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Project 1: Excelsior Mobile Report  
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USE el23wq\_Excelsior;

-- 1 --

-- A) This query will return the first and last name of the customers with their  
minute, data and texts usage  
--along with the total bill.

```
SELECT CONCAT(FirstName, ' ', LastName) AS 'FullName', Minutes, DataInMB, Texts,
Total
FROM LastMonthUsage JOIN Bill
      ON LastMonthUsage.MIN = Bill.MIN
      JOIN Subscriber ON Subscriber.MIN = Bill.MIN
ORDER BY FullName;
```

--B) This query returns the average minutes, data and txts usage of the customers  
with their total bills by city

```
SELECT City, AVG(Minutes) AS 'AVGMinutes',AVG(DataInMB) AS 'AVGDataInMB',AVG(Texts)
AS 'AVGTexts' ,AVG(Total) AS 'AVGTotal'
FROM LastMonthUsage JOIN Bill
      ON LastMonthUsage.MIN = Bill.MIN
      JOIN Subscriber ON Subscriber.MIN = Bill.MIN
GROUP BY City
ORDER BY City;
```

-- C) This query returns the SUM of the minutes, data and txts usage of the  
customers with their total bills by city

```
SELECT City, SUM(Minutes) AS 'TotalMinutes',SUM(DataInMB) AS
'TotalDataInMB',SUM(Texts) AS 'TotalTexts',
      SUM(Total) AS 'Total'
FROM LastMonthUsage JOIN Bill
      ON LastMonthUsage.MIN = Bill.MIN
      JOIN Subscriber ON Subscriber.MIN = Bill.MIN
GROUP BY City
ORDER BY City;
```

--D) This query returns the average minutes, data and txts usage of the customers  
with their total bills by PlanName

```
Select PlanName, AVG(Minutes) AS 'AVGMinutes',AVG(DataInMB) AS
'AVGDataInMB',AVG(Texts) AS 'AVGTexts',
      AVG(Total) AS 'AVGTotal'
FROM LastMonthUsage JOIN Bill
      ON LastMonthUsage.MIN = Bill.MIN
      JOIN Subscriber ON Subscriber.MIN = Bill.MIN
GROUP BY PlanName
ORDER BY PlanName;
```

-- E) This query returns the SUM of the minutes, data and txts usage of the  
customers with their total bills by city

```

SELECT PlanName, SUM(Minutes) AS 'TotalMinutes',SUM(DataInMB) AS
'TotalDataInMB',SUM(Texts) AS 'TotalTexts',
    SUM(Total) AS 'Total'
FROM LastMonthUsage JOIN Bill
    ON LastMonthUsage.MIN = Bill.MIN
    JOIN Subscriber ON Subscriber.MIN = Bill.MIN
GROUP BY PlanName
ORDER BY PlanName;

```

--2

--1A)This query returns the cities names and the number of customers in the city

```

SELECT city, COUNT(MIN) as 'NumCustomers'
FROM Subscriber
GROUP BY city
ORDER BY NumCustomers DESC;

```

--B)This query returns the city where we have only one customer there

```

SELECT city, COUNT(MIN) as 'NumCustomers'
FROM Subscriber
GROUP BY city
HAVING COUNT(MIN) = '1'
ORDER BY NumCustomers DESC;

```

--C) This query returns the plan name and the number of customers who use that plan

```

SELECT PlanName, COUNT(MIN) as 'NumCustomers'
FROM Subscriber
GROUP BY PlanName
ORDER BY NumCustomers DESC;

```

--2)

--A) This query returns the type of devies our customers use and the numer of customers that use each

```

SELECT Type, COUNT(Subscriber.MIN) AS 'NumOfCustomers'
FROM Device join DirNums ON
    DEVICE.IMEI = DirNums.IMEI
    JOIN Subscriber ON subscriber.MDN = DirNums.MDN
GROUP BY Type;

```

--B)This query returns the first and last name of the customers who use apple devices(phone)

```

SELECT FirstName, LastName
FROM Device join DirNums ON
    DEVICE.IMEI = DirNums.IMEI
    JOIN Subscriber ON subscriber.MDN = DirNums.MDN
WHERE TYPE = 'APPLE';

```

--C)This query returns the last and first anme of our customers and the year release of their phones

```

SELECT FirstName, LastName, YearReleased
FROM Device join DirNums ON
    DEVICE.IMEI = DirNums.IMEI

```

```
        JOIN Subscriber ON subscriber.MDN = DirNums.MDN
WHERE YearReleased < 2018;
```

--3 This query returns the top 3 cities with high data usage customers who don't use unlimited plan.

```
SELECT TOP 3 City, SUM(DataInMB) AS 'DataUsage'
FROM Subscriber
JOIN LastMonthUsage ON Subscriber.MIN = LastMonthUsage.MIN
WHERE PlanName NOT IN(
    SELECT PlanName
    from MPlan
    WHERE Minutes = 'Unlimited'
    AND Data = 'Unlimited')
GROUP BY City
ORDER BY SUM(DataInMB) DESC;
```

--4

--A) This query returns the first and last name of our customers and the total bill that they paid

```
SELECT FirstName, LastName, Total
FROM Subscriber JOIN Bill
    ON Subscriber.MIN = Bill.MIN
ORDER BY Total DESC;
```

--B) This query returns the Plan name and the total bill

```
SELECT PlanName, SUM(Total) AS 'TotalBill'
FROM Subscriber JOIN Bill
    ON Subscriber.MIN = Bill.MIN
GROUP BY PlanName
ORDER BY TotalBill DESC;
```

--5

--A) This query returns the first three digits of the phone number along with the minutes used

```
SELECT LEFT(MDN,3) AS 'AreaCode', Minutes
FROM Subscriber JOIN LastMonthUsage ON
    Subscriber.MIN = LastMonthUsage.MIN
ORDER BY Minutes DESC;
```

--B) This query returns the cities having minutes usage less than 200 and minutes greater than 700 at the same time

```
SELECT City, MIN(Minutes) AS 'MinMinutes', MAX(Minutes) AS 'MaxMinutes'
FROM Subscriber JOIN LastMonthUsage ON
    Subscriber.MIN = LastMonthUsage.MIN
GROUP BY City
HAVING MIN(Minutes) < 200 AND MAX(Minutes) > 700;
```