Deliverable 2

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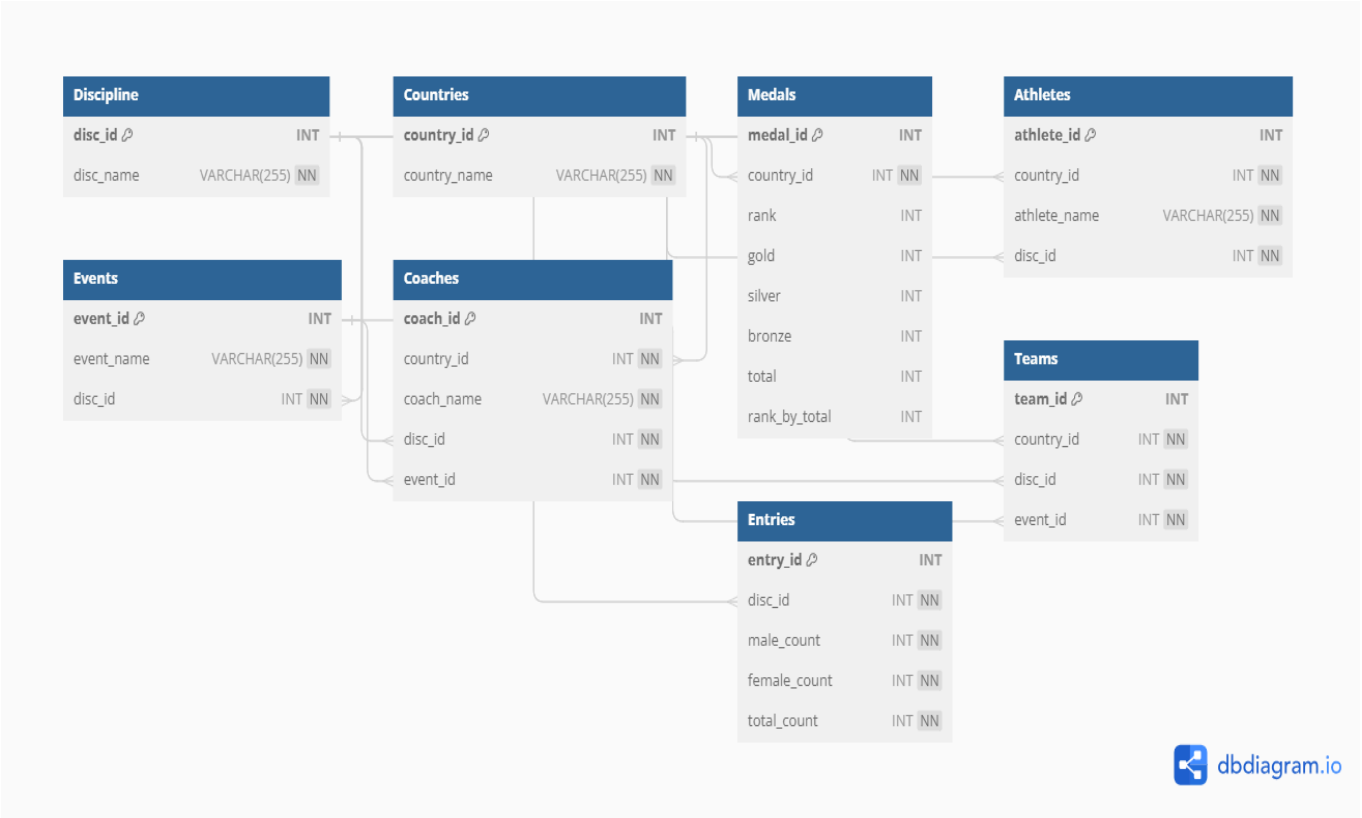
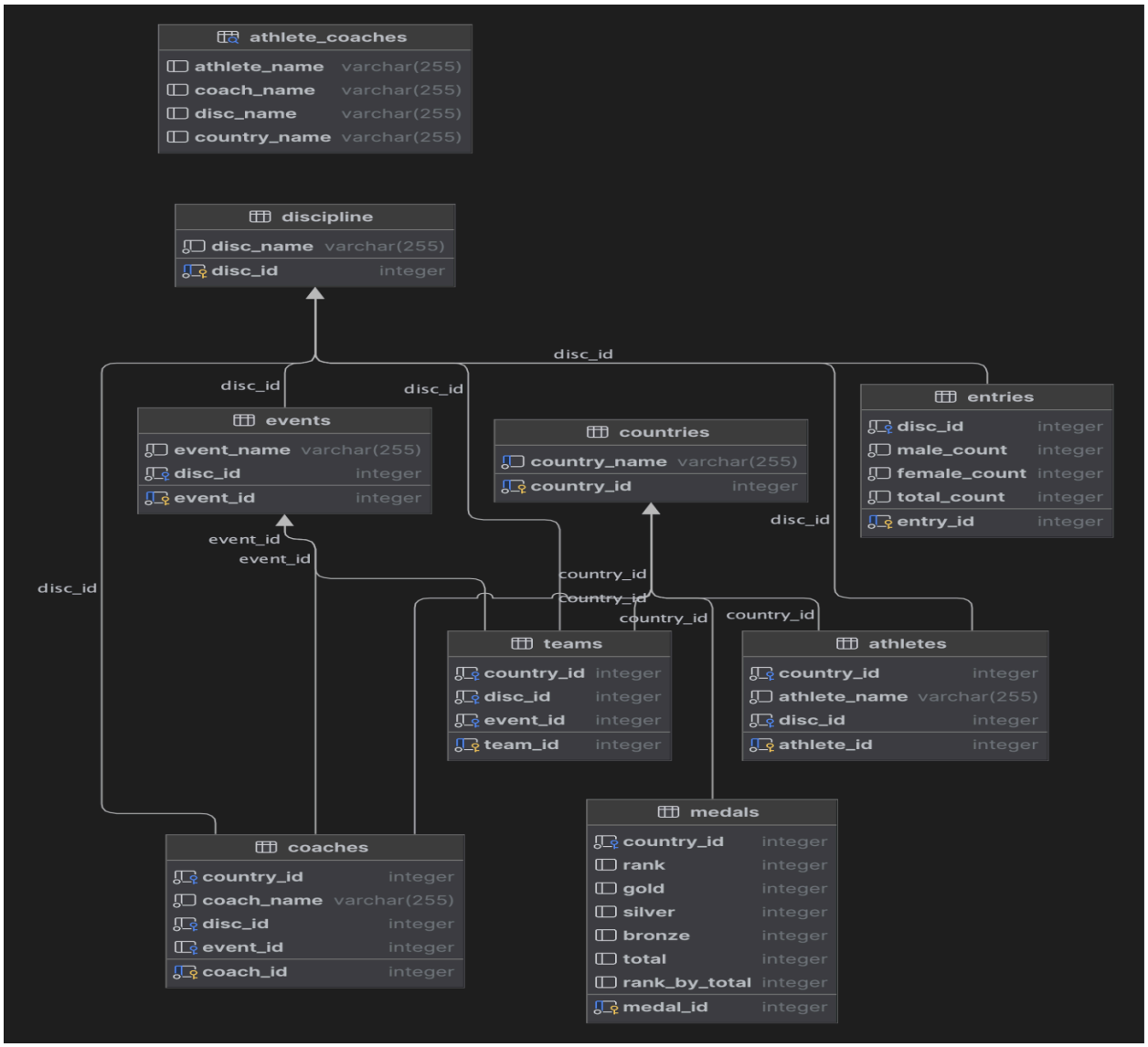
Topic: Tokyo Olympics Database

ER Diagram:



Relational Schema:



DDL Commands:

The attached consists of the schema and table creation queries for the 2021 tokyo olympics database.

```sql
DROP SCHEMA IF EXISTS tokyo_olympics CASCADE;

CREATE SCHEMA tokyo_olympics;

SET search_path TO tokyo_olympics;

CREATE TABLE Discipline (
 disc_id INT generated by default as identity primary key,
 disc_name VARCHAR(255) NOT NULL
);

CREATE TABLE Countries (
 country_id INT generated by default as identity primary key,
 country_name VARCHAR(255) NOT NULL ADD CONSTRAINT unique_country_name UNIQUE (country_name);
);

CREATE TABLE Medals (
 medal_id INT generated by default as identity primary key,
 country_id INT NOT NULL,
 rank INT,
 gold INT,
 silver INT,
 bronze INT,
 total INT,
 rank_by_total INT,
FOREIGN KEY (country_id) REFERENCES Countries(country_id)
);
```

```sql
CREATE TABLE Athletes (
 athlete_id INT generated by default as identity primary key,
 country_id INT NOT NULL,
 athlete_name VARCHAR(255) NOT NULL,
 disc_id INT NOT NULL,
 FOREIGN KEY (country_id) REFERENCES Countries(country_id),
 FOREIGN KEY (disc_id) REFERENCES Discipline(disc_id)
);

CREATE TABLE Events (
 event_id INT generated by default as identity primary key,
 event_name VARCHAR(255) NOT NULL,
 disc_id INT NOT NULL,
 FOREIGN KEY (disc_id) REFERENCES Discipline(disc_id)
);

CREATE TABLE Coaches (
 coach_id INT generated by default as identity primary key,
 country_id INT NOT NULL,
 coach_name VARCHAR(255) NOT NULL,
 disc_id INT NOT NULL,
 event_id INT,
 FOREIGN KEY (country_id) REFERENCES Countries(country_id),
 FOREIGN KEY (disc_id) REFERENCES Discipline(disc_id),
 FOREIGN KEY (event_id) REFERENCES Events(event_id)
);
```

```
);

CREATE TABLE Entries (
 entry_id INT generated by default as identity primary key,
 disc_id INT NOT NULL,
 male_count INT NOT NULL,
 female_count INT NOT NULL,
 total_count INT NOT NULL,
 FOREIGN KEY (disc_id) REFERENCES Discipline(disc_id)
);

CREATE TABLE Teams (
 team_id INT generated by default as identity primary key,
 country_id INT NOT NULL,
 disc_id INT NOT NULL,
 event_id INT NOT NULL,
 FOREIGN KEY (country_id) REFERENCES Countries(country_id),
 FOREIGN KEY (disc_id) REFERENCES Discipline(disc_id),
 FOREIGN KEY (event_id) REFERENCES Events(event_id)
);

CREATE OR REPLACE VIEW Athlete_Coaches AS
SELECT
    a.athlete_name,
    COALESCE(c.coach_name, 'No Coach Assigned')::VARCHAR(255) AS coach_name,
    d.disc_name,
    cn.country_name
```

```
CREATE OR REPLACE VIEW Athlete_Coaches AS
SELECT
    a.athlete_name,
    COALESCE(c.coach_name, 'No Coach Assigned')::VARCHAR(255) AS coach_name,
    d.disc_name,
    cn.country_name
FROM
    Athletes a
INNER JOIN
    Discipline d ON a.disc_id = d.disc_id
INNER JOIN
    Countries cn ON a.country_id = cn.country_id
LEFT JOIN
    Coaches c ON a.country_id = c.country_id AND a.disc_id = c.disc_id;

Select * from Athlete_Coaches LIMIT 5;

ALTER TABLE Countries
ADD CONSTRAINT unique_country_name UNIQUE (country_name);
```

DML Commands:

The attached document consists of the insert and select queries for the 2021 tokyo olympics database. The data is cleaned and loaded from csv files into the tables using copy command.

```
--scp -r "dbms_olympics_project" chetha@linux.cs.pdx.edu:/u/chetha

--
\copy tokyo_olympics.countries(country_name)
FROM '/u/chetha/dbms_olympics_project/country.csv' DELIMITER ',' CSV HEADER;
\copy tokyo_olympics.discipline(disc_name)
 FROM '/u/chetha/dbms_olympics_project/discipline.csv' DELIMITER ',' CSV HEADER;

select * from tokyo_olympics.countries LIMIT 5;

select * from tokyo_olympics.discipline LIMIT 5;

--Medals Table
CREATE TEMPORARY TABLE TempMedals (
    rank INT,
    gold INT,
    silver INT,
    bronze INT,
    total INT,
    rank_by_total INT,
    country_name VARCHAR(255) NOT NULL
);
```

```
INNER JOIN tokyo_olympics.Countries c ON t.country_name = c.country_name;

DROP TABLE TempMedals;


select * from tokyo_olympics.Medals LIMIT 5;

---Athlets Table

CREATE TEMPORARY TABLE TempAthletes (
    athlete_name VARCHAR(255) NOT NULL,
    country_name VARCHAR(255) NOT NULL,
    discipline_name VARCHAR(255) NOT NULL
);

\copy  TempAthletes (athlete_name, country_name, discipline_name)
FROM '/u/chetha/dbms_olympics_project/athlets.csv'
DELIMITER ',' CSV HEADER;

INSERT INTO tokyo_olympics.Athletes (athlete_name, country_id, disc_id)
SELECT t.athlete_name, c.country_id, d.disc_id
FROM TempAthletes t
INNER JOIN tokyo_olympics.Countries c ON t.country_name = c.country_name
INNER JOIN tokyo_olympics.Discipline d ON t.discipline_name = d.disc_name;

DROP TABLE TempAthletes;

select * from tokyo_olympics.Athletes LIMIT 5;
```

```sql
-- Events table

CREATE TEMPORARY TABLE TempEvents (
    event_name VARCHAR(255) NOT NULL,
    discipline_name VARCHAR(255) NOT NULL
);

\copy  TempEvents (event_name, discipline_name)
FROM '/u/chetha/dbms_olympics_project/event.csv'
DELIMITER ',' CSV HEADER;

INSERT INTO tokyo_olympics.Events (event_name, disc_id)
SELECT te.event_name, d.disc_id
FROM TempEvents te
INNER JOIN tokyo_olympics.Discipline d ON te.discipline_name = d.disc_name;

-- Optional: Drop temporary table after use
DROP TABLE TempEvents;

select * from tokyo_olympics.Events LIMIT 5;

---Coach Table

CREATE TEMPORARY TABLE TempCoaches (
    coach_name VARCHAR(255) NOT NULL,
    country_name VARCHAR(255) NOT NULL,
    discipline_name VARCHAR(255),
    event_name VARCHAR(255)
);
```

```sql

\copy  TempCoaches (coach_name, country_name, discipline_name, event_name)
FROM '/u/chetha/dbms_olympics_project/coaches.csv'
DELIMITER ',' CSV HEADER;

INSERT INTO tokyo_olympics.Coaches (coach_name, country_id, disc_id, event_id)
SELECT tc.coach_name, c.country_id, d.disc_id, e.event_id
FROM TempCoaches tc
INNER JOIN tokyo_olympics.Countries c ON tc.country_name = c.country_name
LEFT JOIN tokyo_olympics.Discipline d ON tc.discipline_name = d.disc_name -- Optional: handle mi
LEFT JOIN tokyo_olympics.Events e ON tc.event_name = e.event_name; -- Optional: handle missing

-- Optional: Drop temporary table after use
DROP TABLE TempCoaches;

select * from tokyo_olympics.Coaches LIMIT 5;



---Entries Table

CREATE TEMPORARY TABLE TempEntries (
    discipline_name VARCHAR(255) NOT NULL,
    female INT,
    male INT,
    total INT
);

```

```
\copy  TempEntries (discipline_name, female, male, total)
FROM '/u/chetha/dbms_olympics_project/entries.csv'
DELIMITER ',' CSV HEADER;

INSERT INTO tokyo_olympics.Entries (disc_id, female_count, male_count, total_count)
SELECT d.disc_id, te.female, te.male, te.total
FROM TempEntries te
INNER JOIN tokyo_olympics.Discipline d ON te.discipline_name = d.disc_name;

-- Optional: Drop temporary table after use
DROP TABLE TempEntries;

select * from tokyo_olympics.Entries LIMIT 5;

----Teams Table

CREATE TEMPORARY TABLE TempTeams (
    country_name VARCHAR(255) NOT NULL,
    discipline_name VARCHAR(255) NOT NULL,
    event_name VARCHAR(255) NOT NULL
);

\copy  TempTeams (country_name, discipline_name, event_name)
FROM '/u/chetha/dbms_olympics_project/teams.csv'
DELIMITER ',' CSV HEADER;

INSERT INTO tokyo_olympics.Teams (country_id, disc_id, event_id)
SELECT c.country_id, d.disc_id, e.event_id
FROM TempTeams tt
INNER JOIN tokyo_olympics.Countries c ON tt.country_name = c.country_name
INNER JOIN tokyo_olympics.Discipline d ON tt.discipline_name = d.disc_name
INNER JOIN tokyo_olympics.Events e ON tt.event_name = e.event_name;

-- Optional: Drop temporary table after use
DROP TABLE TempTeams;



select * from tokyo_olympics.Teams LIMIT 5;
```

DISCIPLINE TABLE:

```
11  select count(*) from tokyo_olympics.discipline;
```

Output | win2024adb0046.tokyo_olympics.teams | count(*):bigint

1 row

	count
1	46

```
9   select * from tokyo_olympics.discipline LIMIT 5;
10
11  --Medals Table
```

Output | win2024adb0046.tokyo_olympics.discipline

5 rows

	disc_id	disc_name
1	1	3x3 Basketball
2	2	Archery
3	3	Artistic Gymnastics
4	4	Artistic Swimming
5	5	Athletics

ATHLETES TABLE:

```
58  select count(*) from tokyo_olympics.Athletes;
59  select * from tokyo_olympics.Athletes LIMIT 5;
```

Output | win2024adb0046.tokyo_olympics.teams | count(*):

1 row

count
20436

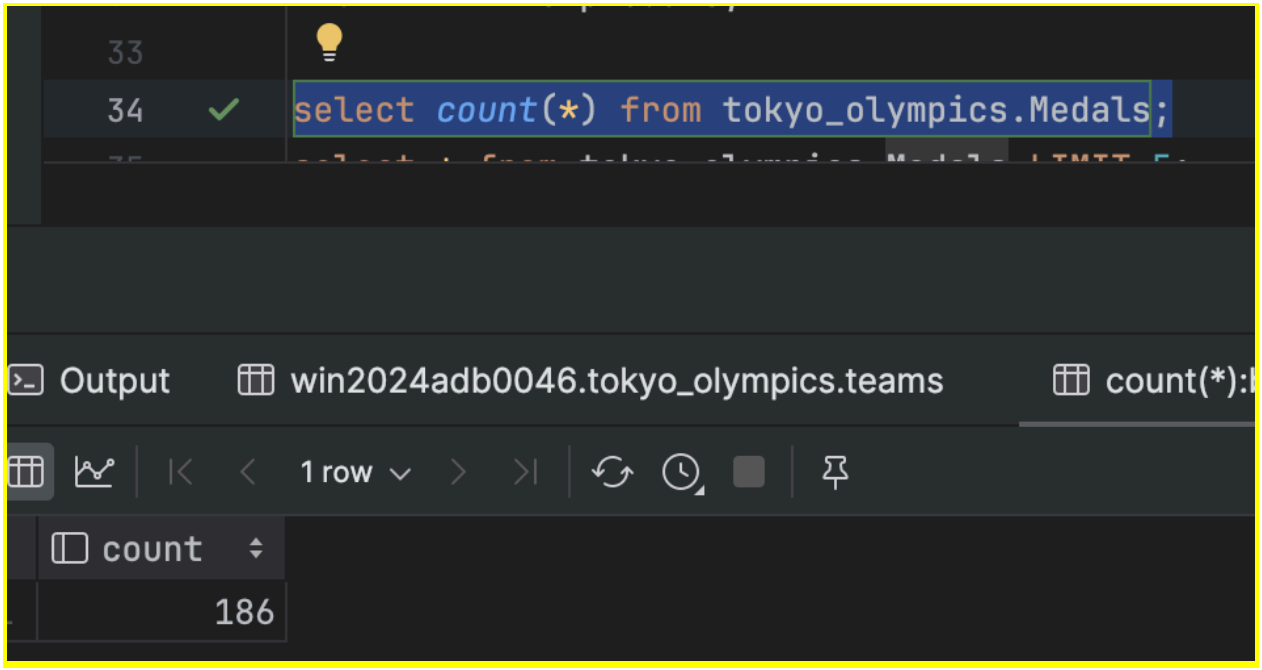
```
55  select * from tokyo_olympics.Athletes LIMIT 5;
56
57  -- Events table
58
```

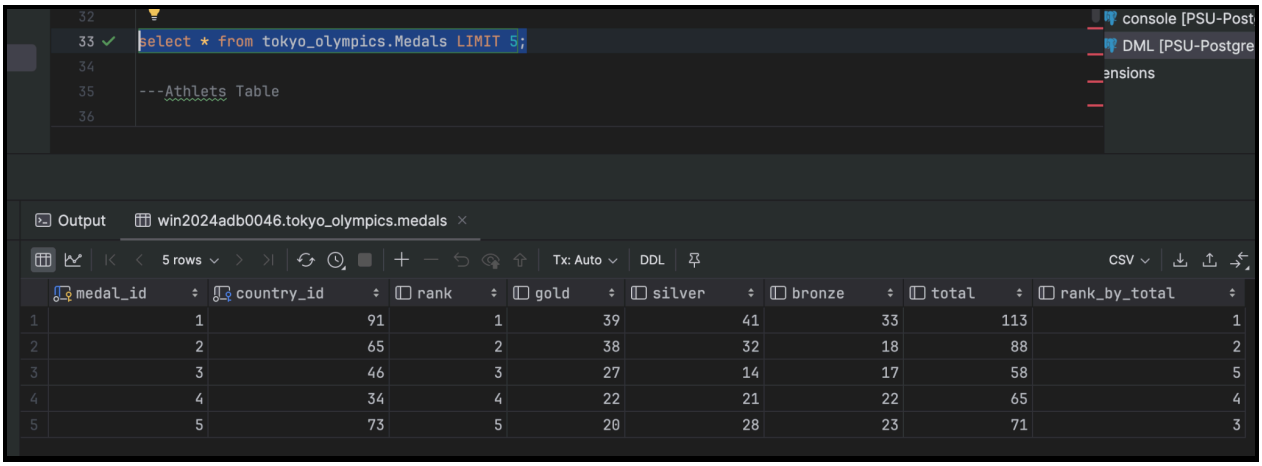
Output | win2024adb0046.tokyo_olympics.athletes

5 rows | Tx: Auto | DDL

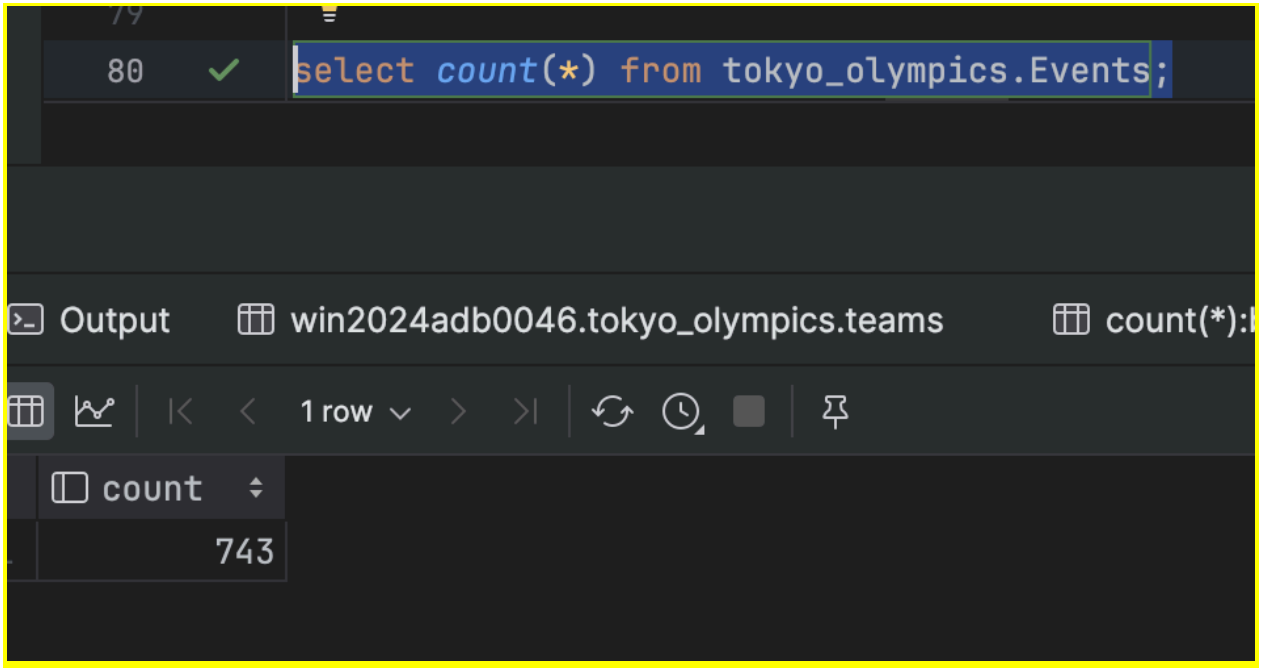
	athlete_id	country_id	athlete_name	disc_id
1	1	64	AALERUD Katrine	16
2	2	81	ABAD Nestor	3
3	3	44	ABAGNALE Giovanni	30
4	4	81	ABALDE Alberto	8
5	5	81	ABALDE Tamara	8

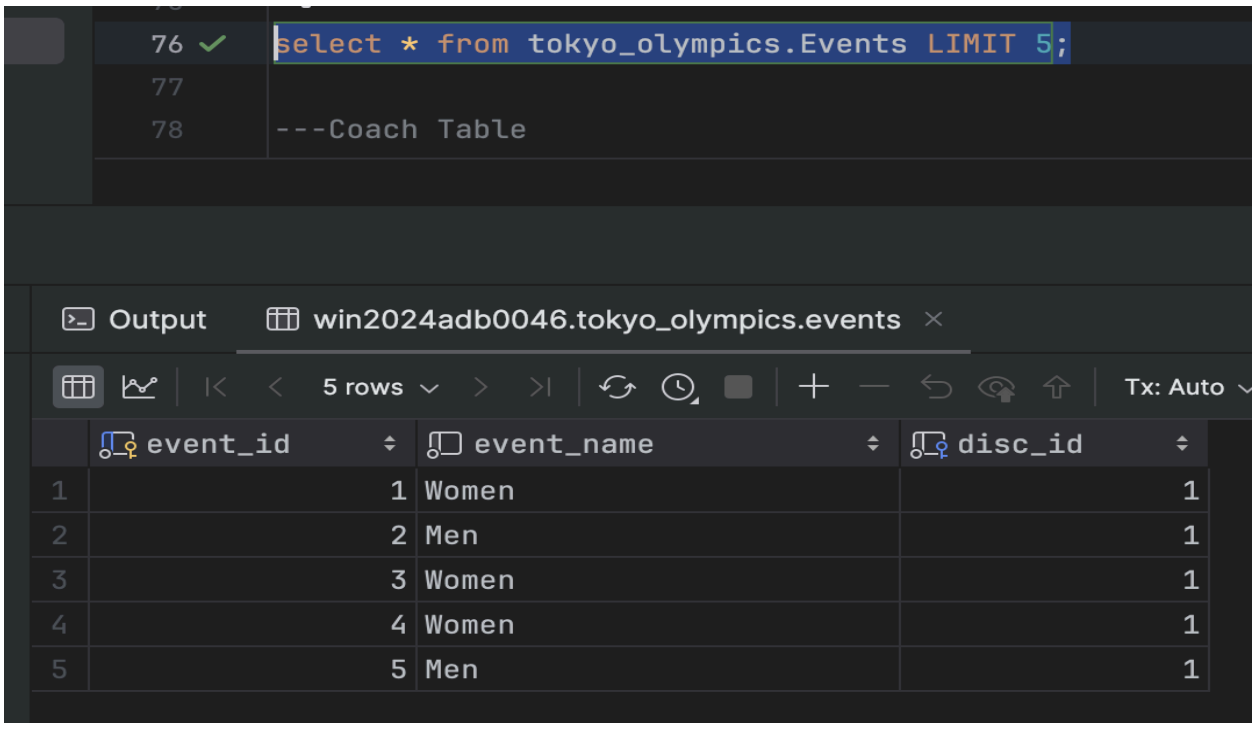
MEDALS TABLE:





EVENTS TABLE:





ENTRIES TABLE:

```
132  select count(*) from tokyo_olympics.Entries;
```

Output | win2024adb0046.tokyo_olympics.teams | count(*)

1 row

	count
1	46

```
126  select * from tokyo_olympics.Entries LIMIT 5;
127
128  ----Teams Table
129
130  CREATE TEMPORARY TABLE TempTeams (
```

Output | win2024adb0046.tokyo_olympics.entries

5 rows | Tx: Auto | DDL

	entry_id	disc_id	male_count	female_count	total_count
1	1	1	32	32	64
2	2	2	64	64	128
3	3	3	98	98	196
4	4	4	0	105	105
5	5	5	1072	969	2041

TEAMS TABLE:

```
159  select count(*) from tokyo_olympics.Teams;
```

Output | win2024adb0046.tokyo_olympics.teams | count(*)

1 row

	count
1	26675

```
151  select * from tokyo_olympics.Teams LIMIT 5;
```

Output | win2024adb0046.tokyo_olympics.teams

5 rows | Tx: Auto | DDL

	team_id	country_id	disc_id	event_id
1	1	3	4	1
2	2	15	44	1
3	3	38	44	1
4	4	46	44	1
5	5	60	44	1

disc_id: integer

COACHES TABLE:

```
107 ✓  select count(*) from tokyo_olympics.Coaches;
```

Output | win2024adb0046.tokyo_olympics.teams | count(*):b

1 row

count
21622

```
102 ✓  select * from tokyo_olympics.Coaches LIMIT 5;
103
104
105    ---Entries Table
106
```

Output | win2024adb0046.tokyo_olympics.coaches

5 rows | Tx: Auto | DDL

	coach_id	country_id	coach_name	disc_id	event_id
1	1	3	MIHAILOVIC Predrag	44	1
2	2	15	PARADELO David	44	1
3	3	38	BIRO Attila	44	1
4	4	46	MOTOMIYA Makihiro	44	1
5	5	60	HAVENGA Arno	44	1

COUNTRIES TABLE:

```
9  select count(*) from tokyo_olympics.countries;
10
```

Output | win2024adb0046.tokyo_olympics.teams | count(*):bigint

1 row

count
93

```
7  select * from tokyo_olympics.countries LIMIT 5;
8
```

Output | win2024adb0046.tokyo_olympics.countries

5 rows

	country_id	country_name
1	1	Argentina
2	2	Armenia
3	3	Australia
4	4	Austria
5	5	Azerbaijan

Athlete Coach View:

```
90 ✓  Select count(*) from Athlete_Coaches;
91
```

Output | count(*):bigint

1 row

	count
1	970972

```
101 ✓  Select * from Athlete_Coaches LIMIT 5;
```

Output | win2024adb0046.tokyo...mpics.athlete_coaches

5 rows | Tx: Auto | DDL

	athlete_name	coach_name	disc_name	country_name
1	AALERUD Katrine	No Coach Assigned	Cycling Road	Norway
2	ABAD Nestor	No Coach Assigned	Artistic Gymnastics	Spain
3	ABAGNALE Giovanni	No Coach Assigned	Rowing	Italy
4	ABALDE Alberto	MONDELO GARCIA Lucas	Basketball	Spain
5	ABALDE Alberto	SCARIOLO Sergio	Basketball	Spain