

AIRBNB WESTERN AUSTRALIA QUERY

--- create table listings ---

```
create table listings
(
    id int8,
    name varchar(255),
    host_id int8,
    host_name varchar(255),
    neighbourhood_group varchar(255),
    neighbourhood varchar(255),
    latitude numeric,
    longitude numeric,
    room_type varchar(255),
    price int8,
    minimum_nights int8,
    number_of_reviews int8,
    last_review date,
    reviews_per_month numeric,
    calculated_host_listings_count int8,
    availability_365 int8,
    number_of_reviews_ltm int8,
    license varchar(255)
)
```

--- import data into listings ---

```
copy listings (id, name, host_id, host_name, neighbourhood_group, neighbourhood, latitude, longitude,
               room_type, price, minimum_nights, number_of_reviews, last_review, reviews_per_month,
               calculated_host_listings_count, availability_365, number_of_reviews_ltm, license)
from 'D:\SKD\Data Analyst\3. SQL\4. Project\9. Airbnb Western Australia\listings.csv'
delimiter ','
csv header
```

--- size and details of listings ---

```
select * from listings
select count(*) as rows from listings
select count(*) as columns from information_schema.columns where table_name = 'listings'
select column_name, data_type from information_schema.columns where table_name = 'listings'
```

--- changing data type of column host_id ---

```
alter table listings
alter column host_id type varchar(255)
```

--- Queries ---

-- Q1. How many total listings are there in Western Australia?

-- total listings

```
select
    count(distinct host_id) as total_hosts
from listings
```

-- inactive listings

```
select
    count(*) as inactive_listings
from listings
where (availability_365 = 0 and number_of_reviews = 0)
```

-- active listings

```
select
    count(*) as active_listings
from listings
where not
    (availability_365 = 0 and number_of_reviews = 0)
```

-- hosts x listings

```
select
    distinct host_id,
    host_name,
    calculated_host_listings_count as total_listings
from listings
order by total_listings desc
```

-- Q2. Which areas have the most Airbnb Units in WA, and what is the price range?

-- areas

```
select
    count (distinct neighbourhood) as areas
from listings
```

-- avg_price

```
select
    round(avg (price), 0) as price
from listings
```

-- top 10 most listed areas

```
select
    neighbourhood,
    count(*) as num_listing
from listings
group by neighbourhood
order by num_listing desc
limit 10
```

-- Q3. Do hosts rent out their entire home or just a room?

-- price of different room types

```
select
    room_type,
    count(*) as room_type_count,
    round(100 * count(*) / (select count(*) from listings), 2) as percentage,
    round(avg(price), 0) as avg_price
from listings
group by room_type
order by avg_price desc
```

-- the price in different areas

```
select
    neighbourhood as suburb,
    room_type,
    round(avg(price), 0) as avg_price
from listings
group by neighbourhood, room_type
-- having room_type = 'Entire home/apt'
order by avg_price desc
```

-- price in waroona neighbourhood

```
select
    name,
    host_id,
    neighbourhood,
    room_type,
    price
from listings
where neighbourhood = 'WAROONA'
order by price desc
```

-- prices of those top 5 areas excluding waroona

```
select
    neighbourhood as suburb,
    room_type,
    round(avg(case when host_id = '367775749' then null else price end), 0) as avg_price
from listings
group by neighbourhood, room_type
having room_type = 'Entire home/apt'
order by avg_price desc
```

-- for hotel rooms

```
select
    neighbourhood as suburb,
    room_type,
    round(avg(price), 0) as avg_price
from listings
group by neighbourhood, room_type
having room_type = 'Hotel room'
order by avg_price desc
```

-- For private rooms, I found column 'name' shows 'hotel' in some rows, but column 'room_type' is shown
-- as 'private room'.

```
select
    name,
    price,
    room_type
from listings
where name like '%Hotel%'
```

-- After eliminating those rows in which the 'name' column contains the word 'hotel'. We have a more precise
-- result.

```
select
    neighbourhood as suburb,
    room_type,
    round (avg(case when name like '%Hotel%' then null else price end), 0) as avg_price
from listings
group by neighbourhood, room_type
having room_type = 'Private room'
order by avg_price desc
```

-- for shared rooms

```
select
    neighbourhood,
    room_type,
    round (avg(price), 0) as avg_price
from listings
group by neighbourhood, room_type
having room_type = 'Shared room'
order by avg_price desc
```

-- Do you find it as interesting as I do that Chittering has a shared room for \$999?

```
select *
from listings
where
    room_type = 'Shared room'
    and neighbourhood = 'CHITTERING'
order by price desc
```

-- Q4. Have hosts used Airbnb as a platform for long-term rental to avoid regulations or accountability?

select

```
    night_range,  
    count(*) as listing_count,  
    round(100.0 * count(*) / sum(count(*)) over (), 2) as percentage_of_listing_count,  
    round(avg(price), 0) as average_price
```

from(

select

```
    host_id,  
    host_name,  
    neighbourhood,  
    room_type,  
    price,  
    minimum_nights,
```

case

```
    when minimum_nights between 1 and 7 then '1 week'  
    when minimum_nights between 8 and 14 then '2 weeks'  
    when minimum_nights between 15 and 28 then '3-4 weeks'  
    else 'over a month'  
    end as night_range
```

from listings

) as subquery

group by night_range

order by night_range