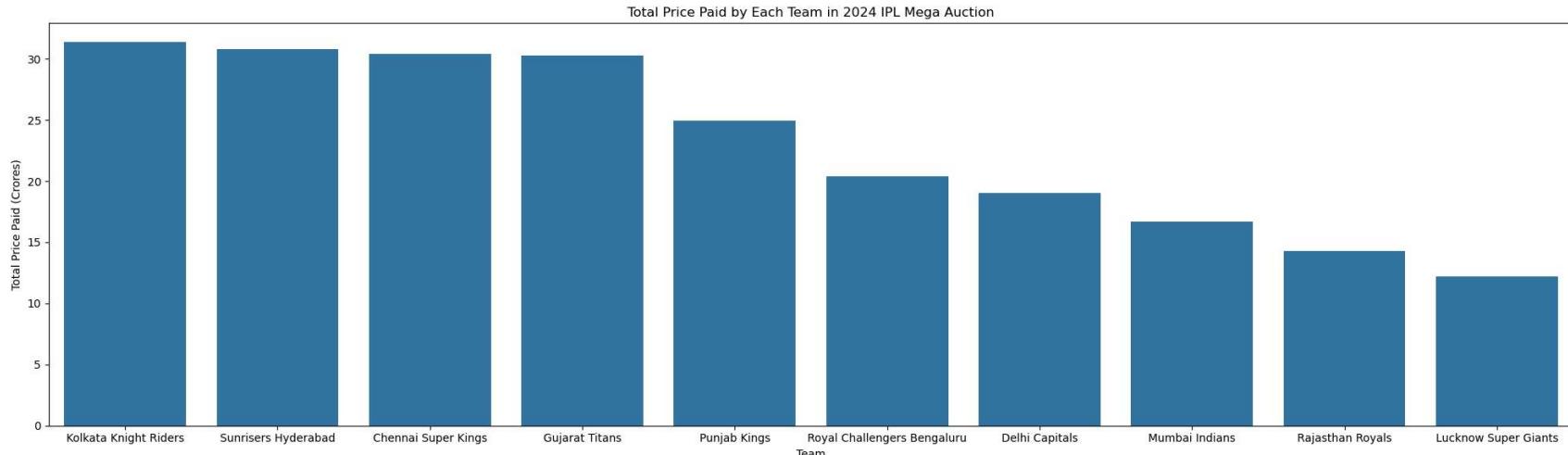
TEAM	PLAYER	NATIONALITY	TYPE	PRICE PAID
Gujarat Titans	Azmatullah Omarzai	Overseas	All-Rounder	5000000
Gujarat Titans	Manav Suthar	Indian	Bowler	2000000
Kolkata Knight Riders	Mitchell Starc	Overseas	Bowler	24750000
Kolkata Knight Riders	Mujeeb Rahman	Overseas	Bowler	20000000
Kolkata Knight Riders	Sherfane Rutherford	Overseas	Batter	15000000
Kolkata Knight Riders	Gus Atkinson	Overseas	Bowler	10000000
Kolkata Knight Riders	Manish Pandey	Indian	Batter	5000000
Kolkata Knight Riders	K.S. Bharat	Indian	Wicket-Keeper	5000000
Kolkata Knight Riders	Chetan Sakariya	Indian	Bowler	5000000
Kolkata Knight Riders	Angkrish Raghuvanshi	Indian	Batter	2000000
Kolkata Knight Riders	Ramandeep Singh	Indian	All-Rounder	2000000
Kolkata Knight Riders	Sakib Hussain	Indian	Bowler	2000000
Lucknow Super Giants	Shivam Mavi	Indian	Bowler	64000000
Lucknow Super Giants	M. Siddharth	Indian	Bowler	24000000
Lucknow Super Giants	David Willey	Overseas	All-Rounder	20000000
Lucknow Super Giants	Ashton Turner	Overseas	Batter	10000000
Lucknow Super Giants	Arshin Kulkarni	Indian	All-Rounder	2000000
Lucknow Super Giants	Mohd. Arshad Khan	Indian	All-Rounder	2000000
Mumbai Indians	Gerald Coetzee	Overseas	All-Rounder	50000000
Mumbai Indians	Nuwan Thushara	Overseas	Bowler	48000000
Mumbai Indians	Dilshan Madushanka	Overseas	Bowler	46000000

TEAM	PLAYER	NATIONALITY	TYPE	PRICE PAID
Mumbai Indians	Mohammad Nabi	Overseas	All-Rounder	15000000
Mumbai Indians	Shreyas Gopal	Indian	Bowler	2000000
Mumbai Indians	Shivalik Sharma	Indian	All-Rounder	2000000
Mumbai Indians	Anshul Kamboj	Indian	All-Rounder	2000000
Mumbai Indians	Naman Dhir	Indian	All-Rounder	2000000
Punjab Kings	Harshal Patel	Indian	All-Rounder	117500000
Punjab Kings	Rilee Rossouw	Overseas	Batter	80000000
Punjab Kings	Chris Woakes	Overseas	All-Rounder	42000000
Punjab Kings	Tanay Thyagarajann	Indian	All-Rounder	2000000
Punjab Kings	Vishwanath Pratap Singh	Indian	All-Rounder	2000000
Punjab Kings	Ashutosh Sharma	Indian	All-Rounder	2000000
Punjab Kings	Shashank Singh	Indian	Batter	2000000
Punjab Kings	Prince Choudhary	Indian	Bowler	2000000
Rajasthan Royals	Rovman Powell	Overseas	Batter	74000000
Rajasthan Royals	Shubham Dubey	Indian	Batter	58000000
Rajasthan Royals	Nandre Burger	Overseas	Bowler	5000000
Rajasthan Royals	Tom Kohler-Cadmore	Overseas	Wicket-Keeper	4000000
Rajasthan Royals	Abid Mushtaq	Indian	All-Rounder	2000000
Royal Challengers Bengaluru	Alzarri Joseph	Overseas	Bowler	115000000
Royal Challengers Bengaluru	Yash Dayal	Indian	Bowler	50000000
Royal Challengers Bengaluru	Lockie Ferguson	Overseas	Bowler	20000000

TEAM	PLAYER	NATIONALITY	TYPE	PRICE PAID
<b>TEAM</b>				
Royal Challengers Bengaluru	Tom Curran	Overseas	All-Rounder	15000000
Royal Challengers Bengaluru	Saurav Chuahan	Indian	Batter	2000000
Royal Challengers Bengaluru	Swapnil Singh	Indian	All-Rounder	2000000
Sunrisers Hyderabad	Pat Cummins	Overseas	All-Rounder	205000000
Sunrisers Hyderabad	Travis Head	Overseas	Batter	68000000
Sunrisers Hyderabad	Jaydev Unadkat	Indian	Bowler	16000000
Sunrisers Hyderabad	Wanindu Hasaranga	Overseas	All-Rounder	15000000
Sunrisers Hyderabad	Jhathavedh Subramanyan	Indian	Bowler	2000000
Sunrisers Hyderabad	Akash Singh	Indian	Bowler	2000000

In [329]:

```
team_price = df.groupby('TEAM')['PRICE PAID'].sum().sort_values(ascending=False)
plt.figure(figsize=(20,6))
sns.barplot(x=team_price.index, y=team_price.values / 1e7)
plt.title('Total Price Paid by Each Team in 2024 IPL Mega Auction')
plt.xlabel('Team')
plt.ylabel('Total Price Paid (Crores)')
plt.tight_layout()
plt.show()
```

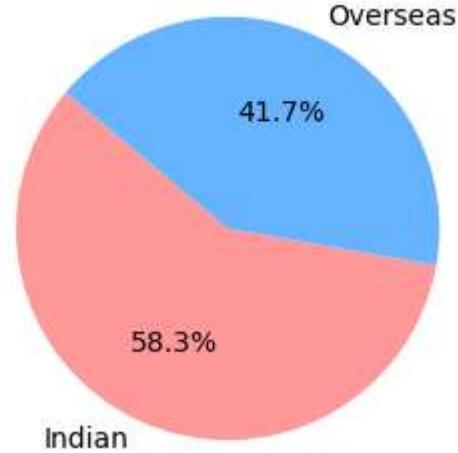


```
In [323...]: team_price
```

```
Out[323...]: TEAM
Kolkata Knight Riders      313500000
Sunrisers Hyderabad        308000000
Chennai Super Kings       304000000
Gujarat Titans             303000000
Punjab Kings               249500000
Royal Challengers Bengaluru 204000000
Delhi Capitals              190500000
Mumbai Indians              167000000
Rajasthan Royals            143000000
Lucknow Super Giants        122000000
Name: PRICE PAID, dtype: int64
```

```
In [387...]: national1 = df['NATIONALITY'].value_counts()
plt.figure(figsize=(3,3))
plt.pie(national1, labels=national1.index, autopct='%1.1f%%', startangle=140, colors=['#ff9999', '#66b3ff'])
plt.title('Indian vs Overseas Players Count')
plt.axis('equal')
plt.show()
```

### Indian vs Overseas Players Count



```
In [263]: df['NATIONALITY'].value_counts()  
df2=df.groupby('NATIONALITY')['PRICE PAID'].sum()
```

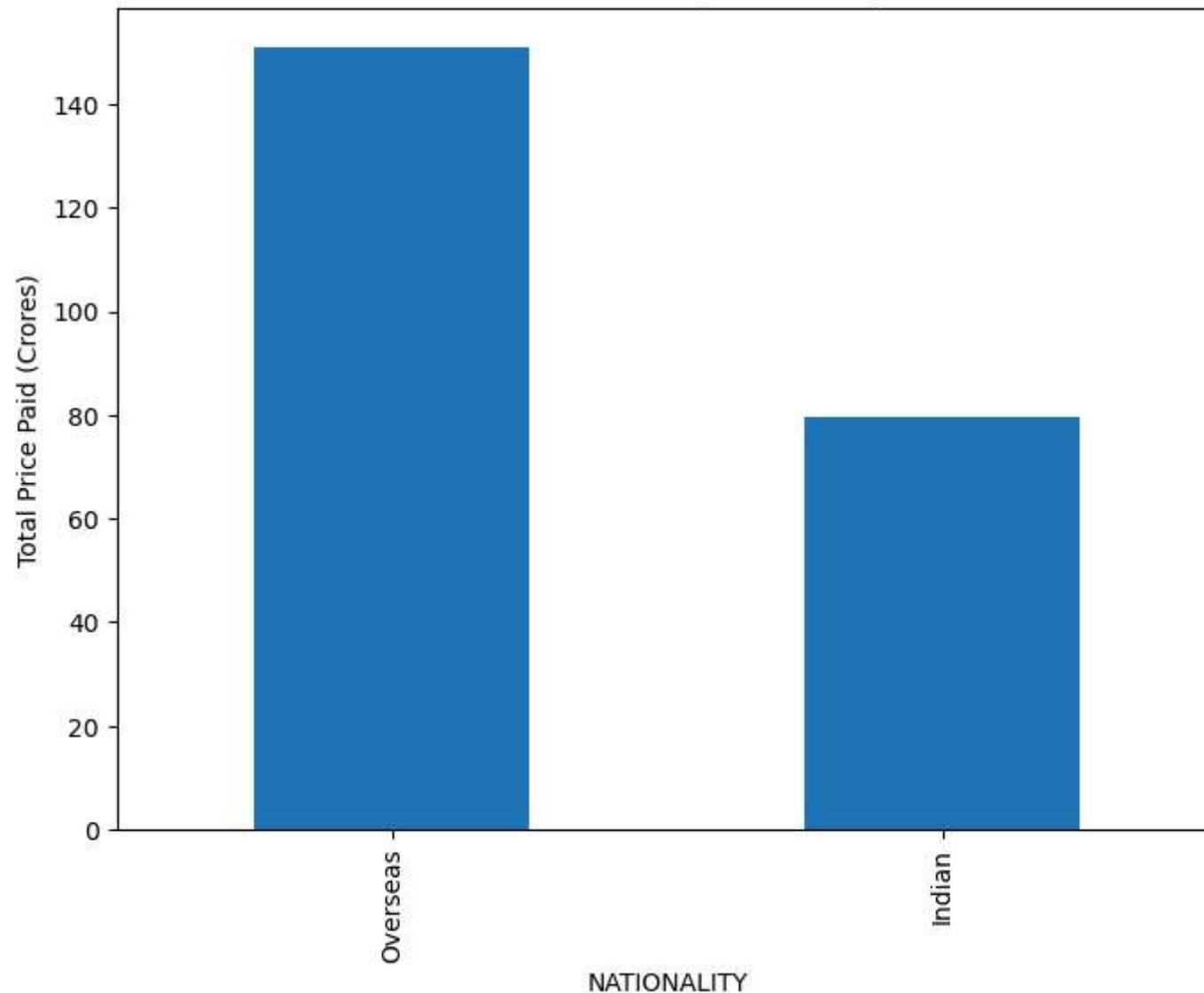
```
In [264]: df2
```

```
Out[264]: NATIONALITY  
Indian      794500000  
Overseas    1510000000  
Name: PRICE PAID, dtype: int64
```

```
In [ ]:
```

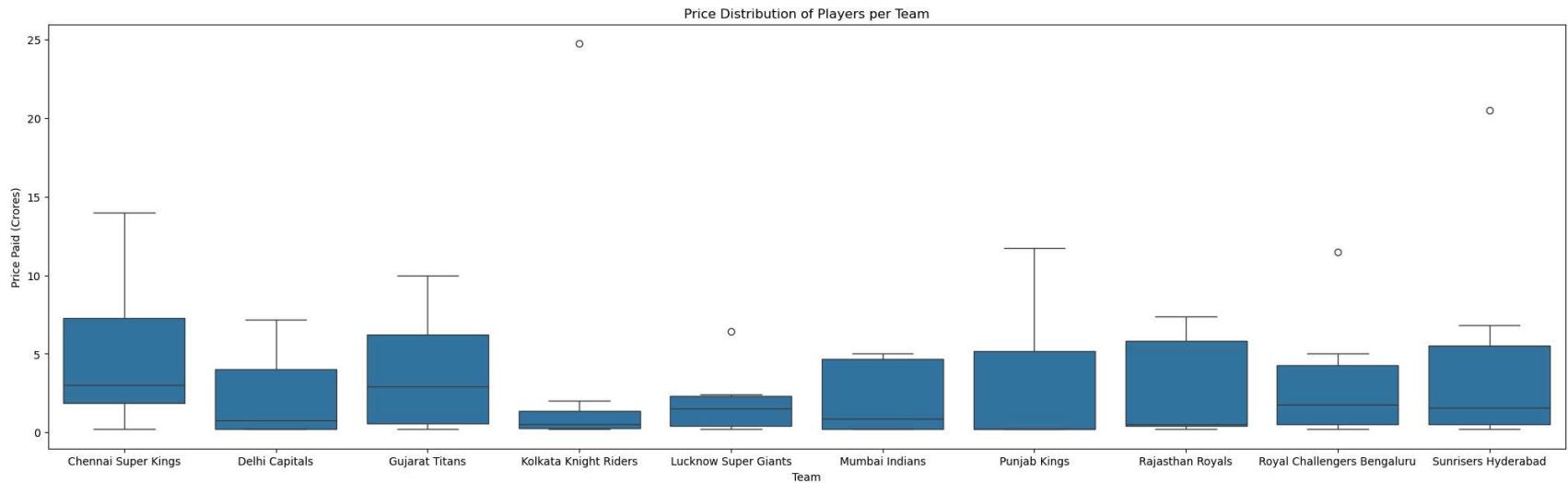
```
In [331]: df3 = df.groupby('NATIONALITY')['PRICE PAID'].sum().sort_values(ascending=False)  
(df3 / 1e7).plot(kind='bar', figsize=(8,6))  
plt.title('Total Price Paid by Nationality')  
plt.ylabel('Total Price Paid (Crores)')  
plt.show()
```

### Total Price Paid by Nationality

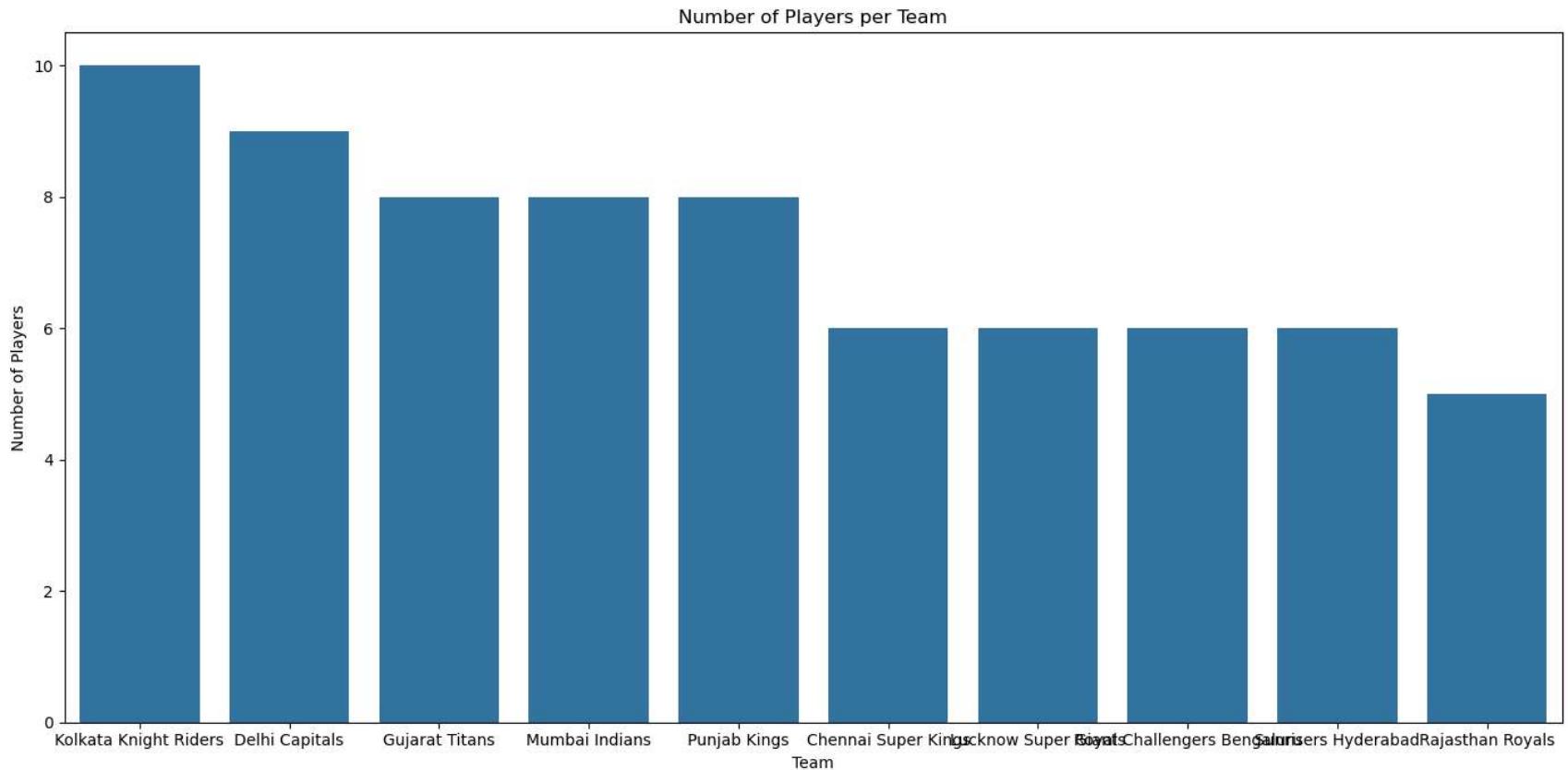


```
In [335]: plt.figure(figsize=(25,7))
df['PRICE PAID Crores'] = df['PRICE PAID'] / 1e7
sns.boxplot(data=df, x='TEAM', y='PRICE PAID Crores')
plt.title('Price Distribution of Players per Team')
plt.xlabel('Team')
```

```
plt.ylabel('Price Paid (Crores)')
plt.show()
```



```
In [307]: team_counts = df['TEAM'].value_counts().reset_index()
team_counts.columns = ['TEAM', 'Number of Players']
plt.figure(figsize=(14,7))
sns.barplot(data=team_counts, x='TEAM', y='Number of Players')
plt.title('Number of Players per Team')
plt.xlabel('Team')
plt.ylabel('Number of Players')
plt.tight_layout()
plt.show()
```



```
In [315]: df5 = df.sort_values(by='PRICE PAID', ascending=False).head(10)
# Create new column with "Player Name (Team)"
df5['Player_with_Team'] = df5['PLAYER'] + ' (' + df5['TEAM'] + ')'
players_display = df5[['Player_with_Team', 'PRICE PAID']]
players_display
```

Out[315...]

	Player_with_Team	PRICE PAID
23	Mitchell Starc (Kolkata Knight Riders)	247500000
66	Pat Cummins (Sunrisers Hyderabad)	205000000
0	Daryl Mitchell (Chennai Super Kings)	140000000
47	Harshal Patel (Punjab Kings)	117500000
60	Alzarri Joseph (Royal Challengers Bengaluru)	115000000
15	Spencer Johnson (Gujarat Titans)	100000000
1	Sameer Rizvi (Chennai Super Kings)	84000000
48	Rilee Rossouw (Punjab Kings)	80000000
16	Shahrukh Khan (Gujarat Titans)	74000000
55	Rovman Powell (Rajasthan Royals)	74000000

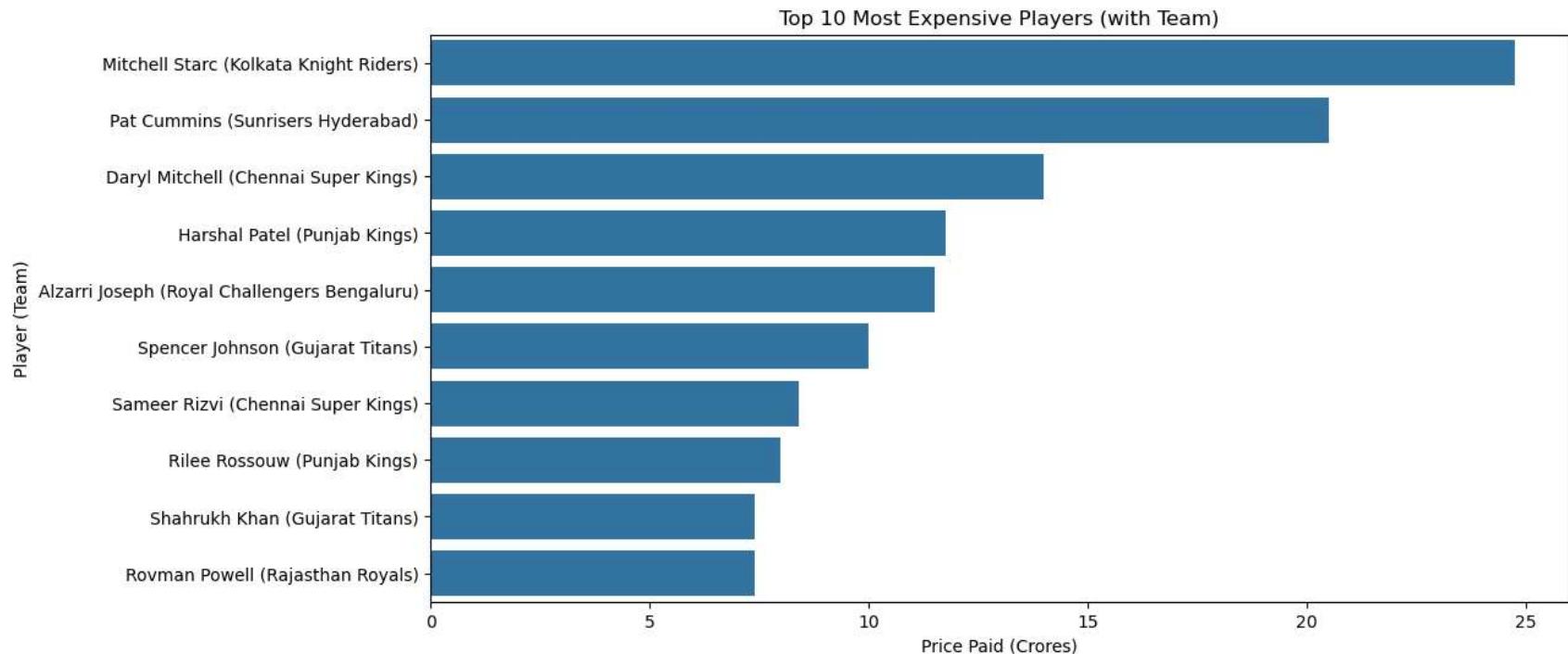
In [341...]

```
players_display['PRICE PAID Crores'] = players_display['PRICE PAID'] / 1e7
plt.figure(figsize=(12,6))
sns.barplot(x='PRICE PAID Crores', y='Player_with_Team', data=players_display)
plt.title('Top 10 Most Expensive Players (with Team)')
plt.xlabel('Price Paid (Crores)')
plt.ylabel('Player (Team)')
plt.show()
```

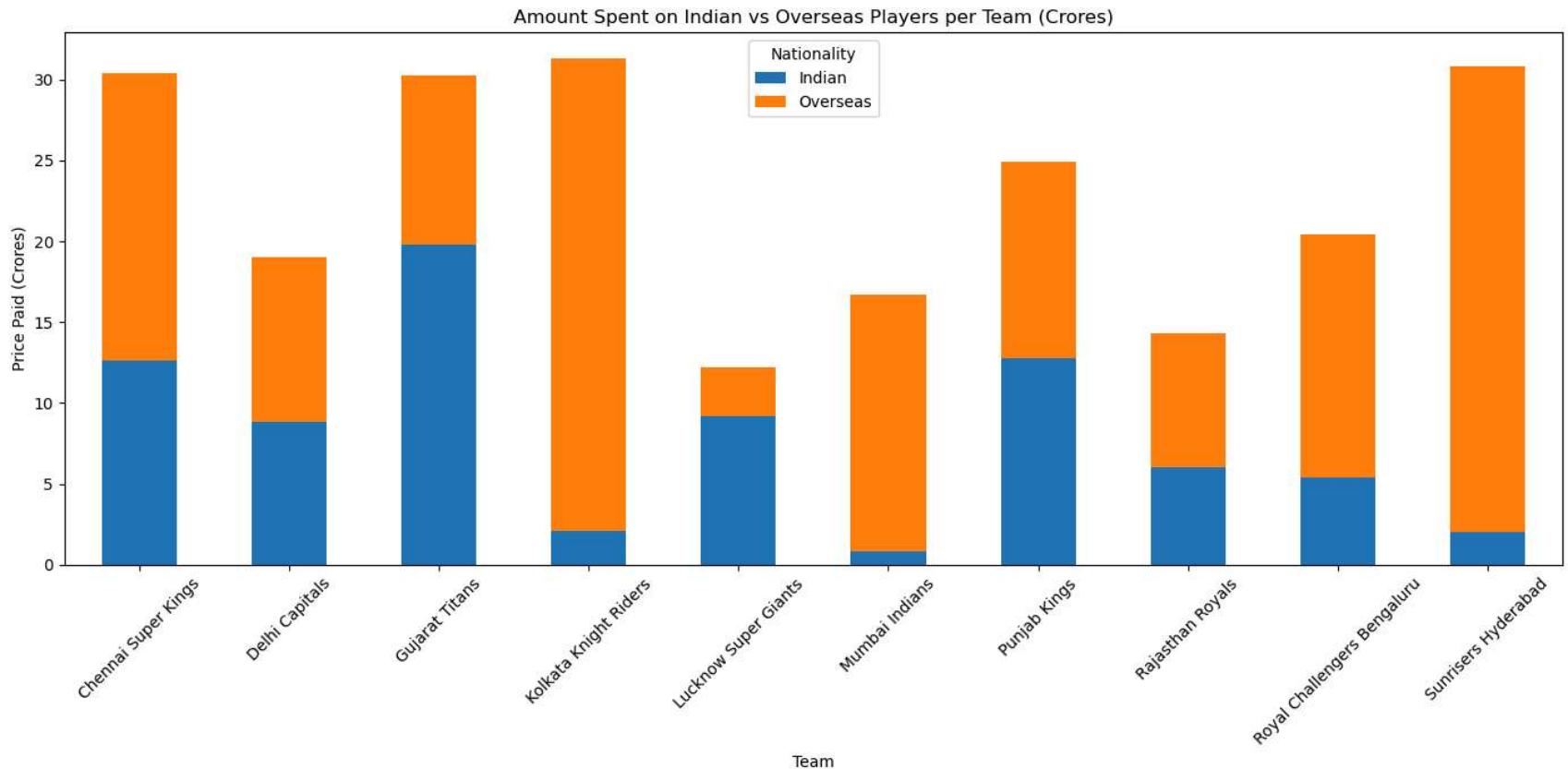
C:\Users\HP\AppData\Local\Temp\ipykernel\_12452\1546672910.py:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy)

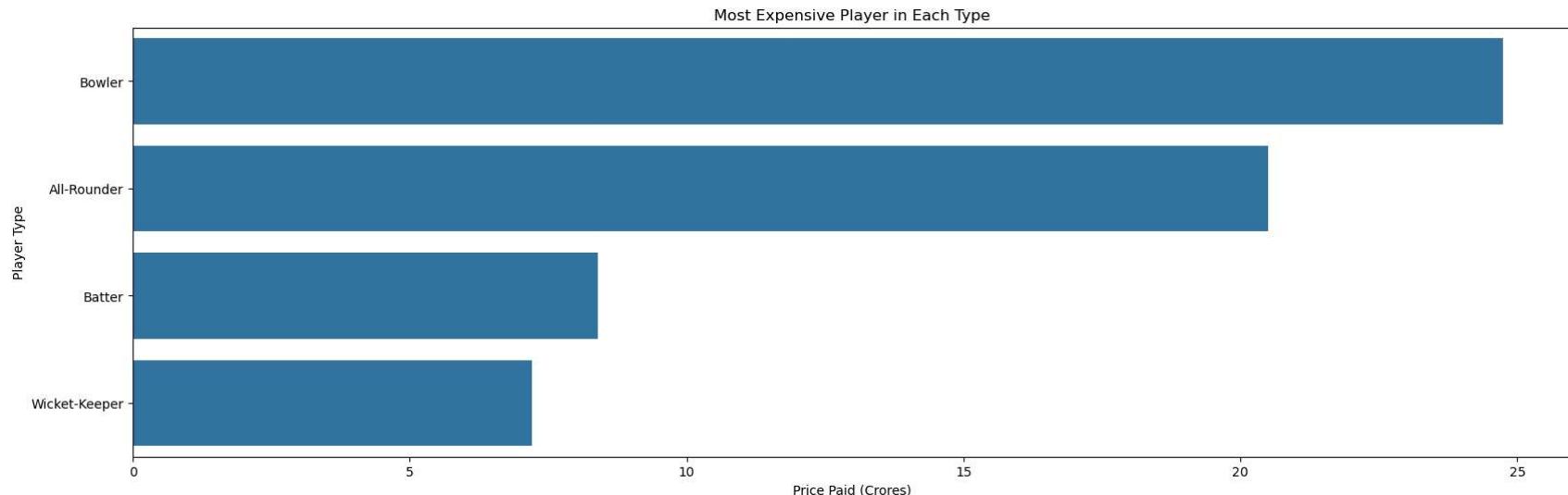
```
players_display['PRICE PAID Crores'] = players_display['PRICE PAID'] / 1e7
```



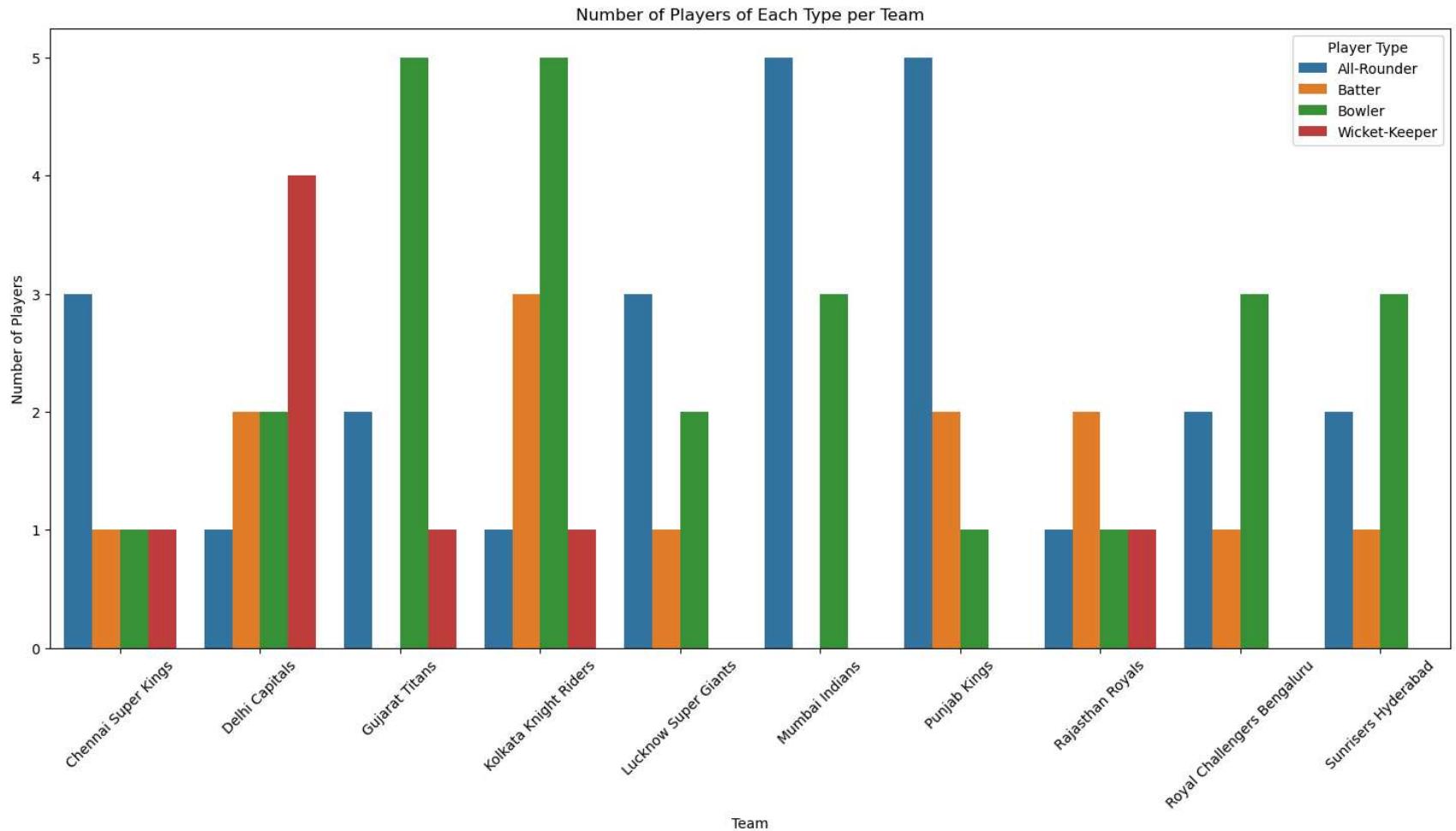
```
In [355...]: team_nationality_price = df.groupby(['TEAM', 'NATIONALITY'])['PRICE PAID'].sum().unstack().fillna(0) / 1e7
team_nationality_price.plot(kind='bar', stacked=True, figsize=(14,7))
plt.title('Amount Spent on Indian vs Overseas Players per Team (Crores)')
plt.ylabel('Price Paid (Crores)')
plt.xlabel('Team')
plt.legend(title='Nationality')
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```



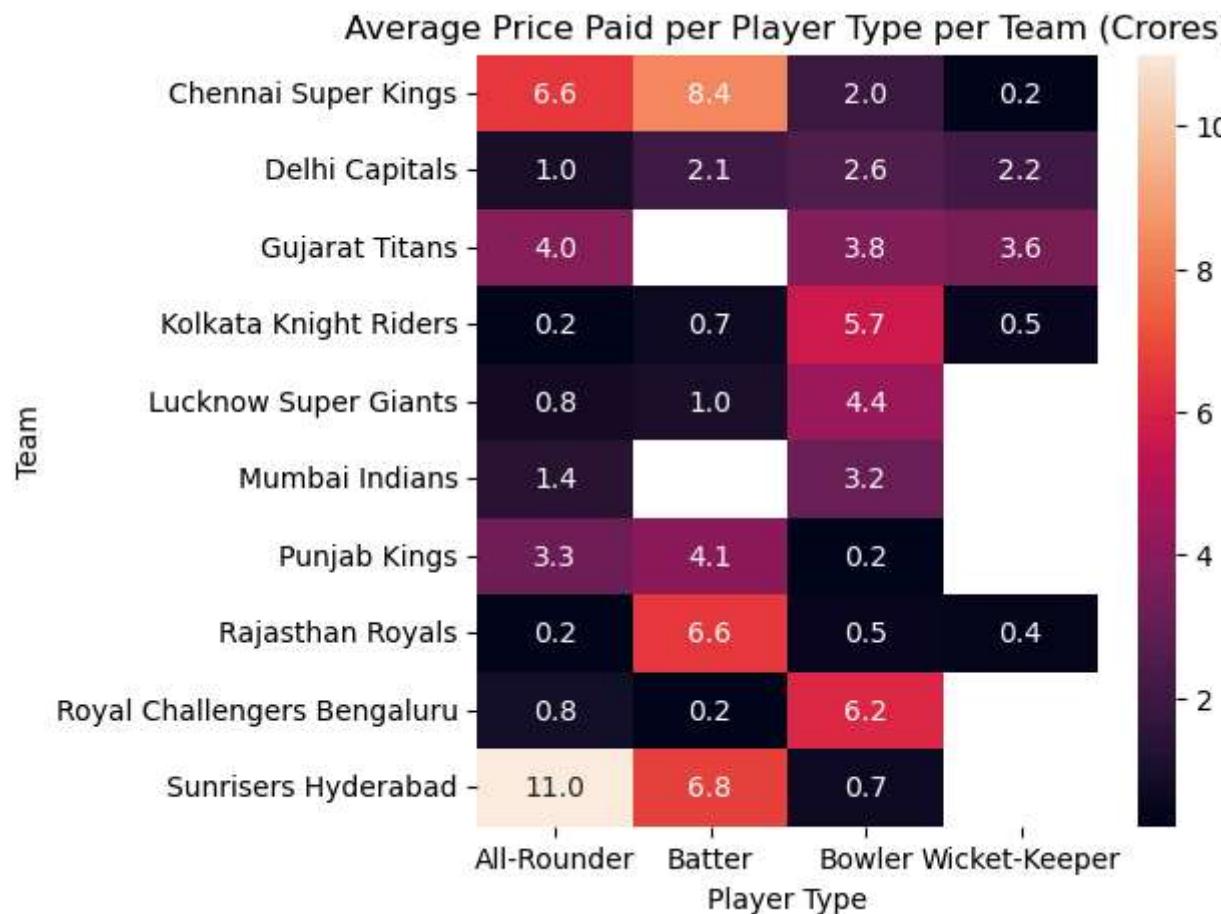
```
In [383]:  
    type_df = df.loc[df.groupby('TYPE')['PRICE PAID'].idxmax()]  
    type_df = type_df.sort_values(by='PRICE PAID', ascending=False)  
    plt.figure(figsize=(20,6))  
    sns.barplot(x=type_df['PRICE PAID'] / 1e7, y=type_df['TYPE'])  
    plt.title('Most Expensive Player in Each Type')  
    plt.xlabel('Price Paid (Crores)')  
    plt.ylabel('Player Type')  
    plt.show()
```



```
In [401]: plt.figure(figsize=(18,8))
sns.countplot(x='TEAM', hue='TYPE', data=df)
plt.title('Number of Players of Each Type per Team')
plt.xlabel('Team')
plt.ylabel('Number of Players')
plt.xticks(rotation=45)
plt.legend(title='Player Type')
plt.show()
```



```
In [399]: pivot = df.pivot_table(index='TEAM', columns='TYPE', values='PRICE PAID', aggfunc='mean') / 1e7
plt.figure(figsize=(5,5))
sns.heatmap(pivot, annot=True, fmt='.1f')
plt.title('Average Price Paid per Player Type per Team (Crores)')
plt.ylabel('Team')
plt.xlabel('Player Type')
plt.show()
```



In [ ]:

In [ ]:

In [ ]: