Case study-1 OYO Business

TABLE CREATION AND INSERTION OF VALUES

```sql
CREATE DATABASE OYO;
USE OYO;

CREATE TABLE Hotels (
    hotel_id INT PRIMARY KEY,
    city VARCHAR(50)
);

CREATE TABLE BookingDetails (
    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 DECIMAL(10, 2),
    discount DECIMAL(10, 2),
    date_of_booking DATE
);
select * from BookingDetails ;

select * from Hotels ;
```

Oyo_Sales.py > ...

```python
import pandas as pd
import pyodbc

# Step 1: Read Excel
df = pd.read_excel("Oyo_City.xlsx", engine='openpyxl')

# Step 2: Connect to SQL Server
conn = pyodbc.connect(
    'Driver={ODBC Driver 17 for SQL Server};'
    'Server=localhost;'
    'Database=OYO;'   # Change this to your DB
    'UID=sa;'
    'PWD=Poojashree;'
)
cursor = conn.cursor()

# Step 3: Optional – Create Table (Only if it doesn't exist)
cursor.execute("""
IF NOT EXISTS (
    SELECT * FROM INFORMATION_SCHEMA.TABLES
    WHERE TABLE_NAME = 'Hotels'
)
BEGIN
    CREATE TABLE Hotels (
        hotel_id INT PRIMARY KEY,
        city VARCHAR(50)
    )
END
""")
conn.commit()

# Step 4: Insert Data from Excel
for index, row in df.iterrows():
    cursor.execute("""
        INSERT INTO Hotels (hotel_id, city)
        VALUES (?, ?)
    """, row['hotel_id'], row['city'])

conn.commit()
cursor.close()
conn.close()

print("✅ Excel data inserted into SQL Server successfully!")
```

OYO CASESTUDY.py > ...

```python
import pandas as pd
import pyodbc

# Read Excel file
df = pd.read_excel("Oyo_Sales.xlsx")

# Convert date columns to datetime
df['check_in'] = pd.to_datetime(df['check_in'])
df['check_out'] = pd.to_datetime(df['check_out'])
df['date_of_booking'] = pd.to_datetime(df['date_of_booking'])

# Connection to SQL Server
conn = pyodbc.connect(
    "Driver={ODBC Driver 17 for SQL Server};"
    "Server=localhost;"
    "Database=OYO;"
    "UID=sa;"
    "PWD=Poojashree"
)

cursor = conn.cursor()

# Insert row by row
for index, row in df.iterrows():
    cursor.execute("""
        INSERT INTO BookingDetails (booking_id, customer_id, status, check_in,
        VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?, ?)""",
        row['booking_id'], row['customer_id'], row['status'],
        row['check_in'], row['check_out'], row['no_of_rooms'],
        row['hotel_id'], row['amount'], row['discount'], row['date_of_booking'
    )

conn.commit()
cursor.close()
conn.close()

print("✅ Data inserted successfully from Excel to SQL Server.")
```

CASE STUDY QUESTIONS

1.Find the - average room rates of different cities

```sql
-- 1.Find the - average room rates of different cities
SELECT h.city,
       ROUND(AVG(b.amount), 2) AS avg_room_rate
FROM BookingDetails b
JOIN hotels h ON b.hotel_id = h.hotel_id
WHERE b.status = 'stayed'
GROUP BY h.city
ORDER BY avg_room_rate DESC;
```

10 % — No issues found — Ln

Results | Messages

	city	avg_room_rate
1	Mumbai	7398.130000
2	Pune	4916.770000
3	Hyderabad	4406.060000
4	Delhi	4268.780000
5	Bangalore	4079.270000
6	Kolkata	3779.930000
7	Chennai	3677.800000
8	Jaipur	3543.230000
9	Noida	2807.030000
10	Gurgaon	2735.050000

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

```
33
34  -- 2.Find the - No of bookings of different cities in Jan Feb Mar Months.
35  SELECT
36      h.city,
37      MONTH(b.check_in) AS month,
38      COUNT(*) AS booking_count
39  FROM BookingDetails b
40  JOIN hotels h ON b.hotel_id = h.hotel_id
41  WHERE MONTH(b.check_in) IN (1, 2, 3)
42    AND b.status = 'Stayed'
43  GROUP BY h.city, MONTH(b.check_in)
44  ORDER BY h.city, month;
```

110 % | No issues found | Ln: 40 | Ch: 39 | SPC

Results | Messages

	city	month	booking_count
10	Gurgaon	1	178
11	Gurgaon	2	183
12	Gurgaon	3	184
13	Hyderabad	1	19
14	Hyderabad	2	18
15	Hyderabad	3	34
16	Jaipur	1	19
17	Jaipur	2	20
18	Jaipur	3	28
19	Kolkata	1	4
20	Kolkata	2	5
21	Kolkata	3	5
22	Mumbai	1	32
23	Mumbai	2	35
24	Mumbai	3	41
25	Noida	1	40
26	Noida	2	35
27	Noida	3	38
28	Pune	1	10
29	Pune	2	40
30	Pune	3	36

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

```
45
46  -- 4.write the  sql query  Frequency of bookings of no of rooms in Hotel
47  SELECT no_of_rooms, COUNT(*) AS frequency
48  FROM BookingDetails
49  WHERE status = 'stayed'
50  GROUP BY no_of_rooms
51  ORDER BY no_of_rooms;
```

110 % | No issues found | Ln: 42 | Ch: 26 | SPC

Results | Messages

	no_of_rooms	frequency
1	1	1708
2	2	64
3	3	11
4	4	4
5	6	1
6	7	1

6.Write a sql query Net revenue to company (due to some bookings cancelled)

```
52
53  -- 6.Write a sql query Net revenue to company (due to some bookings cancelled)
54  SELECT SUM(amount) AS net_revenue
55  FROM bookingDetails
56  WHERE status = 'stayed';
57
```

110 % No issues found Ln: 49 Ch:

Results Messages

	net_revenue
1	6889042.00

7.Write a sql query for Gross revenue to company

```
57
58  -- 7.Write a sql query  for  Gross revenue to company
59  SELECT SUM(amount) AS gross_revenue
60  FROM bookingDetails;
61
```

10 % No issues found

Results Messages

	gross_revenue
1	11917462.00