Tennis Game Analytics
SQL Analysis

GitHub Link:

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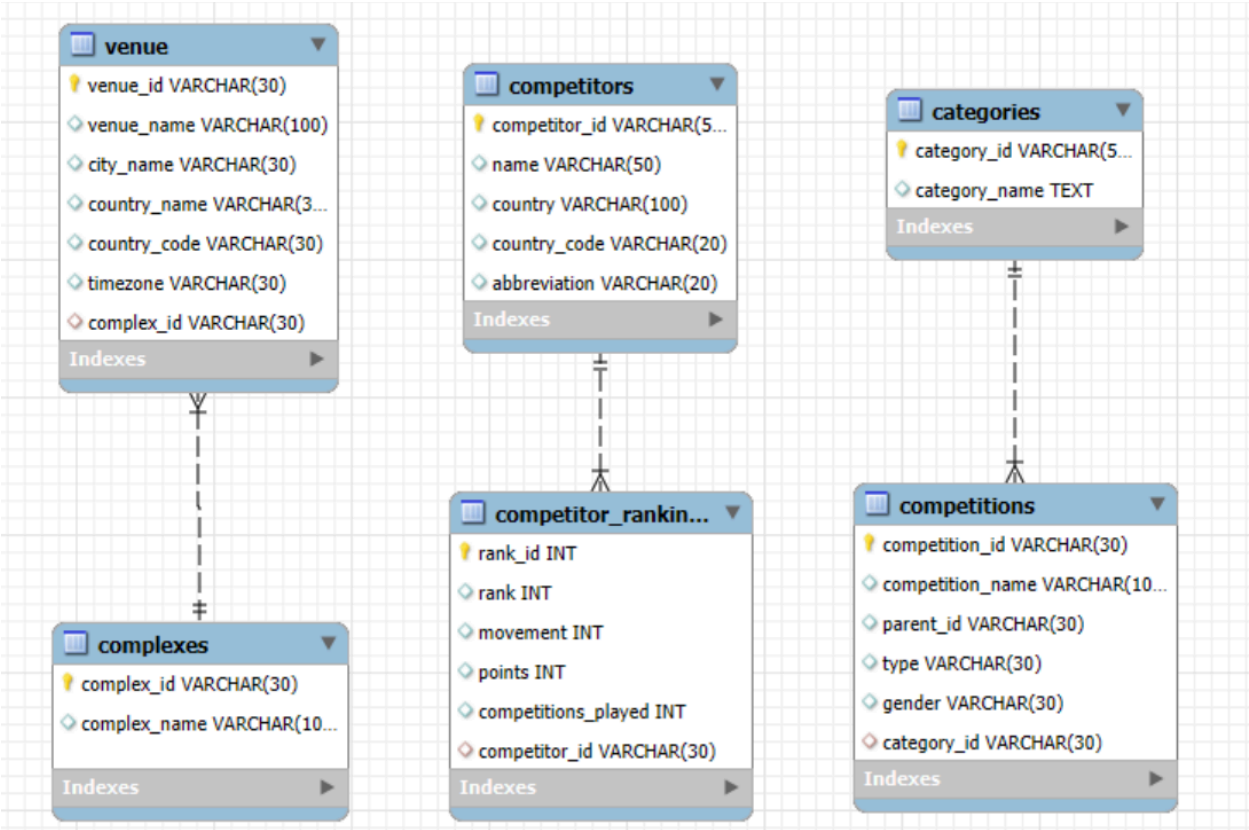
Introduction:

This project is on transforming raw tennis event data into useful information using systematic data gathering, relational structuring, and SQL-based query. Leveraging the capability of the SportRadar API, this project gathers detailed data about tennis events, complexes, venues, and player rankings. Nested JSON structures have data extracted and converted into a normalized MySQL database ready to be used as the basis for comprehensive exploration and reporting. By a series of structured SQL queries, the analysis considers event type trends, competition structure, player performance, and geographical distributions. The aim of this report is to present a brief, query-based examination of the data, presenting insights that enable event exploration, performance assessment, and strategic planning within the scope of sports analytics.

ER Diagram:

The ER diagram shows the underlying relational structure of the tennis analytics project. The project involves six connected tables: Categories, Competitions, Complexes, Venues, Competitors, and Competitor_Rankings. Each competition is connected to a category, showing its classification (e.g., ATP, ITF). Venues are connected to complexes, which are the actual venues where events take place. The competitors table holds players' data and is associated with Competitor_Rankings, whose performance data, like movement, points, and rank, are held. The relationships are made through the use of primary and foreign keys for referential integrity and efficient querying for use in analysis and reporting.



SQL Analysis:

1. Competition Data:

Table Structure—

- Categories Table:

```
CREATE TABLE categories(
category_id VARCHAR(50) PRIMARY KEY,
category_name VARCHAR(100) NOT NULL
);
```

- Competitions Table:

```sql
CREATE TABLE competitions(
competition_id VARCHAR(50) PRIMARY KEY,
competition_name VARCHAR(100) NOT NULL,
parent_id VARCHAR(50),
type VARCHAR(20) NOT NULL,
gender VARCHAR(10) NOT NULL,
category_id VARCHAR(50),
FOREIGN KEY (category_id) REFERENCES categories (category_id)
);
```

Analysis Questions:

Q1. List all competitions along with their category name

Answer:

```sql
select c.competition_id AS Competition_ID, c.competition_name AS Competition_Name, cat.category_name AS Category
from Competitions c
join Categories cat
on c.category_id = cat.category_id;
```

Competition_ID	Competition_Name	Category
sr:competition:12229	IPTL	IPTL
sr:competition:14814	Juniors AO, Melbourne, Australia Men Singles	Juniors
sr:competition:14816	Juniors AO, Melbourne, Australia Men Doubles	Juniors
sr:competition:14818	Juniors AO, Melbourne, Australia Women Singles	Juniors
sr:competition:14820	Juniors AO, Melbourne, Australia Women Doubles	Juniors
sr:competition:15399	Juniors French Open, Paris, France Men Singles	Juniors
sr:competition:15401	Juniors French Open, Paris, France Men Doubles	Juniors
sr:competition:15403	Juniors French Open, Paris, France Women Singles	Juniors
sr:competition:15405	Juniors French Open, Paris, France Women Doubles	Juniors
sr:competition:15660	Juniors Wimbledon, London, GB Women Singles	Juniors
sr:competition:15678	Juniors Wimbledon, London, GB Men Singles	Juniors
sr:competition:15680	Juniors Wimbledon, London, GB Men Doubles	Juniors
sr:competition:15682	Juniors Wimbledon, London, GB Women Doubles	Juniors
sr:competition:18032	Juniors US Open, New York, USA Men Singles	Juniors
sr:competition:18034	Juniors US Open, New York, USA Men Doubles	Juniors
sr:competition:18036	Juniors US Open, New York, USA Women Singles	Juniors
sr:competition:18038	Juniors US Open, New York, USA Women Doubles	Juniors

Insights:

From the analysis, it was found that there were 6110 competitions mapped with their corresponding categories, representing a comprehensive list of events for professional, junior, wheelchair, and exhibition tennis. The categorization provides a basic structure

for tournament-level or demographic group filtering and analysis (e.g., IPTL, WTA, Juniors).

Q2. Count the number of competitions in each category

Answer:

```
select cat.category_name AS Category, COUNT(*) AS Total_Competitions
from Competitions c
join Categories cat
on c.category_id = cat.category_id
group by cat.category_name;
```

Category	Total_Competitions
IPTL	1
Juniors	16
Legends	11
Wheelchairs	16
Hopman Cup	1
ITF Women	2032
Wheelchairs J...	6
United Cup	1
UTR Men	120
UTR Women	104
ATP	223
WTA	255
Challenger	912
Billie Jean Kin...	1
Davis Cup	1
ITF Men	2198
Exhibition	32
WTA 125K	180

Insights:

The analysis shows that ITF Men and ITF Women dominate with 2198 and 2032 competitions, respectively, reflecting their widespread presence and high frequency of occurrence. Categories such as ATP, WTA, and Challenger have high volume, while niche categories such as Hopman Cup and Davis Cup have minimal entries, indicating their exclusivity or seasonal nature.

Q3. Find all competitions of type 'doubles.'

Answer:

```sql
select competition_id AS Competition_ID, competition_name AS Competition_Name, type AS Type
from Competitions
where type = 'doubles';
```

Competition_ID	Competition_Name	Type
sr:competition:10027	ITF Men Stara Zagora, Bulgaria Men Doubles	doubles
sr:competition:10033	ITF Men Sibiu, Romania Men Doubles	doubles
sr:competition:10039	ITF Men Busto Arsizio, Italy Men Doubles	doubles
sr:competition:10045	ITF Men Sabac, Serbia Men Doubles	doubles
sr:competition:10057	ITF Men Seefeld, Austria Men Doubles	doubles
sr:competition:10075	ATP Challenger Portoroz, Slovenia Men DoublesUTR Wo	doubles
sr:competition:10093	ITF Men Focsani, Romania Men Doubles	doubles
sr:competition:10153	ATP Challenger Eskisehir, Turkey Men Doubles	doubles
sr:competition:10159	ITF Men Tallinn, Estonia Men Doubles	doubles
sr:competition:10183	ITF Women Campos Do Jordao, Brazil Women Doubles	doubles
sr:competition:10225	ITF Men Misiones, Argentina Men Doubles	doubles
sr:competition:10255	ATP Challenger Liberec, Czech Republic Men Doubles	doubles
sr:competition:10285	ITF Men Sleza, Poland Men Doubles	doubles
sr:competition:10315	ITF Men Bejar, Spain Men Doubles	doubles
sr:competition:10345	ATP Challenger Meerbusch, Germany Men Doubles	doubles
sr:competition:10381	ITF Men Geneva, Switzerland Men Doubles	doubles
sr:competition:10423	ITF Women Brcko, Bosnia & Herzegovina Women Doubles	doubles
sr:competition:10441	ITF Men Medias, Romania Men Doubles	doubles
sr:competition:10453	ITF Men Este, Italy Men Doubles	doubles

Insights:

The analysis shows that there are 2930 competitions with type 'doubles.' This shows that doubles competitions make up a significant proportion of the tennis landscape. Their existence in categories such as ITF, ATP, and Challenger ensures regular participation in professional and semi-professional games, which is valuable for examining team performance and partnership dynamics.

Q4. Get competitions that belong to a specific category (e.g., ITF Men)

Answer:

```sql
select c.competition_id AS Competition_ID, c.competition_name AS Competition_Name, cat.category_name As Category
from Competitions c
join Categories cat
on c.category_id = cat.category_id
where cat.category_name = 'ITF Men';
```

Competition_ID	Competition_Name	Category
sr:competition:10025	ITF Men Stara Zagora, Bulgaria Men Singles	ITF Men
sr:competition:10027	ITF Men Stara Zagora, Bulgaria Men Doubles	ITF Men
sr:competition:10031	ITF Men Sibiu, Romania Men Singles	ITF Men
sr:competition:10033	ITF Men Sibiu, Romania Men Doubles	ITF Men
sr:competition:10037	ITF Men Busto Arsizio, Italy Men Singles	ITF Men
sr:competition:10039	ITF Men Busto Arsizio, Italy Men Doubles	ITF Men
sr:competition:10043	ITF Men Sabac, Serbia Men Singles	ITF Men
sr:competition:10045	ITF Men Sabac, Serbia Men Doubles	ITF Men
sr:competition:10055	ITF Men Seefeld, Austria Men Singles	ITF Men
sr:competition:10057	ITF Men Seefeld, Austria Men Doubles	ITF Men
sr:competition:10091	ITF Men Focsani, Romania Men Singles	ITF Men
sr:competition:10093	ITF Men Focsani, Romania Men Doubles	ITF Men
sr:competition:10157	ITF Men Tallinn, Estonia Men Singles	ITF Men
sr:competition:10159	ITF Men Tallinn, Estonia Men Doubles	ITF Men
sr:competition:10223	ITF Men Misiones, Argentina Men Singles	ITF Men
sr:competition:10225	ITF Men Misiones, Argentina Men Doubles	ITF Men
sr:competition:10283	ITF Men Sleza, Poland Men Singles	ITF Men
sr:competition:10285	ITF Men Sleza, Poland Men Doubles	ITF Men
sr:competition:10313	ITF Men Bejar, Spain Men Singles	ITF Men

Insights:

The analysis shows that the ITF Men category includes 2198 competitions, reflecting its extensive range of hosting world-class levels of tournaments among men's players. This volume shows ITF Men as a central developmental level of professional players prior to transitioning to ATP-level tournaments.

Q5. Identify parent competitions and their sub-competitions

Answer:

```
select parent.competition_name AS Parent_Competition, child.competition_name AS Sub_Competition
from Competitions child
join Competitions parent
on child.parent_id = parent.competition_id;
```

Parent_Competition	Sub_Competition
ITF Romania F9, Men Singles	ITF Romania F9, Men Doubles

Insights:

Having pairs of parent and sub-competition, like singles and doubles within the same series of events, is an indication of hierarchical structuring. This helps to trace companion events under one cover tournament series and in the selection of the grouping of types of events at every level of competition.

Q6. Analyze the distribution of competition types by category

Answer:

```
select cat.category_name AS Category, c.type As Type, COUNT(*) AS Competition_Count
from Competitions c
join Categories cat
on c.category_id = cat.category_id
group by cat.category_name, c.type;
```

Category	Type	Competition_Count
IPTL	singles	1
Juniors	singles	8
Juniors	doubles	8
Legends	doubles	8
Legends	mixed_doubles	3
Wheelchairs	singles	8
Wheelchairs	doubles	8
Hopman Cup	mixed	1
ITF Women	singles	1014
ITF Women	doubles	1018
Wheelchairs J...	singles	4
Wheelchairs J...	doubles	2
United Cup	mixed	1
UTR Men	singles	120
UTR Women	singles	104
ATP	singles	108
ATP	doubles	107
ATP	mixed_doubles	6
ATP	mixed	2
WTA	singles	128
WTA	doubles	127
Challenger	singles	457
Challenger	doubles	455
Billie Jean Kin...	mixed	1
Davis Cup	mixed	1
ITF Men	singles	1099
ITF Men	doubles	1099
Exhibition	singles	22
Exhibition	doubles	8
Exhibition	mixed_doubles	2
WTA 125K	singles	90
WTA 125K	doubles	90

Insights:

The distribution shows that a majority of categories have both singles and doubles types. For example, ATP and ITF categories are well balanced, whereas others, such as UTR and Wheelchairs Junior, concentrate more specifically. This type of categorization helps to understand each category's focus on specific match formats and makes it simpler to target analysis accordingly.

Q7. List all competitions with no parent (top-level competitions)

Answer:

```
select competition_id As Competition_ID, competition_name AS Competition_Name
from Competitions
where parent_id IS NULL;
```

Competition_ID	Competition_Name
sr:competition:1207	Championship International Series
sr:competition:12229	IPTL
sr:competition:15393	ITF Men San Jose, Costa Rica Men Singles
sr:competition:15395	ITF Men San Jose, Costa Rica Men Doubles
sr:competition:2100	Davis Cup
sr:competition:2102	Billie Jean King Cup
sr:competition:21028	ITF Colombia 02A, Women Singles
sr:competition:21228	ITF Australia 02B, Women Doubles
sr:competition:22334	ITF Uzbekistan 01A, Women Singles
sr:competition:22763	ITF Tunisia 39A, Women Doubles
sr:competition:22787	ITF Egypt F38, Men Doubles
sr:competition:22959	ITF USA 17A, Women Singles
sr:competition:22997	ITF Bosnia & Herzegovina 01A, Women Doubles
sr:competition:29204	ITF Mexico F13, Men Singles
sr:competition:29206	ITF Mexico F13, Men Doubles
sr:competition:29386	ITF Mexico 17A, Women Singles
sr:competition:31137	ITF Mexico F30, Men Singles
sr:competition:31139	ITF Mexico F30, Men Doubles
sr:competition:31263	ATP Cup

Insights:

The analysis showed that there were 264 competitions identified as top level with no parent. Therefore, this indicates that stand-alone tournaments aren't connected within a higher-level system of competitions. They are usually popular or standalone events and significant data points when analyzing competition hierarchies and tournament flexibility.

2. Complexes Data:

Table Structure—

- Complexes Table:

```
CREATE TABLE complexes(
complex_id VARCHAR(50) PRIMARY KEY,
complex_name VARCHAR(100) NOT NULL
);
```

- Venues Table:

```sql
CREATE TABLE venues(
venue_id VARCHAR(50) PRIMARY KEY,
venue_name VARCHAR(100) NOT NULL,
city_name VARCHAR(100) NOT NULL,
country_name VARCHAR(100) NOT NULL,
country_code CHAR(3) NOT NULL,
timezone VARCHAR(100) NOT NULL,
complex_id VARCHAR(50),
FOREIGN KEY (complex_id) REFERENCES complexes (complex_id)
);
```

Analysis Questions:

Q1. List all venues along with their associated complex names.

Answer:

```sql
select v.venue_id as Venue_ID, v.venue_name as Venue_Name, c.complex_name as Complex_Name
from venues v
join complexes c
on v.complex_id = c.complex_id;
```

Venue_ID	Venue_Name	Complex_Name
sr:venue:1008	Estadio Monumental	Club Tennis Las Terrazas de Miraflores
sr:venue:10390	Stadium	Shenzhen International Tennis Center
sr:venue:10394	Court 2	Shenzhen Longgang Sports Center
sr:venue:10472	Court 7	Olympic Park Tennis Center
sr:venue:10536	Court 20	Melbourne Park
sr:venue:10538	Court 22	Melbourne Park
sr:venue:10582	Estadio Ivan Elias Moreno	Club Tennis Las Terrazas de Miraflores
sr:venue:10644	Stade Numa-Daly Magenta	Complexe Tennistique Marie-Louise Lhuillier
sr:venue:11168	Noevir Stadium	Miki Disaster Management Park
sr:venue:1119	Shanghai Stadium	Qi Zhong Tennis Center
sr:venue:11388	Cancha 5	Acapulco Princess Mundo Imperial
sr:venue:11486	Court 13	Indian Wells Tennis Garden
sr:venue:11661	Center Court	Royal Tennis Club de Marrakech
sr:venue:11663	Court 1	Royal Tennis Club de Marrakech
sr:venue:11665	Court 2	Royal Tennis Club de Marrakech
sr:venue:11667	Court 4	Royal Tennis Club de Marrakech
sr:venue:11735	SZ Court	MTTC Iphitos e.V.
sr:venue:11741	Court 1	Complexo Desportivo do Jamor
sr:venue:11985	Center Court	Tennis Club 1.FCN

Insights:

The analysis shows that there are a total of 3455 venue records along with their corresponding sport complexes, representing wide geographic and organizational coverage of tennis centers. This mapping is important for facility-scale analysis and allows tracing events back to exact locations within and across various regions and levels of tournaments.

Q2. Count the number of venues in each complex

Answer:

```
select c.complex_name as Complex_Name, count(v.venue_id) as Total_Venues
from venues v
join complexes c
on v.complex_id = c.complex_id
group by c.complex_name;
```

Complex_Name	Total_Venues
Kindarena	4
Estadio de la Cartuja	2
Estadio German Becker	4
Palais des sports de Gerland	7
Sibur Arena	4
Palais Des Sport	7
Palasport	4
Salle Steredenn	6
Garanti Koza Arena	1
Porsche-Arena	3
Rotterdam Ahoy	3
The O2	1
Bluesun Tennis Center	8
Club Sonoma, Estadio Gnp Seguros	3
Accor Arena	2
Stadium Goran Ivanisevic in ITC Stella Maris	1
Roy Emerson Arena	4
Complexo de Tenis do Jamor	5
Club de Tenis Puente Romano	9

Insights:

The analysis showed that there are a total of 518 complexes hosting venues. Therefore, this shows that many tournaments are dispersed throughout a large network of tennis centers. Knowing the number of venues per complex assists in the accommodation of

facility size and capacity, which is helpful for analysis of infrastructure density and event-hosting capacity.

Q3. Get details of venues in a specific country (e.g., Chile)

Answer:

```
select *
from venues
where country_name = 'Chile';
```

venue_id	venue_name	city_name	country_name	country_code	timezone	complex_id
sr:venue:13830	Cancha 1	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:13832	Cancha 3	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:15858	Centre Court	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:15860	Court 16	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:15862	Court 15	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:15864	Court 11	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:1602	Cancha Central	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:1603	Court 2	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:1604	Cancha 4	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:1605	Cancha 6	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:17100	Court 1	Santiago	Chile	CHL	America/Santiago	sr:complex:50605
sr:venue:17102	Court 2	Santiago	Chile	CHL	America/Santiago	sr:complex:50605
sr:venue:17104	Court 3	Santiago	Chile	CHL	America/Santiago	sr:complex:50605
sr:venue:2233	Cancha 14	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:2234	Cancha 16	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:2235	Cancha 17	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:25740	Court 4	Santiago	Chile	CHL	America/Santiago	sr:complex:62419
sr:venue:26008	Cancha Central	Santiago	Chile	CHL	America/Santiago	sr:complex:50605
sr:venue:26188	Central	Santiago	Chile	CHL	America/Santiago	sr:complex:62419

Insights:

The analysis showed that there are a total of 65 venues located in Chile that reflect the level of activity for the country to host tennis tournaments. The information is supporting regional infrastructure analysis and helps analyze the patterns of event distribution and areas of expansion for the country.

Q4. Identify all venues and their time zones.

Answer:

```
select venue_name as Venue_Name, timezone as TimeZone
from venues;
```

Venue_Name	TimeZone
Estadio Monumental	America/Lima
Stadium	Asia/Shanghai
Court 2	Asia/Shanghai
Court 7	Australia/Sydney
Court 20	Australia/Melbourne
Court 22	Australia/Melbourne
Estadio Ivan Elias Moreno	America/Lima
Stade Numa-Daly Magenta	Pacific/Noumea
Noevir Stadium	Asia/Tokyo
Shanghai Stadium	Asia/Shanghai
Cancha 5	America/Mexico_City
Court 13	America/Los_Angeles
Center Court	Africa/Casablanca
Court 1	Africa/Casablanca
Court 2	Africa/Casablanca
Court 4	Africa/Casablanca
SZ Court	Europe/Berlin
Court 1	Europe/Lisbon
Center Court	Europe/Berlin

Insights:

Capturing time zones for all 3455 venues allows scheduling, broadcasting, and coordinating worldwide events precisely. It becomes critical for tournament organizers, particularly when dealing with international competition that includes many time regions.

Q5. Find complexes that have more than one venue

Answer:

```
select c.complex_name, count(v.venue_id) as Venue_Count
from complexes c
join venues v
on c.complex_id = v.complex_id
group by c.complex_name
having count(v.venue_id) > 1;
```

	complex_name	Venue_Count
▶	Kindarena	4
	Estadio de la Cartuja	2
	Estadio German Becker	4
	Palais des sports de Gerland	7
	Sibur Arena	4
	Palais Des Sport	7
	Palasport	4
	Salle Steredenn	6
	Porsche-Arena	3
	Rotterdam Ahoy	3
	Bluesun Tennis Center	8
	Club Sonoma, Estadio Gnp ...	3
	Accor Arena	2
	Roy Emerson Arena	4
	Complexo de Tenis do Jamor	5
	Club de Tenis Puente Romano	9
	National Tennis Center	63
	Canberra Tennis Centre	7
	BT Arena	2

Insights:

With 488 complexes having multiple venues, it is evident that the majority of facilities are designed to host numerous matches or tournaments at the same time. The analysis shows that the National Tennis Center complex has the highest venue count, i.e., 63 venues. This supports multi-event hosting capacities and is critical in capacity planning and logistics management.

Q6. List venues grouped by country

Answer:

```
select country_name, GROUP_CONCAT(venue_name SEPARATOR ', ') AS venues
from venues
group by country_name;
```

country_name	venues
Argentina	Court 1, Cancha 7, Court 6, Cancha 5, Club Nautico Hacoaj - Center Court, Court 5, Club Nautico Hacoaj - Court 08, Cancha 2, Court 2, Cancha 1, Court 5, Cancha ...
Australia	Show Court 1, Court 3, Court 4, Court 7, Court 20, Court 22, Court 2, Court 5, Ct 10, Ct 8, Ct 14, Court 6, Court 8, Court 11, Centre Court, Court 10, Court 17, C...
Austria	Court 3, Center Court, Court 3, Court 8, Court 1, Court Riedel, Kaps, Center Court, Court 2, Court 1, Centre Court, Show Court, Court 3, Court 7, Cancha 3, Gran...
Bahrain	Court 7, Court CC, Court 3, Court 4, Court 5, Center Court, Court 1, Court 2
Belgium	Court 3, Court Central, Court 2, Centre Court, Court 1, Court 1
Bolivia	Court 2, Court 1, Cancha 2, Court 9, Court 4, Center Court, Cancha 3, Cancha 6, Cancha 7, Cancha 5, Cancha 1, Cancha Central, Cancha 1, Cancha 2, Court 5, C...
Bosnia & Herzegovina	Grandstand, Central Court, Centre Court, Court 1, Court 3, Court 4, Court 5, Court 2, Court 1
Brazil	Court 7, Quadra 4, Quadra 2, Quadra 5, Quadra 3, Center Court, Court 2, Center Court, Centra Court, Indoor Court, Indoors, Quadra 5, Quadra 6, Court 7, Centr...
Bulgaria	Court 2, Tennis Club Favorit - Court 4, Court 1, Center Court, Tennis Club Favorit - Court 3, Tennis Club Favorit - Court 2, Tennis Club Favorit - Court 1, Court 3, Co...
Canada	Court 5, Court 4, Court 9, Court Central, Court Rogers, Polygon Court, Court 4, Court 1, Rogers Court, Court 3, Centre Marcel Dionne, Court 1, National Bank Cour...
Chile	Cancha Central, Court 6, Court 1, Court 2, Court 3, Cancha 3, Court 2, Court 1, Centre Court, Cancha 7, Cancha Central, Court Jaime Fillol, Cancha 2, Cancha 3, C...
China	Court 2, Court 5, Shanghai Stadium, Indoor 10, Indoor 4, Court 9 (indoor), Court 7 (indoor), Court 8, Court 8 (indoor), Court 10 (indoor), Grandstand 2, Capital Gro...
Chinese Taipei	Yang-Ming Tennis Center - Court 4, Yang-Ming Tennis Center - Court 5, Yang-Ming Tennis Center - Court 6, Yang-Ming Tennis Center - Court 6, Court 1, Show Court...
Colombia	Cancha Central, Campo 3, Court 3, Court 2, Estadio Hernan Ramirez Villegas, Cancha 2, Court 1, Cancha Central, Campo 5, Cancha 1, Cancha 2, Cancha 3, Court 4...
Cote dâ€™Ivoire	Court CNPS, Court COFINA NEEMBA, Central KAYDAN
Croatia	Court 4, Table 8, Table 7, Table 6, Table 5, Table 4, Table 3, Table 2, Table 1, Cedevita Court, Cockta Court, Kala Court, Goran Ivanisevic Stadium, Grandstand, Co...
Czechia	Kurt 1, Kurt 2, Match Court, Centre Court, Pernerka Court, Centre Court, Court 2, Svijany Court, Gea Court, Mlyn Perner Court, Center Court, Court 6, Court 5, Co...
Denmark	Court 5, Court 4, Court 1, Court 3, Court 2, Court 1, Court 4, Court 3, Court 2
Dominican Republic	Estadio Central, Estadio, Court 5, Estadio 4, Estadio 3, Cancha 7, Estadio Sid, Court 8, Court 12, Cancha 3, Cancha Avena Americana, Grandstand, Estadio, Estadio...

Insights:

The 69 nations represented show the international scope of tennis events and facilities. The national analysis gives a view of tennis growth at a geographic level and enables federations or sponsors to determine targeted geography for investment or promotion.

Q7. Find all venues for a specific complex (e.g., Nacional)

Answer:

```
select v.venue_id as Venue_ID, v.venue_name as Venue_Name, v.city_name as City, v.country_name as Country
from venues v
join complexes c
on v.complex_id = c.complex_id
where c.complex_name = 'Nacional';
```

Venue_ID	Venue_Name	City	Country
sr:venue:70045	Cancha Central	Santiago	Chile

Insights:

The analysis shows the venue for a specific complex, such as "Nacional," which helps in understanding how every venue operates within a structure. It allows for small-scale facility analysis and can be applied in tracking events, operations planning, and on-site logistics.

3. Doubles Competitor Rankings Data:

Table Structure—

- Competitor_Rankings Table:

```
CREATE TABLE competitor_rankings (
rank_id INT PRIMARY KEY AUTO_INCREMENT,
`rank` INT NOT NULL,
movement INT NOT NULL,
points INT NOT NULL,
competitions_played INT NOT NULL,
competitor_id VARCHAR(50),
FOREIGN KEY (competitor_id) REFERENCES competitors(competitor_id)
);
```

- Competitors Table:

```
CREATE TABLE competitors(
competitor_id VARCHAR(50) PRIMARY KEY,
name VARCHAR(100) NOT NULL,
country VARCHAR(100) NOT NULL,
country_code CHAR(3) NOT NULL,
abbreviation VARCHAR(10) NOT NULL
);
```

Analysis Questions:

Q1. Get all competitors with their rank and points.

Answer:

```
with cte as (
select c.name as Competitor_Name, cr.points as Points,
dense_rank() over (order by points desc) as `Rank`
from competitor_rankings cr
join competitors c
on cr.competitor_id = c.competitor_id
)
select Competitor_Name, Points, `Rank`
from cte
order by Points desc, `Rank` desc;
```

	Competitor_Name	Points	Rank
▶	Siniakova, Katerina	9095	1
	Townsend, Taylor	8835	2
	Pavic, Mate	8280	3
	Arevalo-Gonzalez, Marcelo	8280	3
	Heliovaara, Harri	8060	4
	Patten, Henry	8060	4
	Routliffe, Erin	7610	5
	Ostapenko, Jelena	6855	6
	Krawietz, Kevin	6515	7
	Errani, Sara	6480	8
	Paolini, Jasmine	6480	8
	Dabrowski, Gabriela	6425	9
	Putz, Tim	6425	9
	Granollers, Marcel	6135	10
	Zeballos, Horacio	6135	10
	Thompson, Jordan	5440	11
	Shnaider, Diana	5215	12

Insights:

This analysis gave a detailed overview of 1000 ranked players by points, including an overall picture of performance in the competitive landscape. This will help us to analyze player position and provide deeper analysis of ranking trends and points allocation.

Q2. Find competitors ranked in the top 5.

Answer:

```
with cte as (
select c.name as Competitor_Name, cr.points as Points,
dense_rank() over (order by points desc) as `Rank`
from competitor_rankings cr
join competitors c
on cr.competitor_id = c.competitor_id
)
select Competitor_Name, Points, `Rank`
from cte
where `Rank` <= 5
order by Points desc, `Rank` desc;
```

Competitor_Name	Points	Rank
Siniakova, Katerina	9095	1
Townsend, Taylor	8835	2
Pavic, Mate	8280	3
Arevalo-Gonzalez, Marcelo	8280	3
Heliovaara, Harri	8060	4
Patten, Henry	8060	4
Routliffe, Erin	7610	5

Insights:

This analysis shows the competitors that are ranked in the top 5, highlighting the best performers and helping to analyze the point gaps at the top and monitor consistent high performers in the global tennis landscape.

Q3. List competitors with no rank movement (stable rank).

Answer:

```
select c.name as Competitor_Name, cr.movement as Movement,
row_number() over(order by c.name) as Row_Num
from competitor_rankings cr
join competitors c
on cr.competitor_id = c.competitor_id
where cr.movement = 0;
```

Competitor_Name	Movement	Row_Num
Aguilar, Juan Carlos	0	1
Alexandrova, Ekaterina	0	2
Anderson, Robin	0	3
Andrade, Andres	0	4
Andreescu, Bianca	0	5
Andreeva, Mirra	0	6
Andreozzi, Guido	0	7
Aney, Jessie	0	8
Aoyama, Shuko	0	9
Arevalo-Gonzalez, Marcelo	0	10
Auger-Aliassime, Felix	0	11
Avdeeva, Julia	0	12
Bains, Naiktha	0	13
Barreiros Reyes, Mateo	0	14
Barton, Hynek	0	15
Bayldon, Blake	0	16

Insights:

The analysis shows 169 competitors with no rank movement, showing stability in performance over the recent period. It helps to evaluate the players performance who have been steadily performing consistently and assess the ranking variation across the levels.

Q4. Get the total points of competitors from a specific country (e.g., Croatia).

Answer:

```
select c.country as Country, sum(cr.points) as Total_Points
from competitors c
join competitor_rankings cr
on c.competitor_id = cr.competitor_id
where c.country = 'Croatia';
```

	Country	Total_Points
▶	Croatia	16310

Insights:

From the analysis, we can see that Croatia has 16,310 total points, which shows the total contribution of the country to global rankings. Therefore, this helps us to evaluate national performance strength and how countries have high-ranking potential or dominance.

Q5. Count the number of competitors per country.

Answer:

```
select country as Country, count(*) as Competitor_Count
from competitors
where country != "Neutral"
group by country
order by Competitor_Count desc;
```

Country	Competitor_Count
USA	105
Japan	57
France	54
Great Britain	53
Australia	48
Italy	43
Czechia	38
China	31
Germany	30
India	30
Argentina	29
Spain	29
Netherlands	27
Brazil	24
Canada	20
Switzerland	20
Ukraine	18
Romania	18

Insights:

The analysis shows competitors in 76 countries to understand the global spread of the sport. From the analysis, it is found that the USA has the highest competitor count, i.e., 105 competitors. Therefore, this analysis is useful for regional comparison, tennis participation rate, and federation-level decision-making on resource planning and talent development.

Q6. Find competitors with the highest points in the current week

Answer:

```
select c.name as Competitor_Name, cr.points as Points
from competitors c
join competitor_rankings cr
on c.competitor_id = cr.competitor_id
where cr.points in (
select max(points) from competitor_rankings
);
```

Competitor_Name	Points
Siniakova, Katerina	9095

Insights:

The analysis shows the competitor Siniakova, Katerina, has the highest points in the current week, i.e., 9095 points. This helps in tracking trend shifts, new players, or top athletes who may influence upcoming tournaments.

Conclusion:

The SQL analysis of tennis information fetched from the SportRadar API offers a comprehensive view of global tennis according to competitions, venues, and performance by players. With more than 6000 competitions classified as ITF, ATP, WTA, and Juniors, the data captures the depth and diversity of world tournament structures. Breakdown and distribution by competition type reflect a generally balanced emphasis on singles and doubles forms, with parent-child relationships showing the tournament hierarchies. Venue analysis also uncovers the immense geographic foundation of these events, with thousands of venues scattered in complexes in more than 60 countries—imagining global scope for tennis. Furthermore, competitor rankings also provide crucial insights into personal performance and national-level representation, reflecting elite-class dominance along with consistent mid-tier stability. Overall, this analysis supports data-driven decision-making for organizers, analysts, and federations, which can support more effective planning, monitoring, and resource utilization in the sport.