

PROBLEM STATEMENTS AND SOLUTIONS (OTODOM)

Q1.What is the average surface area of properties in various cities of Poland?

```
SELECT city, AVG(surface_area) AS avg_surface_area
FROM otodom_data_transformed
GROUP BY city;
```

Q2.How many multi-room properties are there in the given dataset or area?

```
SELECT COUNT(*)
FROM otodom_data_transformed
WHERE no_of_rooms > 1;
```

Q3.What is the breakdown of properties by advertiser type in each city?

```
SELECT city, advertiser_type, COUNT(*) AS num_properties
FROM otodom_data_transformed
GROUP BY city, advertiser_type;
```

Q4.How does the number of rooms in a dwelling affect its average surface area ?

```
SELECT no_of_rooms, AVG(surface_area) AS avg_surface_area
FROM otodom_data_transformed
GROUP BY no_of_rooms;
```

Q5.What is the breakdown of properties by surface area for each advertiser type?

Q6.What is the average rental price of 1 room, 2 room, 3 room and 4 room apartments in some of the major cities in Poland?

```
SELECT city,
    ROUND(AVG(CASE WHEN no_of_rooms = 1 THEN price_new END), 2) AS avg_rent_1R,
    ROUND(AVG(CASE WHEN no_of_rooms = 2 THEN price_new END), 2) AS avg_rent_2R,
    ROUND(AVG(CASE WHEN no_of_rooms = 3 THEN price_new END), 2) AS avg_rent_3R,
    ROUND(AVG(CASE WHEN no_of_rooms = 4 THEN price_new END), 2) AS avg_rent_4R
FROM otodom_data_transformed
WHERE city IN ('Warszawa', 'Wrocław', 'Kraków', 'Gdańsk', 'Katowice', 'Łódź')
AND apartment_flag = 'apartment'
AND is_for_sale='false'
AND no_of_rooms IN (1,2,3,4)
GROUP BY city
ORDER BY avg_rent_4R DESC;
```

Q7.What size of an apartment can I expect with a monthly rent of 3000 to 4000 PLN in different major cities of Poland?

```
select city, avg(surface_new) avg_area
from otodom_data_transformed
where city in ('Warszawa', 'Wrocław', 'Kraków', 'Gdańsk', 'Katowice', 'Łódź')
and apartment_flag = 'apartment'
and is_for_sale = 'false'
and price_new between 3000 and 4000
group by city
order by avg_area;
```

Q8.What is the avg sale price for apartments within 50-70 m2 area in major cities of Poland?

```
select city, round(avg(price_new),2) as avg_sale_price
from otodom_data_transformed
where city in ('Warszawa', 'Wrocław', 'Kraków', 'Gdańsk', 'Katowice', 'Łódź')
and apartment_flag = 'apartment'
and is_for_sale = 'true'
and no_of_rooms = 3
and surface_new between 50 and 70
group by city
order by avg_sale_price desc;
```

Q9. Which suburb in warsaw has the most and least no of private ads?

```
select distinct
first_value(suburb || '-' || count(1)) over(order by count(1)) as least_private_ads
, last_value(suburb || '-' || count(1)) over(order by count(1)) as most_private_ads
from otodom_data_transformed
where city = 'Warszawa'
and advertiser_type = 'private'
and suburb is not null
group by suburb;
```