Citi Bike is the nation's largest bike share program with over 12,000 bikes across 750 stations in New York. The program boasts of many benefits to users including affordabiity and convenience. The charts referenced in this summary were compiled from a review of the Citi Bike logs from October 2018 to September 2019. Information such as trip length, station locations and basic demographic information on users was colllected and analyzed. Twelve separate csv files were merged through a python notebook and exported as an excel file which was then transferred into a Tableau notebook. Below is a review of the findings for each of the charts.

In the chart labelled Total Records, we can see that over the duration of a year a total of nearly 400K trips were logged at Citi Bike's numerous locations. This amounts to nearly 1,000 bike trips per year. According to the Users Versus Subscriber Chart, an overwhelming number of trips have been by regular subscribers over other customers. This suggests that this program may benefit from reaching out to a wider audience in order to increase use by tourists or other non-residents. Clearly the program has been successful over time with New York residents, however, the company may increase their profitability by engaging or targeting non-residents. Both customers and subscribers tend to use the service more frequently during summer and fall months, while use seems to decline during winter months. One possibility is that customers would prefer other options during colder months.

The Users by Gender chart indicates that Citi Bike users tend to be male. However, with the affordability and convenience of the Citi Bike service, it may be beneficial for the service to attempt to appeal to potential female customers. While the bikes do have baskets in front, the necessity of carrying bags or purses for work may be more of a deterrent for women. Additionally the bike option may also be more of an invonvenience if wearing dresses, skirts or heels. These are considerations that may be taken into account in order for Citi Bike to appeal to a larger audience.

The popularity of morning hours of 6 and 8 am as well as the evening hours of 5pm and 7pm for both winter and summer months suggests that the majority of Citi Bike users are using the service to commute to and from work. While use does decline during winter use, we see significantly less use during late morning early afternoon times (10am to 2pm) which may indicate that the delcine of use during winter months is due to a decrease in recreational users.

The trip duration by birth year suggests that longer trips are often taken by older users, which may be due to older users being retired and much more likely to use the service for recreational purposes. There is an upsurge of use by users born around the late 90s and early 2000s, however, suggesting that the service appeals to milennials but may have a gap in usage by Gen Xers. This makes sense given the milennial preference for eco friendly and community based options an Generation X's preference for self-reliance and individualism. One exception is individuals born in 1969 who stand out as having the highest sum of overall trip duration out of all the birth years listed. Also, individuals born in 1905 appear to be an outliar with a much higher than average trip duration.

The Average and Total Trip Duration by User Type chart lists the average and overall trip duration by Customers versus Subscribers. This chart tells us that while subscribers are taking much shorter trips, their overall trip duration is slightly higher than the customers. However, cusomers may have a higher average trip duration, they are overall not logging in as many hours on the bike. This may suggest that pricing options for subscribers versus customers may be beneficial for the company. For example, a more pay by use policy for the subscribers would be more profitable while a pay by distance type plan would be more profitable for customers.

The Comparison of Bike Use Per Station compares overall trip duration with average trip duration and number of bikes per station. This is to determine if bikes at certain stations may have more wear and tear than other stations. Grover Street Path seems to have the most bikes out of all the stations as well as the highest sum of overall trip duration. However, the low trip duration average suggests more users taking shorter trips at that station. This may indicate that bikes at this station may need to cater more towards those using bikes for more functional purposes like commuting to work or running short errands. Also, with shorter trips, it may be necessary to have more bikes on hand. In contrast, other stations like Liberty Light Rail, tends to have a higher average trip duration with a significantly less amount of bikes. They may need fewer bikes due to lower amounts of customers that take longer trips. THe bikes at Liberty Light Rail may be used for longer trips or more recreational trips. With a lower number of bikes, this station may need to invest more in the maintanence of their equipment.

Overall Grove St PATH, Hamilton Park and Sip Ave seem to be popular locations for both starting and ending trips. This may be due to those locations being near popular tourist attractions, workplaces or shopping areas. The least used start and end stations appear to be in more specific locations that are not frequented as often.

The bikes per station map refelcts the trend of more bikes being used in more populated crowded areas where people will need to go from point a to point b in a short amount of time. Locations near the harbor are also popular. More out of the way stations like JCBS Depot and Union street show less bikes overall.

While Jackson Square and Union street may be a less likely starting point for trips, their average trip duration is much higher than more popular locations like Grove St PATH according to the Duration of Trips by Station map. This indicates that where a station is in relation to other stations also will influence length of trips and popularity of use.