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In [1]: # Exercise 1

import pandas as pd

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Find the country with the most players
top_country = fifa_data['Nationality'].value_counts().idxmax()
top_country_count = fifa_data['Nationality'].value_counts().max()

print(f"The country with the most players is {top_country} with {top_country_count} players.")
```

The country with the most players is England with 1662 players.

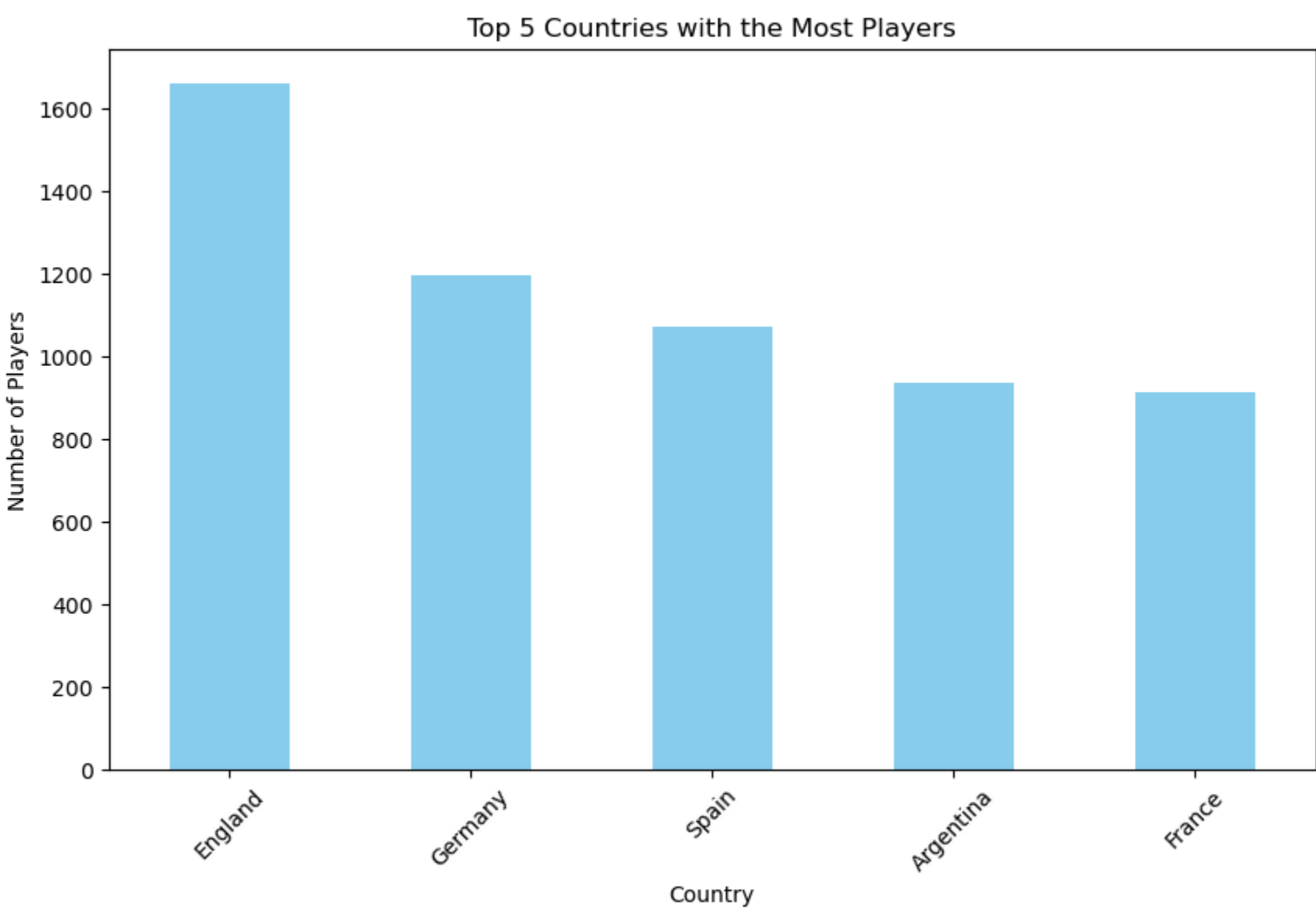
```
In [3]: # Exercise 2

import pandas as pd
import matplotlib.pyplot as plt

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Get the top 5 countries with the most players
top_countries = fifa_data['Nationality'].value_counts().head(5)

# Plotting the bar chart
plt.figure(figsize=(10, 6))
top_countries.plot(kind='bar', color='skyblue')
plt.title('Top 5 Countries with the Most Players')
plt.xlabel('Country')
plt.ylabel('Number of Players')
plt.xticks(rotation=45)
plt.show()
```



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In [5]: # Exercise 3

import pandas as pd

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Convert the salary column to a numeric format if necessary
# Assuming salary is in a column named 'Wage', and it has a format like '€200K'
fifa_data['Wage'] = fifa_data['Wage'].replace(['\K'], '', regex=True).astype(float) * 1000

# Find the player with the highest salary
highest_salary_player = fifa_data.loc[fifa_data['Wage'].idxmax()]

print(f"The player with the highest salary is {highest_salary_player['Name']} with a wage of €{highest_salary_player['Wage']:.2f}.")
```

The player with the highest salary is L. Messi with a wage of €565000.00.

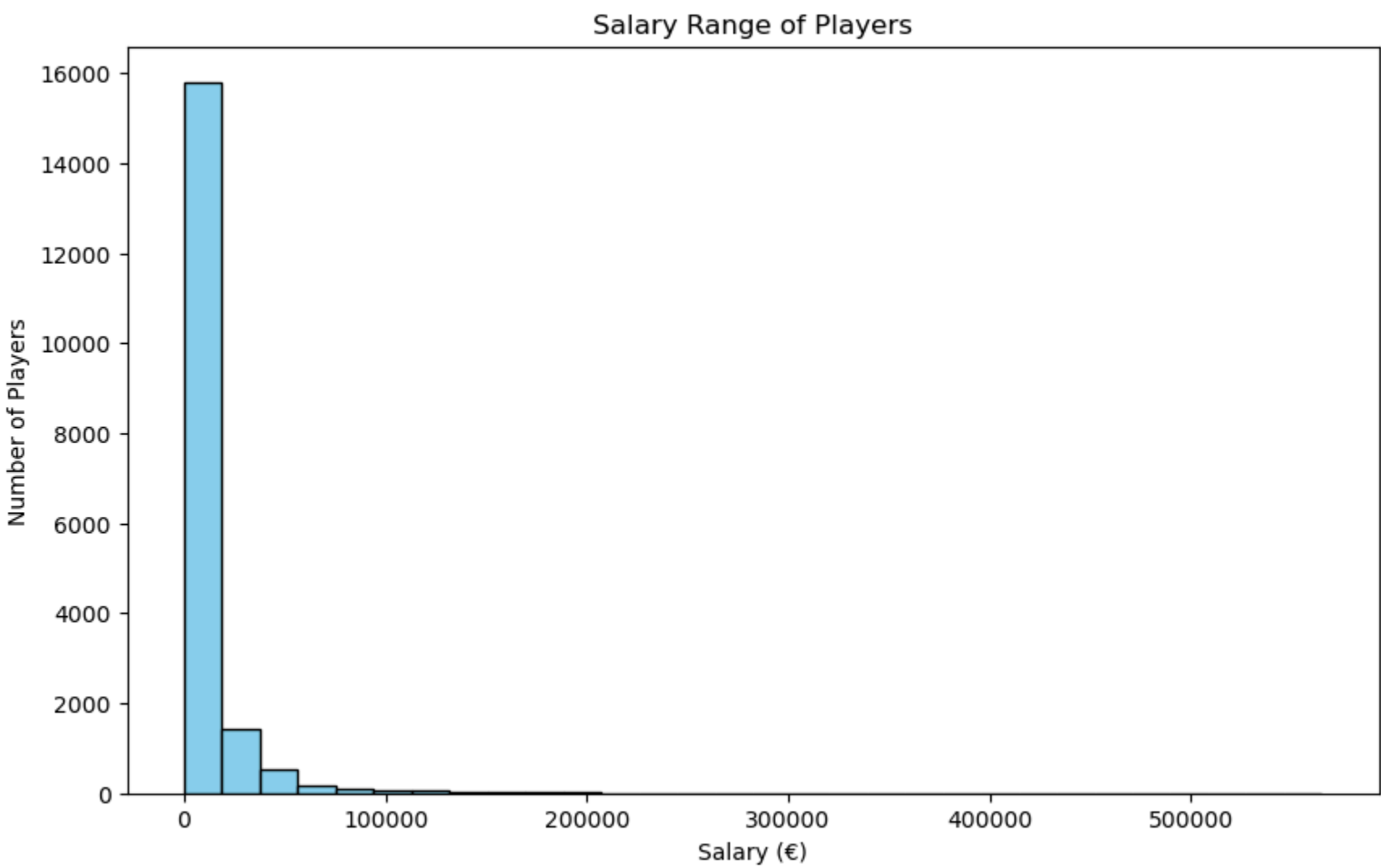
```
In [7]: # Exercise 4

import pandas as pd
import matplotlib.pyplot as plt

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Convert the 'Wage' column to numeric format
fifa_data['Wage'] = fifa_data['Wage'].replace(['\K'], '', regex=True).astype(float) * 1000

# Plot the histogram of player salaries
plt.figure(figsize=(10, 6))
plt.hist(fifa_data['Wage'], bins=30, color='skyblue', edgecolor='black')
plt.title('Salary Range of Players')
plt.xlabel('Salary (€)')
plt.ylabel('Number of Players')
plt.show()
```



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In [13]: # Exercise 5

import pandas as pd

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Convert the 'Height' column to inches, ignoring NaN values
def convert_height_to_inches(height):
    if isinstance(height, str): # Process only if it's a string
        feet, inches = height.split(" ")
        return int(feet) * 12 + int(inches)
    return None # Return None for NaN values

fifa_data['Height_in_inches'] = fifa_data['Height'].apply(convert_height_to_inches)

# Find the tallest player (ignoring NaN values in 'Height_in_inches')
tallest_player = fifa_data.loc[fifa_data['Height_in_inches'].idxmax()]

print(f"The tallest player is {tallest_player['Name']} with a height of {tallest_player['Height']}.")
```

The tallest player is T. Holy with a height of 6'9.

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In [15]: # Exercise 6

import pandas as pd

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Find the club with the most players
top_club = fifa_data['Club'].value_counts().idxmax()
top_club_count = fifa_data['Club'].value_counts().max()

print(f"The club with the most players is {top_club} with {top_club_count} players.")
```

The club with the most players is FC Barcelona with 33 players.

```
In [17]: # Exercise 7

import pandas as pd
import matplotlib.pyplot as plt

# Load the data
fifa_data = pd.read_csv('fifa_data.csv')

# Count the occurrences of each preferred foot
preferred_foot_counts = fifa_data['Preferred Foot'].value_counts()

# Find the most preferred foot
most_preferred_foot = preferred_foot_counts.idxmax()
most_preferred_foot_count = preferred_foot_counts.max()

print(f"The most preferred foot is {most_preferred_foot} with {most_preferred_foot_count} players.")

# Plot a bar chart for preferred foot
plt.figure(figsize=(8, 6))
preferred_foot_counts.plot(kind='bar', color='lightblue', edgecolor='black')
plt.title('Preferred Foot of Players')
plt.xlabel('Preferred Foot')
plt.ylabel('Number of Players')
plt.xticks(rotation=0)
plt.show()
```

The most preferred foot is Right with 13948 players.

