

# OLYMPICS

## 1896-2016

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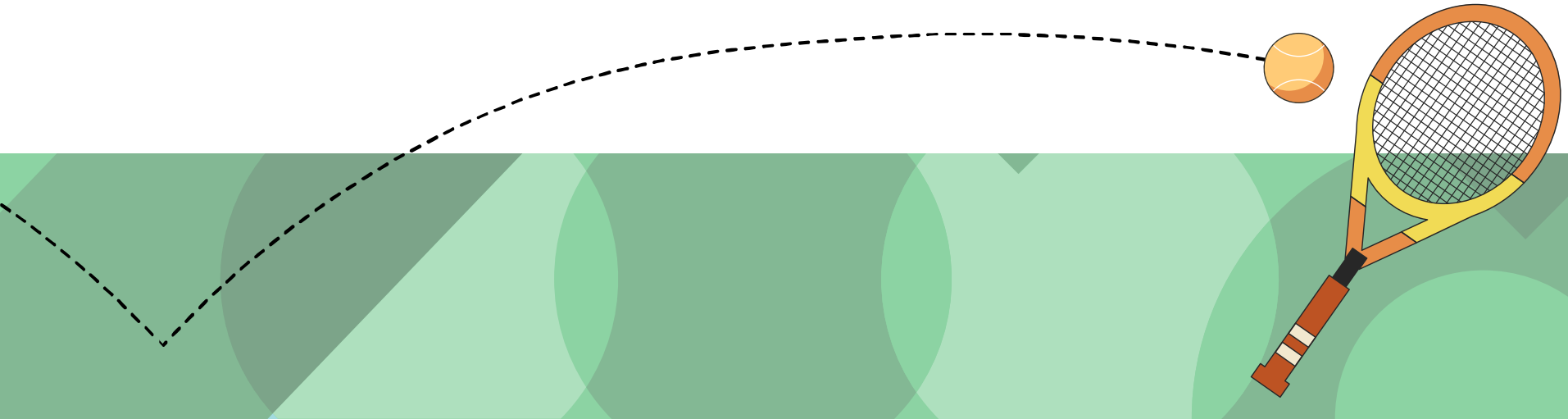
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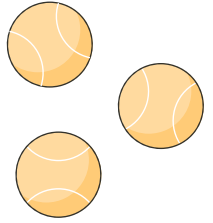
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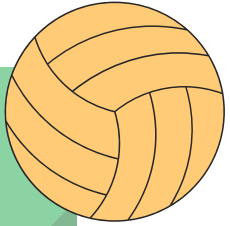
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Starting Attributes



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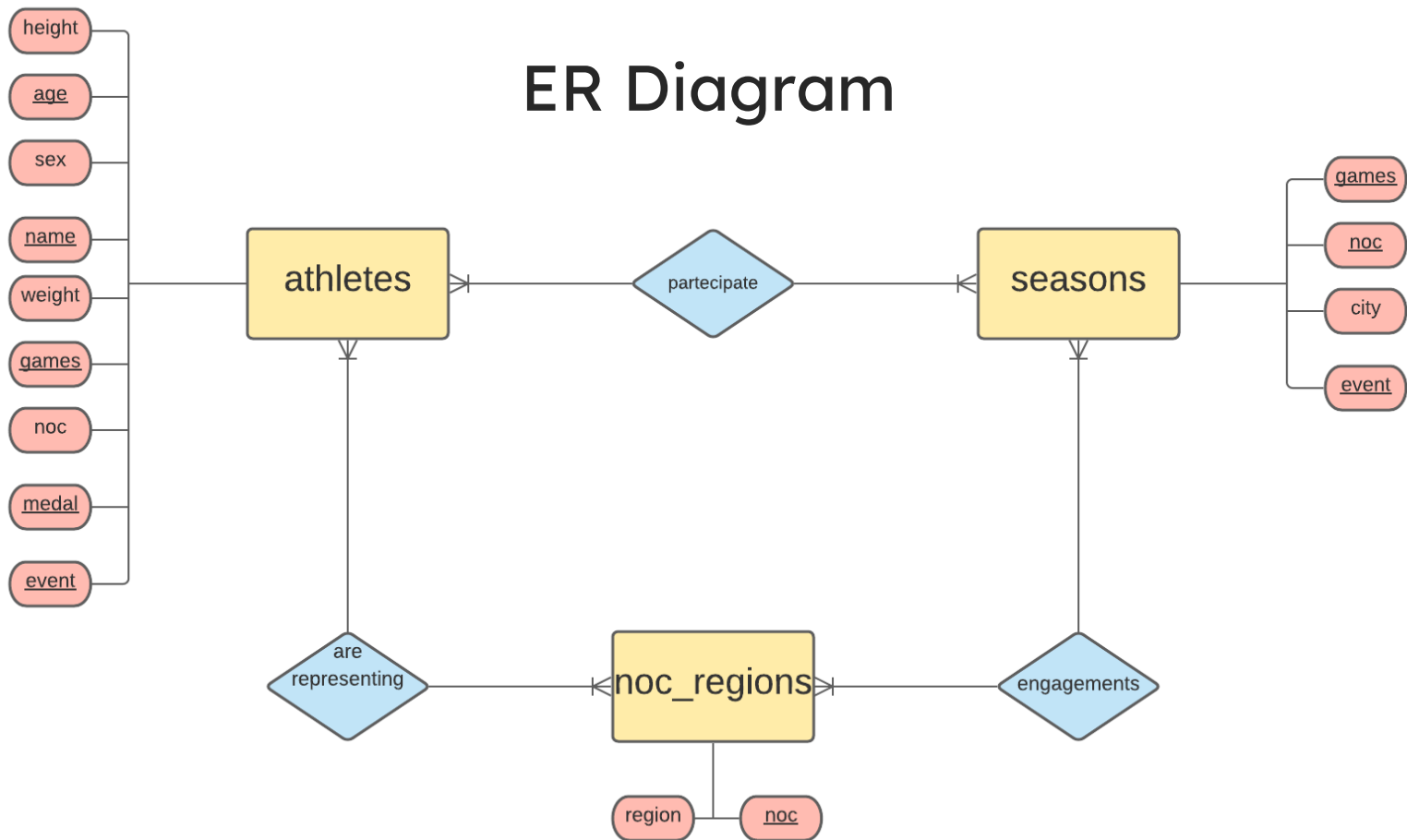
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# 3

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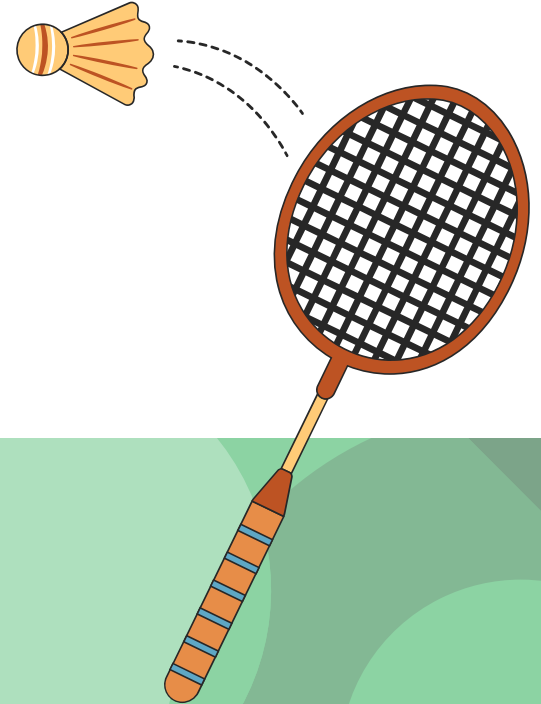
# ER Diagram



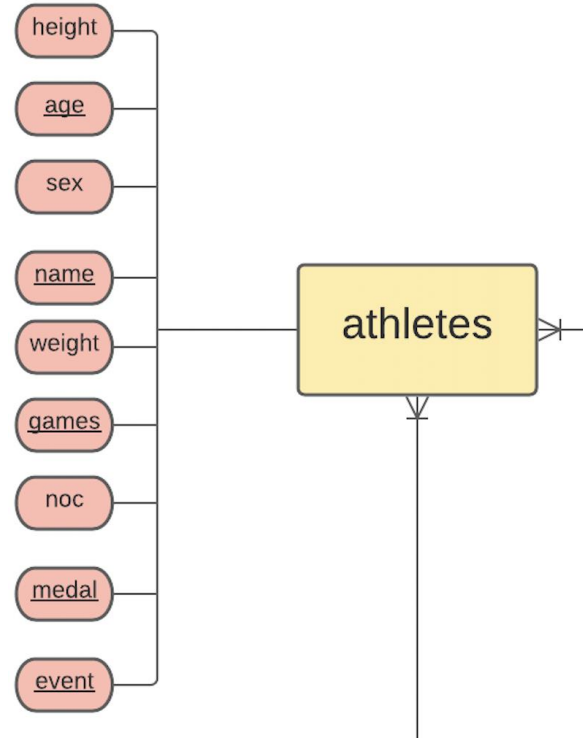
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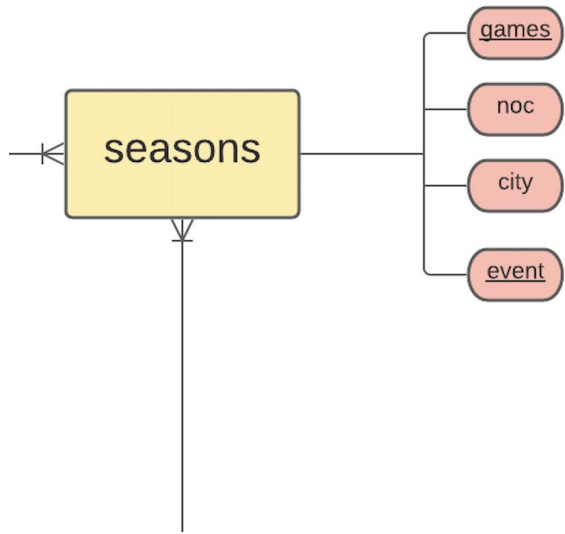
## 3 Tables:

- **Athletes:** Name, NOC, Sex, Age, Height, Weight, Games, Event, Medal
- **Seasons:** Games, NOC, City, Event
- **Noc\_region:** NOC, region

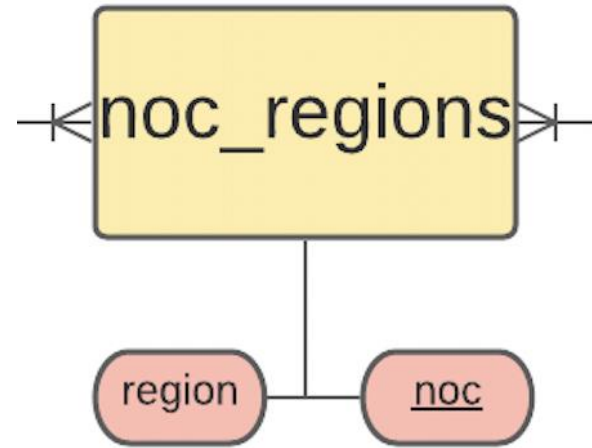


- **athletes:** name, noc, sex, age, height, weight, games, event, medal





**seasons:** games, noc, city, event



**noc\_region:** noc, region



## Logical Design

**Athletes** (Name, NOC, Sex, Age, Height, Weight, Games, Event, Medal)

- Foreign Key (Event) references Seasons (Event)
- Foreign Key (Games) references Seasons (Games)
- Foreign Key (NOC) references noc\_regions (NOC)
- Super key (Name, Age, Games, Event, Medal)

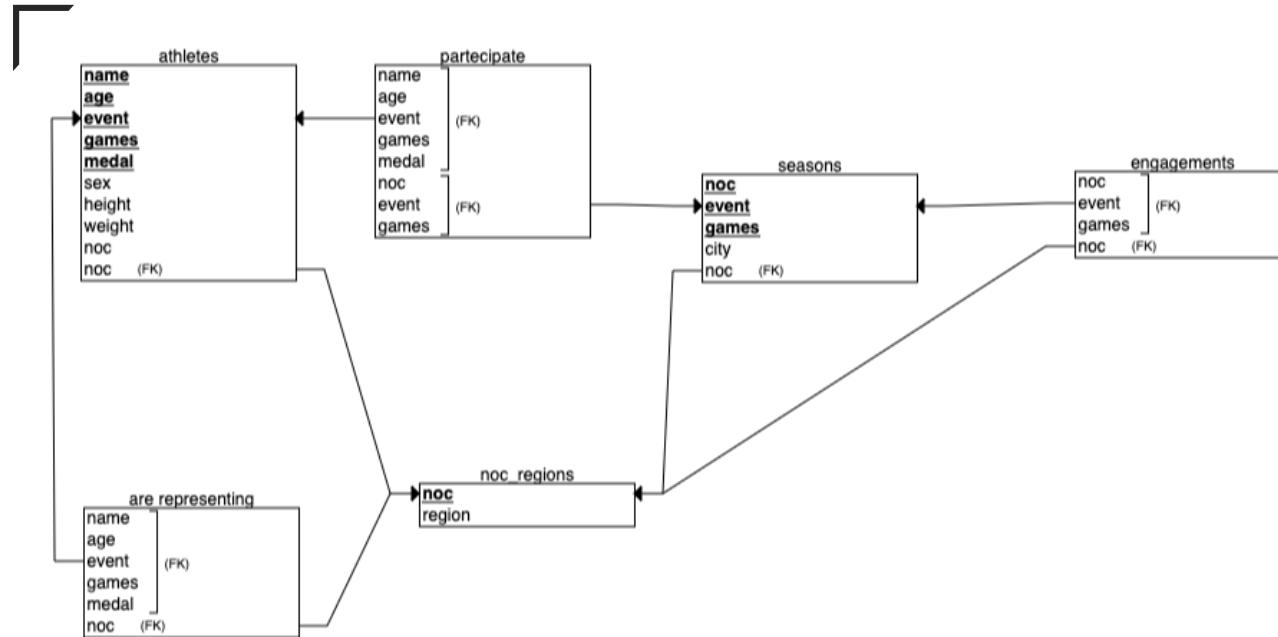
**Seasons** (Games, NOC, City, event)

- Foreign Key (NOC) references noc\_regions (noc)


**Noc\_regions** (NOC, region)



# Relationship schema



# Queries

- Which nations have won the most gold medals?
  - What is the average height and weight of all participants from each nation?
  - Which countries have had the most participants?
  - Which nations have participated in the most olympics?
  - Who has represented their country in the most events?
  - Who has won a medal in our lifetimes?
  - Which cities have been the most frequent hosts
  - What is the average height and weight of each sport?
- 

# Queries' Analysis

- Which nations have won the most gold medals?

```
Select noc_regions.region, athletes.Medal, Count(*) as Amount from athletes
left join noc_regions on noc_regions.noc=athletes.noc
where Medal = 'Gold'
group by Medal, region
order by amount desc;
```

Region	Medal	Amount
USA	Gold	2520
Russia	Gold	1597
Germany	Gold	1283
UK	Gold	652
Italy	Gold	563
France	Gold	484
Sweden	Gold	475
Canada	Gold	460
Hungary	Gold	431
Norway	Gold	378

# Queries' Analysis

- What is the average height and weight of all participants from each nation?

```
select noc_regions.Region, round(avg(Nullif(height, 'NA')),2) as Average_Height,  
       round(avg(Nullif(weight, 'NA')),2) as Average_Weight from athletes  
left join noc_regions on athletes.noc=noc_regions.noc  
group by region;
```

Region	Average_Height	Average_Weight
Serbia and Montenegro	187.51	83.09
Nauru	167.18	95.85
Micronesia	161.24	60.84
Maldives	163.76	54.98

# Queries' Analysis

- Which countries have had the most participants?

```
select noc_regions.region, count(distinct Name) as Athletes from athletes
left join noc_regions on athletes.noc=noc_regions.noc
group by region
order by athletes desc;
```

region	Athletes
USA	8995
Germany	7254
UK	5655
Russia	5449
France	5065
Canada	4637
Italy	4548
Japan	3882
Australia	3744
Sweden	3728

# Queries' Analysis

- Which nations have
- participated in the most olympics?

```
select noc_regions.region, count(distinct games) as participations from seasons
left join noc_regions on seasons.noc=noc_regions.noc
group by region
order by participations desc;
```

region	participations
Switzerland	51
UK	51
France	50
Italy	50
Austria	50
USA	50
Sweden	50
Hungary	49
Norway	49
Canada	49

# Queries' Analysis

Who has represented their country in the most events?

```
SELECT athletes.name, noc_regions.region, count(*) as participations from athletes
left join noc_regions on noc_regions.noc=athletes.noc
group by athletes.Name, noc_regions.region
order by participations desc
limit 50;
```

name	region	participations
Heikki Ilmari Savolainen	Finland	39
Joseph "Josy" Stoffel	Luxembourg	38
Takashi Ono	Japan	33
Andreas Wecker	Germany	32
Alfred August "Al" Jochim	USA	31
Michel Mathiot	France	31
Johann "Hans" Sauter	Austria	31
Karl Tore William Thoreson	Sweden	30
Michael Fred Phelps, II	USA	30
Yordan Yovchev Yovchev	Bulgaria	30



# Queries' Analysis

Who has won a medal in our lifetimes?

```
select athletes.name, noc_regions.region, athletes.medal, athletes.event, cast(games as unsigned) as games from athletes
left join noc_regions on athletes.noc=noc_regions.noc
where medal in('gold','silver','bronze')
and not games <= '1996'
order by event, field(medal, 'gold', 'silver', 'bronze'), games desc;
```

name	region	medal	event	games
Usain St. Leo Bolt	Jamaica	Gold	Athletics Men's 100 metres	2016
Usain St. Leo Bolt	Jamaica	Gold	Athletics Men's 100 metres	2012
Usain St. Leo Bolt	Jamaica	Gold	Athletics Men's 100 metres	2008
Justin Alexander Gatlin	USA	Gold	Athletics Men's 100 metres	2004
Maurice Greene	USA	Gold	Athletics Men's 100 metres	2000
Donovan Bailey	Canada	Gold	Athletics Men's 100 metres	1996
Justin Alexander Gatlin	USA	Silver	Athletics Men's 100 metres	2016
Yohan Blake	Jamaica	Silver	Athletics Men's 100 metres	2012
Richard Thompson	Trinidad and Tobago	Silver	Athletics Men's 100 metres	2008
Francis Oborah Obikwelu	Portugal	Silver	Athletics Men's 100 metres	2004
Ato Jabari Boldon	Trinidad and Tobago	Silver	Athletics Men's 100 metres	2000
Frank "Frankie" Fredericks	Namibia	Silver	Athletics Men's 100 metres	1996
Andre De Grasse	Canada	Bronze	Athletics Men's 100 metres	2016
Justin Alexander Gatlin	USA	Bronze	Athletics Men's 100 metres	2012
Walter Dix	USA	Bronze	Athletics Men's 100 metres	2008

name	region	medal	event	games
Sandro Viletta	Switzerland	Gold	Alpine Skiing Men's Combined	2014
Samuel Bode Miller	USA	Gold	Alpine Skiing Men's Combined	2010
Theodore Sharp "Ted" Ligety	USA	Gold	Alpine Skiing Men's Combined	2006
Kjetil Andr Aamodt	Norway	Gold	Alpine Skiing Men's Combined	2002
Mario Reiter	Austria	Gold	Alpine Skiing Men's Combined	1998
Ivica Kosteli	Croatia	Silver	Alpine Skiing Men's Combined	2014
Ivica Kosteli	Croatia	Silver	Alpine Skiing Men's Combined	2010
Ivica Kosteli	Croatia	Silver	Alpine Skiing Men's Combined	2006
Samuel Bode Miller	USA	Silver	Alpine Skiing Men's Combined	2002
Lasse Kjus (Kristoffersen-)	Norway	Silver	Alpine Skiing Men's Combined	1998
Christof Innerhofer	Italy	Bronze	Alpine Skiing Men's Combined	2014
Silvan Zurbriggen	Switzerland	Bronze	Alpine Skiing Men's Combined	2010
Rainer Schnfelder	Austria	Bronze	Alpine Skiing Men's Combined	2006
Benjamin Raich	Austria	Bronze	Alpine Skiing Men's Combined	2002
Christian Mayer	Austria	Bronze	Alpine Skiing Men's Combined	1998

# Queries' Analysis

- Which cities have been the most frequent hosts?

```
select city, count(distinct games) as appearances from seasons
group by city
order by appearances desc
limit 10;
```

city	appearances
Athina	3
London	3
Stockholm	2
Sankt Moritz	2
Paris	2
Los Angeles	2
Lake Placid	2
Innsbruck	2
Calgary	1
Chamonix	1

# Queries' Analysis

- What is the average height and weight per sport?

```
select event, sex, round(avg(nullif(height,'NA')),2) as avg_height, round(avg(nullif(weight,'NA')),2) as avg_weight from athletes
group by event, sex
order by sex, event;
```

Basketball Men's Basketball	M	195.01	91.76
Volleyball Men's Volleyball	M	193.29	86.92
Weightlifting Men's Flyweight	M	155.37	53.28
Wrestling Men's Light-Flyweight, Freestyle	M	156.35	49.91

event	sex	avg_height	avg_weight
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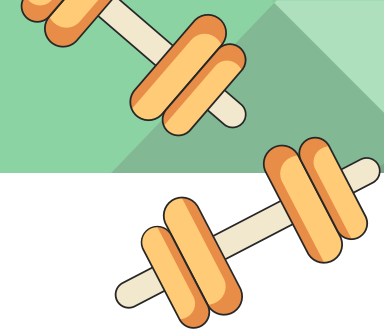
Basketball Women's Basketball	F	182.45	73.69
Rowing Women's Quadruple Sculls	F	179.9	74.04
Weightlifting Women's Flyweight	F	150.53	48.19
Weightlifting Women's Featherweight	F	155.6	53

event	sex	avg_height	avg_weight
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Weightlifting Women's Super-Heavyweight	F	170.29	108.48
Judo Women's Heavyweight	F	175.76	105.97
Figure Skating Mixed Pairs	F	156.71	46.96
Gymnastics Women's Team All-Around	F	155.72	47.32

event	sex	avg_height	avg_weight
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Weightlifting Men's Super-Heavyweight	M	184.48	135.6
Wrestling Men's Super-Heavyweight, Greco-Ro...	M	188.91	122.16



# Thank You

If you have any doubts let us know

