

1. For the year 1992 in Barcelona display the country name and the total number of competitors from that country, including those countries that have no competitors, in descending order of the number of competitors. Remember not all countries participate in every Olympics games.

```
SELECT *
FROM ((SELECT "NOC", COUNT("ID")
FROM ath_country_o
WHERE "Year" = 1992 AND "City" = 'Barcelona'
GROUP BY "NOC")
UNION
(SELECT "NOC", 0 "count"
FROM
(SELECT DISTINCT "NOC"
FROM ath_country_o
EXCEPT
SELECT DISTINCT "NOC"
FROM ath_country_o
WHERE "Year" = 1992 AND "City" = 'Barcelona') AS non_participants)) AS participants
ORDER BY "count" DESC
```

2. For the Vancouver (2010) games, list the competitor countries in the Curling competition.

```
SELECT DISTINCT AC."NOC"
FROM ath_event_medal AM, ath_country_o AC
WHERE (
    (AM."ID" = AC."ID" AND AM."Age" = AC."Age" AND AM."Year" = AC."Year" AND
    AM."Season" = AC."Season" AND AM."City" = AC."City")
    AND AM."City" = 'Vancouver' AND AM."Year" = 2010 AND AM."Sport" = 'Curling'
)
```

3. List all the competitors who have competed in more than 4 events in any Olympics since 1900.

```
SELECT DISTINCT "Name"
FROM (
    SELECT "ID"
    FROM (SELECT DISTINCT "ID", "Event", "Year", "Season", "City"
    FROM ath_event_medal R
    WHERE R."Year" > 1900
    )AS AC
    GROUP BY "Year", "Season", "City", "ID"
    HAVING COUNT("Event") > 4
```

```

) AS QI, athlete_identity as AI
WHERE QI."ID" = AI."ID"

```

- Find the number of competitors in each Olympics game who have competed in at least 3 events and group them by year, after 1940.

```

SELECT "Year", COUNT("ID")
FROM (
    SELECT DISTINCT "Year", "ID"
    FROM (
        SELECT DISTINCT "ID", "Event", "Year", "Season", "City"
        FROM ath_event_medal R
        WHERE R."Year" > 1940) AS AC
    GROUP BY "Year", "Season", "City", "ID"
    HAVING COUNT("Event") >= 3
) AS QA
GROUP BY "Year"

```

- Count the number of competitors who were from India in every Olympics held since 1947.

```

SELECT "Year", "Season", "City", COUNT("ID")
FROM ath_country_o
WHERE "Year" > 1947 AND "NOC" = 'IND'
GROUP BY "Year", "Season", "City"

```

- Display the results for swimming events (both men and women) in the 2004 Olympics.

```

SELECT AM."ID", AI."Name", AM."Sport", AM."Event", AC."NOC", AM."Medal"
FROM ath_event_medal AM, athlete_identity AI, ath_country_o AC
WHERE AM."ID" = AI."ID" AND
(AM."ID" = AC."ID" AND AM."Age" = AC."Age" AND AM."Year" = AC."Year" AND
AM."Season" = AC."Season" AND AM."City" = AC."City")
AND AM."Year" = 2004 AND AM."Sport" = 'Swimming' AND AM."Medal" != 'NA'
ORDER BY "Event" ASC

```

- Find the medal counts for Michael Phelps across multiple years, show it by year and medal type.

```

SELECT AM."Year", AM."Medal", COUNT(AM."ID")
FROM ath_event_medal AM, athlete_identity AI

```

```
WHERE AM."ID" = AI."ID" AND AI."Name" = 'Michael Fred Phelps, II' AND AM."Medal"
!= 'NA'
GROUP BY "Year", "Medal"
```

8. Which country has won the most Gold medals in the Men's marathon.

```
SELECT "NOC"
FROM (
    SELECT "NOC", COUNT("Medal") medal_count
    FROM ath_event_medal AM, ath_country_o AC
    WHERE AM."ID" = AC."ID" AND AM."Age" = AC."Age" AND AM."Year" =
AC."Year" AND AM."Season" = AC."Season" AND AM."City" = AC."City"
    AND AM."Event" = 'Athletics Men's Marathon' AND AM."Medal" = 'Gold'
    GROUP BY "NOC"
) AS gold_by_country
ORDER BY "medal_count" DESC
LIMIT 1
```

9. Find names of competitors who have improved or maintained their standing across three games. Use years after 1940.

```
WITH amw AS (
    SELECT "ID", "Age", "Year", "Season", "City", "Sport", "Event", "Medal", "weight"
    FROM ath_event_medal AM, medal_weight MW
    WHERE AM."Medal" = MW."medal" AND AM."Year" > 1940
), amw_lag AS (
    SELECT "ID", "Year", "Season", "City", "Event", "weight",
LAG("weight", 1) OVER (PARTITION BY "ID", "Event" ORDER BY "Year") last_year,
LAG("weight", 2) OVER (PARTITION BY "ID", "Event" ORDER BY "Year")
"two_years_ago"
FROM amw), amw_lag_three_year_pair AS (SELECT * FROM amw_lag WHERE
"last_year" IS NOT NULL AND "two_years_ago" IS NOT NULL),
medal_winners AS (SELECT * FROM amw_lag_three_year_pair WHERE "weight" != 0
AND "last_year" != 0 AND "two_years_ago" != 0),
qualified_id AS (SELECT * FROM medal_winners WHERE "last_year" >= "weight" AND
"two_years_ago" >= "last_year")
SELECT DISTINCT "Name" FROM qualified_id QI, athlete_identity AI WHERE QI."ID" =
AI."ID"
```