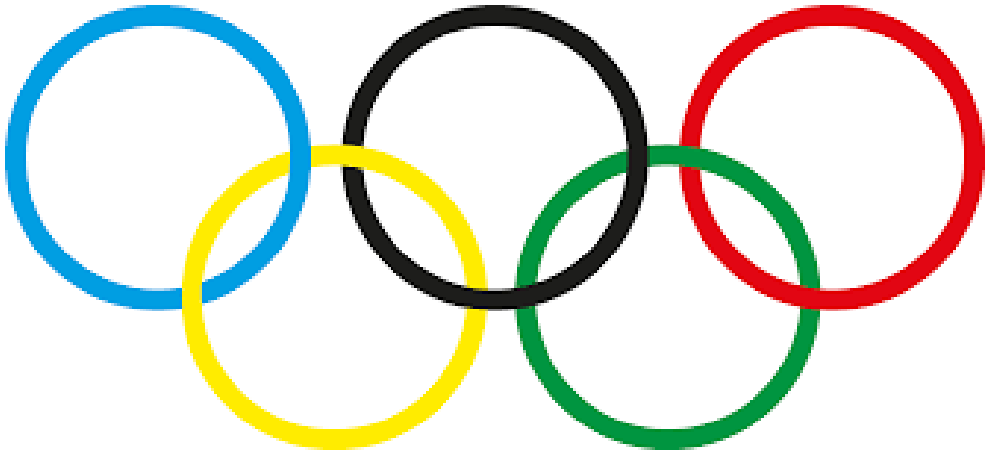
120 Years Of Olympic History: Athletes and Results ANALYSIS



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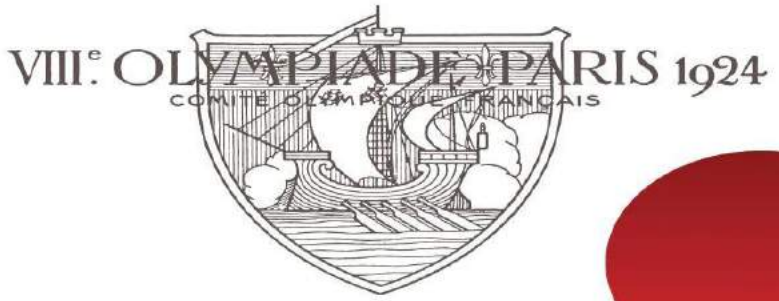
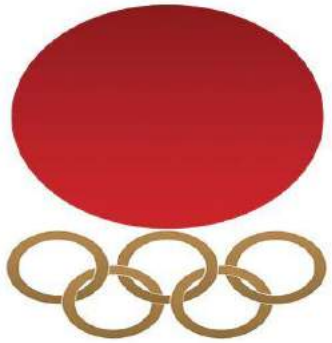
Analysis of 120 years of Winter and Summer Olympics





Contents

- This case study consists of 2 data sets.
- The first dataset consists of Athletes details and events.
- The second dataset contains the region with countries those who participated in various events.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event	Medal
2	1	A Dijiang	M	24	180	80	China	CHN	1992 Sumr	1992	Summer	Barcelona	Basketball	Basketball	NA
3	2	A Lamusi	M	23	170	60	China	CHN	2012 Sumr	2012	Summer	London	Judo	Judo Men'	NA
4	3	Gunnar Ni	M	24	NA	NA	Denmark	DEN	1920 Sumr	1920	Summer	Antwerper	Football	Football M	NA
5	4	Edgar Lind	M	34	NA	NA	Denmark/	DEN	1900 Sumr	1900	Summer	Paris	Tug-Of-W	Tug-Of-W	Gold
6	5	Christine J	F	21	185	82	Netherlan	NED	1988 Wint	1988	Winter	Calgary	Speed Skat	Speed Skat	NA
7	5	Christine J	F	21	185	82	Netherlan	NED	1988 Wint	1988	Winter	Calgary	Speed Skat	Speed Skat	NA
8	5	Christine J	F	25	185	82	Netherlan	NED	1992 Wint	1992	Winter	Albertville	Speed Skat	Speed Skat	NA
9	5	Christine J	F	25	185	82	Netherlan	NED	1992 Wint	1992	Winter	Albertville	Speed Skat	Speed Skat	NA
10	5	Christine J	F	27	185	82	Netherlan	NED	1994 Wint	1994	Winter	Lillehamm	Speed Skat	Speed Skat	NA

	A	B	C
1	NOC	region	notes
2	AFG	Afghanista	null
3	AHO	Curacao	Netherlanc
4	ALB	Albania	null
5	ALG	Algeria	null
6	AND	Andorra	null
7	ANG	Angola	null
8	ANT	Antigua	Antigua an
9	ANZ	Australia	Australasia
10	ARG	Argentina	null
11	ARM	Armenia	null
12	ARU	Aruba	null
13	ASA	American S	null
14	AUS	Australia	null

Introduction

- The Olympic Games are **an international sports festival, held every four years**. The ultimate goals are to cultivate human beings, through sport, and contribute to world peace.

- The IOC (The International Olympic Committee) is responsible for maintaining the regular celebration of the Olympic Games, seeing that the Games are carried out in the spirit that inspired their revival, and promoting the development of sports throughout the world.

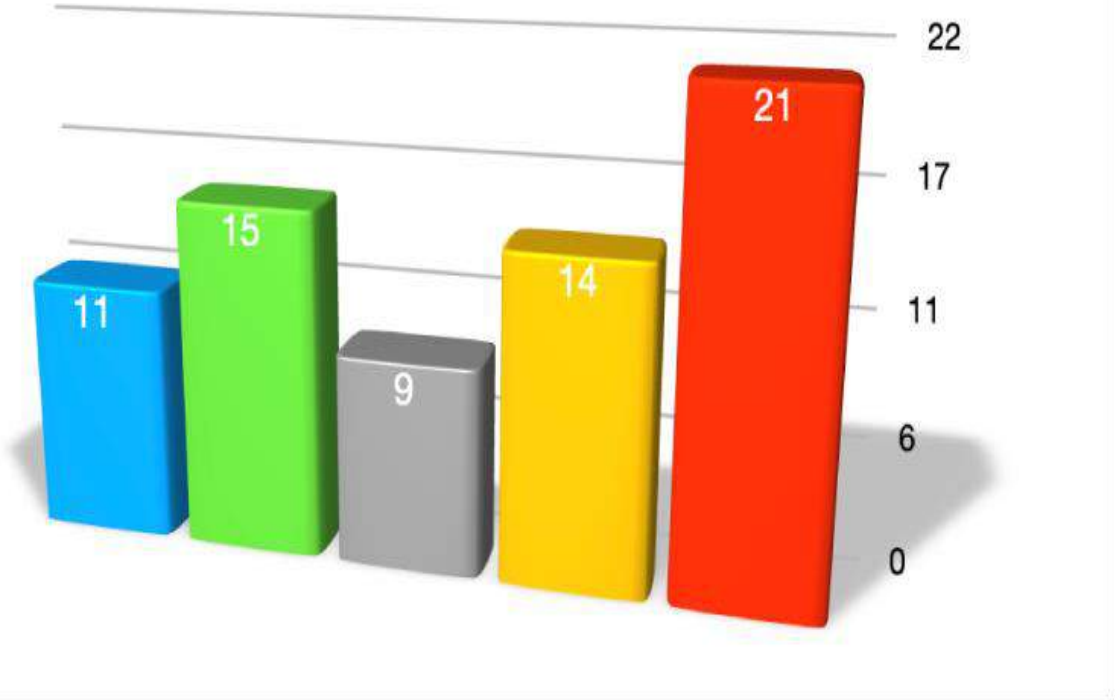
Findings

1. Total no of Olympic games.
2. Find the average weight and height of the athletes gender wise.
3. Top 5 athletes with most medals in their career.
4. Top regions with the highest medals count year wise.
5. Country wise average age of the athletes.
6. Players participated in maximum number of events in their whole career and rank them accordingly.
7. Depending upon the average weight of the athletes set a benchmark for getting permitted for qualifying in Olympics.
8. Create a stored procedure to get all the details about a athlete by giving the ID.
9. Countries with the most gold, most silver and most bronze medals in each Olympic games.
10. Find the no of Olympic games for summer and winter.
11. Games with maximum no of countries that have participated.
12. Countries that got highest medals in winter.
13. Countries that got highest medals in summer.

Data Analysis

For analyzing the data, various factors
that are present in the datasheet (i.e. the important attributes) should be listed out.

In this case study, there are 2 tables
Athlete_events (consisting of athlete details)
and noc_region (consisting of country,
and region in which the events took place).



What is the objective of Olympic data analysis?

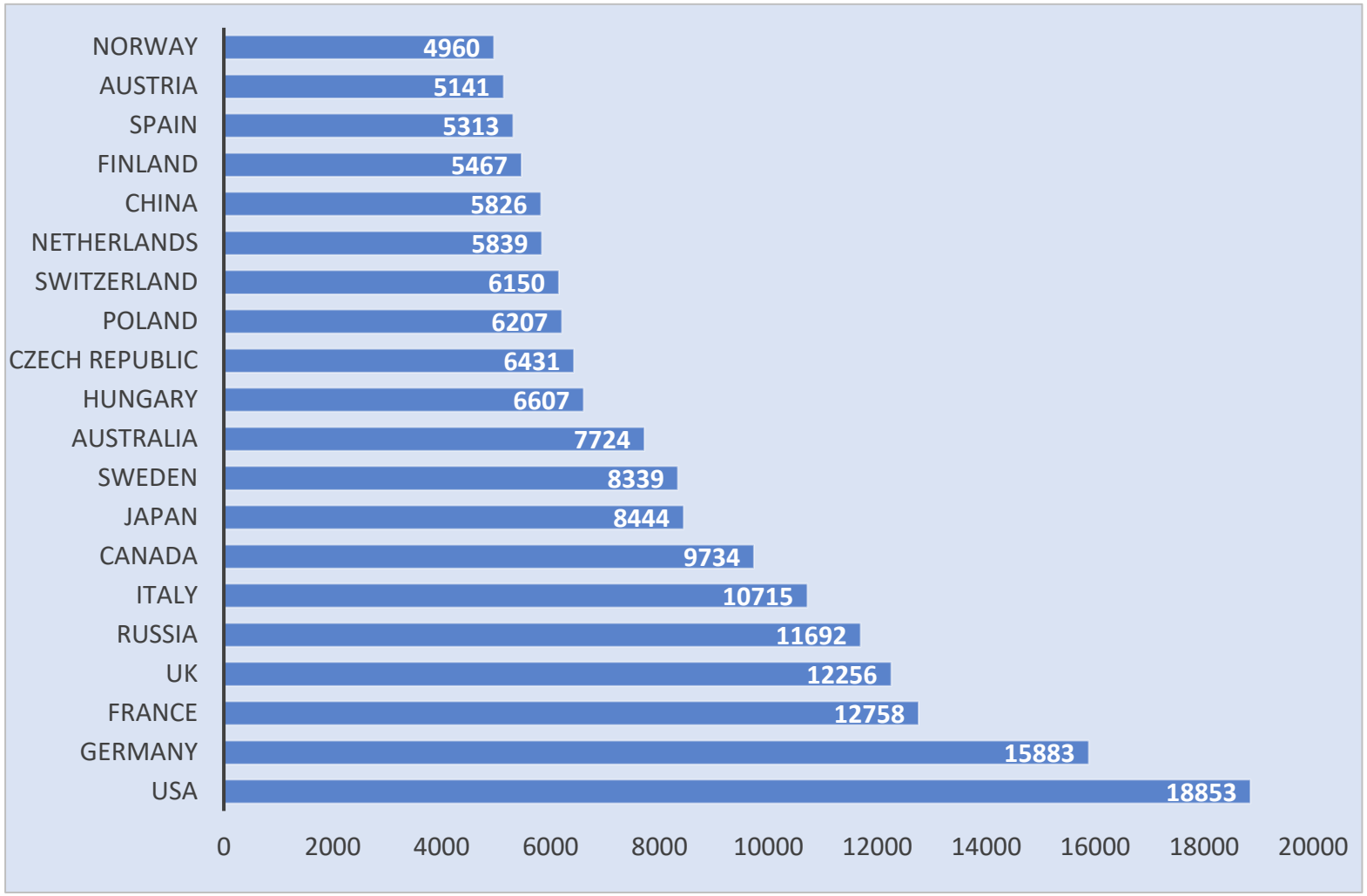
The main aim of this analysis was **to find out the growth in the performance of a country in the Olympics over the years**. With the Help of such an Analysis, any player can check their progress record and can also have a look at their opponent's progress.

Story behind the countries with the Most Olympics Medals:

- As several countries have formed or broken apart since the modern Olympics began in 1896, total medal counts can be tricky. The most notable example is the Soviet Union which fractured into several smaller countries , including Russia, Estonia, Lithuania, and Moldova.

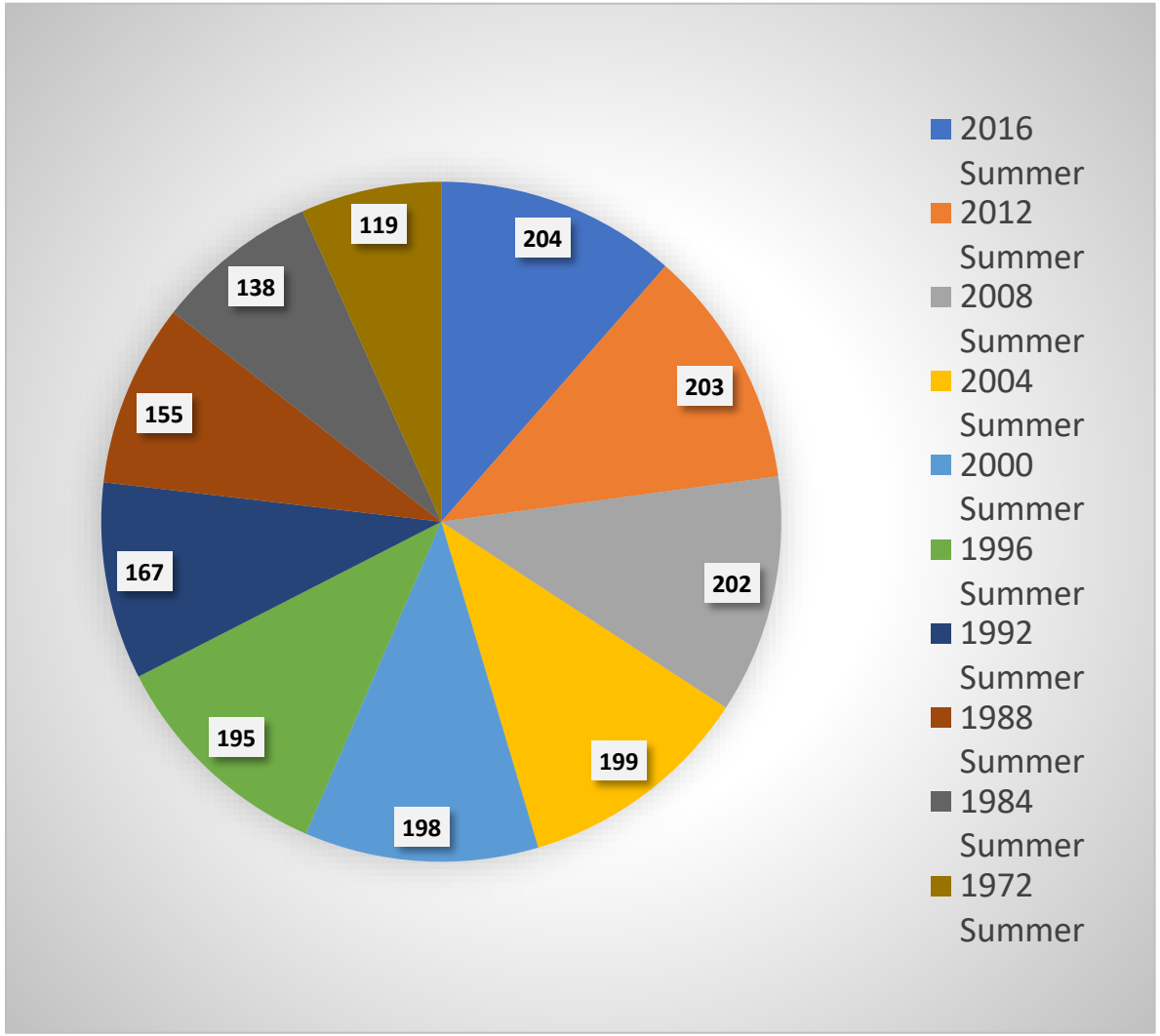
- The International Olympic Committee (IOC) had to decide which of the newer countries, if any, got credit for the Soviet Union's medals. Also, many athletes have participated in the games as individuals due to their political beliefs or sanctions against their host country. Finally, on a few occasions, the IOC has revoked a medal from an athlete found to have broken the rules and awarded it to another athlete.

Top 20 countries with highest medals achieved.
1896-2016




```
#4.Top regions with the highest medals count year wise

Select n.region, year, count(medal) as totalmedal
from athlete_events a inner join noc_regions n
using(noc)
group by region, year
order by year;
```

Olympic games having most number of participations



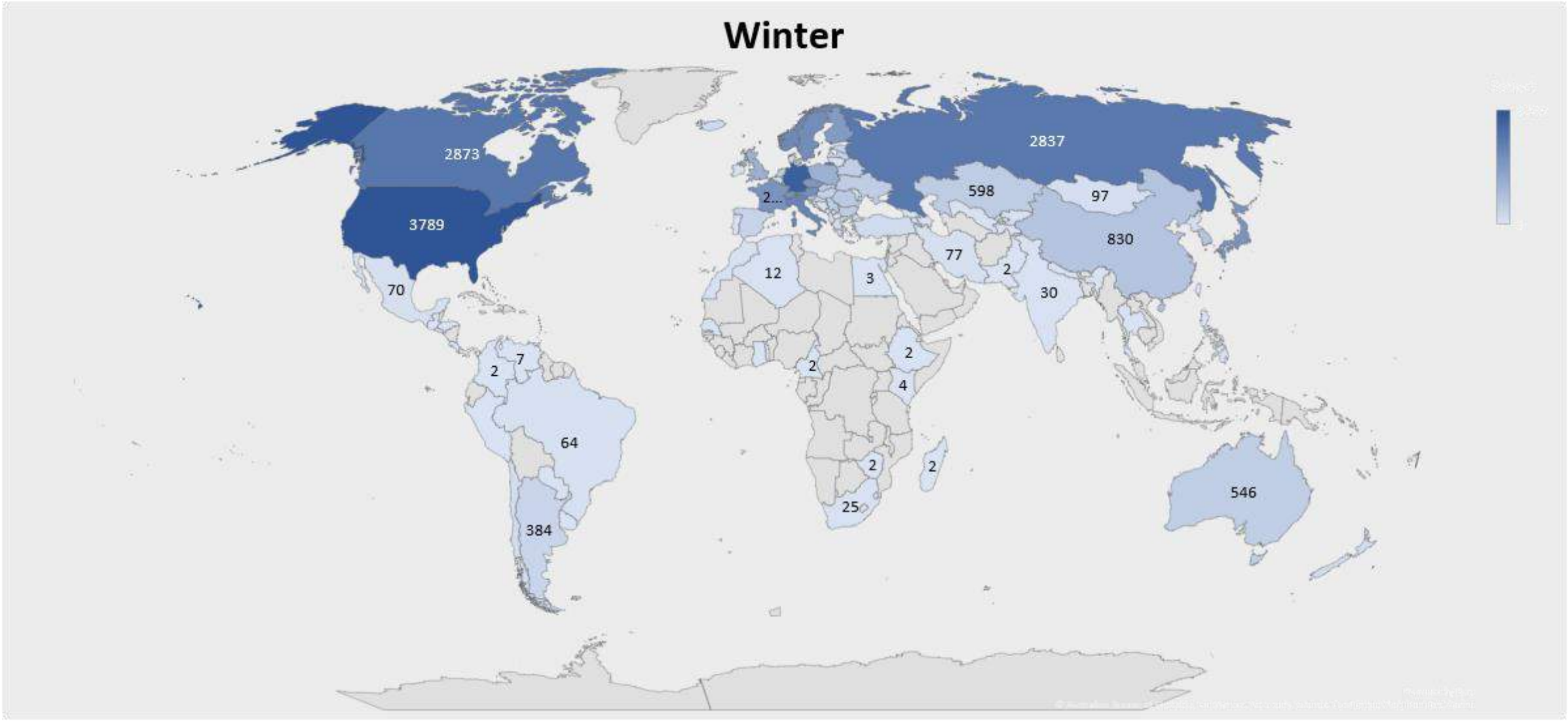

```
#11. Games with maximum no of countries that have participated.

  with total_countries as
        (select games, nr.region
        from athlete_events ae
        join noc_regions nr using (noc)
        group by games, nr.region)
    select games, count(*) as total_countries
    from total_countries
    group by games
    order by total_countries desc limit 10;
```

Is Winter Olympics same as Summer?

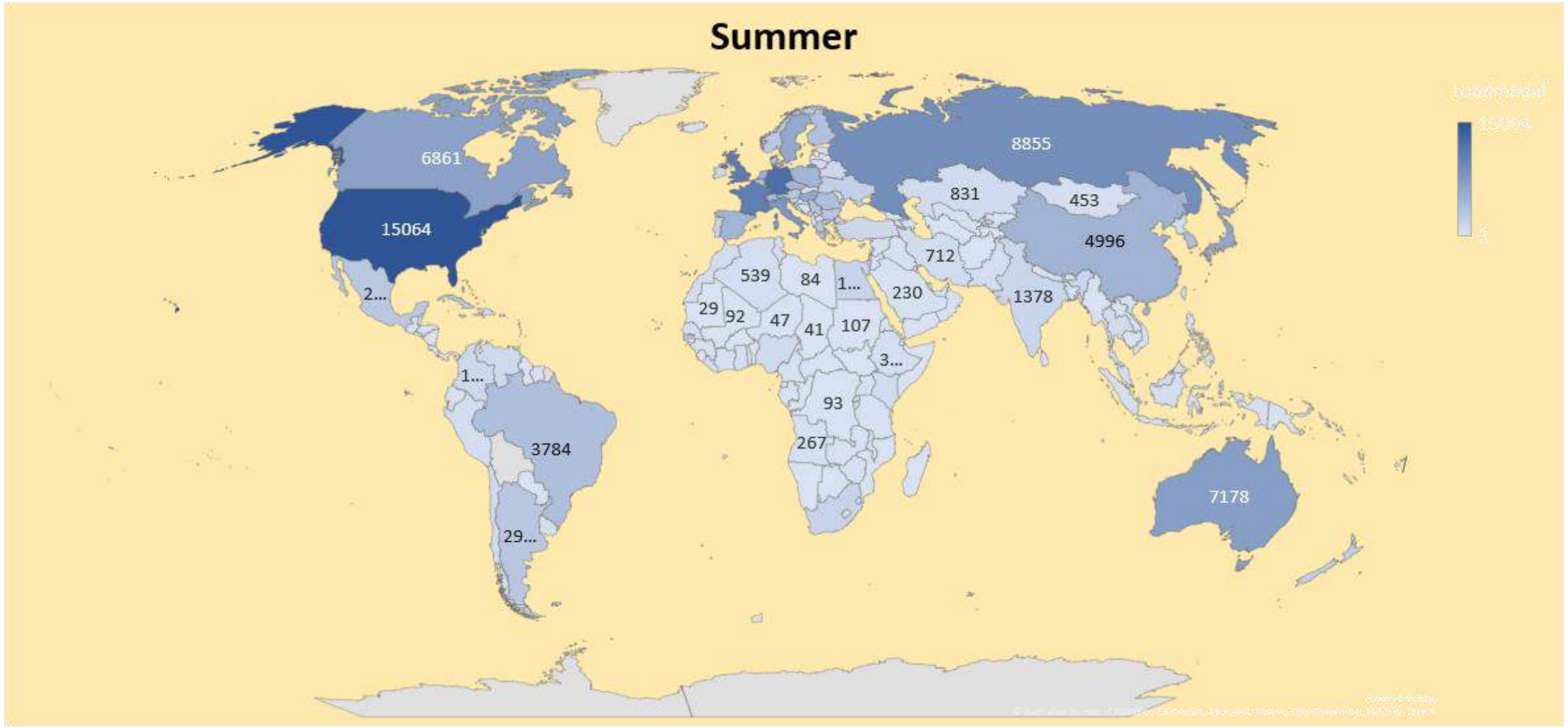
- The Olympics is divided into two seasonally themed halves. The Summer Olympics includes a myriad of fair weather sports, from track and field to swimming, gymnastics, and basketball.

- Conversely, the Winter Olympics focuses upon cold-weather sports such as bobsledding, ice skating, and skiing. Both events are held every four years, but their schedules are currently offset by two years.

Countries with highest medals Season-Wise



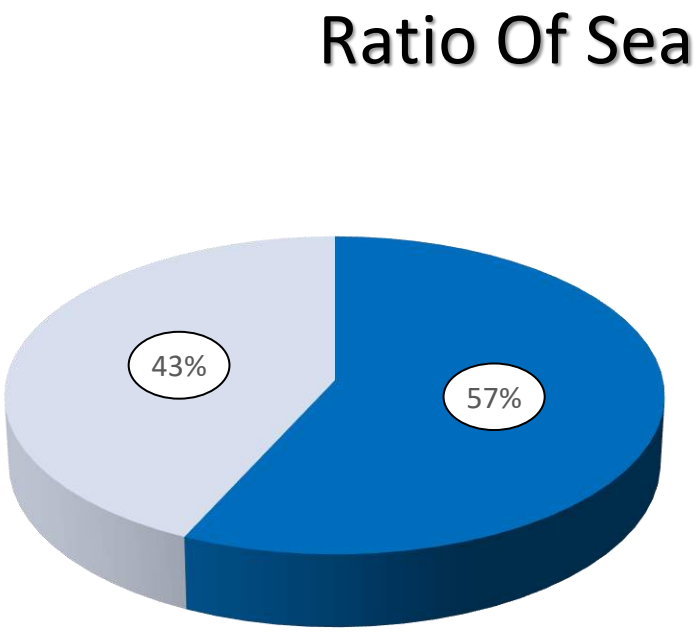
Countries with highest medals Season-Wise



Differences between Summer and Winter Olympics

Parameters	Summer Olympics	Winter Olympics
Introduction	The Summer Olympic Games or the Games of the Olympiad is an international multi-sport event, occurring every four years.	The Winter Olympic Games is a major international sporting event that occurs once every four years.
Organized by	International Olympic Committee	International Olympic Committee
First held	1896 Athens, Greece	1924 Chamonix, France
Schedule	Every four years, on the leap year	Every four years, two years from the leap year.
Most Recent	2020 Olympics rescheduled and held in 2021 in Tokyo, Japan	2022, Beijing, China

Chart showing the seasonality factor for each game




```
#10. Find the no of olympic games for summer and winter.

Select distinct(year), season
from athlete_events
where season = "Summer" OR Season = "Winter"
order by year;
```

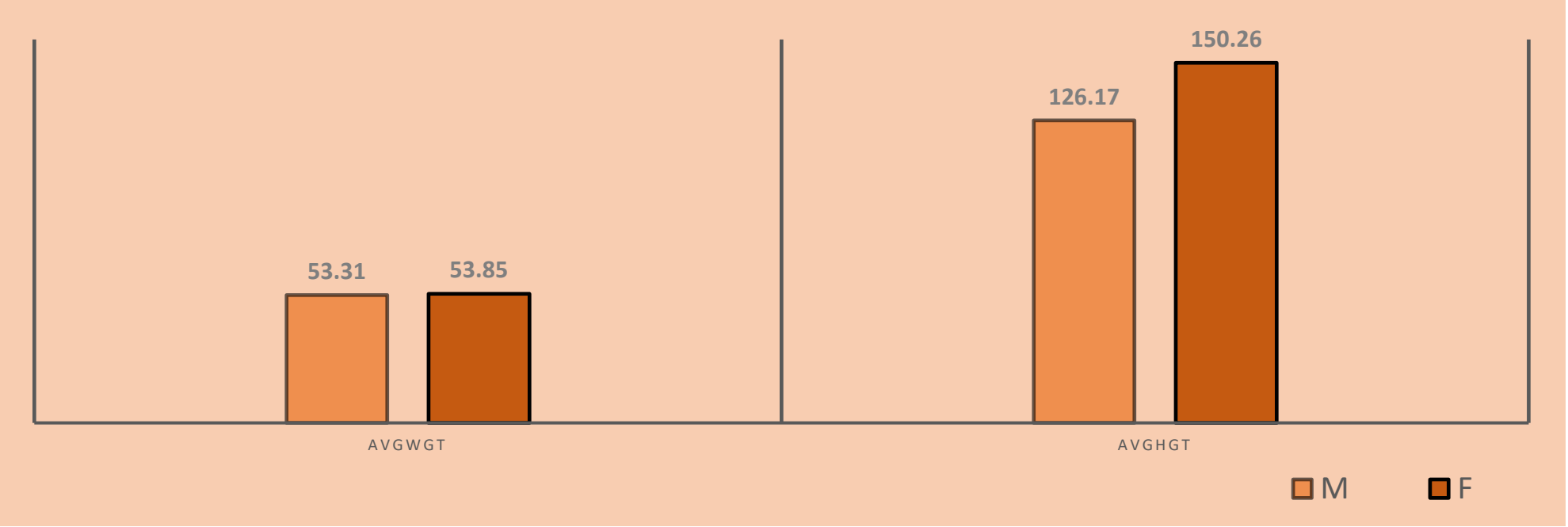
Could you be an athlete? Olympics by age, weight and height

- Height and weight are dependent on sex. Taking a look at men's heights, the tallest male athlete stands at 2.21m is Chinese basketball player Zhaoxu Zhang but a close second is 23-year-old Russian volleyball player, Dmitriy Muserskiy at 2.18m.

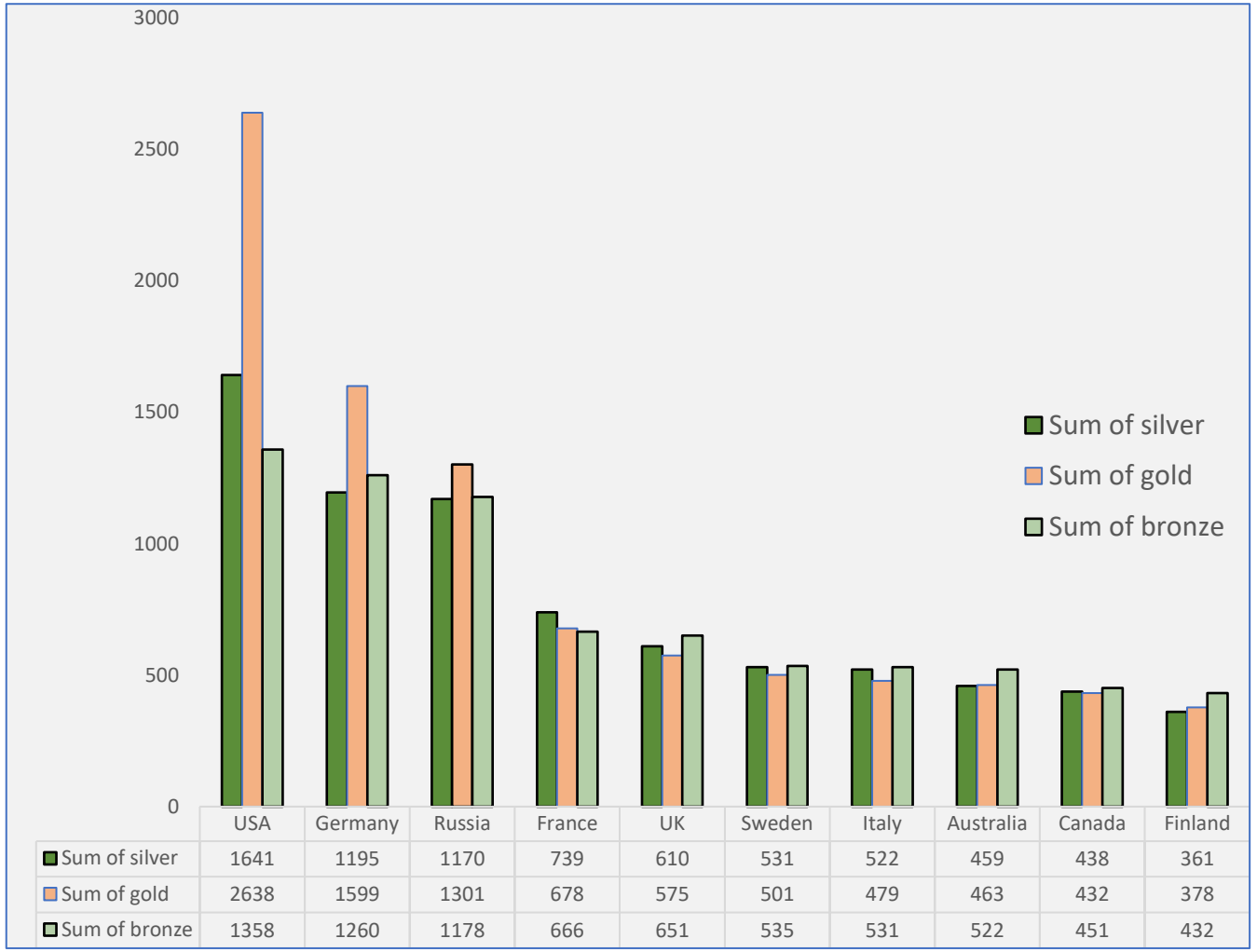
- Weights were a bit trickier in that certain sports (Boxing, Gymnastics, Synchronised swimming, Taekwondo and Trampoline) did not give weights for their athletes. Taking this into account, the heaviest male athlete is Ricardo Blas Jr, a Judo competitor from Guam. The lightest is China's Yuan Cao who won a gold in the Men's Synchronised 10m Diving.

Data showing average weight and height of the athletes gender wise.

```
33    #2.Find the average weight and height of the athletes gender wise
34
35    with t as
36    (select ID, round(avg(weight),2) as avgwgt, round(avg(height),2) as avghgt,    # Used CTE func. to create a temporary table(t) in order
37          sex                                                                      # to get average of height and weight for unique people.
38          from athlete_events
39          group by ID, sex)
40    select sex, round(avg(avgwgt),2) as AvgWgt, round(avg(avghgt),2) AvgHgt      # Extracted the desired data from the temp table(t) and
41    from t                                                                       # grouped it gender wise.
42    group by sex;
```



Countries with the most gold, silver, most bronze medals



	USA	Germany	Russia	France	UK	Sweden	Italy	Australia	Canada	Finland
Sum of silver	1641	1195	1170	739	610	531	522	459	438	361
Sum of gold	2638	1599	1301	678	575	501	479	463	432	378
Sum of bronze	1358	1260	1178	666	651	535	531	522	451	432

```
with t1 as
        (Select region as country, count(medal) as gold
        from athlete_events a inner join noc_regions n
        Where a.noc = n.noc and medal = "gold"
        group by region, medal
        order by gold desc),
t2 as
        (Select region as country, count(medal) as silver
        from athlete_events a inner join noc_regions n
        Where a.noc = n.noc and medal = "silver"
        group by region, medal
        order by silver desc),
t3 as
       (Select region as country, count(medal) as bronze
        from athlete_events a inner join noc_regions n
        Where a.noc = n.noc and medal = "bronze"
        group by region, medal
        order by bronze desc)
select * from
t1, t2, t3;
```


THANK YOU