

```

/*
Project 1: Excelsior Mobile Report
Erick Re
*/

USE [22WQ_BUAN4210_Lloyd_ExcelsiorMobile]

-- 1 (With Visualizations)--
-- A
SELECT FirstName, LastName, Minutes, DataInMB, Texts, Total AS 'BillTotal'
FROM Subscriber AS S,
      LastMonthUsage AS MU,
      Bill AS B
WHERE S.MIN = MU.MIN
      AND MU.MIN = B.MIN
ORDER BY CONCAT(FirstName, LastName);

-- B
SELECT City,
      AVG(Minutes) AS 'Avg. Minutes',
      AVG(DataInMB) AS 'Avg. Data Usage',
      AVG(Texts) AS 'Avg. Texts',
      AVG(Total) AS 'Avg. Total Bill'
FROM Subscriber AS S,
      LastMonthUsage AS MU,
      Bill AS B
WHERE S.MIN = MU.MIN
      AND MU.MIN = B.MIN
GROUP BY City;

-- C
SELECT City,
      SUM(Minutes) AS 'Total Minutes',
      SUM(DataInMB) AS 'Total Data Usage',
      SUM(Texts) AS 'Total Texts',
      SUM(Total) AS 'Total Bill Amount'
FROM Subscriber AS S,
      LastMonthUsage AS MU,
      Bill AS B
WHERE S.MIN = MU.MIN
      AND MU.MIN = B.MIN
GROUP BY City;

-- D
SELECT PlanName,
      AVG(MU.Minutes) AS 'Avg. Minutes',
      AVG(DataInMB) AS 'Avg. Data Usage',
      AVG(Texts) AS 'Avg. Texts',
      AVG(Total) AS 'Avg. Total Bill'
FROM Subscriber AS S,
      LastMonthUsage AS MU,
      Bill AS B
WHERE S.MIN = MU.MIN
      AND MU.MIN = B.MIN
GROUP BY PlanName;

-- E
SELECT PlanName,

```

```

        SUM(MU.Minutes) AS 'Total Minutes',
        SUM(DataInMB) AS 'Total Data Usage',
        SUM(Texts) AS 'Total Texts',
        SUM(TOTAL) AS 'Total Bill Amount'
FROM Subscriber AS S,
     LastMonthUsage AS MU,
     Bill AS B
WHERE S.MIN = MU.MIN
     AND MU.MIN = B.MIN
GROUP BY PlanName;

```

```
-- 1 (Without Visualizations) --
```

```
-- A
SELECT TOP 2 City
FROM Subscriber
GROUP BY City
ORDER BY COUNT(MIN) DESC;
```

```
-- B
SELECT TOP 3 City
FROM Subscriber
GROUP BY City
ORDER BY COUNT(MIN);
```

```
-- C
SELECT TOP 1 PlanName
FROM Subscriber
GROUP BY PlanName
ORDER BY COUNT(PlanName);
```

```
-- 2 --
```

```
-- A
SELECT Type AS 'PhoneType', COUNT(Type) AS 'TotalUsers'
FROM Device
GROUP BY Type;
```

```
-- B
-- Answer from 2A used in this query as 'Apple Users'.
SELECT CONCAT(FirstName, ' ', LastName) AS 'Apple Users'
FROM Subscriber
WHERE MDN IN
    (SELECT MDN
     FROM DirNums
     WHERE IMEI IN
        (SELECT IMEI
         FROM Device
         WHERE Type = 'Apple')));
```

```
-- C
SELECT YearReleased, CONCAT(FirstName, ' ', LastName) as 'Customer'
FROM Subscriber as S,
     DirNums AS DN,
     DEVICE AS D
WHERE S.MDN = DN.MDN
     AND DN.IMEI = D.IMEI
GROUP BY YearReleased, FirstName, LastName
HAVING YearReleased < 2018;
```

```

-- 3 --
-- A
SELECT TOP 3 City AS 'City'
FROM Subscriber, LastMonthUsage
WHERE Subscriber.MIN = LastMonthUsage.MIN
GROUP BY City
ORDER BY SUM(DataInMB) DESC;

-- B
-- 'Unl' refers to unlimited data plans.
SELECT TOP 1 City AS 'Top City'
FROM Subscriber
      JOIN LastMonthUsage
      ON Subscriber.MIN = LastMonthUsage.MIN
WHERE PlanName NOT LIKE 'Unl%'
GROUP BY City
ORDER BY SUM(DataInMB) DESC;

-- 4 --
-- A
SELECT TOP 1 CONCAT(FirstName, ' ', LastName) AS 'Highest Billed Customer'
FROM Subscriber AS S,
      Bill AS B
WHERE S.MIN = B.MIN
GROUP BY FirstName, LastName, Total
ORDER BY Total DESC;

-- B
SELECT TOP 1 PlanName
FROM Subscriber AS S,
      BILL AS B
WHERE S.MIN = B.MIN
GROUP BY PlanName, Total
ORDER BY Total DESC;

-- 5 --
-- A
SELECT TOP 1 LEFT(S.MIN, 3) AS 'AreaCode', Minutes
FROM Subscriber AS S,
      LastMonthUsage AS MU
WHERE S.MIN = MU.MIN
GROUP BY S.MIN, Minutes
ORDER BY Minutes DESC;

-- B
-- Only returning the cities with minutes above 700
-- and below 200.
SELECT City
FROM Subscriber AS S
      JOIN LastMonthUsage AS MU
      ON S.MIN = MU.MIN
GROUP BY City
HAVING MAX(Minutes) > 700
      AND MIN(Minutes) < 200;

```

