**Project 2: Hotel Reservation Analysis with SQL**

mysql> use db;

Database changed

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mysql> show tables;

+----------------------------+

| Tables\_in\_db |

+----------------------------+

| hotel\_reservation\_dataset1 |

+----------------------------+

1 row in set (0.03 sec)

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mysql> select \* from hotel\_reservation\_dataset1;

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

mysql> select count(\*) as total\_reservations from hotel\_reservat

ion\_dataset1;

+--------------------+

| total\_reservations |

+--------------------+

| 700 |

+--------------------+

1 row in set (0.03 sec)

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

mysql> select type\_of\_meal\_plan,count(\*) as total\_guests

-> from hotel\_reservation\_dataset1

-> GROUP BY type\_of\_meal\_plan

-> ORDER BY total\_guests DESC

-> LIMIT 1;

+-------------------+--------------+

| type\_of\_meal\_plan | total\_guests |

+-------------------+--------------+

| Meal Plan 1 | 527 |

+-------------------+--------------+

1 row in set (0.02 sec)

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

mysql> select avg(avg\_price\_per\_room)

-> from hotel\_reservation\_dataset1

-> where no\_of\_children>0;

+-------------------------+

| avg(avg\_price\_per\_room) |

+-------------------------+

| 144.56833333333336 |

+-------------------------+

1 row in set (0.02 sec)

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

i)mysql> select count(\*) as total\_reservaions

-> from hotel\_reservation\_dataset1

-> where year(arrival\_date)=2018;

+-------------------+

| total\_reservaions |

+-------------------+

| 0 |

+-------------------+

1 row in set, 700 warnings (0.03 sec)

ii)mysql> select count(\*) as total\_reservaions

-> from hotel\_reservation\_dataset1

-> where year(arrival\_date)=2017;

+-------------------+

| total\_reservaions |

+-------------------+

| 0 |

+-------------------+

1 row in set, 700 warnings (0.00 sec)

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5. What is the most commonly booked room type?

mysql> select room\_type\_reserved,count(\*) as total\_bookings

-> from hotel\_reservation\_dataset1

-> GROUP BY room\_type\_reserved

-> ORDER BY total\_bookings DESC

-> LIMIT 1;

+--------------------+----------------+

| room\_type\_reserved | total\_bookings |

+--------------------+----------------+

| Room\_Type 1 | 534 |

+--------------------+----------------+

1 row in set (0.00 sec)

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6. How many reservations fall on a weekend (no\_of\_weekend\_nights > 0)?

mysql> select count(\*) as weekend\_reservations

-> from hotel\_reservation\_dataset1

-> where no\_of\_weekend\_nights>0;

+----------------------+

| weekend\_reservations |

+----------------------+

| 383 |

+----------------------+

1 row in set (0.00 sec)

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

mysql> select max(lead\_time) as highest\_lead\_time,

-> min(lead\_time) as lowest\_lead\_time

-> from hotel\_reservation\_dataset1;

+-------------------+------------------+

| highest\_lead\_time | lowest\_lead\_time |

+-------------------+------------------+

| 443 | 0 |

+-------------------+------------------+

1 row in set (0.02 sec)

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

mysql> select market\_segment\_type,count(\*) as total\_reservations

-> from hotel\_reservation\_dataset1

-> GROUP BY market\_segment\_type

-> ORDER BY total\_reservations DESC

-> LIMIT 1;

+---------------------+--------------------+

| market\_segment\_type | total\_reservations |

+---------------------+--------------------+

| Online | 518 |

+---------------------+--------------------+

1 row in set (0.01 sec)

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

mysql> select count(\*) as confirmed\_reservations

-> from hotel\_reservation\_dataset1

-> where booking\_status='Not\_Canceled';

+------------------------+

| confirmed\_reservations |

+------------------------+

| 493 |

+------------------------+

1 row in set (0.00 sec)

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

mysql> select sum(no\_of\_adults) as total\_adults,

-> sum(no\_of\_children) as total\_children

-> from hotel\_reservation\_dataset1;

+--------------+----------------+

| total\_adults | total\_children |

+--------------+----------------+

| 1316 | 69 |

+--------------+----------------+

1 row in set (0.02 sec)

------------------------------------------------------------------------------------------------------

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

mysql> select avg(no\_of\_weekend\_nights) as average\_weekend\_night

s

-> from hotel\_reservation\_dataset1

-> where no\_of\_children>0;

+------------------------+

| average\_weekend\_nights |

+------------------------+

| 1.0000 |

+------------------------+

1 row in set (0.00 sec)

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

mysql> select month(arrival\_date) as reservation\_month,

-> count(\*) as total\_reservations

-> from hotel\_reservation\_dataset1

-> GROUP BY reservation\_month;

+-------------------+--------------------+

| reservation\_month | total\_reservations |

+-------------------+--------------------+

| NULL | 700 |

+-------------------+--------------------+

1 row in set, 701 warnings (0.03 sec)

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

mysql> SELECT room\_type\_reserved,

-> AVG(total\_nights) AS average\_nights

-> FROM (

-> SELECT room\_type\_reserved,

-> (no\_of\_weekend\_nights + no\_of\_week\_nights) AS total\_nights

-> FROM hotel\_reservation\_dataset1

-> ) AS subquery

-> GROUP BY room\_type\_reserved;

+--------------------+----------------+

| room\_type\_reserved | average\_nights |

+--------------------+----------------+

| Room\_Type 1 | 2.8783 |

| Room\_Type 4 | 3.8000 |

| Room\_Type 2 | 3.0000 |

| Room\_Type 6 | 3.6111 |

| Room\_Type 5 | 2.5000 |

| Room\_Type 7 | 2.6667 |

+--------------------+----------------+

6 rows in set (0.02 sec)

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14. For reservations involving children, what is the most common room type, and what is the average

price for that room type?

mysql> SELECT room\_type\_reserved, AVG(avg\_price\_per\_room) AS average\_price

-> FROM hotel\_reservation\_dataset1

-> WHERE no\_of\_children > 0

-> GROUP BY room\_type\_reserved

-> ORDER BY COUNT(\*) DESC

-> LIMIT 1;

+--------------------+--------------------+

| room\_type\_reserved | average\_price |

+--------------------+--------------------+

| Room\_Type 1 | 123.12291666666665 |

+--------------------+--------------------+

1 row in set (0.00 sec)

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

mysql> SELECT market\_segment\_type, AVG(avg\_price\_per\_room) AS average\_price

-> FROM hotel\_reservation\_dataset1

-> GROUP BY market\_segment\_type

-> ORDER BY average\_price DESC

-> LIMIT 1;

+---------------------+--------------------+

| market\_segment\_type | average\_price |

+---------------------+--------------------+

| Online | 112.45521235521232 |

+---------------------+--------------------+

1 row in set (0.01 sec)