

Queries & Pathway Transaction

1-Total Value of Extra Services Used by Each Guest

```
select concat(guest_fname,' ',guest_lname) as full_name , sum(BS.quantity * HS.price) as
        total_service
        from Guests G
        inner join booking B
        ON G.guest_id = B.guest_id
        inner join Booking_service BS
        on B.booking_id = BS.booking_id
        inner join hotel_service HS
        on BS.service_id = HS.service_id
group by guest_fname, guest_lname
order by guest_fname
```

Send query to DBMS

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Query Optimization

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Call Tables: Guests G, Booking B, Booking_service BS, Hotel_service HS

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Use Joins with Conditions:

- G.guest_id = B.guest_id
- B.booking_id = BS.booking_id
- BS.service_id = HS.service_id

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Aggregate Data:

- SUM(BS.quantity * HS.price) AS total_service
- GROUP BY G.guest_fname, G.guest_lname

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Collect Results:

- full_name (G.guest_fname + ' ' + G.guest_lname)
- total_service

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Sort Results:

- ORDER BY G.guest_fname ASC

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Show Results

2-Employee and Their Manager Details

```
select concat(e.employee_fname,' ',e.employee_lname) as employee_name , concat(m.employee_fname,'
',m.employee_lname) as manager_name, e.employee_role
from Employees e inner join Employees m
on e.manager_id= m.employee_id
```

Send query to DBMS

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Query Optimization

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Call Table: Employees e, Employees m

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Use Join with Condition:

- e.manager_id = m.employee_id

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Collect Results:

- employee_name (e.employee_fname + ' ' + e.employee_lname)
- manager_name (m.employee_fname + ' ' + m.employee_lname)
- employee_role (e.employee_role)

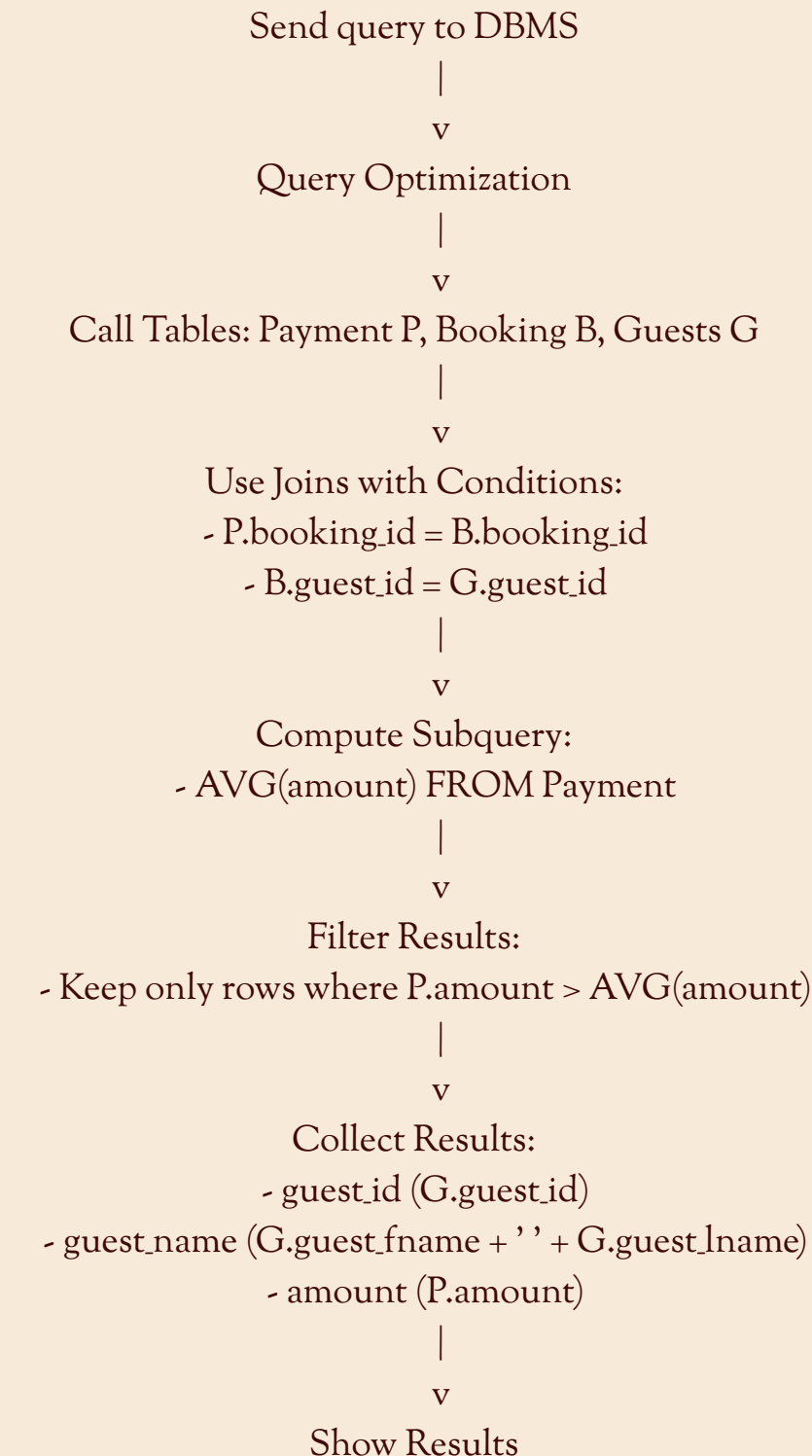
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Show Results

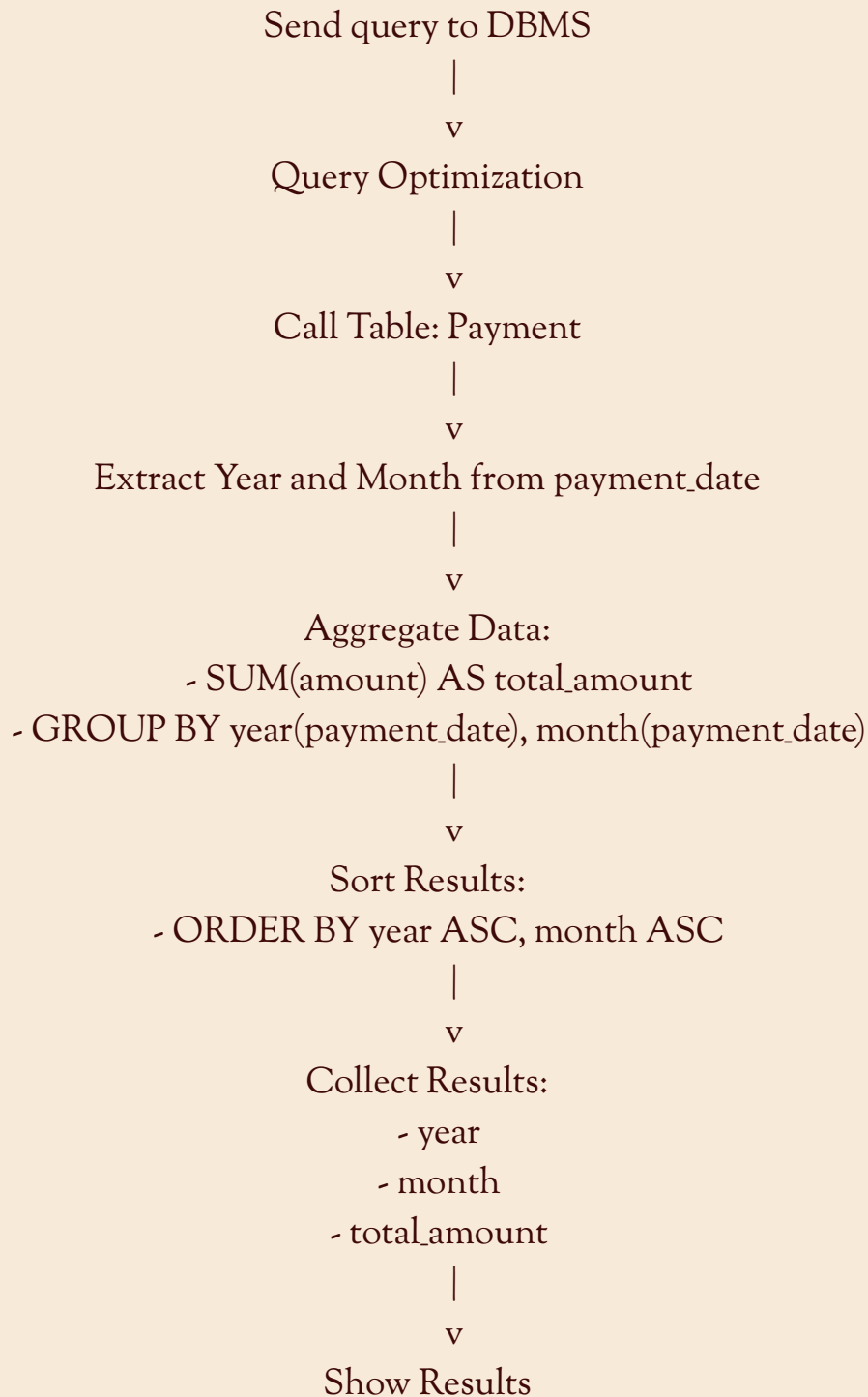
3-Guests Who Paid Above Average Amount

```
select G.guest_id, concat(G.guest_fname, ' ', G.guest_lname) as guest_name , P.amount
      from Payment P
    inner JOIN Booking B on P.booking_id = B.booking_id
      inner JOIN Guests G on B.guest_id = G.guest_id
 where P.amount > (select AVG(amount) from Payment);
```



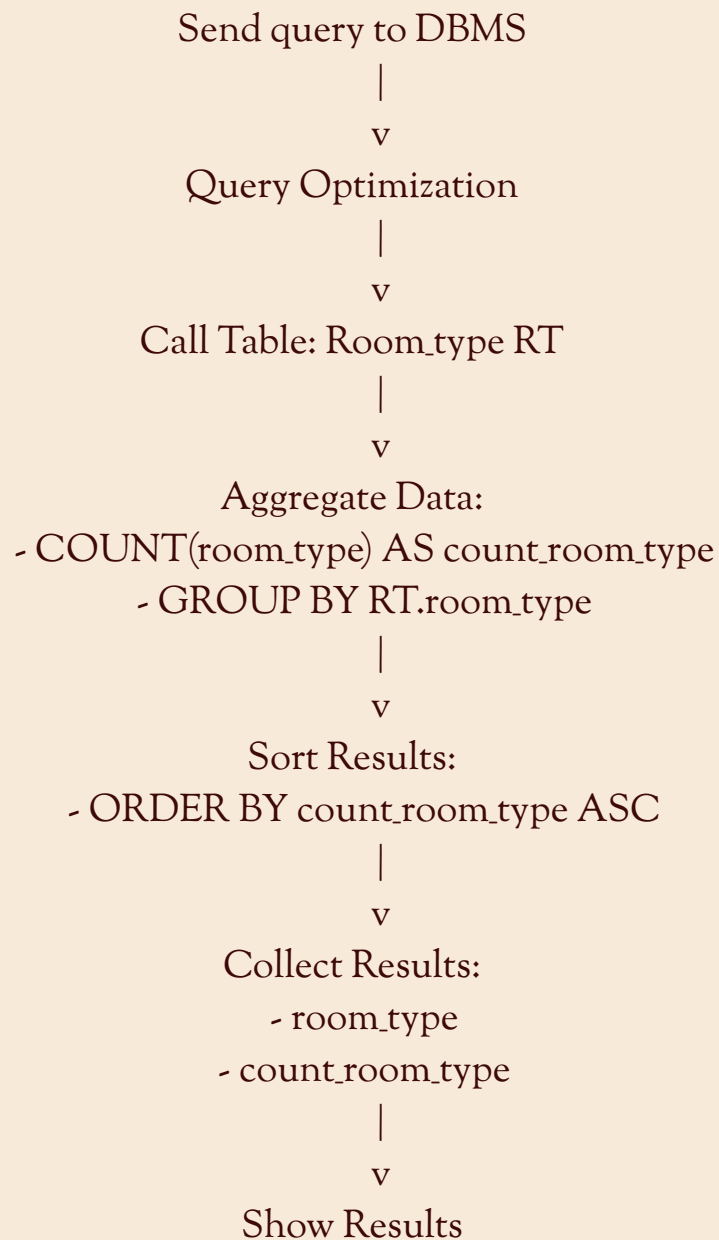
4-Monthly Revenue Report

```
select year(payment.date) as year , month(payment.date) as month, sum(amount) as total_amount
      from payment
group by year(payment.date) , month(payment.date)
ORDER BY YEAR, MONTH;
```



5-Count of Rooms per Room Type

```
SELECT RT.ROOM_TYPE , COUNT(ROOM_TYPE) AS COUNT_ROOM_TYPE
      FROM ROOM_TYPE RT
      GROUP BY ROOM_TYPE
      ORDER BY COUNT(ROOM_TYPE)
```



6-Booking Details: Guest, Employee, and Room Type

```
select concat(G.guest_fname, ' ', G.guest_lname) as guest_name , concat(e.employee_fname,
'e.employee_lname) as employee_name , room_type
      from guests G
      inner join Booking B
      on G.guest_id = B.guest_id
      inner join Employees E
      on E.employee_id = B.employee_id
      inner join Rooms R
      on R.room_id = B.room_id
      inner join Room_type RT
      on RT.room_type_id = R.room_type_id
```

Send query to DBMS

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Query Optimization

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Call Tables: Guests G, Booking B, Employees E, Rooms R, Room_type RT

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Use Joins with Conditions:

- G.guest_id = B.guest_id
- E.employee_id = B.employee_id
- R.room_id = B.room_id
- RT.room_type_id = R.room_type_id

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Collect Results:

- guest_name (G.guest_fname + ' ' + G.guest_lname)
- employee_name (E.employee_fname + ' ' + E.employee_lname)
- room_type (RT.room_type)

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Show Results

7-Most Popular Extra Services

```
select S.name_service , count(name_service) as count_of_service
      from hotel_Service S
      inner join Booking_service BS
      on S.service_id = BS.service_id
      inner join Booking B
      on B.booking_id = BS.booking_id
      inner join Rooms R
      on R.room_id = B.room_id
      group by S.name_service
      order by count(name_service) desc
```

Send query to DBMS

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Query Optimization

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Call Tables: Hotel_service S, Booking_service BS, Booking B, Rooms R

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Use Joins with Conditions:

- S.service_id = BS.service_id
- B.booking_id = BS.booking_id
- R.room_id = B.room_id

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Aggregate Data:

- COUNT(name_service) AS count_of_service
- GROUP BY S.name_service

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Sort Results:

- ORDER BY count_of_service DESC

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Collect Results:

- name_service (S.name_service)
- count_of_service

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Show Results