CASE STUDY-1

OYO Business

SQL Query:

CREATE DATABASE oyo_city;

USE oyo_city;

oyo_sales.sql :

CREATE TABLE oyo_sales (

   booking_id INT PRIMARY KEY,

   customer_id INT,

   status VARCHAR(20),

   check_in DATE,

   check_out DATE,

   no_of_rooms INT,

   hotel_id INT,

   amount INT,

   discount INT,

   date_of_booking DATE

);

INSERT INTO oyo_sales VALUES (170, 9197, 'Cancelled', '2022-01-14', '2022-01-15', 1, 757, 3137, 796, '2022-01-01');

INSERT INTO oyo_sales VALUES (171, 9197, 'Cancelled', '2022-01-16', '2022-01-17', 1, 757, 3137, 663, '2022-01-01');

INSERT INTO oyo_sales VALUES (583, 11659, 'Stayed', '2022-01-01', '2022-01-02', 2, 16, 6237, 1320, '2022-01-01');

INSERT INTO oyo_sales VALUES (642, 14499, 'Cancelled', '2022-01-16', '2022-01-18', 10, 346, 59254, 12535, '2022-01-01');

```sql
INSERT INTO oyo_sales VALUES (569, 15037, 'No Show', '2022-01-02', '2022-01-03', 1, 207, 1884, 398, '2022-01-01');

INSERT INTO oyo_sales VALUES (882, 22257, 'Cancelled', '2022-01-01', '2022-01-02', 1, 800, 3444, 875, '2022-01-01');

INSERT INTO oyo_sales VALUES (419, 29124, 'Cancelled', '2022-01-02', '2022-01-03', 1, 380, 2144, 453, '2022-01-01');

INSERT INTO oyo_sales VALUES (436, 33021, 'No Show', '2022-01-01', '2022-01-02', 1, 62, 2252, 476, '2022-01-01');

INSERT INTO oyo_sales VALUES (889, 65208, 'Stayed', '2022-01-01', '2022-01-02', 1, 117, 5589, 1419, '2022-01-01');

INSERT INTO oyo_sales VALUES (17, 66762, 'Stayed', '2022-01-07', '2022-01-08', 1, 109, 3509, 743, '2022-01-01');

INSERT INTO oyo_sales VALUES (153, 77179, 'Stayed', '2022-01-02', '2022-01-06', 1, 106, 11887, 2515, '2022-01-01');

INSERT INTO oyo_sales VALUES (545, 81709, 'Cancelled', '2022-01-02', '2022-01-03', 1, 449, 2192, 464, '2022-01-01');

INSERT INTO oyo_sales VALUES (416, 86098, 'Stayed', '2022-01-01', '2022-01-02', 1, 579, 2599, 550, '2022-01-01');

INSERT INTO oyo_sales VALUES (641, 86311, 'Stayed', '2022-01-01', '2022-01-02', 1, 346, 3199, 677, '2022-01-01');

INSERT INTO oyo_sales VALUES (491, 102430, 'Cancelled', '2022-01-02', '2022-01-03', 1, 3, 2469, 523, '2022-01-01');

INSERT INTO oyo_sales VALUES (149, 112913, 'Stayed', '2022-01-29', '2022-02-02', 1, 409, 26255, 5554, '2022-01-01');

INSERT INTO oyo_sales VALUES (799, 118118, 'Stayed', '2022-01-01', '2022-01-02', 1, 689, 4224, 893, '2022-01-01');

INSERT INTO oyo_sales VALUES (445, 145486, 'No Show', '2022-01-03', '2022-01-04', 1, 378, 4939, 1045, '2022-01-01');

INSERT INTO oyo_sales VALUES (798, 159297, 'Cancelled', '2022-01-09', '2022-01-13', 1, 164, 14815, 3134, '2022-01-01');

INSERT INTO oyo_sales VALUES (895, 166300, 'Stayed', '2022-01-01', '2022-01-02', 1, 501, 5004, 1058, '2022-01-01');

INSERT INTO oyo_sales VALUES (731, 168983, 'Cancelled', '2022-01-01', '2022-01-02', 1, 417, 2201, 465, '2022-01-01');
```

INSERT INTO oyo_sales VALUES (856, 169224, 'Cancelled', '2022-01-08', '2022-01-09', 1, 136, 5654, 1436, '2022-01-01');

INSERT INTO oyo_sales VALUES (568, 182041, 'No Show', '2022-01-02', '2022-01-03', 1, 207, 1884, 398, '2022-01-01');

INSERT INTO oyo_sales VALUES (283, 184360, 'Cancelled', '2022-01-02', '2022-01-03', 1, 473, 2989, 759, '2022-01-01');

INSERT INTO oyo_sales VALUES (519, 189769, 'Stayed', '2022-01-01', '2022-01-02', 1, 420, 2469, 523, '2022-01-01');

INSERT INTO oyo_sales VALUES (570, 196020, 'Cancelled', '2022-01-01', '2022-01-02', 1, 207, 2339, 495, '2022-01-01');

INSERT INTO oyo_sales VALUES (624, 1864, 'Stayed', '2022-01-02', '2022-01-03', 1, 653, 2534, 536, '2022-01-02');

INSERT INTO oyo_sales VALUES (738, 26536, 'Stayed', '2022-01-09', '2022-01-13', 1, 365, 6235, 0, '2022-01-02');

INSERT INTO oyo_sales VALUES (808, 38803, 'Stayed', '2022-01-05', '2022-01-06', 1, 628, 2597, 550, '2022-01-02');

INSERT INTO oyo_sales VALUES (859, 44047, 'Stayed', '2022-01-03', '2022-01-07', 1, 804, 17155, 3629, '2022-01-02');

INSERT INTO oyo_sales VALUES (516, 44356, 'Stayed', '2022-01-02', '2022-01-03', 1, 33, 2079, 440, '2022-01-02');

INSERT INTO oyo_sales VALUES (657, 45644, 'Stayed', '2022-01-02', '2022-01-04', 1, 50, 4807, 1018, '2022-01-02');

INSERT INTO oyo_sales VALUES (977, 56694, 'Cancelled', '2022-01-02', '2022-01-03', 1, 777, 2794, 591, '2022-01-02');

INSERT INTO oyo_sales VALUES (786, 57879, 'Cancelled', '2022-01-03', '2022-01-04', 1, 808, 2794, 710, '2022-01-02');

INSERT INTO oyo_sales VALUES (83, 68240, 'Stayed', '2022-01-02', '2022-01-03', 1, 245, 2005, 425, '2022-01-02');

INSERT INTO oyo_sales VALUES (312, 88939, 'Stayed', '2022-01-02', '2022-01-03', 1, 570, 3769, 798, '2022-01-02');

INSERT INTO oyo_sales VALUES (314, 88939, 'Stayed', '2022-01-03', '2022-01-04', 1, 570, 3509, 891, '2022-01-02');

INSERT INTO oyo_sales VALUES (704, 106977, 'Cancelled', '2022-01-04', '2022-01-05', 1, 58, 2534, 644, '2022-01-02');

INSERT INTO oyo_sales VALUES (109, 108129, 'Stayed', '2022-01-02', '2022-01-03', 1, 938, 2469, 523, '2022-01-02');

INSERT INTO oyo_sales VALUES (846, 120340, 'Stayed', '2022-01-03', '2022-01-04', 1, 330, 6824, 1502, '2022-01-02');

INSERT INTO oyo_sales VALUES (31, 120371, 'Stayed', '2022-01-02', '2022-01-03', 1, 755, 3184, 809, '2022-01-02');

INSERT INTO oyo_sales VALUES (809, 121394, 'Stayed', '2022-01-03', '2022-01-05', 1, 628, 3726, 789, '2022-01-02');

INSERT INTO oyo_sales VALUES (379, 124801, 'Cancelled', '2022-01-02', '2022-01-03', 1, 716, 3379, 858, '2022-01-02');

INSERT INTO oyo_sales VALUES (434, 126821, 'Stayed', '2022-01-03', '2022-01-04', 2, 62, 5327, 1352, '2022-01-02');

INSERT INTO oyo_sales VALUES (435, 126821, 'Stayed', '2022-01-03', '2022-01-04', 1, 62, 2664, 677, '2022-01-02');

INSERT INTO oyo_sales VALUES (391, 130118, 'No Show', '2022-01-15', '2022-01-16', 1, 147, 4029, 853, '2022-01-02');

INSERT INTO oyo_sales VALUES (433, 136431, 'Stayed', '2022-01-02', '2022-01-03', 1, 62, 2794, 591, '2022-01-02');

INSERT INTO oyo_sales VALUES (41, 145504, 'Stayed', '2022-01-03', '2022-01-05', 1, 232, 3510, 891, '2022-01-02');

INSERT INTO oyo_sales VALUES (763, 150171, 'Cancelled', '2022-01-02', '2022-01-03', 1, 655, 3509, 743, '2022-01-02');

INSERT INTO oyo_sales VALUES (18, 161206, 'Stayed', '2022-01-03', '2022-01-04', 1, 109, 2859, 605, '2022-01-02');

INSERT INTO oyo_sales VALUES (418, 161755, 'Cancelled', '2022-01-02', '2022-01-03', 1, 380, 1949, 495, '2022-01-02');

oyo_city.sql :

CREATE TABLE oyo_city (

   hotel_id INT PRIMARY KEY,

   city VARCHAR(50)

);

```sql
INSERT INTO oyo_city (hotel_id, city) VALUES
(3, 'Gurgaon'),
(13, 'Gurgaon'),
(16, 'Gurgaon'),
(21, 'Gurgaon'),
(25, 'Delhi'),
(29, 'Gurgaon'),
(31, 'Delhi'),
(33, 'Gurgaon'),
(37, 'Gurgaon'),
(44, 'Noida'),
(45, 'Delhi'),
(48, 'Delhi'),
(49, 'Delhi'),
(50, 'Gurgaon'),
(56, 'Bangalore'),
(58, 'Gurgaon'),
(59, 'Noida'),
(62, 'Delhi'),
(68, 'Mumbai'),
(69, 'Noida'),
(73, 'Delhi'),
(74, 'Gurgaon'),
(77, 'Gurgaon'),
(81, 'Delhi'),
(83, 'Bangalore'),
(84, 'Bangalore'),
(86, 'Bangalore'),
```

(88, 'Bangalore'),

(89, 'Delhi'),

(91, 'Delhi'),

(92, 'Delhi'),

(93, 'Delhi'),

(96, 'Mumbai'),

(99, 'Delhi'),

(106, 'Bangalore'),

(107, 'Bangalore'),

(109, 'Bangalore'),

(111, 'Mumbai'),

(114, 'Delhi'),

(116, 'Gurgaon'),

(117, 'Mumbai'),

(123, 'Jaipur'),

(124, 'Jaipur'),

(128, 'Bangalore'),

(129, 'Delhi'),

(130, 'Delhi'),

(131, 'Gurgaon'),

(132, 'Delhi'),

(135, 'Delhi'),

(136, 'Mumbai'),

(139, 'Jaipur');

-- **1.** Find the - average room rates of different cities

SELECT

  c.city,

ROUND(AVG(CAST(s.amount AS FLOAT) / NULLIF(s.no_of_rooms, 0)), 2) AS avg_room_rate

FROM oyo_sales s

JOIN oyo_city c ON s.hotel_id = c.hotel_id

GROUP BY c.city;

Output:

	city	avg_room_rate
1	Bangalore	6085
2	Delhi	2593.38
3	Gurgaon	3001.5
4	Mumbai	5621.5

-- **2.** Find the - No of bookings of different cities in Jan Feb Mar Months.

SELECT

    c.city,

    DATENAME(MONTH, s.date_of_booking) AS booking_month,

    COUNT(*) AS no_of_bookings

FROM oyo_sales s

JOIN oyo_city c ON s.hotel_id = c.hotel_id

WHERE MONTH(s.date_of_booking) IN (1, 2, 3)

GROUP BY c.city, DATENAME(MONTH, s.date_of_booking)

ORDER BY c.city, booking_month;

Output:

	city	booking_month	no_of_bookings
1	Bangalore	January	3
2	Delhi	January	4
3	Gurgaon	January	5
4	Mumbai	January	2

-- **3.** Write a sql query for the -- Frequency of early bookings prior to check-in the hotel

SELECT

   DATEDIFF(DAY, s.date_of_booking, s.check_in) AS days_prior,

   COUNT(*) AS frequency

FROM oyo_sales s

WHERE DATEDIFF(DAY, s.date_of_booking, s.check_in) >= 0

GROUP BY DATEDIFF(DAY, s.date_of_booking, s.check_in)

ORDER BY days_prior;

Output:

	city	booking_month	no_of_bookings
1	Bangalore	January	3
2	Delhi	January	4
3	Gurgaon	January	5
4	Mumbai	January	2

-- **4.** write the sql query Frequency of bookings of no of rooms in Hotel

SELECT

 no_of_rooms,

   COUNT(*) AS frequency

FROM oyo_sales

GROUP BY no_of_rooms

ORDER BY no_of_rooms;

Output:

	no_of_rooms	frequency
1	1	48
2	2	2
3	10	1

-- **5.** write the sql query-- NEW CUSTOMERS ON JAN MONTH

SELECT

   customer_id,

   MIN(date_of_booking) AS first_booking_date

FROM oyo_sales

GROUP BY customer_id

HAVING MONTH(MIN(date_of_booking)) = 1;

Output:

	customer_id	first_booking_date
1	1864	2022-01-02
2	9197	2022-01-01
3	11659	2022-01-01
4	14499	2022-01-01
5	15037	2022-01-01
6	22257	2022-01-01
7	26536	2022-01-02
8	29124	2022-01-01
9	33021	2022-01-01
10	38803	2022-01-02
11	44047	2022-01-02
12	44356	2022-01-02
13	45644	2022-01-02
14	56694	2022-01-02
15	57879	2022-01-02
16	65208	2022-01-01
17	66762	2022-01-01
18	68240	2022-01-02
19	77179	2022-01-01
20	81709	2022-01-01
21	86098	2022-01-01
22	86311	2022-01-01
23	88939	2022-01-02
24	102430	2022-01-01
25	106977	2022-01-02
26	108129	2022-01-02
27	112913	2022-01-01
28	118118	2022-01-01
29	120340	2022-01-02
30	120371	2022-01-02
31	121394	2022-01-02
32	124801	2022-01-02
33	126821	2022-01-02