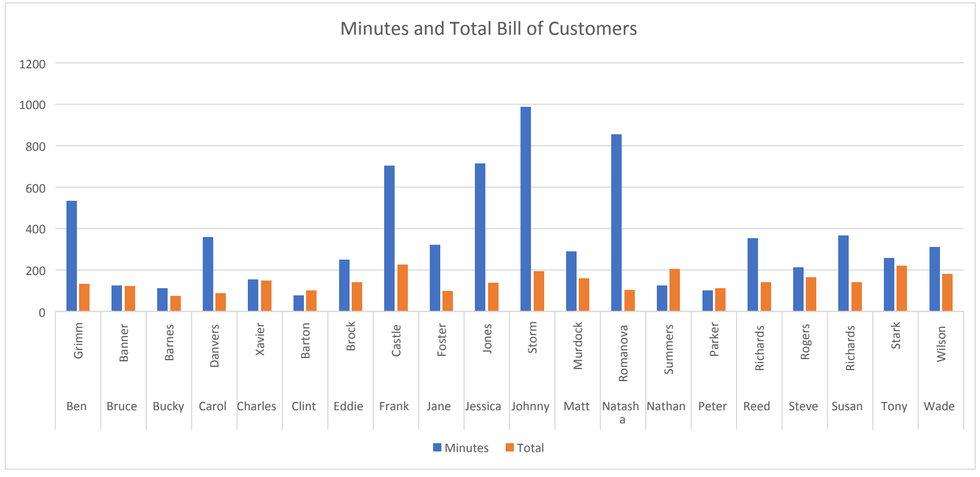
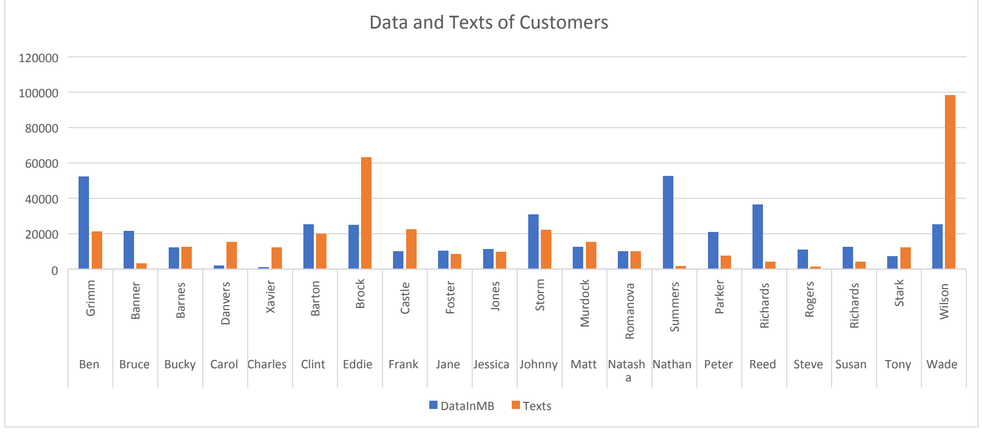
Phone Data of Customers

FirstName	LastName	Minutes	DataInMB	Texts	Total
Ben	Grimm	533	52339	21332	131.5
Bruce	Banner	125	21563	3252	121.5
Bucky	Barnes	112	12356	12452	74.71
Carol	Danvers	359	1912	15332	87
Charles	Xavier	155	1221	12335	149
Clint	Barton	78	25352	20159	101
Eddie	Brock	250	25003	63352	141.5
Frank	Castle	702	10235	22542	224.12
Jane	Foster	320	10256	8449	97.62
Jessica	Jones	715	11256	9663	139
Johnny	Storm	988	31022	22368	194.26
Matt	Murdock	288	12568	15236	159.41
Natasha	Romanova	855	10000	10121	104
Nathan	Summers	125	52669	1752	204
Peter	Parker	101	21052	7596	112
Reed	Richards	352	36588	4253	139.41
Steve	Rogers	212	10950	1533	164
Susan	Richards	365	12635	4256	139.41
Tony	Stark	257	7259	12369	219
Wade	Wilson	311	25332	98254	179



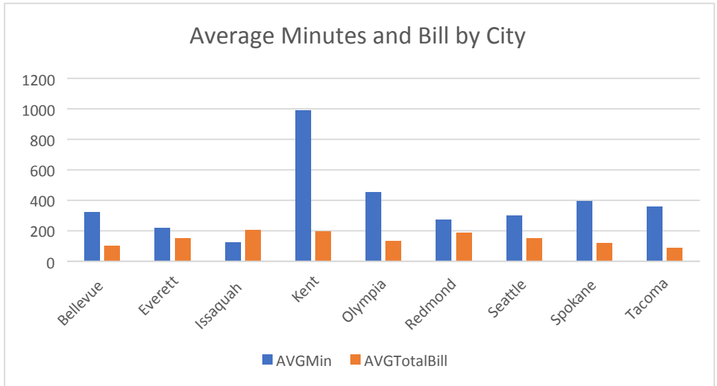
It appears that Johnny Storm uses the most minutes on his phone, while Clint Barton uses the least minutes on his phone. The graph also shows that Frank Castle's bill cost the most out of all the customers and Bucky Barnes cost the least.



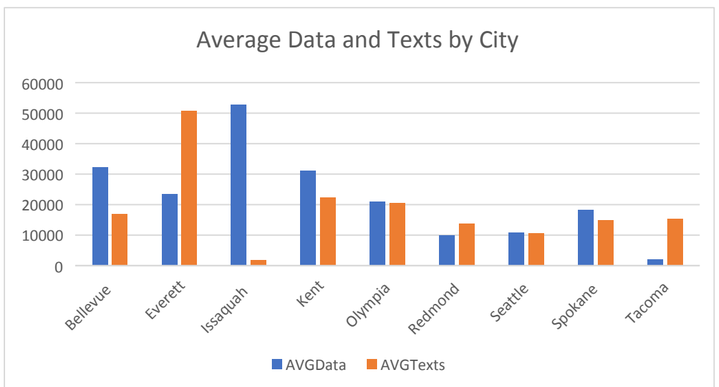
It appears that Charles Xavier has the least Data in MB and Nathan Summers has the most. The graph also shows that Steve Rogers texts the least while Wade Wilson texts the most.

Average Phone Data by City

City	AVGMin	AVGData	AVGTexts	AVGTotalBill
Bellevue	322	32347	16892	103.105
Everett	218	23447	50753	150.25
Issaquah	125	52669	1752	204
Kent	988	31022	22368	194.26
Olympia	455	21056	20495	131.08
Redmond	272	9913	13802	189.205
Seattle	298	10742	10491	149.348
Spokane	396	18304	14911	120
Tacoma	359	1912	15332	87



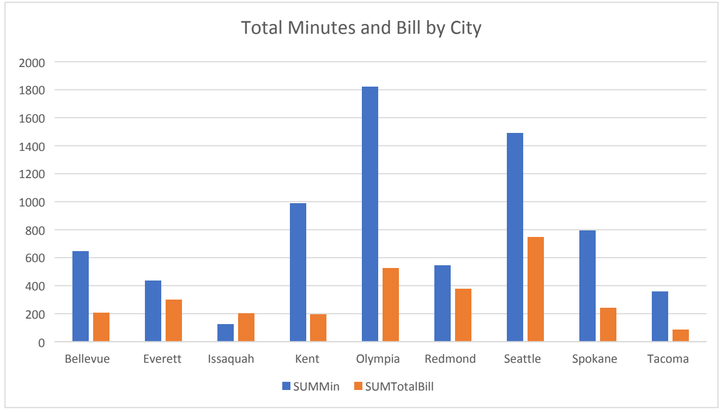
It appears that a lot of customers in Kent spend a lot of time on their phones compared to customers in Issaquah. However, the graph also shows that on average, Issaquah brings in the most amount of money and Tacoma brings in the least. We can possibly conclude that more marketing should be done in Tacoma to bring in more loyal customers that are willing to pay higher plans. We can also conclude that although Issaquah users spend the least amount of time on the phone, Issaquah has loyal customers willing to pay more.



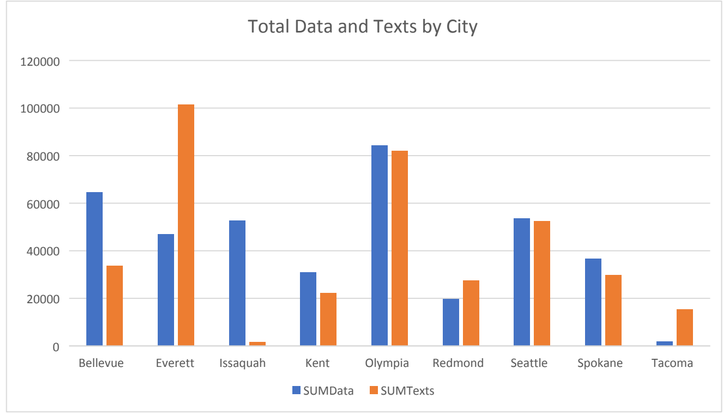
From the data in th graph, it is shown that Tacoma has the least data usage on average and Issaquah has the most. Also, the graph shows that users in Issaquah, on average, texts the least and Everett texts the most. We can conclude that although users in Issaquah don't use their data to text people, they must use it for something else, whether it be for games or streaming videos or going online. More research might need to be done to see how customers in Issaquah are using their data to see if a partnership can be made with the reasons why the data usage is so high, to increase data usage in cities like Tacoma as it would increase revenue as well when looking at both graphs.

Sum of Phone Data by City

City	SUMMin	SUMData	SUMTexts	SUMTotalBill
Bellevue	645	64695	33784	206.21
Everett	436	46895	101506	300.5
Issaquah	125	52669	1752	204
Kent	988	31022	22368	194.26
Olympia	1822	84226	81982	524.32
Redmond	545	19827	27605	378.41
Seattle	1490	53714	52455	746.74
Spokane	793	36608	29822	240
Tacoma	359	1912	15332	87



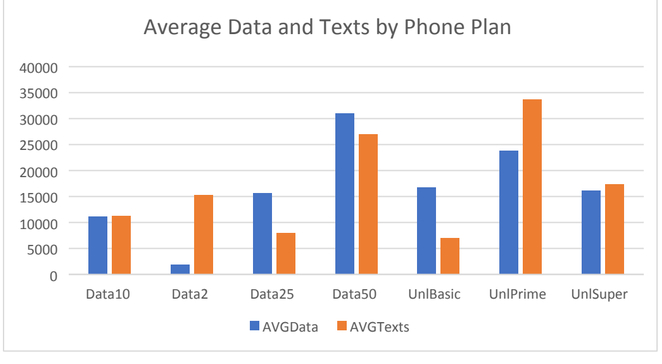
It appears that the city of Olympia spends the most time on their phone and the city of Issaquah spends the least time on their phone. The graph also shows that Seattle brings in the most revenue and Tacoma brings in the least amount of revenue. We can conclude that more marketing in Tacoma should be done to bring in more customers and more revenue.

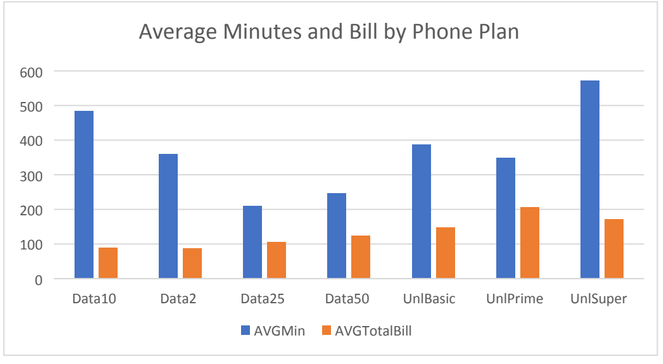


From the graph, it is shown that Olympia uses the most amount of data in MB, while Tacoma uses the least. The graph also shows that users in Everett texts the most while users in Tacoma texts the least. We might be able to conclude that our reach in Tacoma is very weak and more intentional marketing needs to be done to get the city of Tacoma to use their phone more. We might also conclude that using phones constantly in Tacoma isn't a social norm their compared to other cities.

Average of Phone Data by Phone Plan

PlanName	AVGMin	AVGData	AVGTexts	AVGTotalBill
Data10	483	11178	11286	89.355
Data2	359	1912	15332	87
Data25	210	15654	8022	104.81
Data50	246	31064	27023	123.875
UnlBasic	386	16799	6988	148.246
UnlPrime	348	23873	33729	206.53
UnlSuper	571	16121	17351	171.63



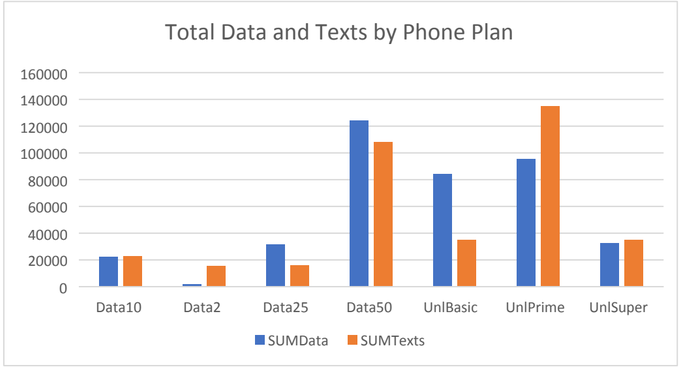


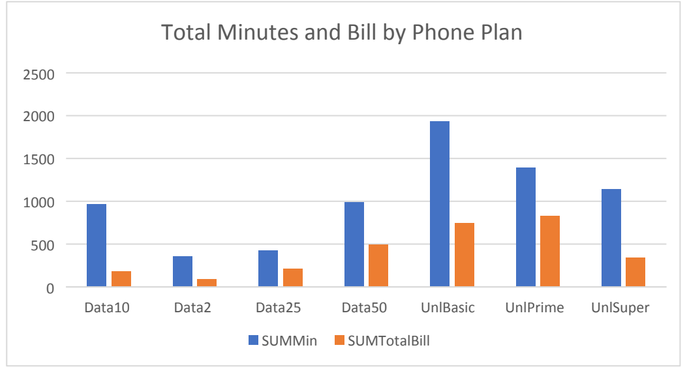
The graph shows that on average, users with the phone plan Data50 use the most data, while users with the phone plan Data2 use the least amount of data. The graph also shows that on average, users with the phone plan UnlPrime texts the most, while users with the phone plan UnlBasic texts the least. Since people with Data2 use the least amount of data, we can conclude the same at the top: we could possibly discontinue the plan to force users to switch to a different plan that can generate a higher revenue.

It appears that, on average, users with the phone plan UnlSuper spend the most amount of minutes on their phone, while users with the phone plan Data25 spend the least. The graph also shows that, on average, users' bill of the phone plan UnlPrime cost the most, while users' bill of the phone plan Data2 cost the least. We can conclude that since Data2 is bringing in the least amount of revenue, we could possibly discontinue the plan to force users to switch to a different plan that can generate a higher revenue.

Sum of Phone Data by Phone Plan

PlanName	SUMMin	SUMData	SUMTexts	SUMTotalBill
Data10	967	22356	22573	178.71
Data2	359	1912	15332	87
Data25	421	31308	16045	209.62
Data50	986	124257	108095	495.5
UnlBasic	1932	83997	34941	741.23
UnlPrime	1395	95495	134917	826.12
UnlSuper	1143	32243	34703	343.26





The graph depicts that users with the phone plan Data2 use the least amount of data, while users with the phone plan Data50 use the most data. It also depicts that users with the phone plan UnlPrime texts the most, while users with the phone plan Data2 texts the least. We can conclude that users of Data2 do not go on their phones that often.

It appears that from the graph, the users with the phone plan of UnlBasic spend the most total time on their phone while users with the phone plan of Data2 spend the least total time on the phone. The graph also shows that UnlPrime brings in the most revenue, while Data2 brings in the least. We can conclude that the phone plan Data2 is for users that don't go on their phones too often and can be marketed towards the demographic such as grandparents that want to connect with their grandchildren to target their marketing in order to increase revenues.

A

City
Seattle
Olympia

Analyzing which two cities we have our most customers in, we can see that our reach in the cities of Seattle and Olympia have been successful as we have the most customers there. We can assume that our marketing efforts have been very successful there.

B

City
Kent
Issaquah
Tacoma

Analyzing which three cities we have the least customers in, we can see that our reach in the cities of Kent, Issaquah, and Tacoma haven't been as successful as we wanted it to be. With our new decision to focus our efforts on marketing with cities that have the least customers but more than one customer, we should increase our marketing in these cities.

C

PlanName
Data2

Analyzing which plan we should market based on the customers, we can see that Data2 is the plan should focus on marketing. It is in our best interest to focus on marketing this plan because aligns with our new marketing strategy the best. Data2 has the least amount of customers, while still having at least one customer. Data2 is also in one of the cities we should focus our marketing in since it is in Tacoma, which is one of the cities in part (b).

A

Type	Number of Users
Android	14
Apple	6

Analyzing which type of phone our customers use the most, we can see that most of our customers use Androids, compared to Apple. About 70% of our customers use Android devices.

B

FirstName	LastName
Reed	Richards
Steve	Rogers
Clint	Barton
Jane	Foster
Bucky	Barnes
Nathan	Summers

After finding out that most of our customers use Androids, we want to send promotions to our customers' friends and family that use Apple, those being: Reed Richards, Steve Rogers, Clint Barton, Jane Foster, Bucky Barnes, and Nathan Summers. We would possibly want to do this to even out the percentage of Android and Apple customers, as well as to convince their friends and family to become new customers through brand credibility and loyalty.

C

FirstName	LastName	YearReleased
Ben	Grimm	2014
Jane	Foster	2017
Bruce	Banner	2016
Matt	Murdock	2017
Natasha	Romanova	2015
Bucky	Barnes	2017
Jessica	Jones	2017
Wade	Wilson	2017
Nathan	Summers	2017

Analyzing which customers have phones released before 2018, we can see that Ben Grimm, Jane Foster, Bruce Banner, Matt Murdock, Natasha Romanova, Bucky Barnes, Jessica Jones, Wade Wilson, and Nathan Summers all have phones made before 2018. It is in our best interest to send these people notifications and possibly even a phone upgrade plan to retain loyal customers as well as to keep them up with modern technology. The notifications and phone upgrade plan could push them to purchase something, increasing revenue for the company.

3

a.

City	Data Usage in City
Olympia	84226
Bellevue	64695
Seattle	53714

It appears that the top 3 cities with the most data usage is Olympia, Bellevue, and Seattle. We can assume that the marketing of the company has been successful in these areas and can research why the data usage is so high, to possibly increase data usage in other cities. This table will be used to solve for the final solution.

b.

City
Everett
Issaquah
Kent
Olympia
Redmond
Seattle
Spokane

It appears that these cities have customers that have unlimited data with their phone plans. Knowing this, we can use this information to see the cities without customers that have unlimited data. This table will be used to solve for the final solution.

c.

City
Bellevue
Tacoma

With the data above, it appears that Bellevue and Tacoma that have no customers that have the unlimited data plan. Knowing this, we can use this information to see which city has the most data usage with no customers having the unlimited data plan. This table will be used to solve for the final solution.

d.

City
Bellevue

Using chart (i) and (iii), we can conclude that Bellevue is the city with the most data usage without customers having the unlimited data plan. Analyzing the conclusion, we can possibly infer that residents in Bellevue have a lot of money that they are willing to spend money on plans that don't have unlimited data, while using a lot of data. A new marketing campaign can be launched in Bellevue to attract customers and should offer plans that aren't unlimited data plans.

A

FirstName	LastName
Frank	Castle

Analyzing which customer had the most expensive bill, we can see that Frank Castle was the greatest revenue generationg customer. It is in our best interest to retain this customer for the future and to persuade him to stay with us as a customer through possible promotions.

B

PlanName
UnlPrime

Analyzing which phone plan brought in the most revenue, we can see that it was UnlPrime. It is in our best inretest to heavily market this plan to our customers to hopefully bring in more revenue for the company.

A

Area Code	Total Minutes
360	1822

Analyzing which area code uses the most minutes, we can see that it is the area code 360. We could possibly conclude that in the area code 360, being on their phone is important for work or a social norm and we can increase our marketing in that area as people are interested in using phones there.

B

a.

City
Bellevue

Analyzing the city with customers who use the least data, with the limitations of only including customers using less than 200 minutes and more than 700 minutes, we can see that the city of Bellevue spends the least amount of time on their phone. With these limitations, we can assume that by only using the extreme values for minutes used on the phone, our results might vary if we include all numbers.

b.

City
Kent

Analyzing the city with customers who use the most data, with the limitations of only including customers using less than 200 minutes and more than 700 minutes, we can see that the city of Kent spends the most amount of time on their phone. With these limitations, we can assume that by only using the extreme values for minutes used on the phone, our results might vary if we include all numbers.