```
USE el23wq_Excelsior;

/*
Project 1: Excelsior Mobile Report

-- The Report Questions (with Visualizations) --

*/
--1--
--A
SELECT CONCAT (FirstName, ' ', LastName) AS 'Customer full name', L.Minutes AS
'Minutes Usage', L.DataInMB AS 'Data Usage', L.Texts AS 'Text Usage', B.Total AS
'Total bill'
FROM Subscriber AS S, LastMonthUsage AS L, Bill AS B
WHERE S.MIN = L.MIN AND S.MIN = B.MIN
ORDER BY 'Customer full name';

--B--

SELECT S.City, AVG(L.Minutes) AS 'Average Minutes' , AVG(L.DataInMB) AS 'Average
Data usage in MB', AVG(L.Texts) AS 'Average Text', AVG(B.Total) AS 'Average Total
bills'
FROM Subscriber AS S, LastMonthUsage AS L, Bill AS B
WHERE S.MIN = L.MIN AND S.MIN = B.MIN
GROUP BY S.City;

-- C--

SELECT S.City, SUM(L.Minutes) AS 'Total Minutes', SUM(L.DataInMB) AS 'Total Data
usage in MB', SUM(L.Texts) As 'Total text', SUM(B.Total) AS 'Total Bills'
FROM Subscriber AS S, LastMonthUsage AS L, Bill AS B
WHERE S.MIN = L.MIN AND S.MIN = B.MIN
GROUP BY S.City;

--D--

SELECT S.PlanName, AVG(L.Minutes) AS 'Average Minutes' , AVG(L.DataInMB) AS
'Average Data uses in MB', AVG(L.Texts) AS 'Average Text', AVG(B.Total) AS 'Average
Total bills'
FROM Subscriber AS S, LastMonthUsage AS L, Bill AS B
WHERE S.MIN = L.MIN AND S.MIN = B.MIN
GROUP BY S.PlanName;

--E--

SELECT S.PlanName, SUM(L.Minutes) AS 'Total Minutes', SUM(L.DataInMB) AS 'Total
Data uses in MB', SUM(L.Texts) As 'Total text', SUM(B.Total) AS 'Total Bills'
FROM Subscriber AS S, LastMonthUsage AS L, Bill AS B
WHERE S.MIN = L.MIN AND S.MIN = B.MIN
GROUP BY S.PlanName;

--NON
--1--
--A
SELECT TOP 2 City, COUNT(MIN) AS 'amount of customers'
FROM Subscriber
GROUP BY City
ORDER BY COUNT(MIN) DESC;
```

```
--B
SELECT City, COUNT(MIN) AS 'amount of customers'
FROM Subscriber
GROUP BY City
ORDER BY COUNT(MIN) ASC;

--C
SELECT TOP 1 PlanName, COUNT(MIN) AS 'amount of Customers'
FROM Subscriber
GROUP BY PlanName
ORDER BY COUNT(MIN) ASC;




--2--
--A
SELECT Type, COUNT(Type) AS 'Phone Type'
FROM Device
GROUP BY Type;


--B
SELECT S.FirstName, S.LastName
FROM Subscriber as S INNER JOIN DirNums AS D ON S.MDN = D.MDN
                     INNER JOIN Device AS De ON De.IMEI = D.IMEI
GROUP BY FirstName, LastName, De.Type
HAVING De.Type = 'Apple';

--C

SELECT CONCAT(FirstName,' ',LastName) AS ' fullname' , D.YearReleased
FROM Subscriber AS S JOIN DirNums AS DI ON S.MDN = DI.MDN
                     JOIN Device AS D ON D.IMEI = DI.IMEI
WHERE YearReleased < 2018
ORDER BY D.YearReleased ASC;


--3--
--A
SELECT DISTINCT TOP 3 S.City,  SUM(L.DataInMB) AS 'Total Data Cities use'
FROM Subscriber AS S INNER JOIN LastMonthUsage AS L ON S.MIN = L.MIN
                     INNER JOIN MPlan AS M ON S.PlanName =  M.PlanName
WHERE M.Data NOT IN ('Unlimited')
GROUP BY S.City
ORDER BY SUM(L.DataInMB) DESC;

--B
SELECT TOP 1 S.City
FROM Subscriber AS S JOIN MPlan as  M ON S.PlanName = M.PlanName
WHERE Data NOT IN ('Unlimited')
GROUP BY S.City;




--4
--A--
SELECT Top 1 B.Total, CONCAT(S.FirstName,' ', S.LastName) AS 'Customer Full Name'
FROM Subscriber AS S JOIN Bill AS B ON S.MIN = B.MIN
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ORDER BY B.Tax DESC;



--B--
SELECT TOP 1 PlanName, SUM(B.Total) AS 'Total Bill Last month'
FROM Subscriber AS S JOIN Bill AS B ON S.MIN = B.MIN
GROUP BY S.PlanName
ORDER BY SUM(B.Total) DESC;

--5
--A--
SELECT TOP 1 LEFT(MDN, 3) AS 'Area Code', SUM(L.Minutes) AS 'Total Minutes'
FROM Subscriber AS S JOIN LastMonthUsage AS L ON S.MIN = L.MIN
GROUP BY LEFT(MDN,3)
ORDER BY SUM(L.Minutes) DESC;

--B--
SELECT DISTINCT(S.City)
FROM Subscriber AS S JOIN LastMonthUsage AS L
ON S.MIN = L.MIN AND S.City IN
            (SELECT S.City
            FROM Subscriber AS S JOIN LastMonthUsage AS L
            ON S.MIN = L.MIN
            GROUP BY S.City, L.Minutes
            HAVING L.Minutes > 700)
GROUP BY S.City, L.Minutes
HAVING L.Minutes < 200;
```