

PROBLEM STATEMENT:

In developing a digital marketplace for outdoor banners, a query is needed to return information about the banners in each of the cities. The result should have the following columns: city/ banners/min_area/avg_area/max_area/total_area

1. city- city name
2. banners - total number of banners for a specific city
3. Min_area- minimum available banner area for a specific city
4. avg_area -average banner area for specific city, rounded up to the nearest integer, e.g $\text{ceiling}(1.1) = 2$
5. max_area- total available banner area for a specific city the result should be sorted in ascending order by city

Note:

1. banners are rectangular

cities:

id	name
1	New York
2	Los Angeles
3	Chicago
4	Houston
5	Phoenix
6	Philadelphia

banners:

city_id	width	height
1	6	5
1	5	5
2	4	5
2	6	6
3	7	4
3	6	5

4	7	5
4	8	5
5	6	4
5	7	5
6	8	4
6	7	5

QUERY:

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SELECT
    c.name AS city,
    b.city_id AS banners,
    MIN(b.width*b.height) AS min_area,
    CEILING(AVG(b.width*b.height)) AS avg_area,
    MAX(b.width*b.height) AS max_area
FROM cities c
LEFT JOIN banners b on c.id = b.city_id
GROUP BY c.name
ORDER BY c.name ASC

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