

# AIR TRAVEL TABLEAU PROJECT

NAME: MRITUNJAY DUBEY

SUBGROUP: 3CO2

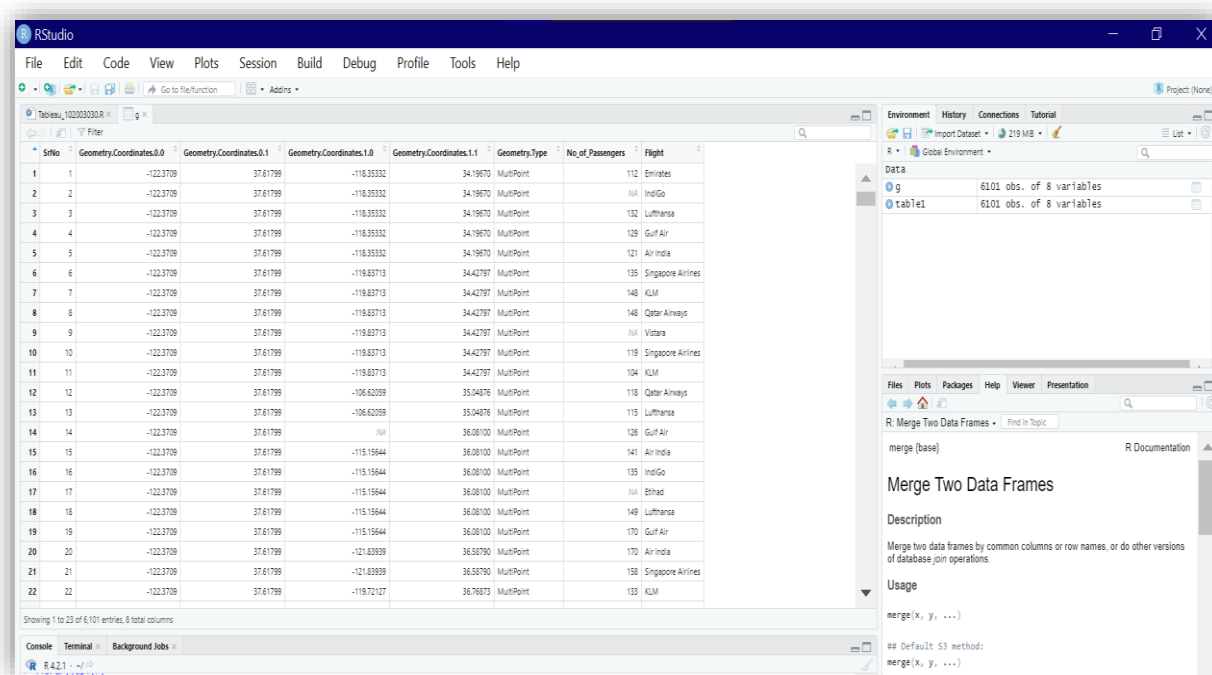
ROLL NO: 102003030

## Installation and Using Packages

```
1 #installation of readxl package to read excel files
2 install.packages("readxl")
3 library("readxl")
4 library(dplyr)
5
```

## Datasets:

Table 1



SNo	Geometry.Coordinates.0.0	Geometry.Coordinates.0.1	Geometry.Coordinates.1.0	Geometry.Coordinates.1.1	Geometry.Type	No. of Passengers	Flight
1	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	112	Emirates
2	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	111	IndiGo
3	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	132	Lufthansa
4	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	129	Gulf Air
5	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	121	Air India
6	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	135	Singapore Airlines
7	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	148	KLM
8	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	140	Qatar Airways
9	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	115	Vistara
10	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	119	Singapore Airlines
11	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	104	KLM
12	-122.3709	37.61799	-106.62039	35.04576	MultiPoint	110	Qatar Airways
13	-122.3709	37.61799	-106.62039	35.04576	MultiPoint	115	Lufthansa
14	-122.3709	37.61799	36.08100	36.08100	MultiPoint	126	Air India
15	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	141	Gulf Air
16	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	135	IndiGo
17	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	111	Ethiopia
18	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	149	Lufthansa
19	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	170	Gulf Air
20	-122.3709	37.61799	-121.63939	36.36790	MultiPoint	170	Air India
21	-122.3709	37.61799	-121.63939	36.36790	MultiPoint	130	Singapore Airlines
22	-122.3709	37.61799	-119.72107	36.76873	MultiPoint	133	KLM

Table 2

SNo	Properties.Edit.Cessation	Properties.Edit.Inception	Properties.Flyto.Actual.Timestamp	Properties.Flyto.Airline	Properties.Flyto.Base.Airline	Properties.Flyto.Base.Flight.Number	Properties.Flyto.Estimated.Time
1	43892	UUAU	1503174320	AC	UA	5628	
2	43892	UUAU	1503201580	AC	UA	5233	
3	43892	UUAU	1503195520	AC	UA	NA	
4	43892	UUAU	1503163840	AC	UA	NA	
5	43892	UA	1503187540	AC	UA	5717	
6	43892	UUAU	1503174160	AC	B6	5325	
7	43892	UUAU	1503193640	EX	B6	5239	
8	43892	UUAU	1503208640	EX	B6	5647	
9	43892	UUAU	1503190660	EX	B6	5251	
10	43892	UUAU	1503169600	EX	B6	5579	
11	43892	UUAU	1503216760	UA	B6	5878	
12	43892	UUAU	1503177820	AC	B6	5448	
13	43892	UUAU	1503208180	AC	B6	5648	
14	43892	UA	1503205440	AC	UA	681	
15	43893	UUAU	1503174280	AC	UA	358	
16	43893	UUAU	1503197300	AC	UA	2337	
17	43893	UUAU	1503215620	AC	UA	2072	
18	43893	UUAU	1503166330	UA	UA	2068	
19	43893	UUAU	1503217420	AC	UA	1152	
20	43893	UUAU	1503216700	AC	UA	5850	
21	43893	UUAU	1503174160	AC	UA	5847	

SNo	Properties.Edit.Cessation	Properties.Edit.Inception	Properties.Flyto.Actual.Timestamp	Properties.Flyto.Airline	Properties.Flyto.Base.Airline	Properties.Flyto.Base.Flight.Number	Properties.Flyto.Estimated.Timestamp	Properties.Flyto.Event	Properties.Flyto.Flight.Number	Properties.Flyto.Gate
1	43892	UUAU	1503174320	AC	UA	5628	1503174320	D	AC4113	F5
2	43892	UUAU	1503201580	AC	UA	5233	1503201580	D	AC4396	FTSK
3	43892	UUAU	1503195520	AC	UA	NA	1503195520	D	AC3514	NA
4	43892	UUAU	1503163840	AC	UA	NA	1503163840	D	AC4024	FTSL
5	43892	UA	1503187540	AC	UA	5717	1503187540	D	UA	FTSL
6	43892	UUAU	1503174160	AC	B6	5325	1503174160	D	AC3952	F6
7	43892	UUAU	1503193640	EX	B6	5239	1503193640	D	AC4302	F6
8	43892	UUAU	1503208640	EX	B6	5647	1503208640	D	AC4362	F9
9	43892	UUAU	1503190660	EX	B6	5251	1503190660	D	AC4484	FTSK
10	43892	UUAU	1503169600	EX	B6	5579	1503169600	D	AC4028	FTSL
11	43892	UUAU	1503216760	UA	B6	5878	1503216760	D	AC4366	NA
12	43892	UUAU	1503177820	AC	B6	5448	1503177820	D	AC4030	F3A
13	43892	UUAU	1503208180	AC	B6	5648	1503208180	D	AC4032	E3
14	43892	UA	1503205440	AC	UA	681	1503205440	D	AC3303	F1
15	43893	UUAU	1503174280	AC	UA	358	1503174280	D	AC3340	F3
16	43893	UUAU	1503197300	AC	UA	2337	1503197300	D	AC4475	F3A
17	43893	UUAU	1503215620	AC	UA	2072	1503215620	D	AC3942	F16
18	43893	UUAU	1503166330	UA	UA	2068	1503166330	D	UA	FT3
19	43893	UUAU	1503217420	AC	UA	1152	1503217420	D	AC3984	F20
20	43893	UUAU	1503216700	AC	UA	5850	1503216700	D	AC4368	FTSL
21	43893	UUAU	1503174160	AC	UA	5847	1503174160	D	AC4102	FTSK
22	43893	UUAU	1503215440	AC	UA	3452	1503215440	D	AC4338	F6
23	43893	UA	1503167440	AC	UA	5299	1503167440	D	AC3849	F7
24	43894	UUAU	1503204280	AC	UA	5373	1503204280	D	AC4334	F8
25	43894	UUAU	1503214120	AC	UA	5184	1503214120	D	AC3028	F10
26	43894	UUAU	1503208380	AC	UA	2031	1503208380	D	AC3818	F3
27	43894	UUAU	1503204460	AC	UA	5493	1503204460	D	AC4067	E2
28	43894	UUAU	1503163480	AC	UA	3000	1503163480	D	AC4036	E1
29	43894	UUAU	1503194020	AC	UA	5473	1503194020	D	AC4032	F5
30	43894	UUAU	1503215800	AC	UA	5038	1503215800	D	AC4302	F5
31	43894	UUAU	1503219420	AC	UA	1687	1503219420	D	AC4168	F5
32	43894	UUAU	1503204460	AC	UA	5524	1503204460	D	AC4540	F6
33	43894	UUAU	1503174400	AC	UA	2719	1503174400	D	AC4488	F14
34	43894	UUAU	1503178020	AC	UA	2457	1503178020	D	AC3766	F14
35	43894	UUAU	1503207380	AC	DL	7842	1503207380	D	AC3677	F16
36	43894	UUAU	1503162080	AC	DL	808	1503162080	UA	AC3384	F13
37	43894	UUAU	1503162220	AC	DL	5039	1503162220	UA	AC4762	F9
38	43894	UUAU	1503180440	AF	DL	5108	1503180440	UA	AC3996	F8
39	43894	UUAU	1503193660	AF	DL	3440	1503193660	UA	AC4385	F17
40	43894	UUAU	1503166360	AC	DL	639	1503166360	UA	AC3804	F17
41	43894	UUAU	1503184420	AF	DL	5489	1503184420	UA	AC4053	FTSK
42	43894	UUAU	1503178840	AC	DL	5328	1503178840	UA	AC4479	FTSK
43	43894	UUAU	1503174220	AC	DL	5491	1503174220	UA	AC4021	FTSK
44	43894	UUAU	1503181960	AF	UA	5855	1503181960	D	AC4360	FTSL
45	43894	UUAU	1503207940	LH	UA	5120	1503207940	D	AC4381	FTSL
46	43894	UUAU	1503207780	LH	UA	5214	1503207780	D	AC3897	FTSM

Table 3

Serial	Date	Route
1	2020-03-02	SFO-BUR
2	2020-03-02	SFO-BUR
3	2020-03-02	SFO-BUR
4	2020-03-02	SFO-BUR
5	2020-03-02	SFO-BUR
6	2020-03-02	SFO-SBA
7	2020-03-02	SFO-SBA
8	2020-03-02	SFO-SBA
9	2020-03-02	SFO-SBA
10	2020-03-02	SFO-SBA
11	2020-03-02	SFO-SBA
12	2020-03-02	SFO-ABQ
13	2020-03-02	SFO-ABQ
14	2020-03-02	SFO-LAS
15	2020-03-03	SFO-LAS
16	2020-03-03	SFO-LAS
17	2020-03-03	SFO-LAS
18	2020-03-03	SFO-LAS
19	2020-03-03	SFO-LAS
20	2020-03-03	SFO-MRY
21	2020-03-03	SFO-MRY
22	2020-03-03	SFO-MRY

## Data Pre-Processing:

```
#For Table 1
table1<- read_excel("C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\Table1.xlsx")
g<-data.frame(table1) #storing data into g as data frame
View(g)

#Replacing NA values with Mean
g$Geometry.Coordinates.1.0[is.na(g$Geometry.Coordinates.1.0)]<-mean(g$Geometry.Coordinates.1.0,na.rm=TRUE)

g_flight<- group_by(g,Flight)

df_mean<-summarise(g_flight,passengers=mean(No_of_Passengers, na.rm = TRUE))

for(x in df_mean$Flight)
{
  a<-is.na(g$No_of_Passengers)
  b<-g$Flight==x
  g$No_of_Passengers[a&b]=floor(df_mean$passengers[df_mean$Flight==x])
}
View(g)

#For Properties Table
table2<- read_excel("C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\Table2.xlsx")
p<-data.frame(table2) #storing data into p as data frame
View(p) #Before preprocessing
#Preprocessing of properties table-->

#Replacing NA values with Mean
t<-mean(p$Properties.Flysfo.Base.Flight.Number,na.rm=TRUE)
p$Properties.Flysfo.Base.Flight.Number[is.na(p$Properties.Flysfo.Base.Flight.Number)]<-trunc(t)
```

```

#Declaring function to calculate Mode
Mode<-function(x){
  ux<-na.omit(unique(x))
  tab<-tabulate(match(x,ux)); ux[tab==max(tab)]
}

#Replacing NA values with Mode
p$Properties.Edtf.Inception[is.na(p$Properties.Edtf.Inception)]<-Mode(p$Properties.Edtf.Inception)
p$Properties.Flysfo.Airline[is.na(p$Properties.Flysfo.Airline)]<-Mode(p$Properties.Flysfo.Airline)
p$Properties.Flysfo.Base.Airline[is.na(p$Properties.Flysfo.Base.Airline)]<-Mode(p$Properties.Flysfo.
p$Properties.Flysfo.Event[is.na(p$Properties.Flysfo.Event)]<-Mode(p$Properties.Flysfo.Event)
p$Properties.Flysfo.Flight.Number[is.na(p$Properties.Flysfo.Flight.Number)]<-Mode(p$Properties.Flysfo.
p$Properties.Flysfo.Gate[is.na(p$Properties.Flysfo.Gate)]<-Mode(p$Properties.Flysfo.Gate)

View(p) #After preprocessing

#For Route Table
table3<- read_excel("C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\Table3.xlsx")
r<-data.frame(table3) #storing data into r as data frame
View(r)

#Splitting the Route column into two as "From" and "To" using stringr
library(stringr)
s<-str_split_fixed(r$Route, "-", 2)

```

```

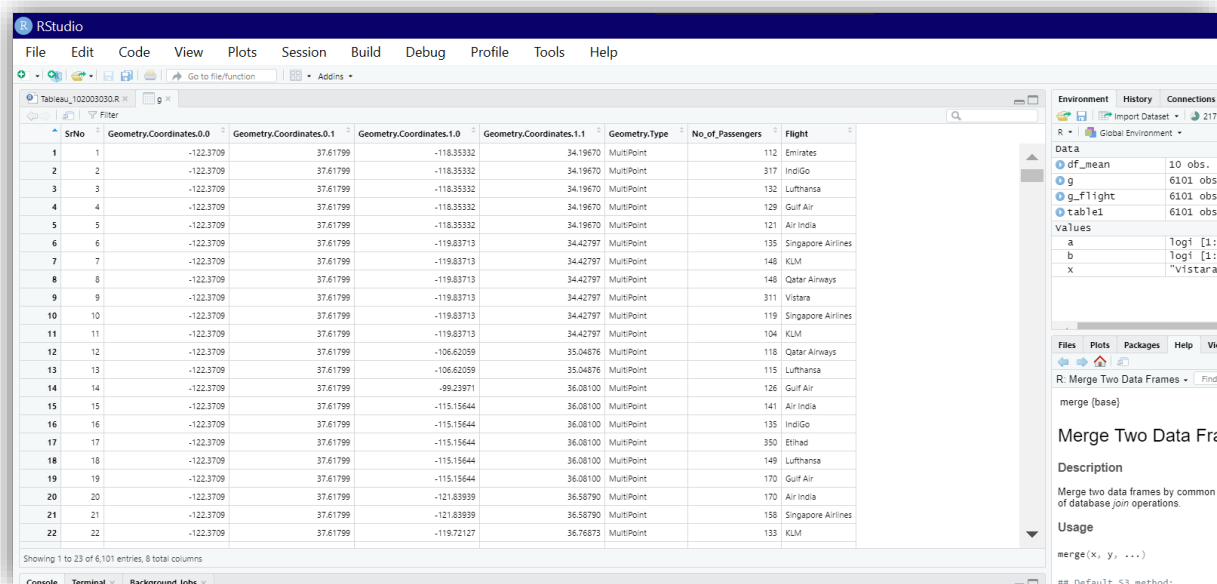
#For Route Table
table3<- read_excel("C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\Table3.xlsx")
r<-data.frame(table3) #storing data into r as data frame
View(r)

#Splitting the Route column into two as "From" and "To" using stringr
library(stringr)
s<-str_split_fixed(r$Route, "-", 2)
colnames(s)=c("From", "To")
d<-cbind.data.frame(r,s)
View(d)

```

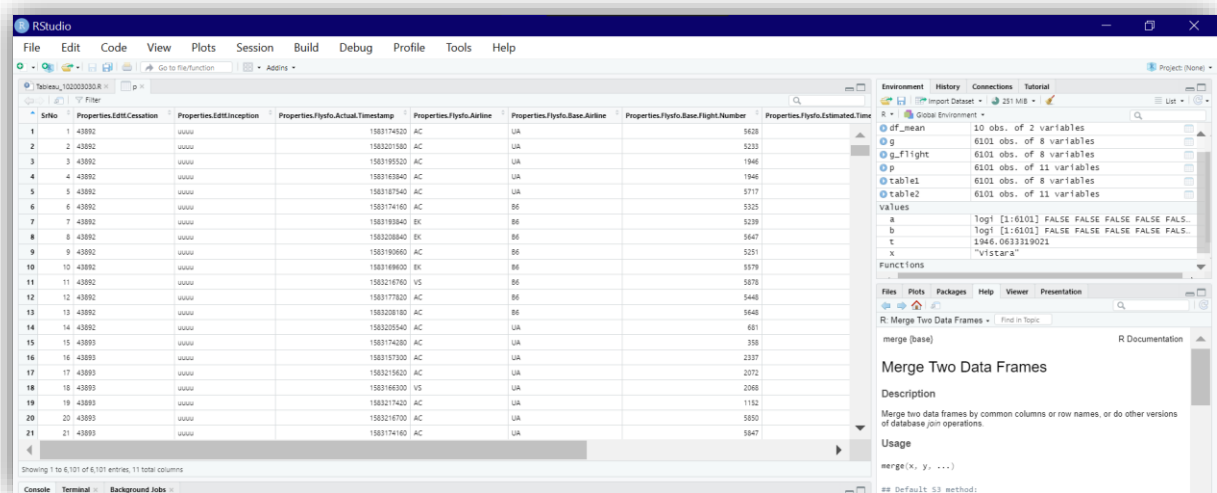
# Tables After Pre-Processing:

Table 1



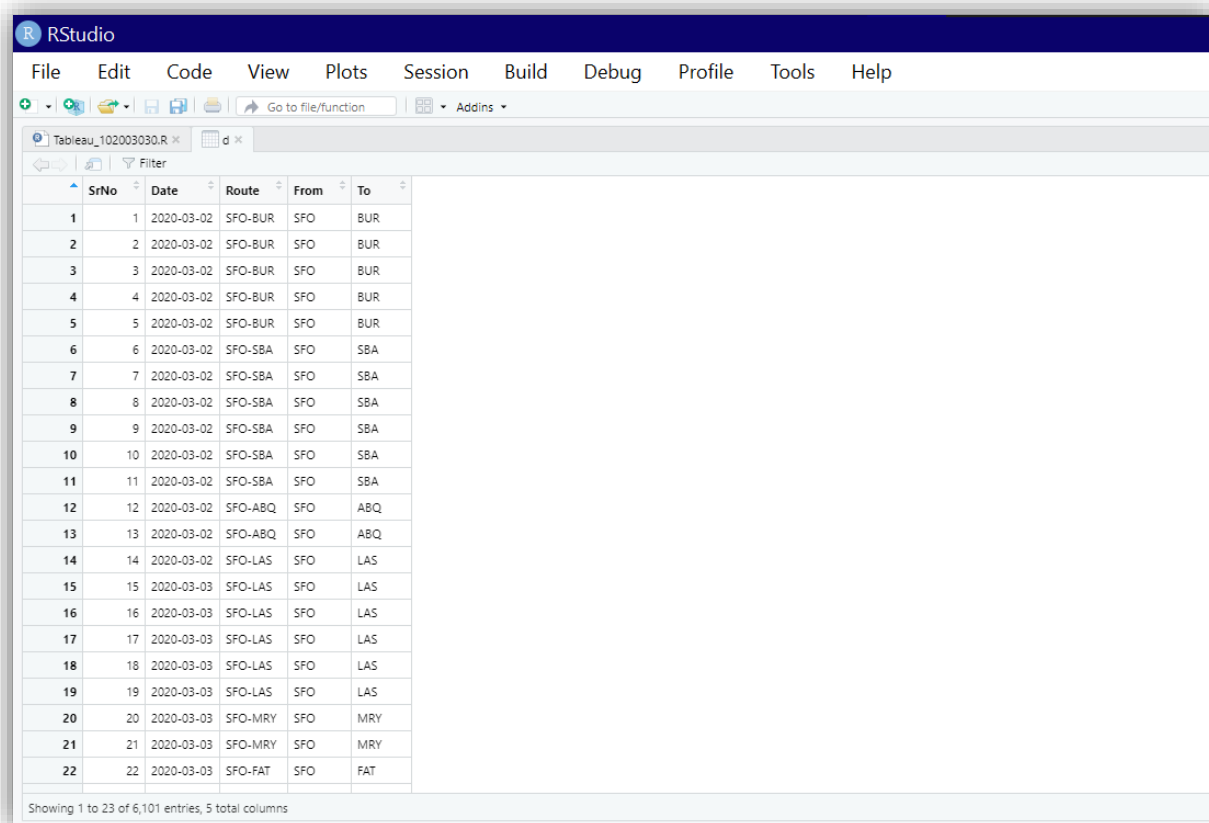
SrNo	Geometry.Coordinates.0.0	Geometry.Coordinates.0.1	Geometry.Coordinates.1.0	Geometry.Coordinates.1.1	Geometry.Type	No_of_Passengers	Flight
1	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	112	Emirates
2	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	317	IndiGo
3	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	132	Lufthansa
4	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	129	Gulf Air
5	-122.3709	37.61799	-118.35332	34.19670	MultiPoint	121	Air India
6	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	135	Singapore Airlines
7	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	148	KLM
8	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	148	Qatar Airways
9	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	311	Vistara
10	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	119	Singapore Airlines
11	-122.3709	37.61799	-119.83713	34.42797	MultiPoint	104	KLM
12	-122.3709	37.61799	-106.62059	35.04876	MultiPoint	118	Qatar Airways
13	-122.3709	37.61799	-106.62059	35.04876	MultiPoint	115	Lufthansa
14	-122.3709	37.61799	-89.23971	36.08100	MultiPoint	126	Gulf Air
15	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	141	Air India
16	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	135	IndiGo
17	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	350	Ethad
18	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	149	Lufthansa
19	-122.3709	37.61799	-115.15644	36.08100	MultiPoint	170	Gulf Air
20	-122.3709	37.61799	-121.83939	36.58790	MultiPoint	170	Air India
21	-122.3709	37.61799	-121.83939	36.58790	MultiPoint	158	Singapore Airlines
22	-122.3709	37.61799	-119.72127	36.76873	MultiPoint	133	KLM

Table 2



SrNo	Properties.Edit.Creation	Properties.Edit.Cancellation	Properties.Flyto.Actual.Timestamp	Properties.Flyto.Airline	Properties.Flyto.Base.Airline	Properties.Flyto.Base.Flight.Number	Properties.Flyto.Estimated.Time
1	43892	UUUU	1583174520	AC	UA	5628	
2	43892	UUUU	1583201580	AC	UA	5233	
3	43892	UUUU	1583195520	AC	UA	1946	
4	43892	UUUU	1583163840	AC	UA	1946	
5	43892	UUUU	1583187540	AC	UA	5717	
6	43892	UUUU	1583174160	AC	BE	5325	
7	43892	UUUU	1583193840	EK	BE	5239	
8	43892	UUUU	1583208840	EK	BE	5647	
9	43892	UUUU	1583190860	AC	BE	5251	
10	43892	UUUU	1583198400	EK	BE	5579	
11	43892	UUUU	1583216760	VS	BE	5879	
12	43892	UUUU	1583177820	AC	BE	5648	
13	43892	UUUU	1583209180	AC	BE	5648	
14	43892	UUUU	1583205540	AC	UA	681	
15	43892	UUUU	1583174280	AC	UA	358	
16	43892	UUUU	1583197900	AC	UA	2337	
17	43892	UUUU	1583215620	AC	UA	2072	
18	43892	UUUU	1583166320	VS	UA	2068	
19	43892	UUUU	1583217420	AC	UA	1152	
20	43892	UUUU	1583216700	AC	UA	5850	
21	43892	UUUU	1583174160	AC	UA	5847	

Table 3



SrNo	Date	Route	From	To
1	2020-03-02	SFO-BUR	SFO	BUR
2	2020-03-02	SFO-BUR	SFO	BUR
3	2020-03-02	SFO-BUR	SFO	BUR
4	2020-03-02	SFO-BUR	SFO	BUR
5	2020-03-02	SFO-BUR	SFO	BUR
6	2020-03-02	SFO-SBA	SFO	SBA
7	2020-03-02	SFO-SBA	SFO	SBA
8	2020-03-02	SFO-SBA	SFO	SBA
9	2020-03-02	SFO-SBA	SFO	SBA
10	2020-03-02	SFO-SBA	SFO	SBA
11	2020-03-02	SFO-SBA	SFO	SBA
12	2020-03-02	SFO-ABQ	SFO	ABQ
13	2020-03-02	SFO-ABQ	SFO	ABQ
14	2020-03-02	SFO-LAS	SFO	LAS
15	2020-03-03	SFO-LAS	SFO	LAS
16	2020-03-03	SFO-LAS	SFO	LAS
17	2020-03-03	SFO-LAS	SFO	LAS
18	2020-03-03	SFO-LAS	SFO	LAS
19	2020-03-03	SFO-LAS	SFO	LAS
20	2020-03-03	SFO-MRY	SFO	MRY
21	2020-03-03	SFO-MRY	SFO	MRY
22	2020-03-03	SFO-FAT	SFO	FAT

Showing 1 to 23 of 6,101 entries; 5 total columns

## Merging All Three Tables and Putting in Excel:

```
#Merging of Tables
f<-merge(g,p,by="SrNo")
air_travel<-merge(f,d,by="SrNo")
View(air_travel)

#Formatting Date Column
air_travel$Date<-format(as.POSIXct(air_travel$Date), format="%d-%m-%y")
View(air_travel)

#Putting Dataframe in Excel File
install.packages("writexl")
library("writexl")
write_xlsx(air_travel,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\air_travel.xlsx")
```



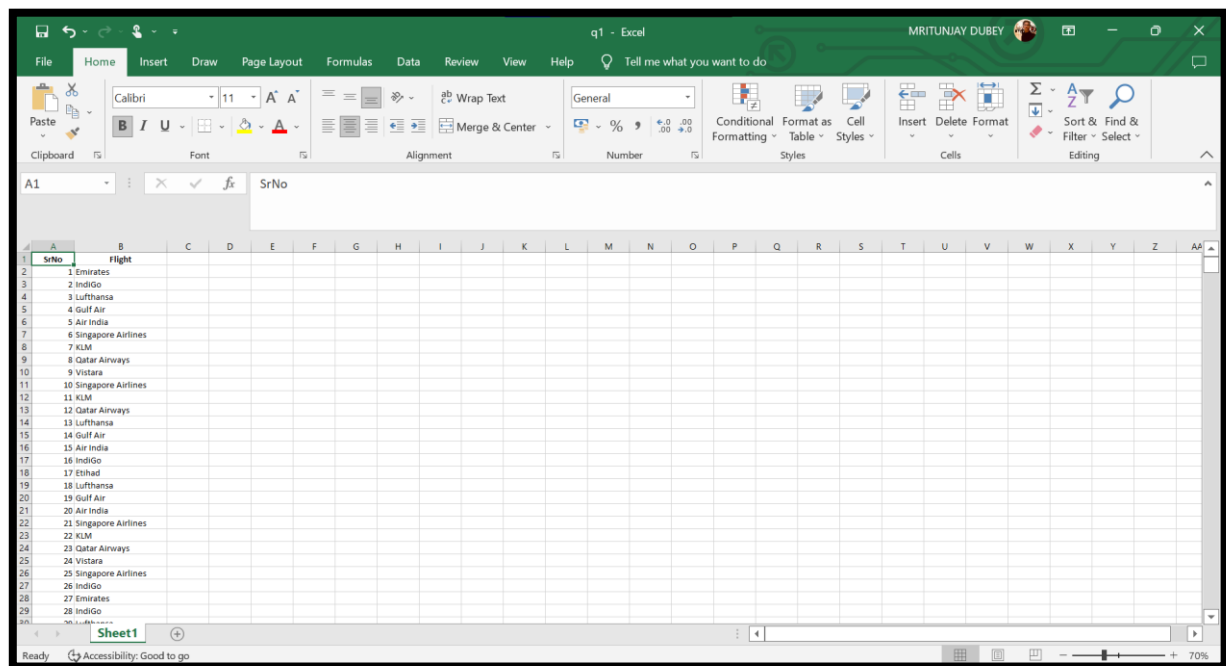
## Tableau Implementation:

### Query for Sheet 1-->

Aim: What are the total number of flights in March?

```
x<-g[,c(1,8)] #Using Table 1
```

```
write_xlsx(x,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q1.xlsx")
```



SrNo	Flight
1	Emirates
2	IndiGo
3	Lufthansa
4	Gulf Air
5	Air India
6	Singapore Airlines
7	KLM
8	Qatar Airways
9	Vistara
10	Singapore Airlines
11	KLM
12	Qatar Airways
13	Lufthansa
14	Gulf Air
15	Air India
16	IndiGo
17	Ethiad
18	Lufthansa
19	Gulf Air
20	Air India
21	Singapore Airlines
22	KLM
23	Qatar Airways
24	Vistara
25	Singapore Airlines
26	IndiGo
27	Emirates
28	IndiGo

**Total No of Flights**

**6,101**



## Query for sheet 2-->

Aim: Busiest Day at SFO Airport based on different Airlines.

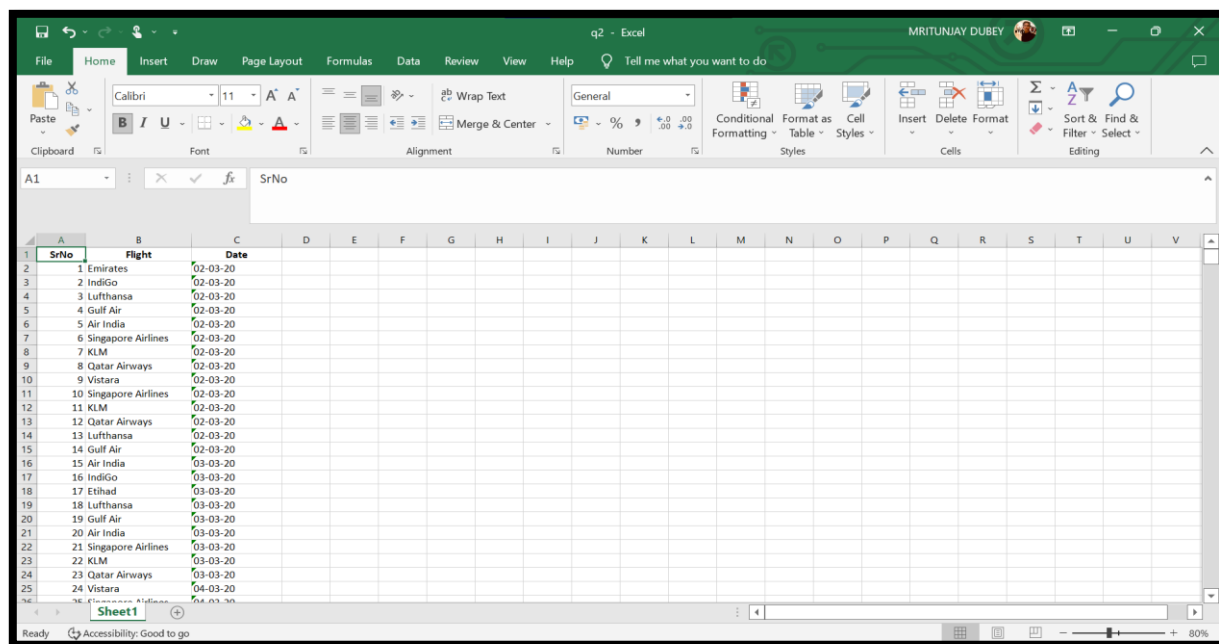
```
y<-g[,c(1,8)] #Using Table 1 and Table 3
```

```
z<-d[,c(1,2)]
```

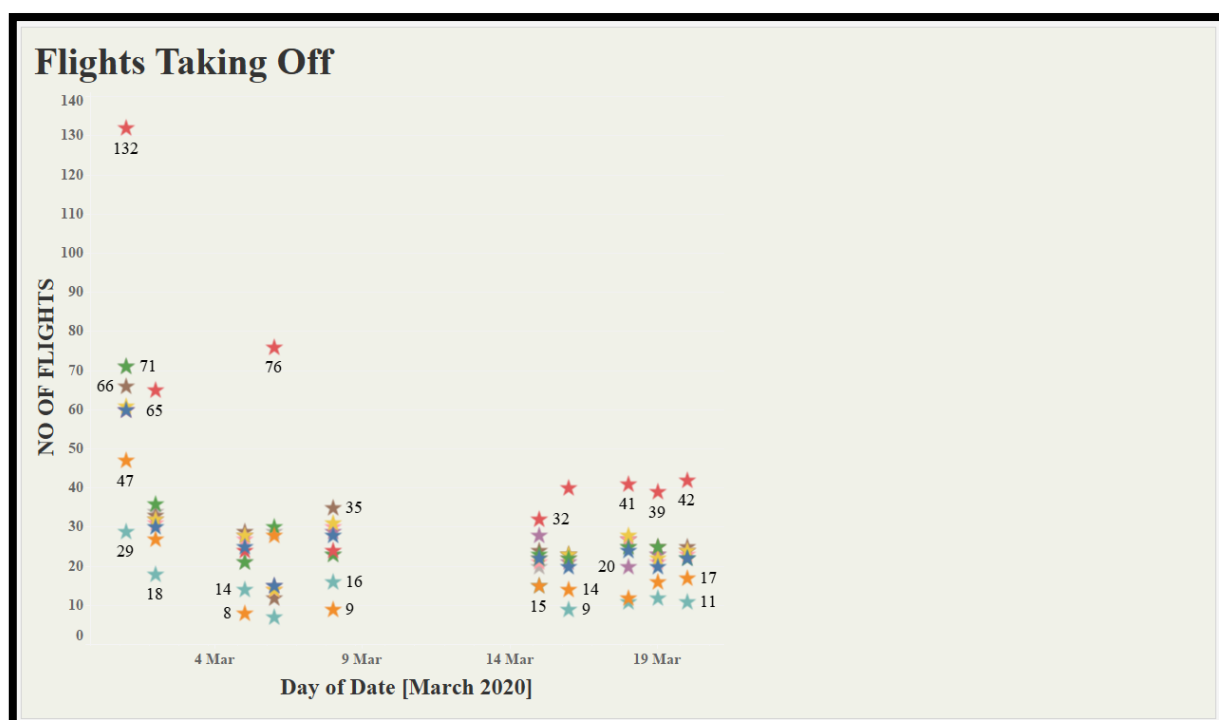
```
f<-merge(y,z,by="SrNo")
```

```
f$date<-format(as.POSIXct(f$date), format="%d-%m-%y")
```

```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q2.xlsx")
```



SrNo	Flight	Date
1	Emirates	02-03-20
2	IndiGo	02-03-20
3	Lufthansa	02-03-20
4	Gulf Air	02-03-20
5	Air India	02-03-20
6	Singapore Airlines	02-03-20
7	KLM	02-03-20
8	Qatar Airways	02-03-20
9	Vistara	02-03-20
10	Singapore Airlines	02-03-20
11	KLM	02-03-20
12	Qatar Airways	02-03-20
13	Lufthansa	02-03-20
14	Gulf Air	02-03-20
15	Air India	03-03-20
16	IndiGo	03-03-20
17	Etihad	03-03-20
18	Lufthansa	03-03-20
19	Gulf Air	03-03-20
20	Air India	03-03-20
21	Singapore Airlines	03-03-20
22	KLM	03-03-20
23	Qatar Airways	03-03-20
24	Vistara	04-03-20



### Query for sheet 3-->

Aim: What are the total number of flights by each airline per day in a month?

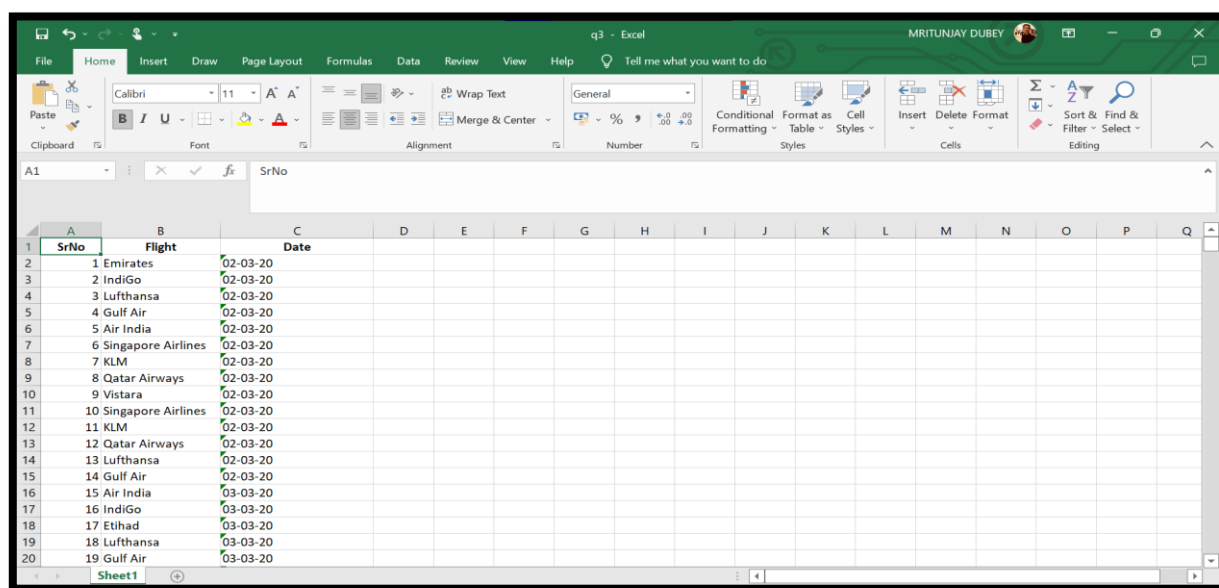
```
y<-g[,c(1,8)]
```

```
z<-d[,c(1,2)]
```

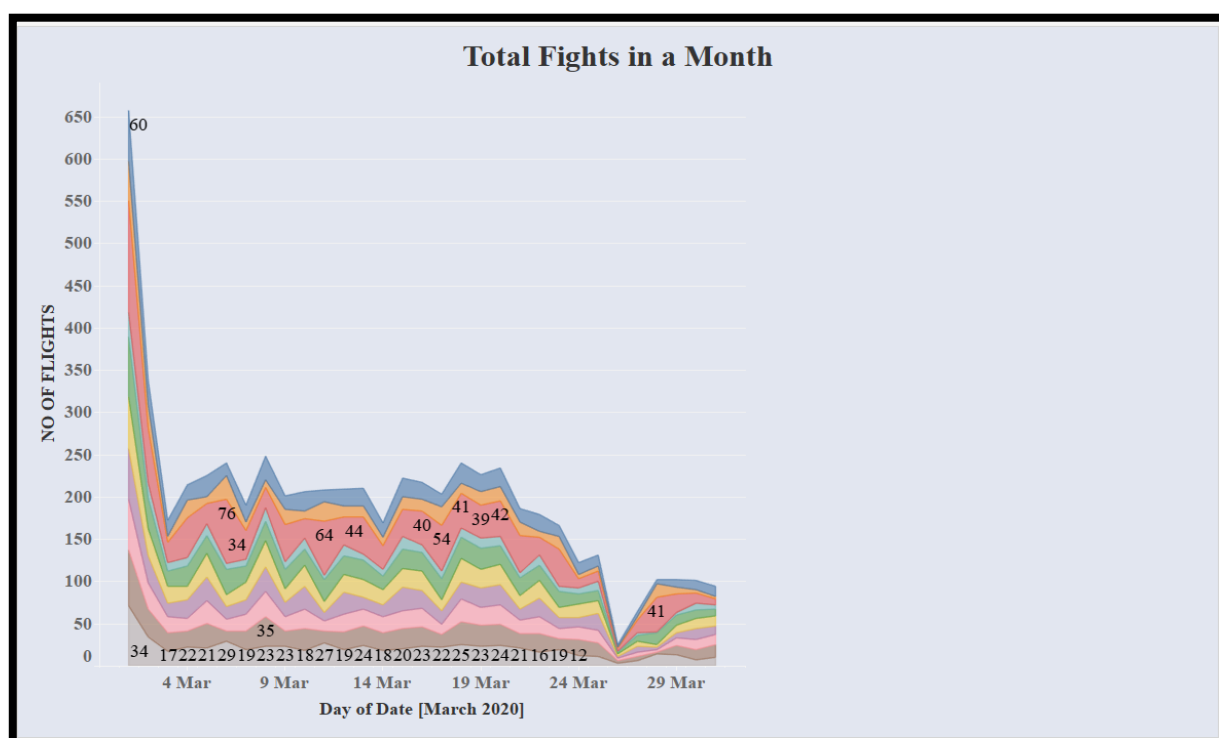
```
f<-merge(y,z,by="SrNo")
```

```
f$date<-format(as.POSIXct(f$date), format="%d-%m-%y")
```

```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q3.xlsx")
```



SrNo	Flight	Date
1	Emirates	02-03-20
2	IndiGo	02-03-20
3	Lufthansa	02-03-20
4	Gulf Air	02-03-20
5	Air India	02-03-20
6	Singapore Airlines	02-03-20
7	KLM	02-03-20
8	Qatar Airways	02-03-20
9	Vistara	02-03-20
10	Singapore Airlines	02-03-20
11	KLM	02-03-20
12	Qatar Airways	02-03-20
13	Lufthansa	02-03-20
14	Gulf Air	02-03-20
15	Air India	03-03-20
16	IndiGo	03-03-20
17	Ethiopia	03-03-20
18	Lufthansa	03-03-20
19	Gulf Air	03-03-20



## Query for sheet 4-->

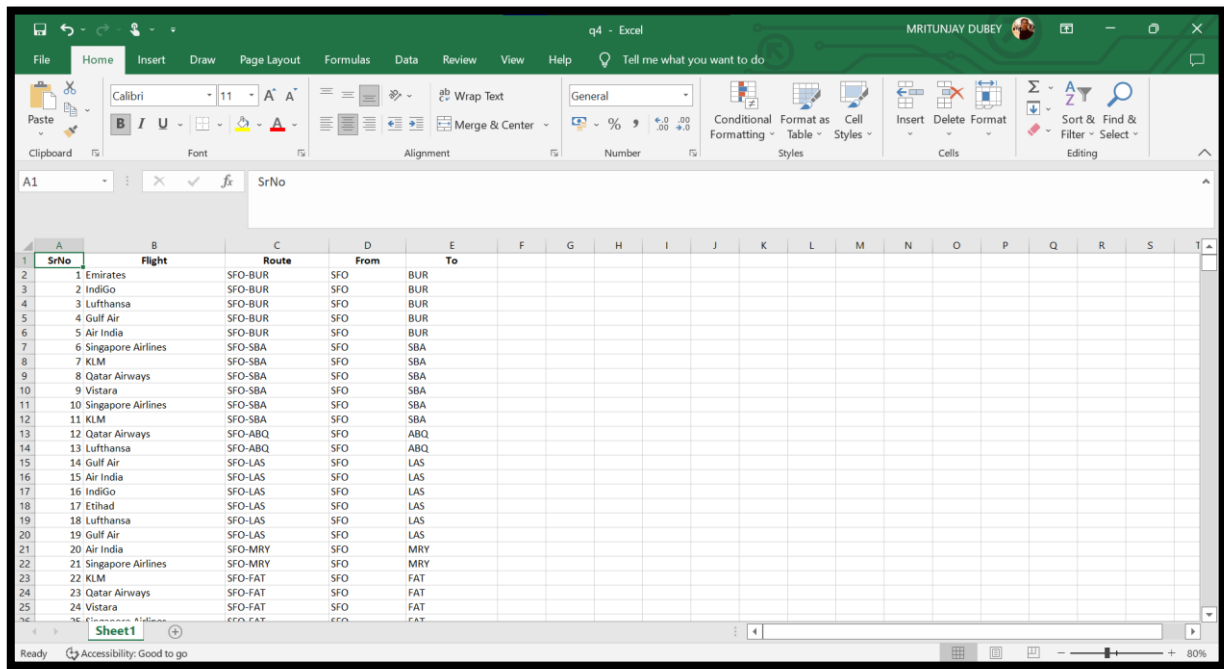
Aim: What are the top 10 busiest flight routes?

```
y<-g[,c(1,8)]
```

```
busy<-d[,c(1,3,4,5)]
```

```
f<-merge(y,busy,by="SrNo")
```

```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q4.xlsx")
```



SrNo	Flight	Route	From	To
1	Emirates	SFO-BUR	SFO	BUR
2	IndiGo	SFO-BUR	SFO	BUR
3	Lufthansa	SFO-BUR	SFO	BUR
4	Gulf Air	SFO-BUR	SFO	BUR
5	Air India	SFO-BUR	SFO	BUR
6	Singapore Airlines	SFO-SBA	SFO	SBA
7	KLM	SFO-SBA	SFO	SBA
8	Qatar Airways	SFO-SBA	SFO	SBA
9	Vistara	SFO-SBA	SFO	SBA
10	Singapore Airlines	SFO-SBA	SFO	SBA
11	KLM	SFO-SBA	SFO	SBA
12	Qatar Airways	SFO-ABQ	SFO	ABQ
13	Lufthansa	SFO-ABQ	SFO	ABQ
14	Gulf Air	SFO-LAS	SFO	LAS
15	Air India	SFO-LAS	SFO	LAS
16	IndiGo	SFO-LAS	SFO	LAS
17	Ethiad	SFO-LAS	SFO	LAS
18	Lufthansa	SFO-LAS	SFO	LAS
19	Gulf Air	SFO-LAS	SFO	LAS
20	Air India	SFO-MRY	SFO	MRY
21	Singapore Airlines	SFO-MRY	SFO	MRY
22	KLM	SFO-FAT	SFO	FAT
23	Qatar Airways	SFO-FAT	SFO	FAT
24	Vistara	SFO-FAT	SFO	FAT
25				



## Query for sheet 5-->

Aim: What are the top 10 longest flight routes?

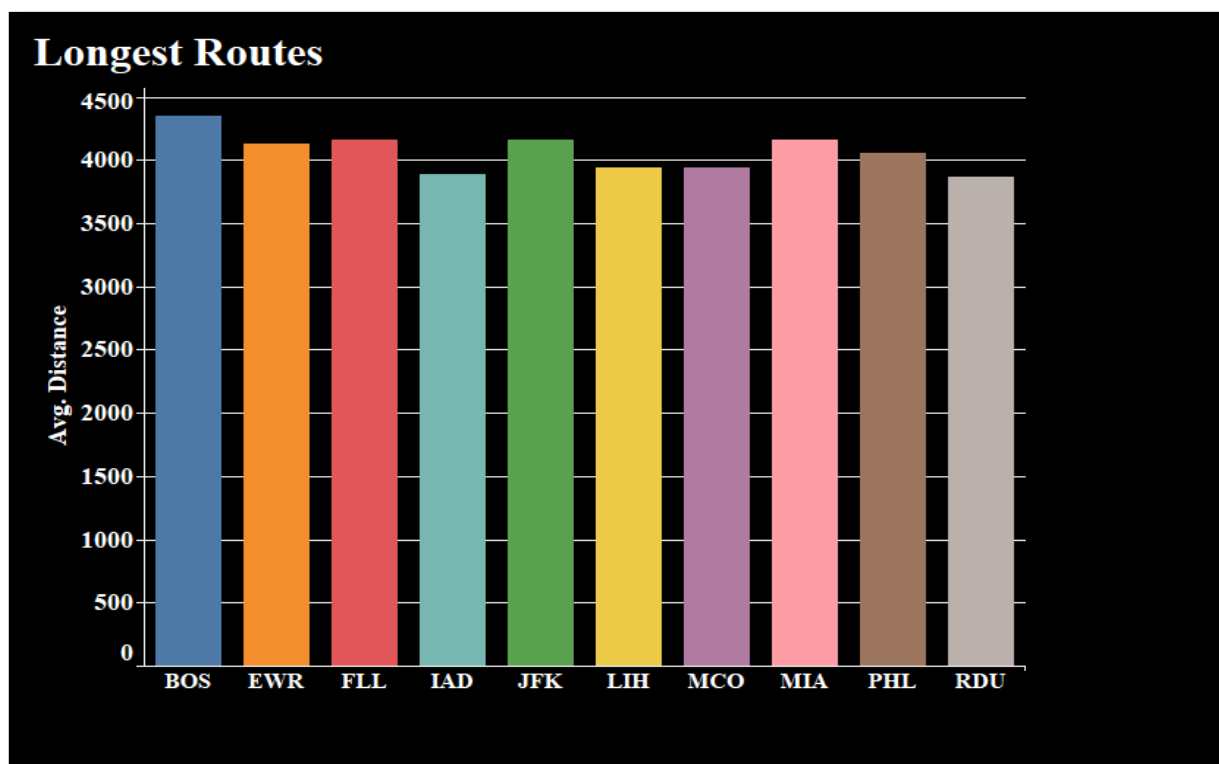
```
distance<-g[,c(1:5)]
```

```
busy<-d[,c(1,3,4,5)]
```

```
f<-merge(distance,busy,by="SrNo")
```

```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q5.xlsx")
```

SrNo	Geometry.Coordinates.0.0	Geometry.Coordinates.0.1	Geometry.Coordinates.1.0	Geometry.Coordinates.1.1	Route	From	To
1	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
2	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
3	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
4	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
5	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
6	-122.370943	37.61799	-118.353322	34.196704	SFO-BUR	SFO	BUR
7	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
8	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
9	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
10	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
11	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
12	-122.370943	37.61799	-119.837133	34.427974	SFO-SBA	SFO	SBA
13	-122.370943	37.61799	-106.620586	35.048762	SFO-ABQ	SFO	ABQ
14	-122.370943	37.61799	-106.620586	35.048762	SFO-ABQ	SFO	ABQ
15	-122.370943	37.61799	-99.23970798	36.081003	SFO-LAS	SFO	LAS
16	-122.370943	37.61799	-115.15644	36.081003	SFO-LAS	SFO	LAS
17	-122.370943	37.61799	-115.15644	36.081003	SFO-LAS	SFO	LAS
18	-122.370943	37.61799	-115.15644	36.081003	SFO-LAS	SFO	LAS
19	-122.370943	37.61799	-115.15644	36.081003	SFO-LAS	SFO	LAS
20	-122.370943	37.61799	-115.15644	36.081003	SFO-LAS	SFO	LAS



Aim: Represent the flights flying outside SFO towards different parts of the world.

```
busy<-d[,c(1,3,4,5)]
```

```
names(x)=c("Flight")
```

```
b<-cbind(busy,x)
```

```
f<-merge(distance,b,by="SrNo")
```

```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q6.xlsx")
```

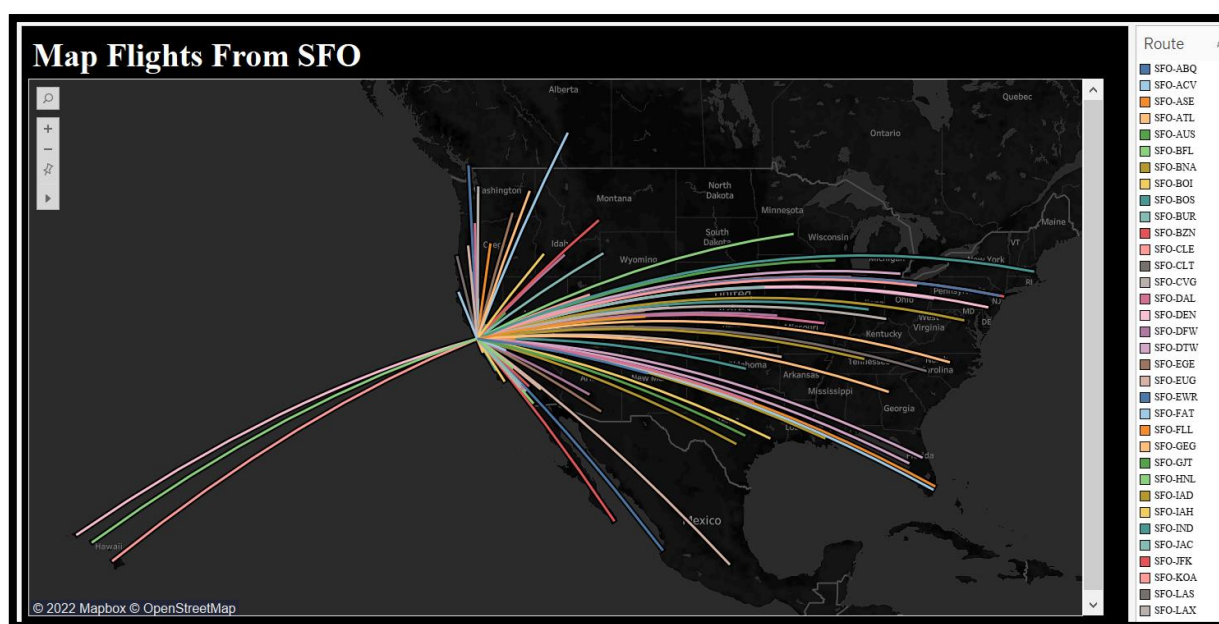
File Home Insert Draw Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard Font Alignment Number Conditional Formatting Styles Cell Styles Insert Delete Format Sort & Find Editing

K15

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Srto	Geometry.Coordinates.0.0	Geometry.Coordinates.0.1	Geometry.Coordinates.1.0	Geometry.Coordinates.1.1	Route	From	To	Distance				
1	1	-122.370943	-118.353322	-118.353322	34.196704 SFO-BUR	SFO	BUR	Emirates					
2	2	-122.370943	-118.353322	-118.353322	34.196704 SFO-BUR	SFO	BUR	Indigo					
3	3	-122.370943	-118.353322	-118.353322	34.196704 SFO-BUR	SFO	BUR	Lufthansa					
4	4	-122.370943	-118.353322	-118.353322	34.196704 SFO-BUR	SFO	BUR	Gulf Air					
5	5	-122.370943	-118.353322	-118.353322	34.196704 SFO-BUR	SFO	BUR	Air India					
6	6	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	Singapore Airlines					
7	7	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	KLM					
8	8	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	Qatar Airways					
9	9	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	Vistara					
10	10	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	Singapore Airlines					
11	11	-122.370943	-118.353322	-118.353322	34.427974 SFO-SBA	SFO	SBA	KLM					
12	12	-122.370943	-118.353322	-118.353322	35.048762 SFO-ABQ	SFO	ABQ	Qatar Airways					
13	13	-122.370943	-118.353322	-118.353322	35.048762 SFO-ABQ	SFO	ABQ	Indigo					
14	14	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Gulf Air					
15	15	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Air India					
16	16	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Indigo					
17	17	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Ethiadd					
18	18	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Lufthansa					
19	19	-122.370943	-118.353322	-118.353322	36.081003 SFO-LAS	SFO	LAS	Gulf Air					
20	20	-122.370943	-118.353322	-118.353322	36.5879 SFO-MRY	SFO	MRY	Air India					
21	21	-122.370943	-118.353322	-118.353322	36.5879 SFO-MRY	SFO	MRY	Singapore Airlines					
22	22	-122.370943	-118.353322	-118.353322	36.788728 SFO-FAT	SFO	FAT	KLM					
23	23	-122.370943	-118.353322	-118.353322	36.788728 SFO-FAT	SFO	FAT	Qatar Airways					
24	24	-122.370943	-118.353322	-118.353322	36.788728 SFO-FAT	SFO	FAT	Vistara					
25	25	-122.370943	-118.353322	-118.353322	36.788728 SFO-FAT	SFO	FAT	Singapore Airlines					
26	26	-122.370943	-118.353322	-118.353322	39.864939 SFO-DEN	SFO	DEN	Indigo					
27	27	-122.370943	-118.353322	-118.353322	51.119526 SFO-YVC	SFO	YVC	Emirates					
28	28	-122.370943	-118.353322	-118.353322	39.505223 SFO-RNO	SFO	RNO	Indigo					

Sheet1



## Query for sheet 7-->

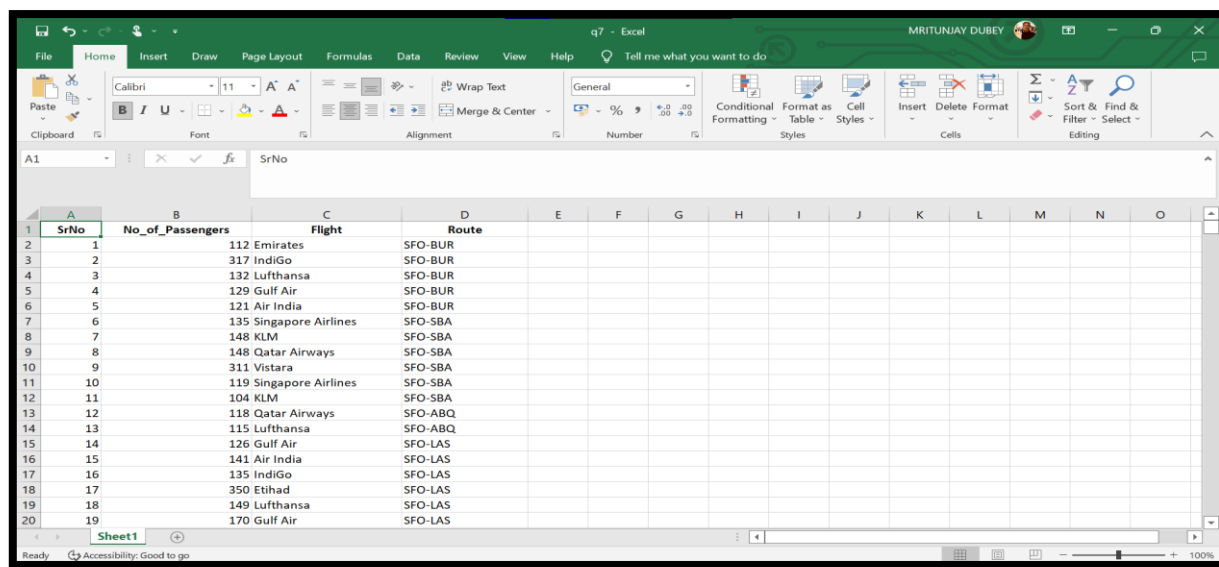
Aim: Which airlines are mostly selected by passengers from SFO Airport?

```
passengers<-g[c(1,7,8)]
```

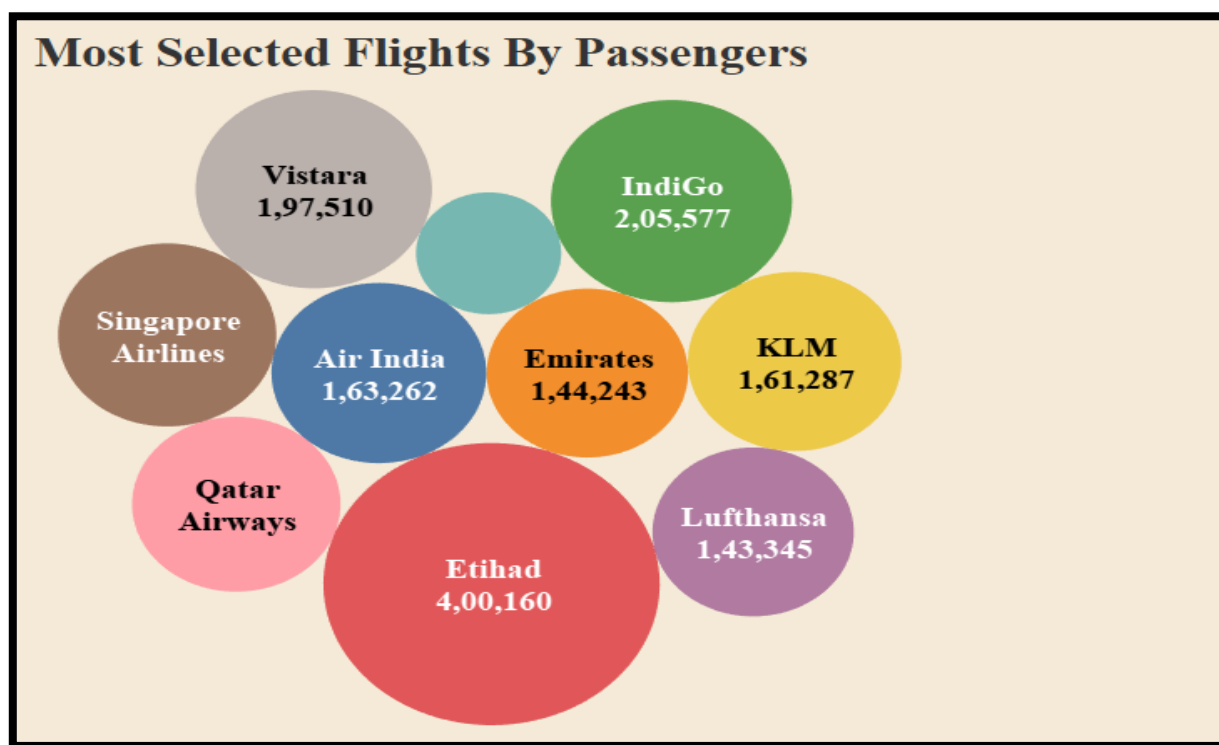
```
route<-d[c(1,3)]
```

```
f<-merge(passengers,route,by="SrNo")
```

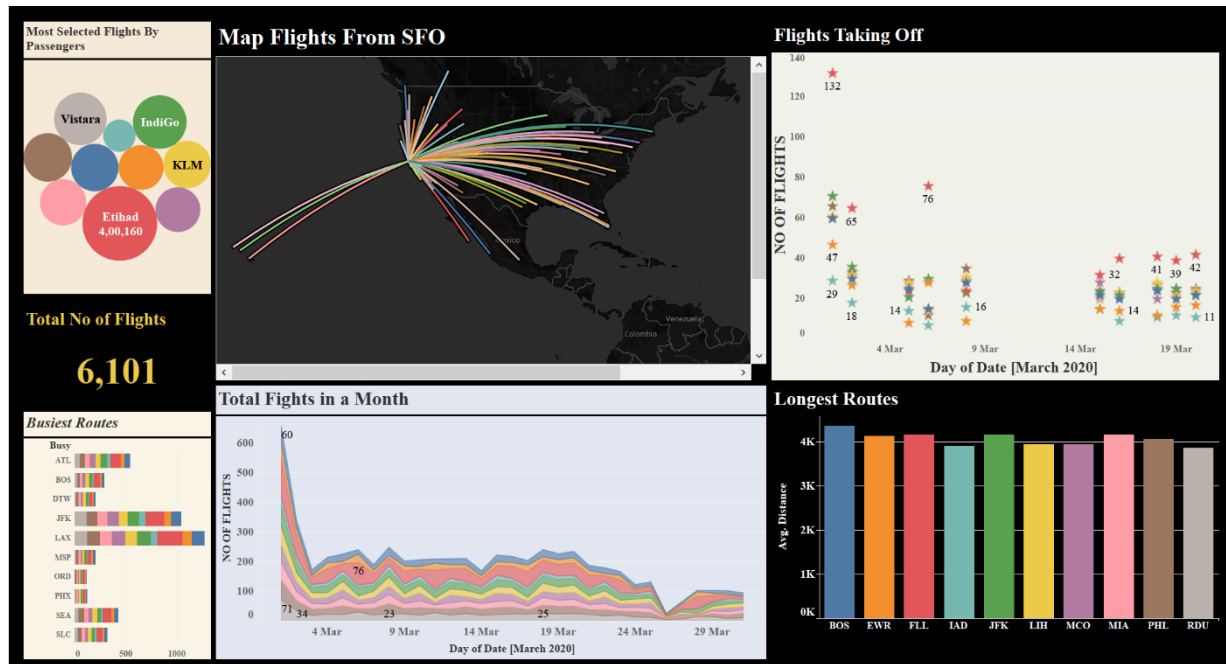
```
write_xlsx(f,"C:\\Users\\MRITUNJAY\\Desktop\\Tableau Project\\q7.xlsx")
```



SrNo	No_of_Passengers	Flight	Route
1	112	Emirates	SFO-BUR
2	317	IndiGo	SFO-BUR
3	132	Lufthansa	SFO-BUR
4	129	Gulf Air	SFO-BUR
5	121	Air India	SFO-BUR
6	135	Singapore Airlines	SFO-SBA
7	148	KLM	SFO-SBA
8	148	Qatar Airways	SFO-SBA
9	311	Vistara	SFO-SBA
10	119	Singapore Airlines	SFO-SBA
11	104	KLM	SFO-SBA
12	118	Qatar Airways	SFO-ABQ
13	115	Lufthansa	SFO-ABQ
14	126	Gulf Air	SFO-LAS
15	141	Air India	SFO-LAS
16	135	IndiGo	SFO-LAS
17	350	Etihad	SFO-LAS
18	149	Lufthansa	SFO-LAS
19	170	Gulf Air	SFO-LAS

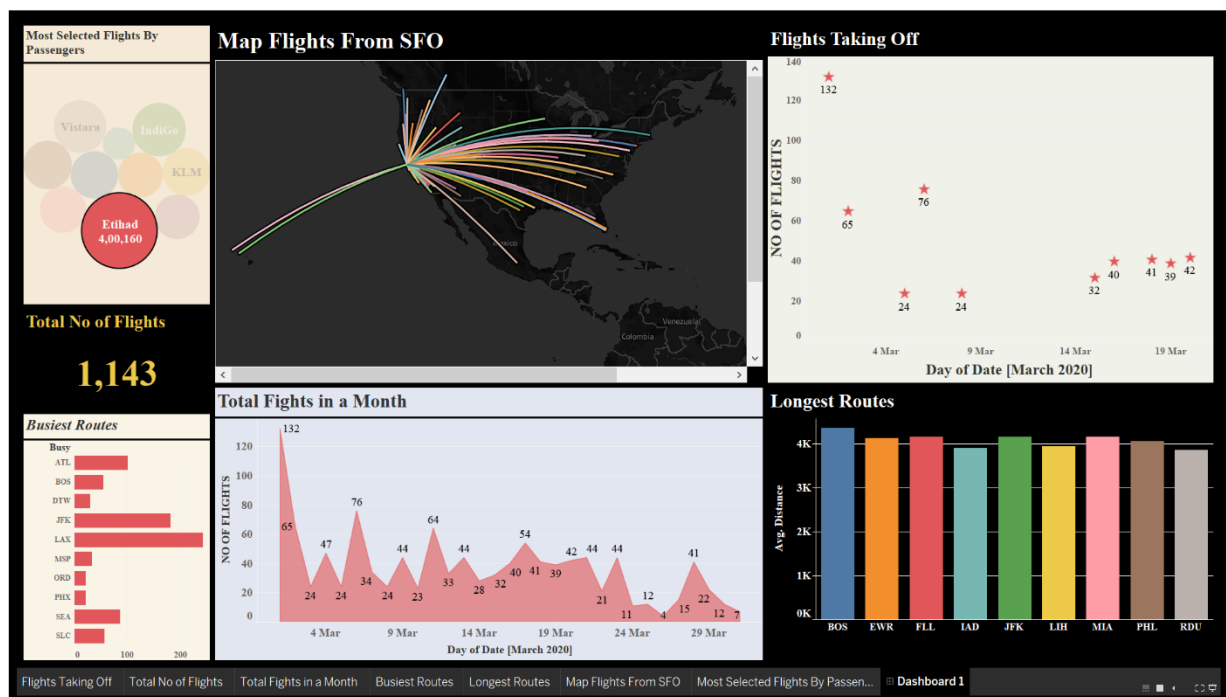


## Final Dashboard:



## Visualization by selecting particular Airline:

For Etihad



## For KLM

