

WEEK 2

TOPIC: Hotel reservation

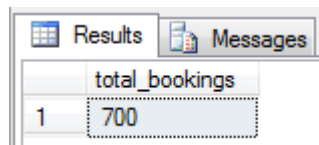
Platform: SSMS 2008 Version

Source Code

```
select * from Hotel_Rsvn_Dataset
```

```
-- 1. What is the total number of reservations in the dataset?
```

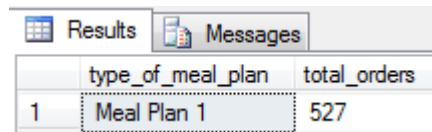
```
select COUNT(*) as total_bookings from Hotel_Rsvn_Dataset
```



total_bookings	
1	700

```
-- 2. Which meal plan is the most popular among guests?
```

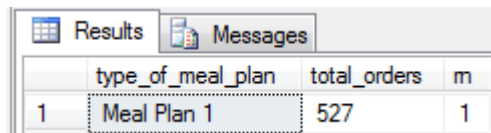
```
select top 1 type_of_meal_plan, count(type_of_meal_plan) as total_orders from  
Hotel_Rsvn_Dataset  
group by type_of_meal_plan  
order by total_orders desc
```



	type_of_meal_plan	total_orders
1	Meal Plan 1	527

Alternate Method: Using window function

```
select * from  
(select type_of_meal_plan, count(type_of_meal_plan) as total_orders,  
RANK() over (order by count(type_of_meal_plan) desc) as rn  
from Hotel_Rsvn_Dataset  
group by type_of_meal_plan) a  
where rn=1
```



	type_of_meal_plan	total_orders	m
1	Meal Plan 1	527	1

```
-- 3. What is the average price per room for reservations involving children?
```

```
select Booking_ID, avg_price_per_room from Hotel_Rsvn_Dataset  
where no_of_children !=0
```

Booking_ID	avg_price_per_room
1: RN000033	82.44
2: RN000051	258
3: RN000081	159.3
4: RN000096	130.5
5: RN00100	156.9
6: RN00115	184.24
7: RN00118	102.83
8: RN00120	190.8
9: RN00137	121.5
10: RN00170	87.4

Query executed successfully: | PN2\SQLEXPRESS (10.50 SP2) | PN2\Faiqua (54) | Hotel Reservation project | 00:00:00 | 48 rows

-- 4. How many reservations were made for the year 20XX (replace XX with the desired year)?

```
select YEAR(arrival_date) Year_of_booking, COUNT(*) no_of_rsvn from
Hotel_Rsvn_Dataset
group by YEAR(arrival_date)
```

	Year_of_booking	no_of_rsvn
1	2017	123
2	2018	577

-- 5. What is the most commonly booked room type?

```
select top 1 room_type_reserved, count(room_type_reserved) as common_room_type
from Hotel_Rsvn_Dataset
group by room_type_reserved
order by common_room_type desc
```

	room_type_reserved	common_room_type
1	Room_Type 1	534

Alternate Method: Using window function

```
select * from
(select room_type_reserved, count(room_type_reserved) as common_room_type,
RANK() over (order by count(room_type_reserved) desc) as rn
from Hotel_Rsvn_Dataset
group by room_type_reserved) a
where rn=1
```

	room_type_reserved	common_room_type	m
1	Room_Type 1	534	1

-- 6. How many reservations fall on a weekend (no_of_weekend_nights > 0)?

```
select COUNT(*) no_of_rsvn_on_weekends from Hotel_Rsvn_Dataset
where no_of_weekend_nights>0
```

Results Messages	
	no_of_rsvn_on_weekends
1	383

-- 7. What is the highest and lowest lead time for reservations?

```
select *,
case
    when lead_time_rank=1 then 'Highest Lead Time'
    when lead_time_rank=700 then 'Lowest Lead Time'
end as Lead_Time_Status
from
(select lead_time,
row_number() over(order by lead_time desc) lead_time_rank
from Hotel_Rsvn_Dataset) a
where lead_time_rank in (1,700)
```

Results		Messages	
	lead_time	lead_time_rank	Lead_Time_Status
1	443	1	Highest Lead Time
2	0	700	Lowest Lead Time

-- 8. What is the most common market segment type for reservations?

```
select top 1 market_segment_type,COUNT(*) count_market_segment_type from
Hotel_Rsvn_Dataset
group by market_segment_type
order by count_market_segment_type desc
```

Results		Messages
	market_segment_type	count_market_segment_type
1	Online	518

-- 9. How many reservations have a booking status of "Confirmed"?

```
select count(booking_status) as confirmed_bookings from Hotel_Rsvn_Dataset
where booking_status = 'Not_Canceled'
```

Results Messages	
	confirmed_bookings
1	493

-- 10. What is the total number of adults and children across all reservations?

```
select sum(no_of_adults) total_adults ,sum(no_of_children) total_children from
Hotel_Rsvn_Dataset
```

Results		Messages
	total_adults	total_children
1	1316	69

-- 11. What is the average number of weekend nights for reservations involving children?

```
select AVG(no_of_weekend_nights) as avg_weekend_night from Hotel_Rsvn_Dataset
where no_of_children>0
```

Results		Messages
	avg_weekend_night	
1	1.000000	

-- 12. How many reservations were made in each month of the year?

```
select month(arrival_date) as month_of_rsvn ,COUNT(Booking_ID) as no_of_bookings
from Hotel_Rsvn_Dataset
group by month(arrival_date)
```

Results			Messages
	month_of_rsvn	no_of_bookings	
1	1	11	
2	2	28	
3	3	52	
4	4	67	
5	5	55	
6	6	84	
7	7	44	
8	8	70	
9	9	80	
10	10	103	
11	11	54	
12	12	52	

-- 13. What is the average number of nights (both weekend and weekday) spent by guests for each room type?

```
select room_type_reserved, avg(no_of_weekend_nights+no_of_week_nights) ang_nights
from Hotel_Rsvn_Dataset
group by room_type_reserved
```

Results			Messages
	room_type_reserved	ang_nights	
1	Room_Type 1	2.878277	
2	Room_Type 2	3.000000	
3	Room_Type 4	3.800000	
4	Room_Type 5	2.500000	
5	Room_Type 6	3.611111	
6	Room_Type 7	2.666666	

-- 14. For reservations involving children, what is the most common room type, and what is the average price for that room type?

```
select top 1 room_type_reserved, COUNT(*) no_reg
,round(avg(avg_price_per_room),0) avg_price
from Hotel_Rsvn_Dataset
where no_of_children>0
```

```

where no_of_children!=0
group by room_type_reserved
order by no_reg desc

```

Results		Messages	
	room_type_reserved	no_reg	avg_price
1	Room_Type 1	24	123

Alternate Method: Using window function

```

select * from
(select room_type_reserved, COUNT(*) no_reg, round(avg(avg_price_per_room),0)
avg_price,
DENSE_RANK() over(order by COUNT(*) desc) rnk
from Hotel_Rsvn_Dataset
where no_of_children!=0
group by room_type_reserved) b
where rnk=1

```

Results		Messages		
	room_type_reserved	no_reg	avg_price	mk
1	Room_Type 1	24	123	1

-- 15. Find the market segment type that generates the highest average price per room.

```

select top 1 market_segment_type, round(avg(avg_price_per_room),0) as
avg_price_market_segment from Hotel_Rsvn_Dataset
group by market_segment_type
order by avg_price_market_segment desc

```

Results		Messages	
	market_segment_type	avg_price_market_segment	
1	Online	112	

Alternate Method: Using window function

```

select * from
(select market_segment_type, round(avg(avg_price_per_room),0) as
avg_price_market_segment,
DENSE_RANK() over(order by round(avg(avg_price_per_room),0) desc) rnk
from Hotel_Rsvn_Dataset
group by market_segment_type) b
where rnk=1

```

Results		Messages	
	market_segment_type	avg_price_market_segment	mk
1	Online	112	1