

Final Project - ANKIT NASHINE

1 – Design



I have included No_of_Guests in fact table and assumed the values.
Few other additions in fact table are No_of_Days and TotalAmount.
No_of_Days is calculated by calculating difference between Checkout_Date and Checkin_Date.
TotalAmount in fact table is calculated by multiplying No_of_Days and Confirmed_Room_Rate.

2 – Requirements

There are measures that were created using calculations with the requirements met using them.

Avg Day Booked – represents average number of days a room is booked
Requirements met – O2

Calculation - $\text{SUM}([\text{Measures}].[\text{Number of Days}]) / ([\text{Measures}].[\text{Fact Reservation Count}])$

Avg Guest – represents average number of guests stayed in a room
Requirements met – R1, A1

Calculation – $\text{SUM}([\text{Measures}].[\text{Number of Guests}]) / ([\text{Measures}].[\text{Fact Reservation Count}])$

Avg Room Rate – represents average rate at which each type of rooms was booked.
Requirements met – O3

Calculation – $\text{SUM}([\text{Measures}].[\text{Total Amount}]) / \text{SUM}([\text{Measures}].[\text{Number of Days}])$

No of Days – represents number of days a room was booked.

Calculation – it was calculated in design view using new named calculation – $\text{SETDIFF}(\text{day}, \text{Checkout_Date}, \text{Checkin_Date})$

Total Amount – Tells the total amount (Revenue) each reservation generated
Requirements met – O1, M1

Calculation – It was calculated in design view using new named calculation – $\text{Confirmed_Room_Rate} * \text{No_Of_Days}$

reservation (Fact Reservation Count) – tells the counts of reservations/bookings made
Requirements met – O4, M2, R1

3 – Implementation

O1) Booked revenue – Total revenue based on the room rate that was confirmed at time of reservation,

Row Labels	Total Amount
Garden Room Double Beds	\$1,575
King-size Bed	\$2,925
Luxury Penthouse	\$1,820
Luxury Suite	\$1,600
Queen-size Bed	\$3,380
Grand Total	\$11,300

Row Labels	Total Amount
Camden Inn	\$4,105
Dover	\$1,440
Four Seasons	\$2,705
Liberty Bell Suites	\$1,600
Ritz Carlton	\$1,450
Grand Total	\$11,300

Row Labels	Total Amount
Camden Inn	
Garden Room Double Beds	\$1,575
Queen-size Bed	\$2,530
Dover	
King-size Bed	\$1,180
Queen-size Bed	\$260
Four Seasons	
King-size Bed	\$885
Luxury Penthouse	\$1,820
Liberty Bell Suites	
Luxury Suite	\$1,600
Ritz Carlton	
King-size Bed	\$860
Queen-size Bed	\$590
Grand Total	\$11,300

Total Amount
\$11,300

These 4 tables show the Total Revenue (Total Amount) generated by hotel heaven in different dimensions.

First table shows total revenue generated on each of their room type.

Second table shows revenue generated on each of their hotel.

Third table shows revenue generated on each room type in each of their hotel.

Fourth table shows total revenue generated by hotel heaven.

Total Amount, Room Description and Hotel Name were used.

O2) Days booked – This can be the average number of days rooms are booked (reserved),

Row Labels	Avg Day Booked
Garden Room Double Beds	3.0
King-size Bed	2.5
Luxury Penthouse	1.5
Luxury Suite	2.0
Queen-size Bed	3.0
Grand Total	2.5

Row Labels	Avg Day Booked
Camden Inn	3.8
Dover	2.5
Four Seasons	2.0
Liberty Bell Suites	2.0
Ritz Carlton	1.7
Grand Total	2.5

Row Labels	Avg Day Booked
Camden Inn	
Garden Room Double Beds	3.0
Queen-size Bed	4.5
Dover	
King-size Bed	4.0
Queen-size Bed	1.0
Four Seasons	
King-size Bed	3.0
Luxury Penthouse	1.5
Liberty Bell Suites	
Luxury Suite	2.0
Ritz Carlton	
King-size Bed	1.5
Queen-size Bed	2.0
Grand Total	2.5

These tables show average number of days rooms are booked

First table shows average number of days rooms are booked for each type of room.

Second table shows average number of days rooms are booked for each hotel.

Third table shows average number of days rooms are booked for each type of room in each hotel.

Avg Day Booked, Room Description and Hotel Name were used.

O3) Room rate – This can be the average rate per day on reservations,

Row Labels	Avg Room Rate	Row Labels	Avg Room Rate
Garden Room Double Beds	262.5	Camden Inn	273.7
King-size Bed	292.5	Dover	288.0
Luxury Penthouse	606.7	Four Seasons	450.8
Luxury Suite	800.0	Liberty Bell Suites	800.0
Queen-size Bed	281.7	Ritz Carlton	290.0
Grand Total	342.4	Grand Total	342.4

Row Labels	Avg Room Rate
Camden Inn	
Garden Room Double Beds	262.5
Queen-size Bed	281.1
Dover	
King-size Bed	295.0
Queen-size Bed	260.0
Four Seasons	
King-size Bed	295.0
Luxury Penthouse	606.7
Liberty Bell Suites	
Luxury Suite	800.0
Ritz Carlton	
King-size Bed	286.7
Queen-size Bed	295.0
Grand Total	342.4

These tables show average rate per day for rooms that are booked

First table shows average rate per day for rooms for each type of room.

Second table shows rate per day for rooms that are booked for each hotel.

Third table shows rate per day for rooms that are booked for each type of room in each hotel.

Avg Room Rate, Room Description and Hotel Name were used.

O4) Number of rooms booked – Hotel Heaven needs to look at the number of rooms reserved, at each hotel and by type of room (King-size bed, Luxury Suite, etc.).

Row Labels	# Reservation
Garden Room Double Beds	2
King-size Bed	4
Luxury Penthouse	2
Luxury Suite	1
Queen-size Bed	4
Grand Total	13

Row Labels	# Reservation
Camden Inn	4
Dover	2
Four Seasons	3
Liberty Bell Suites	1
Ritz Carlton	3
Grand Total	13

Row Labels	# Reservation
Camden Inn	
Garden Room Double Beds	2
Queen-size Bed	2
Dover	
King-size Bed	1
Queen-size Bed	1
Four Seasons	
King-size Bed	1
Luxury Penthouse	2
Liberty Bell Suites	
Luxury Suite	1
Ritz Carlton	
King-size Bed	2
Queen-size Bed	1
Grand Total	13

These tables show number of rooms that are booked.

First table shows number of rooms that are booked for each type of room.

Second table shows number of rooms that are booked for each hotel.

Third table shows number of rooms that are booked for each type of room in each hotel.

reservation, Room Description and Hotel Name were used.

M1) Value – This is the total value of bookings that have been made by each guest (or customer).

Row Labels	Total Amount
Kadeem McGowan	\$1,120
Lucius Farrell	\$1,475
Madaline Dejesus	\$570
Nash Romero	\$850
Odessa Cox	\$3,640
Troy Giles	\$2,845
Zenia Stuart	\$800
Grand Total	\$11,300

This table shows the total value of booking made by each guest in any of the hotels.

Total Amount, Guest Name were used.

M2) Frequency - The number of customers who have made a single reservation and never come back, the number who have made two reservations, three reservations, and so on.

Row Labels	# Reservation
Kadeem McGowan	1
Lucius Farrell	1
Madaline Dejesus	1
Nash Romero	2
Odessa Cox	4
Troy Giles	2
Zenia Stuart	2
Grand Total	13

This table shows the number of bookings (Reservations) made by each guest in any of the hotels.

reservation, Guest Name were used.

R1) Creating ideas to get customers/guests come back.

Row Labels	# Reservation	Avg Guest
Kadeem McGowan	1	3
Lucius Farrell	1	1
Madaline Dejesus	1	1
Nash Romero	2	2
Odessa Cox	4	2
Troy Giles	2	1
Zenia Stuart	2	2
Grand Total	13	2

For identifying guests who came to any of the hotel just for once and never came back, the above table shows number of reservations made by each guest.

Another measure Avg Guest which means average number of guests stayed in the room on that reservation.

For example, Kadeem McGowan just came to hotel once and never returned can be because the average guest in his stay were 3. And it could have been uncomfortable for them to accommodate in single room.

So, using this table we can offer different guest different offers based on problems they faced which led them to never return back. For example, we can offer free room upgrade offer to Kadeem McGowan where he can get big room on the price of small one.

reservation, Avg Guest and Guest Name were used.

A1) Important Metric

Row Labels	Avg Guest
Garden Room Double Beds	1
King-size Bed	2
Luxury Penthouse	3
Luxury Suite	4
Queen-size Bed	2
Grand Total	2

Average guest is a very important metric to target types of customers based on their marital status or age. The above table shows the types of rooms and average number of guests stayed in those rooms.

So, if the target customer is a young married person, we can offer them King size or queen size room where usually two guests stay and give them good discounts on these types of rooms. If the targeted customer is a family man with 1-2 kids, we can give them good offers (like one day stay free on one day stay) and other discounts for luxury penthouse or suite (where usually 3-4 members stay which can be family) to attract them book their stay at our hotel.

Avg Guest, Guest Name were used.