Google

You are on the Google Play store's App Marketplace team....

Question 1: The marketplace team wants to identify high and low performing app categories. Provide the total downloads for the app categories for November 2024. If there were no downloads for that category, return the value as 0.

```sql
SELECT
  category,
  COALESCE(SUM(download_count), 0) AS total_download
FROM dim_app
LEFT JOIN fct_app_downloads
  ON dim_app.app_id = fct_app_downloads.app_id
  AND download_date BETWEEN DATE '2024-11-01' AND DATE '2024-1
1-30'
GROUP BY category;
```

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Question 2: Our team's goal is download conversion rate -- defined as downloads per browse event. For each app category, calculate the download conversion rate in December, removing categories where browsing counts are be zero.

```sql
WITH browsing AS (
  SELECT app_id, SUM(browse_count) AS browse_counts
  FROM fct_app_browsing
  WHERE browse_date BETWEEN DATE '2024-12-01' AND DATE '2024-12-31'
    AND browse_count != 0
  GROUP BY app_id
),
download AS (
  SELECT app_id, SUM(download_count) AS download_counts
  FROM fct_app_downloads
  WHERE download_date BETWEEN DATE '2024-12-01' AND DATE '2024-12-31'
  GROUP BY app_id
),
combine AS (
  SELECT
    d.category,
    dl.download_counts,
    b.browse_counts
  FROM dim_app d
  INNER JOIN browsing b USING (app_id)
  INNER JOIN download dl USING (app_id)
)
SELECT
  category,
  ROUND(SUM(download_counts) * 1.0 / NULLIF(SUM(browse_counts), 0), 4) AS conversion_rate
FROM combine
GROUP BY category;
```

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Question 3: The team wants to compare conversion rates between free and premium apps across all categories. Combine the conversion data for both app types to present a unified view for Q4 2024.

```
WITH browsing AS (
  SELECT app_id, SUM(browse_count) AS browse_counts
  FROM fct_app_browsing
  WHERE browse_date BETWEEN DATE '2024-10-01' AND DATE '2024-1
2-31'
    AND browse_count != 0
  GROUP BY app_id
),
download AS (
  SELECT app_id, SUM(download_count) AS download_counts
  FROM fct_app_downloads
  WHERE download_date BETWEEN DATE '2024-10-01' AND DATE '2024
-12-31'
  GROUP BY app_id
),
combine AS (
  SELECT
    d.category,
    d.app_type,
    COALESCE(b.browse_counts, 0) AS browse_counts,
    COALESCE(dl.download_counts, 0) AS download_counts
  FROM dim_app d
  LEFT JOIN browsing b USING (app_id)
  LEFT JOIN download dl USING (app_id)
)
SELECT
  category,
  app_type,
  ROUND(SUM(download_counts) * 1.0 / NULLIF(SUM(browse_count
s), 0), 4) AS conversion_rate
FROM combine
GROUP BY category, app_type
ORDER BY category;
```