

When using join and not in

Planning Time: 0.482
ms

Execution Time: 0.369
ms

When using in but not join

Planning Time: 1.944 ms

Execution Time: 0.618 ms

After using index using join not in

Planning Time: 0.237
ms

Execution Time: 0.220
ms

After using indexes :

CREATE INDEX idx_user_preferences ON [user_preferences](#)(user_id, genre_pref);

CREATE INDEX idx_viewing_history ON [viewing_history](#)(user_id, content_id);

CREATE INDEX idx_content_repository_content_id ON [content_repository](#)(content_id);

CREATE INDEX idx_content_repository_genre ON [content_repository](#)(genre);

Planning Time: 0.326 ms

Execution Time: 0.174 ms

SELECT **split_part**([user_preferences](#).genre_pref, '|', 2) as genre from [user_preferences](#) join
[geolocation](#) ON [user_preferences](#).user_id = [geolocation](#).user_id
where [geolocation](#).geolocation_id = 4

SELECT

split_part([user_preferences](#).genre_pref,'|',3) AS genre,

COUNT(*) AS genre_count

FROM

[user_preferences](#)

JOIN

[geolocation](#) ON [user_preferences](#).user_id = [geolocation](#).user_id

WHERE

[geolocation](#).geolocation_id = 4

GROUP BY

genre

ORDER BY genre_count DESC;

CREATE INDEX idx_geolocation_id ON [geolocation](#)(geolocation_id);

SELECT

unnest(**string_to_array**([user_preferences](#).genre_pref, '|')) AS genre,

COUNT(*) AS genre_count

FROM

[user_preferences](#)

JOIN

[geolocation](#) ON [user_preferences](#).user_id = [geolocation](#).user_id

WHERE

[geolocation](#).geolocation_id = 4

AND [user_preferences](#).genre_pref <> '' -- Filter out empty genres

GROUP BY

genre

ORDER BY genre_count DESC;

Planning Time: 2.332
ms

Execution Time: 1.030
ms

[CREATE INDEX](#) idx_user_id ON [user_preferences](#)(user_id);

[CREATE INDEX](#) idx_genre_pref ON [user_preferences](#)(genre_pref);

Planning Time: 2.142
ms

Execution Time: 0.607
ms

Location wise top 5 genre

CREATE MATERIALIZED VIEW top_genres_by_geolocation AS

SELECT

unnest(string_to_array(user_preferences.genre_pref, '|')) AS genre,

COUNT(*) AS genre_count,

geolocation.geolocation_id,

ROW_NUMBER() OVER (PARTITION BY geolocation.geolocation_id ORDER BY COUNT(*) DESC)

AS row_num

FROM

user_preferences

JOIN

geolocation ON user_preferences.user_id = geolocation.user_id

WHERE

user_preferences.genre_pref <> ''

GROUP BY

genre, geolocation.geolocation_id;