



MY SQL PROJECT

DATA SUMMARY

athlete_events.athlete_events

athlete_events.country_definitions;

 Tools: SQL(MySQL),
Excel, CSV files

1. TABLE PURPOSE:

THE ATHLETE_EVENTS TABLE RECORDS EVERY PARTICIPATION OF OLYMPIC ATHLETES ACROSS ALL EDITIONS OF THE OLYMPIC GAMES.

- EACH ROW = ONE ATHLETE'S APPEARANCE IN A SPECIFIC EVENT, IN A PARTICULAR OLYMPIC GAME.
- MULTIPLE ROWS CAN EXIST FOR THE SAME ATHLETE ACROSS DIFFERENT YEARS OR EVENTS.



Basic Queries Analysis

- List all records from the athlete_events table.
- Show all athletes who are older than 25.
- List all distinct sports.
- Show all athletes who won a medal.

Joins & Subqueries

- Join athlete_events with country_definitions to get athlete names and their regions.
- List athletes along with their country names.
- Show number of athletes per region.
- Get medal counts per region by joining the tables.

Aggregation & Grouping

- Count how many athletes participated in each Olympic year.
- Get the average height and weight of athletes by sport.
- Count total medals won by each country.
- Show the number of medals won by each team in 2012.
- List sports with the highest number of athletes.



Canoe Slalom



Cycling Track



Football



Badminton



Canoe Slalom

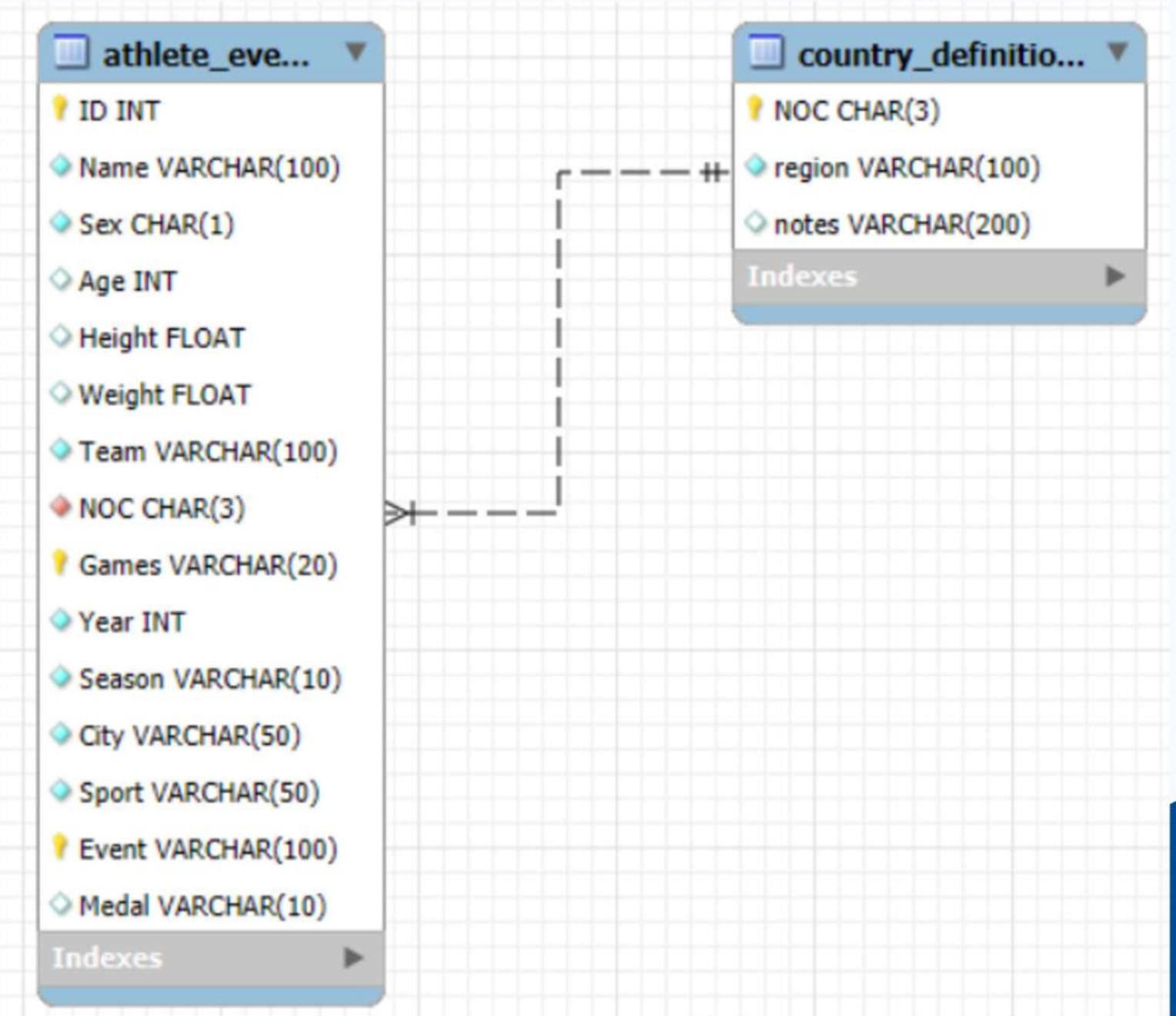


Cycling Track



Football





ER DIAGRAM

MySQL SCREENSHOT

```
CREATE TABLE athlete_events (
    ID INT NOT NULL,
    Name VARCHAR(100) NOT NULL,
    Sex CHAR(1) NOT NULL,
    Age INT NULL,
    Height FLOAT NULL,
    Weight FLOAT NULL,
    Team VARCHAR(100) NOT NULL,
    NOC CHAR(3) NOT NULL,
    Games VARCHAR(20) NOT NULL,
    Year INT NOT NULL,
    Season VARCHAR(10) NOT NULL,
    City VARCHAR(50) NOT NULL,
    Sport VARCHAR(50) NOT NULL,
    Event VARCHAR(100) NOT NULL,
    Medal VARCHAR(10) NULL,
    PRIMARY KEY (ID, Event, Games),
    FOREIGN KEY (NOC) REFERENCES country_definitions(NOC)
);
```

- CREATE TABLE country_definitions (
 - NOC CHAR(3) PRIMARY KEY,
 - region VARCHAR(100) NOT NULL,
 - notes VARCHAR(200) NULL) ;

*LIST ALL RECORDS FROM THE ATHLETE_EVENTS TABLE.

SELECT * FROM ATHLETE_EVENTS;

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event
1	A Dijiang	M	24	180	80	China	CHN	1992 Summer	1992	Summer	Barcelona	Basketball	Basketball Men's Basketball
2	A Lamusi	M	23	170	60	China	CHN	2012 Summer	2012	Summer	London	Judo	Judo Men's Extra-Lightweight
3	Gunnar Nielsen Aaby	M	24	NA	NA	Denmark	DEN	1920 Summer	1920	Summer	Antwerpen	Football	Football Men's Football
4	Edgar Lindenau Aabye	M	34	NA	NA	Denmark/Sweden	DEN	1900 Summer	1900	Summer	Paris	Tug-Of-War	Tug-Of-War Men's Tug-Of-War
5	Christine Jacoba Aaftink	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating Women's 500 m
5	Christine Jacoba Aaftink	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating Women's 1,000 m
5	Christine Jacoba Aaftink	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating Women's 500 m
5	Christine Jacoba Aaftink	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating Women's 1,000 m
5	Christine Jacoba Aaftink	F	27	185	82	Netherlands	NED	1994 Winter	1994	Winter	Lillehammer	Speed Skating	Speed Skating Women's 500 m

*LIST ALL RECORDS FROM THE COUNTRY_DEFINITIONS TABLE.

SELECT* FROM COUNTRY_DEFINITIONS;

NOC	region	notes
AFG	Afghanistan	
AHO	Curacao	Netherlands Antilles
ALB	Albania	
ALG	Algeria	
AND	Andorra	
ANG	Angola	
ANT	Antigua	Antigua and Barbuda
ANZ	Australia	Australasia
ARG	Argentina	
ARM	Armenia	

WHO WON THE MOST MEDALS?

SELECT MAX(MEDAL) FROM ATHLETE_EVENTS;

Result Grid | Filter Rows

	max(medal)
▶	Silver

HOW MANY SPORTS ARE THERE IN THIS EVENT?

SELECT COUNT(SPORT) FROM ATHLETE_EVENTS;

Result Grid | Filter Rows:

	count(Sport)
▶	123045

SHOW ALL ATHLETES WHO ARE OLDER THAN 25

SELECT * FROM ATHLETE_EVENTS WHERE AGE > 25
LIMIT 5;

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event
4	Edgar Lindenau Aabye	M	34	NA	NA	Denmark/Sweden	DEN	1900 Summer	1900	Summer	Paris	Tug-Of-War	Tug-Of-War Men's Tug-Of
5	Christine Jacoba Aaftink	F	27	185	82	Netherlands	NED	1994 Winter	1994	Winter	Lillehammer	Speed Skating	Speed Skating Women's 500m
5	Christine Jacoba Aaftink	F	27	185	82	Netherlands	NED	1994 Winter	1994	Winter	Lillehammer	Speed Skating	Speed Skating Women's 1000m
6	Per Knut Aaland	M	31	188	75	United States	USA	1992 Winter	1992	Winter	Albertville	Cross Country Skiing	Cross Country Skiing Men's 15km
6	Per Knut Aaland	M	31	188	75	United States	USA	1992 Winter	1992	Winter	Albertville	Cross Country Skiing	Cross Country Skiing Men's 30km

SHOW ALL ATHLETES WHO WON A MEDAL

SELECT * FROM ATHLETE_EVENTS WHERE MEDAL IS NOT NULL;

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event
1	A Dijiang	M	24	180	80	China	CHN	1992 Summer	1992	Summer	Barcelona	Basketball	Basketball Men's Basketball
2	A Lamusi	M	23	170	60	China	CHN	2012 Summer	2012	Summer	London	Judo	Judo Men's Extra-Lightweight
3	Gunnar Nielsen Aaby	M	24	NA	NA	Denmark	DEN	1920 Summer	1920	Summer	Antwerpen	Football	Football Men's Football
4	Edgar Lindenau Aabye	M	34	NA	NA	Denmark/Sweden	DEN	1900 Summer	1900	Summer	Paris	Tug-Of-War	Tug-Of-War Men's Tug-Of-War
5	Christine Jacoba Aafink	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating Women's 500
5	Christine Jacoba Aafink	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating Women's 1,000
5	Christine Jacoba Aafink	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating Women's 500
5	Christine Jacoba Aafink	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating Women's 1,000
5	Christine Jacoba Aafink	F	27	185	82	Netherlands	NED	1994 Winter	1994	Winter	Lillehammer	Speed Skating	Speed Skating Women's 500
5	Christine Jacoba Aafink	F	27	185	82	Netherlands	NED	1994 Winter	1994	Winter	Lillehammer	Speed Skating	Speed Skating Women's 1,000

FIND ALL ATHLETES WHO PARTICIPATED IN THE 2016 SUMMER OLYMPICS

SELECT * FROM ATHLETE_EVENTS WHERE YEAR = 2016 AND SEASON = 'SUMMER';

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event
22	Andreea Aanei	F	22	170	125	Romania	ROU	2016 Summer	2016	Summer	Rio de Janeiro	Weightlifting	Weightlifting Women's Super-Heavyweight
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Individual All-Around
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Floor Exercise
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Parallel Bars
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Horizontal Bar
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Rings
51	Nstor Abad Sanjun	M	23	167	64	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Gymnastics	Gymnastics Men's Pommelled Horse
55	Antonio Abadia Bedi	M	26	170	65	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Athletics	Athletics Men's 5,000 metres
62	Giovanni Abagnale	M	21	198	90	Italy	ITA	2016 Summer	2016	Summer	Rio de Janeiro	Rowing	Rowing Men's Coxless Pairs
65	David Altimiras	F	24	165	40	Spain	ESP	2016 Summer	2016	Summer	Rio de Janeiro	Triathlon	Triathlon Women's Sprint

LIST ATHLETES WHOSE NAMES START WITH 'MICHAEL'

SELECT * FROM ATHLETE_EVENTS WHERE NAME LIKE 'MICHAEL%';

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event	Medal
423	Michael Brent Abernathy	M	22	182	84	United States	USA	2000 Summer	2000	Summer	Sydney	Baseball	Baseball Men's Baseball	Gold
772	Michael B. "Mike" Adam"	M	24	175	95	Canada	CAN	2006 Winter	2006	Winter	Torino	Curling	Curling Men's Curling	Gold
1185	Michael George Raymond "Mike" Agostini"	M	21	171	66	Trinidad and Tobago	TTO	1956 Summer	1956	Summer	Melbourne	Athletics	Athletics Men's 100 metres	NA
1185	Michael George Raymond "Mike" Agostini"	M	21	171	66	Trinidad and Tobago	TTO	1956 Summer	1956	Summer	Melbourne	Athletics	Athletics Men's 200 metres	NA
1258	Michael Aguilar	M	24	178	77	Belize	BIZ	2004 Summer	2004	Summer	Athina	Athletics	Athletics Men's 400 metres Hurdles	NA
1312	Michael H. G. Ah Matt	M	21	188	73	Australia	AUS	1964 Summer	1964	Summer	Tokyo	Basketball	Basketball Men's Basketball	NA
1326	Michael Kofi "Mike" Ahey"	M	24	196	72	Ghana	GHA	1964 Summer	1964	Summer	Tokyo	Athletics	Athletics Men's 100 metres	NA
1326	Michael Kofi "Mike" Ahey"	M	24	196	72	Ghana	GHA	1964 Summer	1964	Summer	Tokyo	Athletics	Athletics Men's 4 x 100 metres Relay	NA
1326	Michael Kofi "Mike" Ahey"	M	24	196	72	Ghana	GHA	1964 Summer	1964	Summer	Tokyo	Athletics	Athletics Men's Long Jump	NA
1326	Michael Kofi "Mike" Ahey"	M	28	196	72	Ghana	GHA	1968 Summer	1968	Summer	Mexico City	Athletics	Athletics Men's 100 metres	NA

FIND ALL ATHLETES FROM INDIA

SELECT * FROM ATHLETE_EVENTS WHERE NOC = 'IND';

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event
512	Shiny Kurisingal Abraham-Wilson	F	19	167	53	India	IND	1984 Summer	1984	Summer	Los Angeles	Athletics	Athletics Women's 800 metres
512	Shiny Kurisingal Abraham-Wilson	F	19	167	53	India	IND	1984 Summer	1984	Summer	Los Angeles	Athletics	Athletics Women's 4 x 400 metres
512	Shiny Kurisingal Abraham-Wilson	F	23	167	53	India	IND	1988 Summer	1988	Summer	Seoul	Athletics	Athletics Women's 800 metres
512	Shiny Kurisingal Abraham-Wilson	F	23	167	53	India	IND	1988 Summer	1988	Summer	Seoul	Athletics	Athletics Women's 4 x 400 metres
512	Shiny Kurisingal Abraham-Wilson	F	27	167	53	India	IND	1992 Summer	1992	Summer	Barcelona	Athletics	Athletics Women's 800 metres
512	Shiny Kurisingal Abraham-Wilson	F	31	167	53	India	IND	1996 Summer	1996	Summer	Atlanta	Athletics	Athletics Women's 4 x 400 metres
663	Sharath Kamal Achanta	M	22	186	85	India	IND	2004 Summer	2004	Summer	Athina	Table Tennis	Table Tennis Men's Singles
663	Sharath Kamal Achanta	M	26	186	85	India	IND	2008 Summer	2008	Summer	Beijing	Table Tennis	Table Tennis Men's Singles
663	Sharath Kamal Achanta	M	34	186	85	India	IND	2016 Summer	2016	Summer	Rio de Janeiro	Table Tennis	Table Tennis Men's Singles

GET THE UNIQUE YEARS WHEN OLYMPICS WERE HELD

```
SELECT DISTINCT YEAR FROM ATHLETE_EVENTS ORDER BY YEAR  
LIMIT 10;
```

Result Grid

Year
1896
1900
1904
1906
1908
1912
1920
1924
1928
1932

JOIN ATHLETE_EVENTS WITH COUNTRY_DEFINITIONS TO GET ATHLETE NAMES AND REGIONS

```
SELECT AE.NAME, CD.REGION  
FROM ATHLETE_EVENTS AE
```

```
JOIN COUNTRY_DEFINITIONS CD ON AE.NOC = CD.NOC;
```

Name	Region
A Dijiang	China
A Lamusi	China
Gunnar Nielsen Aaby	Denmark
Edgar Lindenau Aabye	Denmark
Christine Jacoba Aaftink	Netherlands

GET ALL ATHLETE DATA FOR ATHLETES FROM 'INDIA' (REGION = 'INDIA')

```
SELECT AE.*  
FROM ATHLETE_EVENTS AE  
JOIN COUNTRY_DEFINITIONS CD ON AE.NOC = CD.NOC  
WHERE CD.REGION = 'INDIA';
```

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event	Medal
1415	Shakeel Ahmed	M	21	NA	NA	India	IND	1992 Summer	1992	Summer	Barcelona	Hockey	Hockey Men's Hockey	NA
1455	Neha Ahuja	F	24	162	54	India	IND	2006 Winter	2006	Winter	Torino	Alpine Skiing	Alpine Skiing Women's Giant Slalom	NA
1455	Neha Ahuja	F	24	162	54	India	IND	2006 Winter	2006	Winter	Torino	Alpine Skiing	Alpine Skiing Women's Slalom	NA
1710	Balkrishan Akotkar	M	27	171	57	India	IND	1964 Summer	1964	Summer	Tokyo	Athletics	Athletics Men's Marathon	NA
2453	Anil Alexander Aldrin	M	24	NA	NA	India	IND	1996 Summer	1996	Summer	Atlanta	Hockey	Hockey Men's Hockey	NA
2699	Shaukat Ali	M	30	NA	NA	India	IND	1928 Summer	1928	Summer	Amsterdam	Hockey	Hockey Men's Hockey	Gold
2702	Syed Ali	M	19	169	60	India	IND	1976 Summer	1976	Summer	Montreal	Hockey	Hockey Men's Hockey	NA
2703	Syed Mushtaq Ali	M	22	165	61	India	IND	1964 Summer	1964	Summer	Tokyo	Hockey	Hockey Men's Hockey	Gold
2706	Sayed Zeeshan Ali	M	18	180	64	India	IND	1988 Summer	1988	Summer	Seoul	Tennis	Tennis Men's Singles	NA
2864	Richard James Allen	M	25	172	NA	India	IND	1928 Summer	1928	Summer	Amsterdam	Hockey	Hockey Men's Hockey	Gold

FIND ATHLETE WITH MOST OVERALL OLYMPIC APPEARANCES

```
SELECT NAME, COUNT(DISTINCT YEAR) AS APPEARANCES  
      FROM ATHLETE_EVENTS  
      GROUP BY NAME  
      ORDER BY APPEARANCES DESC  
      LIMIT 1;
```

Name	appearances
Durward Randolph Knowles	8

LIST COUNTRIES THAT PARTICIPATED IN BOTH SUMMER AND WINTER OLYMPICS

```
SELECT CD.REGION  
      FROM ATHLETE_EVENTS AE  
      JOIN COUNTRY_DEFINITIONS CD ON AE.NOC = CD.NOC  
      GROUP BY CD.REGION  
      HAVING COUNT(DISTINCT AE.SEASON) = 2;
```

Region
Algeria
American Samoa
Andorra
Argentina
Armenia
Australia
Austria
Azerbaijan
Belarus
Belgium

LIST ATHLETES WHO WON MULTIPLE MEDALS IN ONE OLYMPIC GAME

```
SELECT AE.NAME, AE.GAMES, COUNT(*) AS MEDALS_WON  
      FROM ATHLETE_EVENTS AE  
      WHERE AE.MEDAL IS NOT NULL  
      GROUP BY AE.NAME, AE.GAMES  
      HAVING COUNT(*) > 1;
```

Name	Games	medals_won
Christine Jacoba Aaftink	1988 Winter	2
Christine Jacoba Aaftink	1992 Winter	2
Christine Jacoba Aaftink	1994 Winter	2
Per Knut Aaland	1992 Winter	4
Per Knut Aaland	1994 Winter	4
John Aalberg	1992 Winter	4
John Aalberg	1994 Winter	4
Cornelia "Cor" Aalten (-Strannood)	1932 Summer	2
Arvo Ossian Aaltonen	1912 Summer	2
Arvo Ossian Aaltonen	1920 Summer	2

LIST ALL ATHLETES WHO HAVE WON A GOLD MEDAL

```
SELECT DISTINCT NAME  
FROM ATHLETE_EVENTS.ATHLETE_EVENTS  
WHERE MEDAL = 'GOLD';
```

Name
Edgar Lindenau Aabye
Paavo Johannes Altonen
Kjetil Andr Aamodt
Ragnhild Margrethe Aamodt
Roald Edgar Aas
Thomas Valentin Aas
Ren Abadie
Aleksey Aleksandrovich Abalmasov
Luc Abalo
Jouan Patrice Abanda Etong

FIND THE AVERAGE HEIGHT AND WEIGHT OF ATHLETES BY SPORT

```
SELECT SPORT,  
AVG(HEIGHT) AS AVG_HEIGHT,  
AVG(WEIGHT) AS AVG_WEIGHT  
FROM ATHLETE_EVENTS.ATHLETE_EVENTS  
GROUP BY SPORT  
ORDER BY AVG_HEIGHT ASC;
```

Sport	avg_height	avg_weight
Cricket	0	0
Basque Pelota	0	0
Alpinism	0	0
Roque	0	0
Jeu De Paume	0	0
Croquet	0	0
Military Ski Patrol	0	0
Racquets	0	0
Polo	3.188679245283019	0
Art Competitions	3.2973149967256057	0.7321545514079896

HOW MANY ATHLETES PARTICIPATED FROM EACH COUNTRY

NOC	athlete_count
USA	4636
GBR	2905
FRA	2821
ITA	2340
CAN	2244
GER	2217
SWE	1930
AUS	1884
JPN	1472
KOR	1361

```
SELECT  
NOC, COUNT(DISTINCT ID) AS  
ATHLETE_COUNT  
FROM  
ATHLETE_EVENTS.ATHLETE_EVENTS  
GROUP BY NOC  
ORDER BY ATHLETE_COUNT DESC;
```

LIST ALL SPORTS PLAYED IN THE 2016 OLYMPICS

```
SELECT DISTINCT SPORT  
FROM  
ATHLETE_EVENTS.ATHLETE_EVENTS  
WHERE YEAR = 2016  
ORDER BY SPORT;
```

Sport
Archery
Athletics
Badminton
Basketball
Beach Volleyball
Boxing
Canoeing
Cycling
Diving
Equestrianism
Fencing

Sport	avg_weight
Baseball	83.17682926829268
Rugby Sevens	79.45255474452554
Weightlifting	77.51653868871826
Beach Volleyball	76.57915057915058
Volleyball	76.03022339027595
Handball	73.71838763114302
Luge	72.09509202453988
Basketball	71.88332523091881
Judo	70.76324689966178
Snowboarding	69.14660831509846
Canoeing	68.0740222221567

FIND THE YOUNGEST ATHLETE TO WIN A GOLD MEDAL

```
SELECT NAME, AGE, TEAM, YEAR, SPORT,  
EVENT  
FROM  
ATHLETE_EVENTS.ATHLETE_EVENTS  
WHERE MEDAL = 'GOLD' AND AGE IS NOT  
NULL  
ORDER BY AGE ASC  
LIMIT 1;
```

Name	Age	Team	Year	Sport	Event
Kim Yun-Mi	13	South Korea	1994	Short Track Speed Skating	Short Track Speed Skating Women's 3,000 metr...

FIND THE AVERAGE HEIGHT AND WEIGHT OF ATHLETES BY SPORT

```
SELECT SPORT,  
AVG(WEIGHT) AS AVG_WEIGHT  
FROM  
ATHLETE_EVENTS.ATHLETE_EVENTS  
GROUP BY SPORT  
ORDER BY AVG_WEIGHT DESC;
```

LIST ALL ATHLETES WHO HAVE WON A GOLD MEDAL

```
SELECT DISTINCT NAME  
FROM  
ATHLETE_EVENTS.ATHLETE_EVENTS  
WHERE MEDAL = 'GOLD'  
LIMIT 5;
```

Name
Edgar Lindenau Aabye
Paavo Johannes Aaltonen
Kjetil Andr Aamodt
Ragnhild Margrethe Aamodt
Roald Edgar Aas

Name	Region
Ragnhild Margrethe Aamodt	Norway
Moonika Aava	Estonia
Jos Luis Abajo Gmez	Spain
Mariya Vasilyevna Abakumova (-Tarabina)	Russia
Tamara Abalde Daz	Spain
Aleksey Aleksandrovich Abalmasov	Belarus
Luc Abalo	France
Ignazio Abate	Italy
Jol Marc Abati	France
Shakeel Abbasi	Pakistan

SHOW NUMBER OF MEDALS WON BY EACH TEAM IN 2012

```
SELECT TEAM, COUNT(*) AS MEDALS_2012  
FROM ATHLETE_EVENTS  
WHERE YEAR = 2012 AND MEDAL IS NOT  
NULL  
GROUP BY TEAM  
ORDER BY MEDALS_2012 DESC;
```

Team	medals_2012
United States	308
Great Britain	292
Russia	247
Australia	239
Germany	234
France	220
South Korea	202
Italy	192
Spain	176
Brazil	163
Canada	160

LIST ATHLETES WITH THEIR COUNTRY WHO PARTICIPATED IN THE 2008 OLYMPICS

```
SELECT AE.NAME, CD.REGION  
FROM ATHLETE_EVENTS AE  
JOIN COUNTRY_DEFINITIONS CD ON  
AE.NOC = CD.NOC  
WHERE AE.YEAR = 2008;
```

**THANK
YOU!**