

Navigate BigQuery Lab - Task 2 Summary

In Task 2 of the Navigate BigQuery lab, you will explore the NCAA Basketball public dataset and perform SQL queries to analyze player performance data.

Steps and Explanations

1. Open BigQuery Studio from the Google Cloud Console.
2. Add the NCAA Basketball public dataset by selecting 'Public Datasets' from the 'Add data' menu and searching for 'ncaa'.
3. View the dataset schema and explore the tables, especially 'mbb_players_games_sr'.
4. Run a query to calculate the total points scored by each player across all games:

```
SELECT  
  first_name,  
  last_name,  
  team_name,  
  sum(points) as total_points  
FROM `bigquery-public-  
data.ncaa_basketball.mbb_players_games_sr`  
GROUP BY first_name, last_name, team_name  
ORDER BY total_points DESC;
```

This query returns each player's name, team, and their total points scored across all games.

5. Run a query to find the top 10 highest scoring players in a single game:

```
WITH rankings AS (  
  SELECT  
    RANK() OVER (ORDER BY points DESC) AS ranking,  
    first_name,  
    last_name,  
    team_name,  
    points  
  FROM `bigquery-public-  
data.ncaa_basketball.mbb_players_games_sr`  
)  
SELECT  
  ranking,
```

```
first_name,  
last_name,  
team_name,  
points  
FROM rankings  
WHERE ranking <= 10  
ORDER BY ranking;
```

This query uses a common table expression (CTE) to rank players by points scored in a single game and returns the top 10.

Understanding Ranking Functions

- **RANK()**: Assigns the same rank to tied values and skips subsequent ranks. E.g., 1, 2, 2, 4.
- **DENSE_RANK()**: Assigns the same rank to tied values but does not skip ranks. E.g., 1, 2, 2, 3.
- **ROW_NUMBER()**: Assigns a unique rank to each row, ignoring ties.

Expected Outcomes

- Identify top-performing NCAA basketball players based on total points and single-game performance.
- Gain experience using SQL aggregation and ranking functions in BigQuery.
- Visualize query results using Looker Studio for further insights.