### Number of matches played per year:

As observed in the graph, the number of matches played has shown an increasing trend over the years. The following points are noteworthy:

* There was a lower number of matches recorded between 1939 and 1945, coinciding with the period of World War II. The increasing trend did not recover until the 1950s when the FIFA World Cup resumed.
* Despite the clear upward trend, approximately every four years, there is a decrease in the number of matches played compared to the previous and following years. These years coincide with the FIFA World Cup, and this is mainly because, during these years, there are fewer qualifying matches, which are usually held in large numbers in other years.
* Since around the year 2000, the increasing trend has slowed down and has become more of a consistent alternation.
* A significant dip is observed in the year 2020, the year of the pandemic, making it the year with the fewest matches since 50 years before.

### Matches played by country:

Teams like Germany, South Korea, Hungary, Mexico, and France are regular participants in World Cups and, as well as the first mentioned teams, are expected to be high on this list.

Given my prior knowledge, it is surprising to me that Sweden is the team that has played the most matches in history.

1. **Matches played by tournament:**

### A reasonable hypothesis is that, among official tournaments, the World Cup Qualifiers should have the highest number of matches. It will also confirm that, as seen in the descriptive statistics, the majority of matches in this dataset are friendly matches. It also shows that, after World Cup Qualifiers, the most common matches are qualification games for other major tournaments like the UEFA Euro or the African Cup of Nations.

**4 .Who is the best team of all time :**

* 1. By comapring the top 5 teams we can say that Brazil has won most number of home matches. As we seen before there is always home advantage as a home team playes well in it's home ground.

**5.which teams dominated different eras of football:**

* 1. **Scotland** and **England** dominated the early era of international football.
  2. The **1900s** saw the emergence of **Brazil**, **Argentina**, and other European teams like **Germany** and **Sweden** as dominant forces.
  3. In the **modern era**, teams such as the **United States**, **Mexico**, and **Brazil** continued to perform well, while non-European teams like **Egypt** and **Japan** gained prominence, reflecting the global growth of football.

1. **Which country play with each other the most:**
   1. **Argentina** and **Uruguay** have grabbed the 1st spot with **179** total matches together followed by **Austria** and **Hungry** with **137** matches together.
2. **Which countries host the most matches where they themselves are not participating in :**
   1. **US** has hosted 894 matches in which it not participated. It is followed by **Malaysia**(473 matches) and **Quatar**(372 matches).

### Does hosting a major tournament help a country's chances in the tournament?

* 1. The bar plot shows that **a host country is significantly more likely to win a match**, while a non-host is more likely to lose. This indicates a clear average advantage for host countries

1. **Which teams are the most active in playing friendlies and friendly tournaments - does it help or hurt them:**

**1.High Number of Friendly Matches with High Win Percentages**:

* 1. Teams like **Brazil, Spain, and Italy** show a high number of friendly matches and win percentages above 59%. This indicates that they perform well in friendlies, suggesting that frequent participation may help them stay competitive and fine-tune their strategies.
  2. **Brazil**, in particular, stands out with a very high win percentage (75.8%) and low loss percentage (6.49%). This shows that playing many friendly matches seems to benefit them, allowing them to build momentum and maintain a strong form.

**2.High Number of Friendly Matches with Moderate Win Percentages**:

* 1. Teams like **Mexico, France, and Sweden** have win percentages around 50-56%. This indicates that while they frequently participate in friendly matches, their performance is balanced between wins and losses. For these teams, friendlies may not significantly harm or benefit their competitive form but still provide valuable practice.

1. **High Loss Percentages Despite Frequent Friendlies**:
   1. Teams such as **Austria, Switzerland, and Belgium** have relatively higher loss percentages (over 30%). This suggests that, despite playing many friendlies, they tend to struggle more often. It could indicate that these teams might not be using the friendlies as effectively for preparation or that they face stronger opponents in these matches.
2. **Correlation Between Win Percentages and Tournament Success**:
   1. The teams with higher win percentages in friendlies (e.g., **Brazil, Spain, Italy, England**) are generally more successful in major tournaments, suggesting that consistently strong performance in friendlies may be an indicator of overall team strength and preparedness.
   2. Conversely, teams with lower win percentages may not use friendlies as effectively for preparation, or they may schedule friendlies against stronger opponents, leading to more losses.
3. **Conclusion:**
   * 1. The data suggests that teams actively participating in friendlies can benefit from the practice if they manage to maintain a higher win percentage, as seen with **Brazil, Italy, and Spain**. However, for teams with higher loss rates, frequent friendlies might not provide the same benefit, potentially highlighting areas that need improvement. Thus, playing friendlies can help teams sharpen their skills and strategies, but the impact varies depending on how well they perform in these matches.