



## **Zillow Database Design and SQL Queries**

## Approach

```
Select property_id, home_type, mortgage_id, mortgage_provider, mortgage_amount from
(
select p.property_id, p.home_type, m.mortgage_id, m.mortgage_provider, m.mortgage_amount,
rank() over(partition by home_type order by mortgage_amount DESC) as amount_rank
from property_mortgage m
join property p
on p.property_id= m.property_id
) as ex
where amount_rank = 5;
```

[illegible]






For each property show the amenities details show one more column availability when amenities are study room or Home Office "study area available" , for garage 'parking space available' else show other. When amenities not available show null values.



Approach

```
select p.property_id, p.home_type, a.amenities_id, a.name,  
case when name = 'Study Room' or 'Home Office' then 'study area available'  
when name = 'garage' then 'parking space available'  
else 'other'  
end as Availability  
from amenities a  
right join property p  
on a.property_id = p.property_id;
```

Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 						
	property_id	home_type	listing_stat...	name	description	
	143	apartment	sold	Walk-in Closet	des4	
	160	apartment	open	Jacuzzi Tub	des1	
	175	apartment	not available	Jacuzzi Tub	des2	
	180	apartment	not available	Garage	des3	
	185	apartment	open	Garage	des2	
	212	apartment	sold	Jacuzzi Tub	des4	
	239	apartment	open	Jacuzzi Tub	des3	
	272	apartment	open	Garage	des4	
	279	apartment	open	Study Room	des2	
	288	apartment	open	Jacuzzi Tub	des3	
	296	apartment	open	Home Theater	des4	
	372	apartment	not available	Jacuzzi Tub	des3	
	378	apartment	open	Jacuzzi Tub	des2	
	385	apartment	open	Study Room	des2	
	402	apartment	not available	Home Office	des2	
	403	apartment	not available	Jacuzzi Tub	des2	
Result 69						



```
select p.property_id, p.home_type, r.rent_id, r.price, r.rent_startdate, r.rent_enddate,
avg(price) over(order by price DESC rows between current row and unbounded following) as
average_price,
price - avg(price) over(order by price DESC rows between current row and unbounded
following) as Difference
from property p
left join rent_property r
on r.property_id = p.property_id;
```

[illegible]

The logo of the National Association of Public Health Administrators (NAPHA) is a blue square containing a white stylized house shape. Inside the house shape is a thick blue letter 'Z' that is slightly tilted.

```
Select property_id, review_id, rating,review_date, comments, DENSE_Ranking from
( Select p.property_id, r.review_id, r.rating, r.review_date, r.comments,
DENSE_RANK() OVER( order by rating) as DENSE_Ranking
FROM review r
join property p
on p.property_id = r.property_id) as ex
where review_date between '2024-09-10' and '2024-12-31'and
DENSE_Ranking = 4;
```

	property_id	review_id	rating	review_date	comments	DENSE_Ranking
	149	163	5	2024-12-01	des2	4
	115	415	5	2024-10-27	des1	4
	12	153	5	2024-12-22	des2	4
	46	382	5	2024-12-23	des4	4
	191	431	5	2024-10-13	des2	4
	191	451	5	2024-10-19	des4	4






# Number of properties per city and state where properties are available (listing\_status = open)

## Approach

```
select l.city, l.state, p.home_type, p.listing_status, count(distinct p.property_id) as
Number_of_properties
from property p
inner join location l
on p.property_id = l.property_id
where listing_status = 'open'
group by city, state, p.home_type
order by city DESC;
```




Result Grid



Filter Rows:

Export:



	city	state	home_type	listing_status	Number_of_properties	
	Youngstown	OH	apartment	open	1	
	Young America	MN	apartment	open	1	
	Wilmington	DE	house	open	1	
	Wilmington	NC	apartment	open	1	
	Wichita Falls	TX	apartment	open	1	
	Wichita	KS	apartment	open	2	
	Wichita	KS	house	open	1	
	Waterloo	IA	house	open	1	
	Washington	DC	apartment	open	2	
	Washington	DC	house	open	3	
	Waco	TX	apartment	open	1	
	Virginia Beach	VA	apartment	open	1	
	Virginia Beach	VA	house	open	2	
	Vero Beach	FL	apartment	open	1	
	Valley Forge	PA	apartment	open	1	
	Tuscaloosa	AL	house	open	1	
	Tulsa	OK	apartment	open	1	
	Tulsa	OK	house	open	2	
	Tucson	AZ	apartment	open	2	

Result 114