**Deliverable 3**

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Except for questions 1, 4, 9, 10, 15, and 17, we changed the other questions due to the alteration in the table structure after normalizing and loading the data. Consequently, we felt the necessity to adjust the questions as well as explore joins (self, inner, left, right), aggregate functions, etc.

1. How many athletes from each country whose names begin with 'A' participated, and how many medals did they win for their country?

SELECT c.country\_name, *COUNT*(DISTINCT a.athlete\_id) AS num\_athletes, *SUM*(m.total) AS total\_medals

FROM tokyo\_olympics.Athletes a

JOIN tokyo\_olympics.Countries c ON a.country\_id = c.country\_id

LEFT JOIN tokyo\_olympics.Medals m ON a.country\_id = m.country\_id

WHERE a.athlete\_name LIKE 'A%'

GROUP BY c.country\_name;

1. Which discipline has the event with the most participating countries and the highest average medal count (excluding gold) per athlete?

SELECT d.disc\_name AS Discipline\_Name, e.event\_name AS Event\_Name, *COUNT*(DISTINCT t.country\_id) AS Participating\_Countries,

*AVG*(CASE WHEN m.gold = 0 THEN m.silver + m.bronze ELSE NULL END) AS Avg\_Medal\_Count\_Per\_Athlete

FROM tokyo\_olympics.Events e

JOIN tokyo\_olympics.Teams t ON e.event\_id = t.event\_id

JOIN tokyo\_olympics.Discipline d ON e.disc\_id = d.disc\_id

LEFT JOIN tokyo\_olympics.Medals m ON t.country\_id = m.country\_id

GROUP BY d.disc\_name, e.event\_name

ORDER BY *COUNT*(DISTINCT t.country\_id) DESC,

*AVG*(CASE WHEN m.gold = 0 THEN m.silver + m.bronze ELSE NULL END) DESC LIMIT 1;

1. List all athletes and their respective countries participating in all kinds of Basketball discipline and event type of the "Men".

SELECT Distinct a.athlete\_name, c.country\_name, d.disc\_name

FROM tokyo\_olympics.Athletes a

JOIN tokyo\_olympics.Countries c ON a.country\_id = c.country\_id

JOIN tokyo\_olympics.Teams t ON a.country\_id = t.country\_id

JOIN tokyo\_olympics.Events e ON t.event\_id = e.event\_id

JOIN tokyo\_olympics.Discipline d ON t.disc\_id = d.disc\_id

WHERE e.event\_name = 'Men' AND d.disc\_name like '%Basketball%';

1. List countries, along with their total gold medals and corresponding disciplines, sorted by gold medals from highest to lowest.

SELECT c.country\_name, *SUM*(m.gold) AS total\_gold\_medals, *STRING\_AGG*(d.disc\_name, ', ') AS disciplines\_with\_gold

FROM tokyo\_olympics.Medals m

JOIN tokyo\_olympics.Countries c ON m.country\_id = c.country\_id

JOIN tokyo\_olympics.Teams t ON m.country\_id = t.country\_id

JOIN tokyo\_olympics.Events e ON t.event\_id = e.event\_id

JOIN tokyo\_olympics.Discipline d ON e.disc\_id = d.disc\_id WHERE m.gold > 0

GROUP BY c.country\_name ORDER BY total\_gold\_medals DESC;

1. List the athletes who participated without assigned coaches, along with their respective disciplines and countries.

SELECT a.athlete\_name, d.disc\_name, c.country\_name FROM tokyo\_olympics.Athletes a

JOIN tokyo\_olympics.Discipline d ON a.disc\_id = d.disc\_id

JOIN tokyo\_olympics.Countries c ON a.country\_id = c.country\_id

WHERE NOT *EXISTS* (

SELECT 1 FROM tokyo\_olympics.Coaches WHERE

Coaches.country\_id = a.country\_id AND Coaches.disc\_id = a.disc\_id

);

1. List Top 10 disciplines with the most participating countries.

SELECT d.disc\_name, *COUNT*(DISTINCT c.country\_id) AS participating\_countries

FROM tokyo\_olympics.Entries en

JOIN tokyo\_olympics.Discipline d ON en.disc\_id = d.disc\_id

JOIN tokyo\_olympics.Athletes a ON en.disc\_id = a.disc\_id

JOIN tokyo\_olympics.Countries c ON a.country\_id = c.country\_id

GROUP BY d.disc\_name

ORDER BY participating\_countries DESC

LIMIT 10;

1. What are the names of athletes from Spain who won the gold medal in Artistic Gymnastics along with the events name in the Tokyo 2021 Olympics?

SELECT a.athlete\_name, e.event\_name FROM tokyo\_olympics.Athletes a

JOIN tokyo\_olympics.Medals m ON a.country\_id = m.country\_id

JOIN tokyo\_olympics.Discipline d ON a.disc\_id = d.disc\_id

join tokyo\_olympics.events e on d.disc\_id = e.disc\_id

WHERE

m.gold > 0

AND d.disc\_name = 'Artistic Gymnastics'

AND a.country\_id = (SELECT country\_id FROM tokyo\_olympics.Countries

WHERE country\_name = 'Spain');

1. How many disciplines did Belgium compete in during the Tokyo 2021 Olympics?

select *count*(distinct d.disc\_id) as num\_disciplines

from tokyo\_olympics.teams

join tokyo\_olympics.countries on teams.country\_id = countries.country\_id

join tokyo\_olympics.discipline d on d.disc\_id = teams.disc\_id

join tokyo\_olympics.events on teams.event\_id = events.event\_id

where country\_name = 'Belgium';

1. What are the disciplines in Tokyo Olympics with a minimum number of 3 participating countries

select d.disc\_name, *count*(distinct a.athlete\_id) as atheletes\_per\_country

from tokyo\_olympics.discipline d

join tokyo\_olympics.events e on d.disc\_id = e.disc\_id

join tokyo\_olympics.teams t on e.event\_id = t.event\_id

join tokyo\_olympics.athletes a on t.country\_id = a.country\_id and t.disc\_id = a.disc\_id

group by d.disc\_name

having *count*(distinct t.country\_id) >=3;

1. What is the rank achieved by Belgium in the 3x3 Basketball discipline?

SELECT m.rank, cn.country\_name, e.event\_name, d.disc\_name FROM tokyo\_olympics.Medals m

JOIN tokyo\_olympics.Teams t ON m.country\_id = t.country\_id

JOIN tokyo\_olympics.Countries cn ON m.country\_id = cn.country\_id

JOIN tokyo\_olympics.Events e ON t.event\_id = e.event\_id

JOIN tokyo\_olympics.Discipline d ON e.disc\_id = d.disc\_id

WHERE d.disc\_name = '3x3 Basketball' AND t.country\_id =

(SELECT country\_id FROM tokyo\_olympics.Countries WHERE country\_name = 'Belgium');

1. What are the unique names of coaches and discipline names for teams where total athlete count is greater than 10.

select distinct c.coach\_name, d.disc\_name from tokyo\_olympics.coaches c

join tokyo\_olympics.countries cn on c.country\_id = cn.country\_id

join tokyo\_olympics.teams t on c.country\_id = t.country\_id and c.disc\_id = t.disc\_id

join tokyo\_olympics.entries e on t.disc\_id = e.disc\_id

join tokyo\_olympics.discipline d on d.disc\_id = t.disc\_id

where e.total\_count > 10;

1. What is the total number of medals each country won for disciplines with a specific gender participation?

select c.country\_name, *sum*(m.total) as total\_medals from tokyo\_olympics.medals m

join tokyo\_olympics.countries c on c.country\_id = m.country\_id

join tokyo\_olympics.athletes a on c.country\_id = a.country\_id

join tokyo\_olympics.entries e on a.disc\_id = e.disc\_id

where(e.female\_count > 0 and e.male\_count >0)

group by c.country\_name

order by total\_medals desc;

1. What are the names of Coaches who coached the event named Men for the United States of America?

select tc.coach\_name, c.country\_name, e.event\_name, *coalesce*(d.disc\_name, 'N/A') as discipline\_name

from tokyo\_olympics.coaches tc

join tokyo\_olympics.countries c on c.country\_id = tc.country\_id

left outer join tokyo\_olympics.discipline d on d.disc\_id = tc.disc\_id

join tokyo\_olympics.events e on e.event\_id = tc.event\_id

where e.event\_name = 'Men' and c.country\_name = 'United States of America'

order by tc.coach\_name;

1. What are the events and disciplines coached by each coach in the Tokyo 2021 Olympics? Let the event name be only events that have “ea'' contained in it

select co.coach\_name, e.event\_name, d.disc\_name from tokyo\_olympics.coaches co

join tokyo\_olympics.countries c on co.country\_id = c.country\_id

left join tokyo\_olympics.events e on co.event\_id = e.event\_id

left join tokyo\_olympics.discipline d on co.disc\_id = d.disc\_id

where event\_name like '%ea%';

1. What countries have the most gold across all female events in the Tokyo 2021 Olympics?

select c.country\_name, *sum*(m.gold) as total\_gold\_medals\_female

from tokyo\_olympics.countries c

join tokyo\_olympics.medals m on c.country\_id = m.country\_id

join tokyo\_olympics.teams t on m.country\_id = t.country\_id

join tokyo\_olympics.events e on e.event\_id = t.event\_id

join tokyo\_olympics.entries en on e.disc\_id = en.disc\_id

where

en.female\_count > 0

group by c.country\_name

order by total\_gold\_medals\_female desc

limit 5;

1. List countries and their respective medal counts in Basketball events

select c.country\_name, *sum*(m.gold + m.silver + m.bronze) as totl\_medals

from tokyo\_olympics.teams

join tokyo\_olympics.countries c on c.country\_id = teams.country\_id

join tokyo\_olympics.discipline d on d.disc\_id = teams.disc\_id

join tokyo\_olympics.medals m on teams.country\_id = m.country\_id

where d.disc\_name = 'Basketball'

group by c.country\_name

1. Who were the coaches for the Egyptian Football team in the Tokyo 2021 Olympics?

select distinct c.coach\_name, c2.country\_name, d.disc\_name,e.event\_name

from tokyo\_olympics.coaches c

join tokyo\_olympics.teams t on c.country\_id = t.country\_id

join tokyo\_olympics.countries c2 on c2.country\_id = t.country\_id

join tokyo\_olympics.discipline d on d.disc\_id = t.disc\_id

join tokyo\_olympics.events e on e.event\_id = t.event\_id

where c2.country\_name = 'Egypt' and d.disc\_name = 'Football';

1. How many events are allocated to each discipline and country, considering only those disciplines where a country has athletes?

SELECT d.disc\_name, c.country\_name, *COUNT*(DISTINCT e.event\_id) AS num\_events

FROM tokyo\_olympics.Discipline d

JOIN tokyo\_olympics.Teams t ON d.disc\_id = t.disc\_id

JOIN tokyo\_olympics.Events e ON t.event\_id = e.event\_id

JOIN tokyo\_olympics.Countries c ON t.country\_id = c.country\_id

GROUP BY d.disc\_name, c.country\_name;

1. What are the names of coaches who have athletes participating in both Swimming and Rhythmic Gymnastics? Also include the name of the countries.

select c.coach\_name, co.country\_name

from tokyo\_olympics.coaches c

join tokyo\_olympics.countries co on co.country\_id = c.country\_id

join tokyo\_olympics.athletes a on co.country\_id = a.country\_id

join tokyo\_olympics.discipline d on d.disc\_id = a.disc\_id

where d.disc\_name in ('Swimming', 'Rhythmic Gymnastics')

group by c.coach\_name, co.country\_name

having *count*(distinct d.disc\_id) = 2;

1. Display events together with corresponding discipline, coach and country?

select e.event\_name, d.disc\_name, *coalesce*(c.coach\_name, 'No coach assigned') as coach\_name,cn.country\_name

from tokyo\_olympics.events e

join tokyo\_olympics.discipline d on d.disc\_id = e.disc\_id

left join tokyo\_olympics.coaches c on e.event\_id = c.event\_id and e.disc\_id = c.disc\_id

left outer join tokyo\_olympics.countries cn on cn.country\_id = c.country\_id;

View: Athletes and their events Info

DROP VIEW AthleteEventInfo;

CREATE OR REPLACE VIEW AthleteEventInfo AS

SELECT a.athlete\_id, a.athlete\_name, c.country\_name AS country, d.disc\_name AS discipline, e.event\_name,

co.coach\_name

FROM Athletes a

INNER JOIN Countries c ON a.country\_id = c.country\_id

INNER JOIN Discipline d ON a.disc\_id = d.disc\_id

LEFT JOIN Teams t ON a.country\_id = t.country\_id AND a.disc\_id = t.disc\_id

LEFT JOIN Events e ON t.event\_id = e.event\_id

LEFT JOIN Coaches co ON t.country\_id = co.country\_id AND t.disc\_id = co.disc\_id AND t.event\_id = co.event\_id

ORDER BY a.athlete\_id;