Query 1: Revenue Breakdown by Service Type

```
SELECT st.serviceName, ROUND(SUM(c.price * c.quantity), 2) AS totalRevenue
FROM Charge c
JOIN ServiceType st ON c.serviceTypeID = st.serviceTypeID
GROUP BY st.serviceName
ORDER BY totalRevenue DESC;
```

This query calculates total revenue for each service offered by the business. It helps management identify the most and least profitable services. Also helping with guiding decisions on pricing, marketing, and resource allocation. By tracking which services drive revenue, managers can optimize operations and develop targeted promotions.

Query 2: Average Stay Duration by Room Type

```
SELECT rt.typeName, ROUND(AVG(DATEDIFF(rsv.endDate, rsv.startDate)), 1) AS
avgStayDays

FROM Reservation rsv

JOIN Room rm ON rsv.roomID = rm.roomID

JOIN RoomType rt ON rm.roomTypeID = rt.roomTypeID

GROUP BY rt.typeName

ORDER BY avgStayDays DESC;
```

This query measures the average number of days guests stay for each room type. It provides insight into guest behavior and room popularity, allowing management to adjust pricing or package deals accordingly. Longer stays may indicate higher satisfaction or better value in certain room categories.

Query 3: Utilization Rate For Event Spaces

```
SELECT rm.roomNumber, ROUND(SUM(TIMESTAMPDIFF(HOUR, eru.actualStart,
eru.actualEnd)) / SUM(TIMESTAMPDIFF(HOUR, eru.scheduledStart, eru.scheduledEnd)) *
100, 2) AS utilizationRate

FROM EventRoomUsage eru

JOIN Room rm ON eru.roomID = rm.roomID

GROUP BY rm.roomNumber

ORDER BY utilizationRate DESC;
```

This query compares actual event room usage time versus scheduled time, which gives a utilization percentage for each room. It helps management evaluate how efficiently event spaces are being used and whether certain rooms are underutilized or overbooked. This information could help with scheduling improvements.

Query 4: Top Guests by Total Spend

```
SELECT g.firstName, g.lastName, SUM(c.price * c.quantity) AS totalSpend
FROM Charge c
JOIN Guest g ON c.guestID = g.guestID
GROUP BY g.guestID, g.firstName, g.lastName
ORDER BY totalSpend DESC
LIMIT 10;
```

This query ranks guests by their total spending across all services. It helps management identify VIP and potential VIP customers and develop loyalty programs or personalized offers to encourage repeat business.

Query 5: Average Revenue per Guest

```
SELECT g.guestID, g.firstName, g.lastName, ROUND(SUM(c.price * c.quantity) /
COUNT(DISTINCT c.chargeID), 2) AS avgRevenuePerCharge

FROM Guest g

JOIN Charge c ON g.guestID = c.guestID

GROUP BY g.guestID, g.firstName, g.lastName

ORDER BY avgRevenuePerCharge DESC

LIMIT 10;
```

This query determines the average revenue generated per guest by dividing total charges by the number of guests or transactions. It allows management to measure guest profitability and compare performance across different time periods. By tracking this module, it helps set revenue goals and monitor overall business efficiency.

Query 6: Average Occupancy Duration by Building

```
SELECT b.buildingName, ROUND(AVG(DATEDIFF(r.endDate, r.startDate)), 1) AS
avgStayDays

FROM Reservation r

JOIN Room rm ON r.roomID = rm.roomID

JOIN Floor f ON rm.floorID = f.floorID

JOIN Wing w ON f.wingID = w.wingID

JOIN Building b ON w.buildingID = b.buildingID

GROUP BY b.buildingName

ORDER BY avgStayDays DESC;
```

This query finds the average length of stay per building, and highlights which locations or wings attract longer stays. It helps management evaluate building performance and optimize maintenance, staffing, and pricing across properties. The differences in stay duration can also reveal guest preferences related to building amenities or room types.

Query 7: Top Event Hosts by Number of Events

```
SELECT e.hostID, COUNT(e.eventID) AS totalEvents
FROM Event e
GROUP BY e.hostID
ORDER BY totalEvents DESC
LIMIT 10;
```

This query lists the hosts or organizations that have held the most events. It provides valuable data for building long-term partnerships and offering discounts or premium packages to frequent clients. This information can also guide marketing efforts toward industries or clients with high event frequency.

Query 8: Total Reservations per Month

```
SELECT  DATE_FORMAT(r.startDate, '%Y-%m') AS month, COUNT(r.reservationID) AS totalReservations

FROM Reservation r

GROUP BY DATE_FORMAT(r.startDate, '%Y-%m')

ORDER BY month;
```

This query counts the total number of reservations made each month. It gives management a clear picture of seasonal trends and booking fluctuations. This helps with staffing, budgeting, and marketing planning. Tracking reservation trends also supports forecasting and resource management throughout the year.
