



Host Queries

1.Super Host Status :

```
SELECT Host_ID, Name FROM Host
WHERE Super_Host_Status = True;
```

host_id [PK] character varying (10) 	name character varying (20) 
HST0000001	Aarav Patel
HST0000003	Aditi Sharma
HST0000005	Akshara Joshi
HST0000007	Ananya Reddy
HST0000009	Bhavya Singh
HST0000011	Deepika Patel
HST0000013	Eshaan Gupta
HST0000015	Himanshu Sharma
HST0000017	Jhanvi Gupta
HST0000019	Lakshya Sharma
HST0000021	Neha Khanna
HST0000023	Pooja Gupta
HST0000025	Sneha Singh



2. Hosts who can speak a particular language :

```
SELECT DISTINCT h.Host_ID,h.Name FROM Host AS h
INNER JOIN Host_Languages AS hl
ON hl.Host_ID = h.Host_ID
WHERE 'Hindi' = ANY(hl.Languages_Spoken)
OR 'Gujarati' = ANY(hl.Languages_Spoken);
```

host_id [PK] character varying (10) 	name character varying (20) 
HST0000001	Aarav Patel
HST0000002	Aishwarya Singh
HST0000003	Aditi Sharma
HST0000012	Dev Khatri
HST0000013	Eshaan Gupta
HST0000020	Maya Patel
HST0000022	Omkar Desai




3. Listing Count for each host :

```
SELECT h.Host_ID,count(p.Property_ID) AS Listing_Count FROM Host AS h
INNER JOIN Property AS p
ON h.Host_ID = p.Host_ID
WHERE p.availability_status <> 'OutsofContract'
GROUP BY h.Host_ID
ORDER BY Listing_Count DESC Limit 15;
```

host_id [PK] character varying (10) 	Listing_Count bigint 
HST0000021	5
HST0000018	4
HST0000019	4
HST0000017	3
HST0000011	3
HST0000020	3
HST0000022	3
HST0000016	2
HST0000025	2
HST0000023	2
HST0000024	2
HST0000010	2
HST0000013	2
HST0000015	2
HST0000014	2


4. Top 3 Rated Hosts :

```
SELECT Host_ID,Name,Avg_Rating FROM Host  
ORDER BY Avg_Rating DESC  
LIMIT 3;
```

host_id [PK] character varying (10) 	name character varying (20) 	avg_rating numeric (5,2) 
HST0000015	Himanshu Sharma	4.90
HST0000007	Ananya Reddy	4.90
HST0000021	Neha Khanna	4.90

5.Monthly contract charges for each host :

```
SELECT h.Host_ID,sum(c.Fixed_Monthly_Rent) AS 'Monthly_Fixed_Charges'
FROM Host AS h INNER JOIN Property AS p
ON h.Host_ID = p.Host_ID
INNER JOIN Contract_Details AS c
ON p.Property_ID = c.Property_ID
WHERE c.Start_Date <= CURRENT_DATE AND c.End_Date > CURRENT_DATE
GROUP BY h.Host_ID
Order By Host_ID ASC;
```

host_id [PK] character varying (10) 	'monthly_fixed_charges' numeric 
HST0000001	1200.00
HST0000002	1300.00
HST0000003	1150.00
HST0000005	1350.00
HST0000007	1250.00
HST0000009	1300.00
HST0000010	1200.00
HST0000011	3800.00
HST0000012	1350.00
HST0000013	1350.00
HST0000014	2350.00
HST0000015	1250.00
HST0000016	2500.00
HST0000017	2600.00
HST0000018	4750.00
HST0000019	4950.00
HST0000020	2600.00
HST0000021	4850.00
HST0000022	3700.00
HST0000023	2500.00
HST0000024	2450.00
HST0000025	2400.00


6.Revenue for host in a particular month :

```

WITH earnings AS (
    SELECT h.Host_ID, SUM(inv.Amount) AS BookingsEarnings
    FROM Host AS h
    INNER JOIN Property AS p ON p.Host_ID = h.Host_ID
    INNER JOIN Bookings AS b ON b.Property_ID = p.Property_ID
    INNER JOIN Booking_Invoice AS inv ON b.Booking_ID = inv.Booking_ID
    GROUP BY h.Host_ID
),
refund AS (
    SELECT h.Host_ID, SUM(can.Refund_amount) AS Cancellation_Refund
    FROM Host AS h
    INNER JOIN Property AS p ON p.Host_ID = h.Host_ID
    INNER JOIN Bookings AS b ON b.Property_ID = p.Property_ID
    INNER JOIN Booking_Invoice AS inv ON b.Booking_ID = inv.Booking_ID
    INNER JOIN Booking_Cancellation AS can ON inv.Invoice_ID = can.Invoice_ID
    WHERE can.Refund_Status = 'Approved'
    GROUP BY h.Host_ID
)

SELECT e.Host_ID, e.BookingsEarnings - COALESCE(r.Cancellation_Refund, 0) AS Net_Earnings
FROM earnings AS e
LEFT JOIN refund AS r ON e.Host_ID = r.Host_ID;

```

host_id [PK] character varying (10) 	net_earnings numeric 
HST0000022	108000.00
HST0000002	135000.00
HST0000023	85500.00
HST0000008	216000.00
HST0000019	727200.00
HST0000021	445500.00
HST0000012	99000.00
HST0000017	477000.00
HST0000006	360000.00
HST0000014	630000.00
HST0000015	342000.00
HST0000011	130500.00
HST0000025	234900.00
HST0000007	121500.00
HST0000018	162000.00
HST0000016	171000.00
HST0000024	142200.00
HST0000013	180000.00
HST0000009	6300.00

7. Commision given by a host in a given period :

```
SELECT h.Host_ID, ROUND(sum(cd.Commission_Per_Booking*inv.Amount)/100,2)
AS 'BookingEarning' FROM Host AS h
INNER JOIN Property AS p ON p.Host_ID = h.Host_ID
INNER JOIN Bookings AS b ON b.Property_ID = p.Property_ID
INNER JOIN Booking_Invoice AS inv ON b.Booking_ID = inv.Booking_ID
INNER JOIN Contract_Details AS cd ON cd.Property_ID = p.Property_ID
WHERE b.Booking_Date BETWEEN '2022-06-01' AND '2023-12-31'
GROUP BY h.Host_ID
```

host_id [PK] character varying (10) 	'bookingearning' numeric 
HST0000011	4050.00
HST0000025	19125.00
HST0000002	10800.00
HST0000023	1687.50
HST0000007	6682.50
HST0000012	8910.00
HST0000016	6412.50
HST0000024	9562.50
HST0000008	8100.00
HST0000019	11761.88
HST0000013	13950.00
HST0000017	8640.00
HST0000015	8167.50
HST0000014	25987.50

Property Queries

1. Top3 Rated Property category wise at least 10 ratings:

```
WITH RatedProperty AS (
SELECT p.Property_ID, p.Title, p.Category_ID, p.Avg_Rating,
COUNT(r.Property_ID) AS num_ratings
FROM Property as p LEFT JOIN Ratings as r
ON p.Property_ID = r.Property_ID
GROUP BY p.Property_ID, p.Title, p.Category_ID, p.Avg_Rating
HAVING COUNT(r.Property_ID) >= 2)
SELECT rp.Title, pc.Category_Name, rp.Avg_Rating
FROM RatedProperty rp
JOIN Property_Category pc ON rp.Category_ID = pc.Category_ID
WHERE rp.Avg_Rating IS NOT NULL
ORDER BY pc.Category_Name, rp.Avg_Rating DESC
LIMIT 3;
```

title character varying (20) 🔒	category_name character varying (20) 🔒	avg_rating numeric (5,2) 🔒
Seaview Apartment	Apartment	4.60
Cityscape Studio	Apartment	4.40
City Center Studio	Apartment	4.30

2. Minimum Required Capacity of Guests :

```
SELECT p.Property_ID,p.Title,p.Accommodation_Limit
FROM Property p
WHERE p.Accommodation_Limit >= 5;
```

property_id [PK] bigint	title character varying (20)	accommodation_limit integer
1000000002	Tranquil Villa	8
1000000003	Riverside Bungalow	6
1000000004	Cozy Cottage	5
1000000006	Luxury Condo	10
1000000008	Hilltop Retreat	6
1000000010	Beachside Villa	8
1000000011	Mountain View House	5
1000000012	Riverside Retreat	5
1000000013	Luxury Penthouse	6
1000000014	Hillside Mansion	12
1000000015	Riverfront Retreat	8
1000000020	Lakeview Mansion	10
1000000021	Seaside Chalet	5
1000000022	Tranquil Retreat	6
1000000024	Mountain Retreat	7
1000000025	Seaside Villa	10
1000000027	Lakefront Retreat	6
1000000031	Mountainview Chalet	5
1000000036	Lakeview Lodge	6
1000000037	Forest Retreat	8
1000000039	Mountain Chalet	6

3. Minimum Required number rooms and bathrooms :

```
SELECT Property_ID, Title FROM Property p
WHERE p.No_of_rooms >= 4 AND p.No_of_bathrooms >= 3;
```

property_id [PK] bigint	title character varying (20)
1000000002	Tranquil Villa
1000000006	Luxury Condo
1000000010	Beachside Villa
1000000014	Hillside Mansion
1000000015	Riverfront Retreat
1000000020	Lakeview Mansion
1000000025	Seaside Villa
1000000037	Forest Retreat
1000000040	Beachside Bungalow
1000000042	Mountainview Mansion

4. Upper/Lower limit to price :

```
SELECT property_ID, Title,price_per_night FROM Property
WHERE price_per_night BETWEEN 8000 AND 12000;
```

property_id [PK] bigint	title character varying (20)	price_per_night numeric (8,2)
1000000003	Riverside Bungalow	10000.00
1000000004	Cozy Cottage	8000.00
1000000008	Hilltop Retreat	12000.00
1000000011	Mountain View House	8500.00
1000000012	Riverside Retreat	11000.00
1000000016	Beachfront Bungalow	9000.00
1000000021	Seaside Chalet	8500.00
1000000026	Hilltop Chalet	10000.00
1000000028	Beachfront Apartment	8000.00
1000000031	Mountainview Chalet	9000.00
1000000032	Riverside Lodge	12000.00
1000000033	Seaview Apartment	8500.00
1000000035	Hillside Hideaway	11000.00
1000000036	Lakeview Lodge	9500.00
1000000037	Forest Retreat	12000.00
1000000039	Mountain Chalet	10500.00

5. Category wise listings :

```
SELECT pc.Category_ID, pc.Category_Name, COUNT(p.Property_ID)
FROM Property_Category AS pc
INNER JOIN Property AS p ON pc.Category_ID = p.Category_ID
GROUP BY pc.Category_ID, pc.Category_Name
Order By Category_ID ASC;
```

category_id [PK] integer	category_name character varying (20)	count bigint
1	Apartment	8
2	House	14
3	Villa	13
4	Condo	7
5	Room	9

6. Category wise booking stats :

```
SELECT pc.Category_ID, pc.Category_Name, COUNT(b.Booking_ID)
FROM Property_Category AS pc
INNER JOIN Property AS p ON pc.Category_ID = p.Category_ID
INNER JOIN Bookings AS b ON p.Property_ID = b.Property_ID
GROUP BY pc.Category_ID, pc.Category_Name
Order By Category_ID;
```

category_id [PK] integer	category_name character varying (20)	count bigint
1	Apartment	9
2	House	13
3	Villa	17
4	Condo	8
5	Room	3

7. Property where smoking/pet is allowed :

```
SELECT Property_ID, Title
FROM Property
WHERE Pet_Permit = TRUE AND smoking_permit = TRUE;
```

property_id [PK] bigint 	title character varying (20) 
1000000003	Riverside Bungalow
1000000005	Beach House
1000000009	Lakefront Cottage
1000000016	Beachfront Bungalow
1000000019	Serenity Cottage
1000000023	Riverside Cottage
1000000027	Lakefront Retreat
1000000029	Forest Cabin
1000000032	Riverside Lodge
1000000034	Riverside Cabin
1000000039	Mountain Chalet

8. Property hosted by a Super-host

```
SELECT p.Property_ID, p.Title
FROM Property AS p
INNER JOIN Host AS h ON h.Host_ID = p.Host_ID
WHERE h.Super_Host_Status = TRUE;
```

property_id [PK] bigint	title character varying (20)
1000000001	Urban Apartment
1000000003	Riverside Bungalow
1000000005	Beach House
1000000007	City View Apartment
1000000009	Lakefront Cottage
1000000047	Economy Stay
1000000029	Forest Cabin
1000000011	Mountain View House
1000000033	Seaview Apartment
1000000013	Luxury Penthouse
1000000035	Hillside Hideaway
1000000015	Riverfront Retreat
1000000037	Forest Retreat
1000000030	Cityscape Studio
1000000017	Rustic Cabin
1000000049	Traveller's Rest
1000000039	Mountain Chalet
1000000027	Lakefront Retreat
1000000019	Serenity Cottage
1000000051	Peaceful Retreat
1000000041	Riverside Retreat

9. Property which are available right now

```
SELECT Property_ID,Title,AVg_Rating FROM Property
WHERE Availability_Status = 'Available'
```

property_id [PK] bigint	title character varying (20)	avg_rating numeric (5,2)
1000000001	Urban Apartment	4.50
1000000002	Tranquil Villa	4.80
1000000003	Riverside Bungalow	4.60
1000000004	Cozy Cottage	4.70
1000000005	Beach House	4.90
1000000006	Luxury Condo	4.90
1000000007	City View Apartment	4.40
1000000008	Hilltop Retreat	4.70
1000000009	Lakefront Cottage	4.90
1000000010	Beachside Villa	4.80
1000000011	Mountain View House	4.60
1000000012	Riverside Retreat	4.70
1000000013	Luxury Penthouse	4.90
1000000014	Hillside Mansion	4.80
1000000015	Riverfront Retreat	4.70
1000000016	Beachfront Bungalow	4.60
1000000017	Rustic Cabin	4.50
1000000018	City Center Studio	4.30
1000000019	Serenity Cottage	4.60
1000000020	Lakeview Mansion	4.80
1000000021	Seaside Chalet	4.70

10. Preferred Property

```
SET Search_Path to airbnb;
```

```
SELECT pa.property_id, p.Title AS "PropertyName"
FROM Property_Amenities AS pa
INNER JOIN Property AS p ON p.property_id = pa.property_id
WHERE pa.Amenity_Name IN (SELECT Pref_Amenities FROM Preferences WHERE User_ID = 'USR0000001');
```

property_id bigint	title character varying (20)	Wishlist Properties bigint
1000000020	Lakeview Mansion	4
1000000005	Beach House	3
1000000002	Tranquil Villa	3
1000000017	Rustic Cabin	3
1000000025	Seaside Villa	3
1000000023	Riverside Cottage	3
1000000027	Lakefront Retreat	2
1000000008	Hilltop Retreat	2
1000000013	Luxury Penthouse	2
1000000024	Mountain Retreat	2
1000000018	City Center Studio	2
1000000012	Riverside Retreat	2
1000000019	Serenity Cottage	2
1000000026	Hilltop Chalet	2
1000000003	Riverside Bungalow	2
1000000021	Seaside Chalet	2
1000000007	City View Apartment	1
1000000011	Mountain View House	1
1000000014	Hillside Mansion	1
1000000022	Tranquil Retreat	1
1000000030	Cityscape Studio	1
1000000028	Beachfront Apartment	1
1000000009	Lakefront Cottage	1
1000000029	Forest Cabin	1

11. Commission percent and fixed monthly rent for a property in contract

```
SELECT p.Property_ID, cd.Commission_Per_Booking, cd.Fixed_Monthly_Rent
FROM Property AS p
INNER JOIN Contract_Details AS cd ON p.Property_ID = cd.Property_ID
WHERE p.Availability_Status <> 'OutOfContract'
AND CURRENT_DATE BETWEEN cd.Start_Date AND cd.End_Date;
```

property_id bigint	commision_per_booking numeric (6,2)	fixed_monthly_rent numeric (8,2)
1000000001	7.50	1200.00
1000000002	8.00	1300.00
1000000003	7.25	1150.00
1000000005	9.00	1350.00
1000000007	8.25	1250.00
1000000009	8.00	1300.00
1000000011	8.50	1250.00
1000000012	9.00	1350.00
1000000014	8.25	1250.00
1000000016	8.00	1300.00
1000000018	8.50	1250.00
1000000019	9.00	1350.00
1000000021	8.25	1250.00
1000000022	7.50	1200.00
1000000023	8.00	1300.00
1000000024	7.25	1150.00
1000000025	8.50	1250.00
1000000026	9.00	1350.00
1000000027	7.75	1100.00
1000000028	8.25	1250.00
1000000029	7.50	1200.00
1000000030	8.00	1300.00
1000000031	7.25	1150.00
1000000032	8.50	1250.00



12. Property with most Wishlist :

```
SELECT w.property_id,p.title,count(w.user_id) AS "Wishlist Properties"
FROM wishlist AS w
INNER JOIN property AS p ON p.property_id = w.property_id
GROUP BY w.property_id,p.title
ORDER BY "Wishlist Properties" DESC;
```

	property_id bigint	title character varying (20)	Wishlist Properties bigint
1	1000000020	Lakeview Mansion	4
2	1000000005	Beach House	3
3	1000000002	Tranquil Villa	3
4	1000000017	Rustic Cabin	3
5	1000000025	Seaside Villa	3
6	1000000023	Riverside Cottage	3
7	1000000027	Lakefront Retreat	2
8	1000000008	Hilltop Retreat	2
9	1000000013	Luxury Penthouse	2
10	1000000024	Mountain Retreat	2
11	1000000018	City Center Studio	2
12	1000000012	Riverside Retreat	2
13	1000000019	Serenity Cottage	2
14	1000000026	Hilltop Chalet	2
15	1000000003	Riverside Bungalow	2
16	1000000021	Seaside Chalet	2
17	1000000007	City View Apartment	1
18	1000000011	Mountain View House	1
19	1000000014	Hillside Mansion	1
20	1000000022	Tranquil Retreat	1
21	1000000030	Cityscape Studio	1
22	1000000028	Beachfront Apartment	1
23	1000000009	Lakefront Cottage	1

13. Month-wise bookings :

```
SELECT EXTRACT(Month FROM Booking_Date) AS "Booking Month",
count(Booking_ID) AS "Number of Bookings" FROM Bookings
GROUP BY "Booking Month"
ORDER BY "Booking Month" ASC;
```

	Booking Month double precision 	Number of Bookings bigint 
1	1	5
2	2	7
3	3	4
4	4	10
5	5	4
6	6	3
7	7	3
8	8	3
9	9	3
10	10	3
11	11	3
12	12	2

14. Property by Location(Only particular area) :

```
SELECT Title, price_per_night FROM Property
WHERE city = 'Bangalore';
```

title character varying (20) 🔒	price_per_night numeric (8,2) 🔒
Urban Apartment	5000.00
City Center Studio	3000.00
Cityscape Studio	5000.00
Cityscape Loft	7500.00

15. Property By Location(Nearby Areas) :

```
With pin AS(
SELECT pincode FROM Property WHERE city = 'Bangalore')
SELECT p.Title, p.city, p.price_per_night FROM Property AS p CROSS JOIN pin
where ABS(pin.pincode - p.pincode) BETWEEN 0 AND 15000
```

title character varying (20) 🔒	city character varying (20) 🔒	price_per_night numeric (8,2) 🔒
City Center Studio	Bangalore	3000.00
Cityscape Loft	Bangalore	7500.00
Forest Retreat	Coorg	12000.00
Cozy Single Room	Mysore	2500.00
Urban Apartment	Bangalore	5000.00
Cityscape Studio	Bangalore	5000.00
Rustic Cabin	Coorg	6000.00
Forest Cabin	Coorg	6000.00

16.User wise booking stats :

```
SELECT u.User_ID, COUNT(b.Booking_ID) AS "Number of Bookings",
SUM(inv.Amount) AS "Total Spendings"
FROM Users AS u
INNER JOIN Bookings AS b ON b.User_ID = u.User_ID
INNER JOIN Booking_Invoice AS inv ON b.Booking_ID = inv.Booking_ID
WHERE inv.Invoice_ID NOT IN (SELECT Invoice_ID FROM Booking_Cancellation)
GROUP BY u.User_ID
ORDER BY "Total Spendings" DESC;
```

user_id [PK] character 	Number of Bookings bigint 	Total Spendings numeric 
USR0000035	3	445500.00
USR0000029	2	405000.00
USR0000009	2	355500.00
USR0000044	2	288000.00
USR0000031	2	270000.00
USR0000036	2	234000.00
USR0000022	2	216000.00
USR0000032	3	198000.00
USR0000010	2	166500.00
USR0000011	2	162000.00
USR0000042	2	157500.00
USR0000023	1	135000.00
USR0000013	1	117000.00
USR0000038	1	108000.00
USR0000006	1	108000.00
USR0000008	1	99000.00
USR0000018	1	85500.00
USR0000033	1	85500.00
USR0000014	1	76500.00
USR0000043	1	67500.00
USR0000024	1	40500.00

17. Most available Amenity :

```
SELECT pa.Amenity_Name,COUNT(p.Property_ID)
AS "Amenity Availability in Property"
FROM Property_Amenities AS pa
INNER JOIN Property AS p ON pa.Property_ID = p.Property_ID
GROUP BY pa.Amenity_Name
ORDER BY "Amenity Availability in Property" DESC;
```

amenity_name character varying (50)	Amenity Availability in Property
Wifi	16
Kitchen	15
Free parking on premises	14
Garden or backyard	14
Swimming pool	12
Balcony	12
Hot tub	11
Gym	11
Indoor fireplace	10
Air conditioning	10
Lake access	10
BBQ grill	10

20. Month-wise bookings :

```
SELECT EXTRACT(Month FROM Booking_Date) AS "Booking Month",
count(Booking_ID) AS "Number of Bookings" FROM Bookings
GROUP BY "Booking Month"
ORDER BY "Booking Month" ASC;
```

	Booking Month double precision 	Number of Bookings bigint 
1	1	5
2	2	7
3	3	4
4	4	10
5	5	4
6	6	3
7	7	3
8	8	3
9	9	3
10	10	3
11	11	3
12	12	2

21. City Wise Property Counts :

```
SELECT City,Count(Property_ID) FROM Property
Group By City
```

city character varying (20) 🔒	count bigint 🔒
Bangalore	4
Puducherry	3
Nainital	3
Munnar	2
Mumbai	3
Manali	3
Varanasi	1
Delhi	1
Chennai	1
Ooty	1
Pune	1
Pondicherry	1
Mysore	1
Coorg	3
Jaipur	1
Rishikesh	5
Kovalam	1
Darjeeling	3
Kochi	1
Agra	1
Shimla	4

