

SQL Exercise: Filtering Using a Subquery with a List

Question: Generate a list of teams that never played a game in their home city. Using a subquery, retrieve all unique hometeam_ID values from the match table, and use it to exclude these IDs in the team table to get team_long_name and team_short_name.

Correct Answer:

SQL Query:

```
SELECT
    team_long_name,
    team_short_name
FROM team
WHERE team_api_ID NOT IN (
    SELECT DISTINCT hometeam_ID
    FROM match
);
```

Explanation:

1. Subquery:

- `SELECT DISTINCT hometeam_ID FROM match`: Retrieves all unique `hometeam_ID` values from the match table, identifying teams that played matches in their home city.

2. Main Query:

- `SELECT team_long_name, team_short_name FROM team`: Selects the full name and short name of teams from the team table.

3. WHERE Clause:

- `team_api_ID NOT IN (...)`: Filters out teams whose `team_api_ID` matches any `hometeam_ID` retrieved by the subquery.

4. Purpose:

- Identifies teams that never played a match in their home city by excluding IDs present in the match table from the team table.