

Otodom Data Analysis

Problem Statements & Solutions

1. 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?

Arrange the result such that avg rent for each type of room is shown in separate column

```
select city, round(avg_rent_1R,2) as avg_rent_1R
, round(avg_rent_2R,2) as avg_rent_2R, round(avg_rent_3R,2) as avg_rent_3R
, round(avg_rent_4R,2) as avg_rent_4R
from (
    select city,no_of_rooms,price_new
    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)) x
pivot
(
    avg(price_new)
    for no_of_rooms in ('1','2','3','4')
)
as p(city,avg_rent_1R, avg_rent_2R, avg_rent_3R, avg_rent_4R)
order by avg_rent_4R desc;
```

2. I want to buy an apartment which is around 90-100 m2 and within a range of 800,000 to 1M, display the suburbs in warsaw where I can find such apartments.

```
select suburb, count(1), avg(price_new) avg_price
from otodom_data_transformed
where city in ('Warszawa')
and apartment_flag = 'apartment'
and is_for_sale = 'true'
and surface_new between 90 and 100
and price_new between 800000 and 1000000
group by suburb
order by count(1) desc;
```

3. 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;
```

4. What are the most expensive apartments in major cities of Poland? Display the ad title in english along with city, suburb, cost, size.

```
with cte as
  (select city, max(price_new) max_price, min(price_new) min_price
   from otodom_data_transformed
   where city in ('Warszawa', 'Wrocław', 'Kraków', 'Gdańsk', 'Katowice', 'Łódź')
   and apartment_flag = 'apartment'
   and is_for_sale = 'true'
   group by city)
select x.rn, x.title_eng, x.city, x.suburb, x.price_new, x.surface_new, x.url
from otodom_data_transformed x
join cte on cte.city=x.city and cte.max_price=x.price_new
where apartment_flag = 'apartment'
and is_for_sale = 'true'
order by x.city,x.price_new;
```

5. What is the percentage of private & business ads on otodom?

```
with all_ads as
  (select count(1) tot_ads from otodom_data_transformed),
ads_type as
  (select advertiser_type
   , sum(case when advertiser_type='business' then 1 end) as business_ads
   , sum(case when advertiser_type='private' then 1 end) as private_ads
   from otodom_data_transformed
   group by advertiser_type)
```

```
select concat(round((max(business_ads) * 100)/max(tot_ads),2),'%') as business_ads_perc
, concat(round((max(private_ads) * 100)/max(tot_ads),2),'%') as private_ads_perc
from ads_type ty
cross join all_ads al ;
```

6. 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;
```

7. What is the average rental price for apartments in warsaw in different suburbs? Categorize the result based on surface area 0-50, 50-100 and over 100.

```
with cte1 as
(
select a.*
, case when surface_new between 0 and 50 then '0-50'
when surface_new between 50 and 100 then '50-100'
when surface_new > 100 then '>100'
end as area_category
from otodom_data_transformed a
where city = 'Warszawa'
and apartment_flag = 'apartment'
and is_for_sale = 'false'
and suburb is not null ),
cte2 as
(
select suburb
, case when area_category = '0-50' then avg(price_new) end as avg_price_upto50
, case when area_category = '50-100' then avg(price_new) end as avg_price_upto100
, case when area_category = '>100' then avg(price_new) end as avg_price_over100
from cte1
group by suburb,area_category)
select suburb
, round(max(avg_price_upto50),2) as avg_price_upto_50
, round(max(avg_price_upto100),2) as avg_price_upto_100
, round(max(avg_price_over100),2) as avg_price_over_100
```

```

from cte2
group by suburb
order by suburb;

```

8. Which are the top 3 most luxurious neighborhoods in Warsaw? Luxurious neighborhoods can be defined as suburbs which has the most no of of apartments costing over 2M in cost.

```

select suburb, luxurious_apartments
from (
    select suburb, count(1) luxurious_apartments
    , rank() over(order by luxurious_apartments desc ) as rn
    from otodom_data_transformed
    where city = 'Warszawa'
    and apartment_flag = 'apartment'
    and is_for_sale = 'true'
    and price_new > 2000000
    and suburb is not null
    group by suburb) x
where x.rn <= 3;

```

9. Most small families would be looking for apartment with 40-60 m2 in size. Identify the top 5 most affordable neighborhoods in warsaw.

```

select suburb, avg_price, no_of_apartments
from (
    select suburb, round(avg(price_new),2) avg_price, count(1) as no_of_apartments
    , rank() over(order by avg_price ) as rn
    from otodom_data_transformed
    where city = 'Warszawa'
    and apartment_flag = 'apartment'
    and is_for_sale = 'false'
    and surface_new between 40 and 60
    and suburb is not null
    group by suburb) x
where x.rn <= 5;

```

10. 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;

```

11. What is the average rental price and sale price in some of the major cities in Poland?

```

with cte as
  (select city
    , (case when is_for_sale='false' then round(avg(price_new),2) end) as avg_rental
    , (case when is_for_sale='true' then round(avg(price_new),2) end) as avg_sale
  from otodom_data_transformed
  where city in ('Warszawa', 'Wrocław', 'Kraków', 'Gdańsk', 'Katowice', 'Łódź')
  and apartment_flag = 'apartment'
  group by city, is_for_sale)
select city, max(avg_rental) as avg_rental, max(avg_sale) as avg_sale
from cte
group by city
order by avg_rental desc ;

```