MINI PROJECT 3

Using the below dataset of fifa players dataset. Perform Exploratory data analysis and find the following insights: 1.Which country has the most number of players (score :1) 2.Plot a bar chart of 5 top countries with the most number of players. (score :1) 3.Which player has the highest salary? (score :1) 4.Plot a histogram to get the salary range of the players. (score :1) 5.Who is the tallest player in the fifa? (score :1) 6.Which club has the most number of players? (score :1) 7.Which foot is most preferred by the players?Draw a bar chart for preferred foot (score :1)

In addition, Data Story - Describe the insights you gained from each question. (score :2) Timely submission (score :1) Total score : 10

Dataset : https://drive.google.com/file/d/10oyIT1KPdwUqeU9-2LX0xE5-ZytNn9su/view?usp=share_link (https://drive.google.com/file/d/10oyIT1KPdwUqeU9-2LX0xE5-ZytNn9su/view?usp=share_link)

In [6]:
```
import pandas as pd
data=pd.read_csv("C:/Users/sheej/OneDrive/Desktop/jupyternotebook/ASSIGNMEN
print(data)
```

```
       Unnamed: 0      ID                Name  Age  \
0               0  158023            L. Messi   31
1               1   20801   Cristiano Ronaldo   33
2               2  190871           Neymar Jr   26
3               3  193080              De Gea   27
4               4  192985        K. De Bruyne   27
...           ...     ...                 ...  ...
18202       18202  238813        J. Lundstram   19
18203       18203  243165  N. Christoffersson   19
18204       18204  241638           B. Worman   16
18205       18205  246268      D. Walker-Rice   17
18206       18206  246269           G. Nugent   16

                                                   Photo Nationality  \
0      https://cdn.sofifa.org/players/4/19/158023.png (https://cdn.sofifa.
org/players/4/19/158023.png)   Argentina
1       https://cdn.sofifa.org/players/4/19/20801.png (https://cdn.sofifa.
org/players/4/19/20801.png)    Portugal
2      https://cdn.sofifa.org/players/4/19/190871.png (https://cdn.sofifa.
org/players/4/19/190871.png)      Brazil
3      https://cdn.sofifa.org/players/4/19/193080.png (https://cdn.sofifa.
org/players/4/19/193080.png)       Spain
4      https://cdn.sofifa.org/players/4/19/192985.png (https://cdn.sofifa.
org/players/4/19/192985.png)     Belgium
...                                                  ...         ...
18202  https://cdn.sofifa.org/players/4/19/238813.png (https://cdn.sofifa.
org/players/4/19/238813.png)     England
18203  https://cdn.sofifa.org/players/4/19/243165.png (https://cdn.sofifa.
org/players/4/19/243165.png)      Sweden
18204  https://cdn.sofifa.org/players/4/19/241638.png (https://cdn.sofifa.
org/players/4/19/241638.png)     England
18205  https://cdn.sofifa.org/players/4/19/246268.png (https://cdn.sofifa.
org/players/4/19/246268.png)     England
18206  https://cdn.sofifa.org/players/4/19/246269.png (https://cdn.sofifa.
org/players/4/19/246269.png)     England

                                      Flag  Overall  Potential  \
0      https://cdn.sofifa.org/flags/52.png (https://cdn.sofifa.org/flags/5
2.png)       94         94
1      https://cdn.sofifa.org/flags/38.png (https://cdn.sofifa.org/flags/3
8.png)       94         94
2      https://cdn.sofifa.org/flags/54.png (https://cdn.sofifa.org/flags/5
4.png)       92         93
3      https://cdn.sofifa.org/flags/45.png (https://cdn.sofifa.org/flags/4
5.png)       91         93
4       https://cdn.sofifa.org/flags/7.png (https://cdn.sofifa.org/flags/
7.png)       91         92
...                                        ...      ...        ...
18202  https://cdn.sofifa.org/flags/14.png (https://cdn.sofifa.org/flags/1
4.png)       47         65
18203  https://cdn.sofifa.org/flags/46.png (https://cdn.sofifa.org/flags/4
6.png)       47         63
18204  https://cdn.sofifa.org/flags/14.png (https://cdn.sofifa.org/flags/1
4.png)       47         67
18205  https://cdn.sofifa.org/flags/14.png (https://cdn.sofifa.org/flags/1
4.png)       47         66
18206  https://cdn.sofifa.org/flags/14.png (https://cdn.sofifa.org/flags/1
4.png)       46         66

                     Club  ... Composure Marking StandingTackle  \
0             FC Barcelona  ...      96.0    33.0           28.0
```

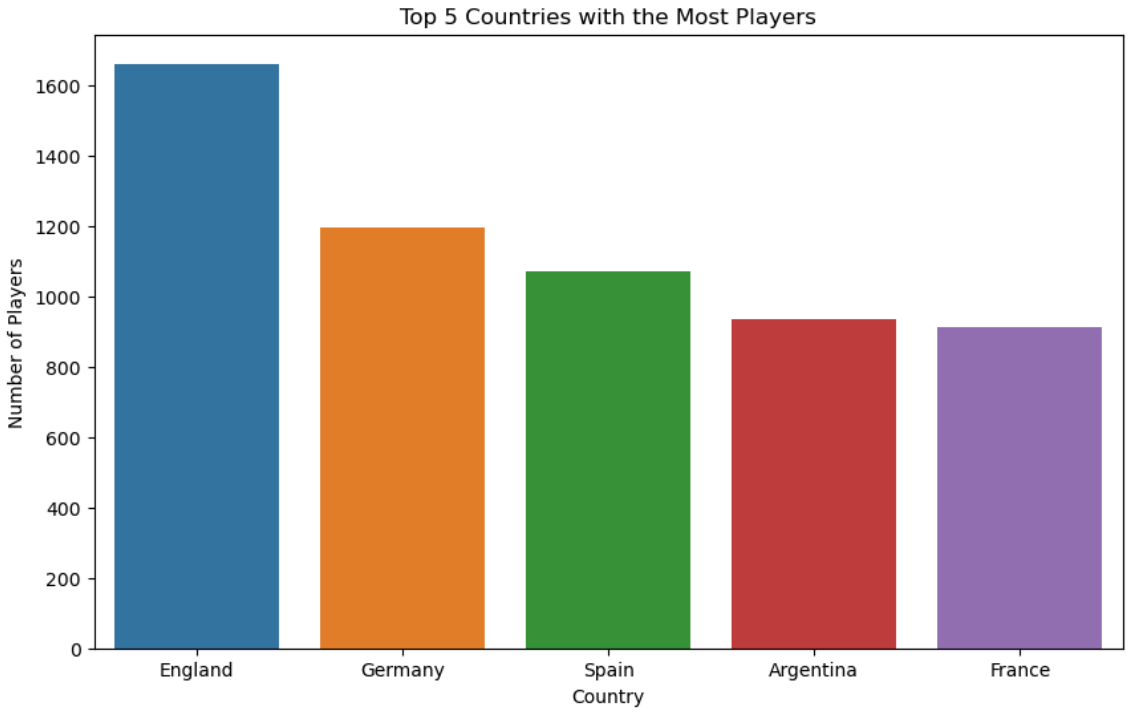
```
1                Juventus  ...      95.0    28.0          31.0
2      Paris Saint-Germain  ...      94.0    27.0          24.0
3        Manchester United  ...      68.0    15.0          21.0
4          Manchester City  ...      88.0    68.0          58.0
...                    ...  ...       ...     ...           ...
18202      Crewe Alexandra  ...      45.0    40.0          48.0
18203       Trelleborgs FF  ...      42.0    22.0          15.0
18204     Cambridge United  ...      41.0    32.0          13.0
18205      Tranmere Rovers  ...      46.0    20.0          25.0
18206      Tranmere Rovers  ...      43.0    40.0          43.0

       SlidingTackle GKDiving  GKHandling  GKKicking  GKPositioning  \
0               26.0      6.0        11.0       15.0           14.0
1               23.0      7.0        11.0       15.0           14.0
2               33.0      9.0         9.0       15.0           15.0
3               13.0     90.0        85.0       87.0           88.0
4               51.0     15.0        13.0        5.0           10.0
...              ...      ...         ...        ...            ...
18202           47.0     10.0        13.0        7.0            8.0
18203           19.0     10.0         9.0        9.0            5.0
18204           11.0      6.0         5.0       10.0            6.0
18205           27.0     14.0         6.0       14.0            8.0
18206           50.0     10.0        15.0        9.0           12.0

      GKReflexes Release Clause
0            8.0        €226.5M
1           11.0        €127.1M
2           11.0        €228.1M
3           94.0        €138.6M
4           13.0        €196.4M
...          ...            ...
18202        9.0          €143K
18203       12.0          €113K
18204       13.0          €165K
18205        9.0          €143K
18206        9.0          €165K

[18207 rows x 89 columns]
```

In [8]:

```python
import seaborn as sns
import matplotlib.pyplot as plt

# 1. Which country has the most number of players?
most_players_country = data['Nationality'].value_counts().idxmax()
print("Country with the most players:", most_players_country)
```

```
Country with the most players: England
```

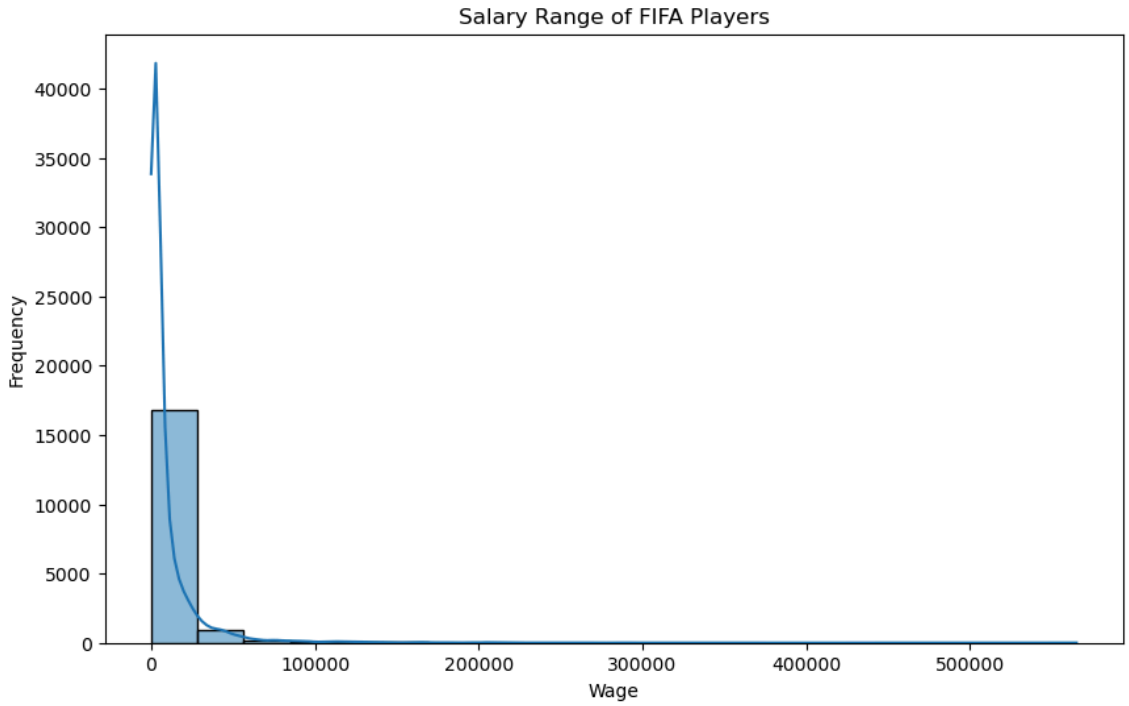
In [9]:
```
# 2. Plot a bar chart of 5 top countries with the most number of players
top_countries = data['Nationality'].value_counts().head(5)
plt.figure(figsize=(10, 6))
sns.barplot(x=top_countries.index, y=top_countries.values)
plt.title('Top 5 Countries with the Most Players')
plt.xlabel('Country')
plt.ylabel('Number of Players')
plt.show()
```



In [23]:
```
# 3. Which player has the highest salary?

# Convert 'Wage' column to string format
data['Wage'] = data['Wage'].astype(str)

# Convert 'Wage' column to numeric format and handle the euro and 'K' symbo
data['Wage'] = pd.to_numeric(data['Wage'].str.replace('€', '').str.replace(

# Now you can find the player with the highest salary
highest_salary_player = data.loc[data['Wage'].idxmax()]
print("Player with the highest salary:", highest_salary_player['Name'])
```

```
Player with the highest salary: L. Messi
```

In [24]:
```
# 4. Plot a histogram to get the salary range of the players
plt.figure(figsize=(10, 6))
sns.histplot(data['Wage'], bins=20, kde=True)
plt.title('Salary Range of FIFA Players')
plt.xlabel('Wage')
plt.ylabel('Frequency')
plt.show()
```



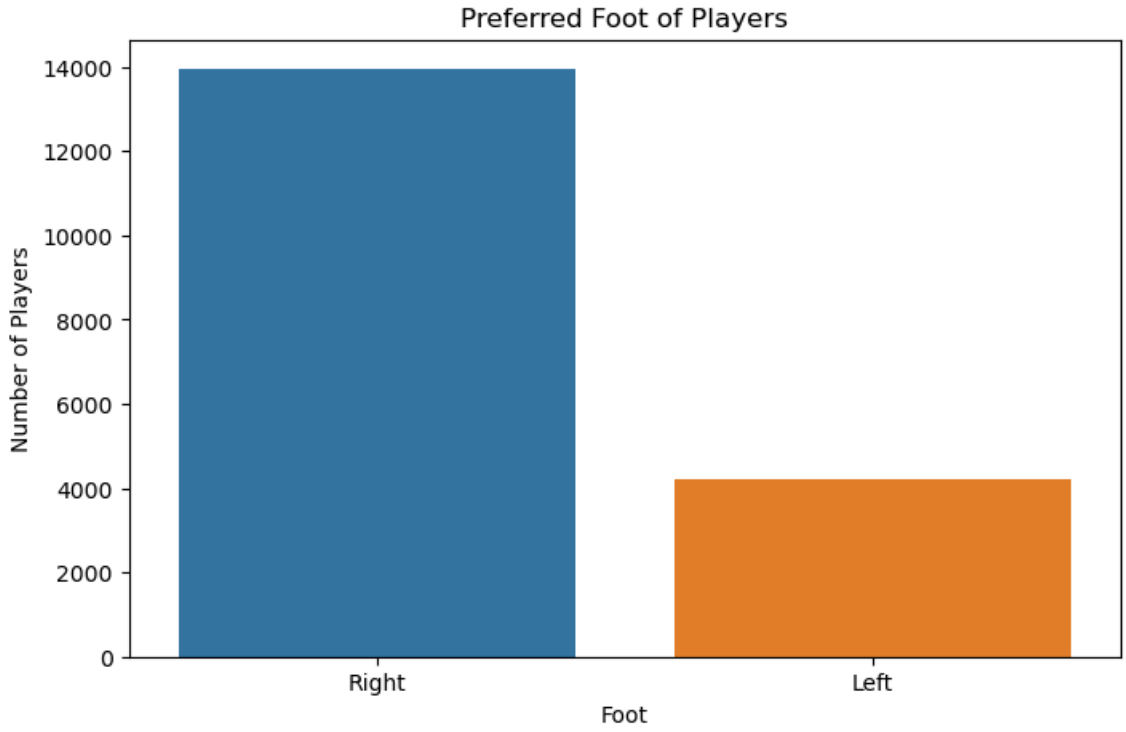
In [35]:
```
# 5. Who is the tallest player in FIFA?
# Convert 'Height' column to numeric format
data['Height'] = pd.to_numeric(data['Height'], errors='coerce')

# Now you can find the tallest player
tallest_player = data.loc[data['Height'].idxmax()]
print("Tallest player in FIFA:", tallest_player['Name'])
```

```
Tallest player in FIFA: T. Holý
```

In [37]:
```
# 6. Which club has the most number of players?
most_players_club = data['Club'].value_counts().idxmax()
print("Club with the most players:", most_players_club)
```

```
Club with the most players: FC Barcelona
```

In [39]:
```
# 7. Which foot is most preferred by the players? Draw a bar chart for pref
preferred_foot = data['Preferred Foot'].value_counts()
plt.figure(figsize=(8, 5))
sns.barplot(x=preferred_foot.index, y=preferred_foot.values)
plt.title('Preferred Foot of Players')
plt.xlabel('Foot')
plt.ylabel('Number of Players')
plt.show()
```



DATA STORY

1. The country with the most players is found to be England. This indicates the country's prominence in producing football talent.
2. The bar chart visually represents the top 5 countries with the most players, providing a clear comparison of player counts among different nations. The top 5 countries are England, Germany, Spain, Argentina, France.
3. The player with the highest salary is L.Messi.
4. The histogram of player salaries gives an overview of the distribution of wages among players, helping understand the salary range.
5. The tallest player in FIFA is T. Holy.
6. The club with the most players is FC Barcelona
7. The bar chart depicting preferred foot provides insights into the dominance of left or right foot among players, aiding in understanding player characteristics. Majority players are right footed.

In [ ]: