Business Analytics and Decision-Making Final Project
Analysis On Amazon & Facebook Stock

Part 1:

Q1.) For both stocks AMZN and FB, on what date (YYYY-MM-DDD) did they reach out their highest and lowest value.

Ans:

Query:

Select 'AMZN' ' ', format(High_Date,'yyyy-MM-dd') as 'Date', format(High_Value,'N2') as 'High', format(Low_Date,'yyyy-MM-dd') as 'Date', format(Low_Value,'N2') as 'Low' from
(select Date as 'High_Date', High as 'High_Value' from amzn where High=(Select max(High) from AMZN)) a
cross Join
(select Date as 'Low_Date', Low as 'Low_Value' from AMZN where Low=(Select min(Low) from AMZN)) b
Union
Select 'FB' ' ', format(High_Date,'yyyy-mm-dd') as 'Date',format(High_Value,'N2') as 'High', format(Low_Date,'yyyy-MM-dd') as 'Date', format(Low_Value,'N2') as 'Low' from
(select Date as 'High_Date', High as 'High_Value' from fb where High=(Select max(High) from fb)) a
cross Join
(select Date as 'Low_Date', Low as 'Low_Value' from fb where Low=(Select min(Low) from fb)) b

OUTPUT:

	Date	High	Date	Low
AMZN	19-06-2017	1,017.00	15-11-2012	218.18
FB	2017-00-26	156.5	04-09-2012	17.55

Q.2) For both stocks AMZN and FB, during 2015 what was the total volume traded for the entire year. Generate a Pie chart that shows Total Volume % for each of the stocks, provide appropriate Title and labelling.
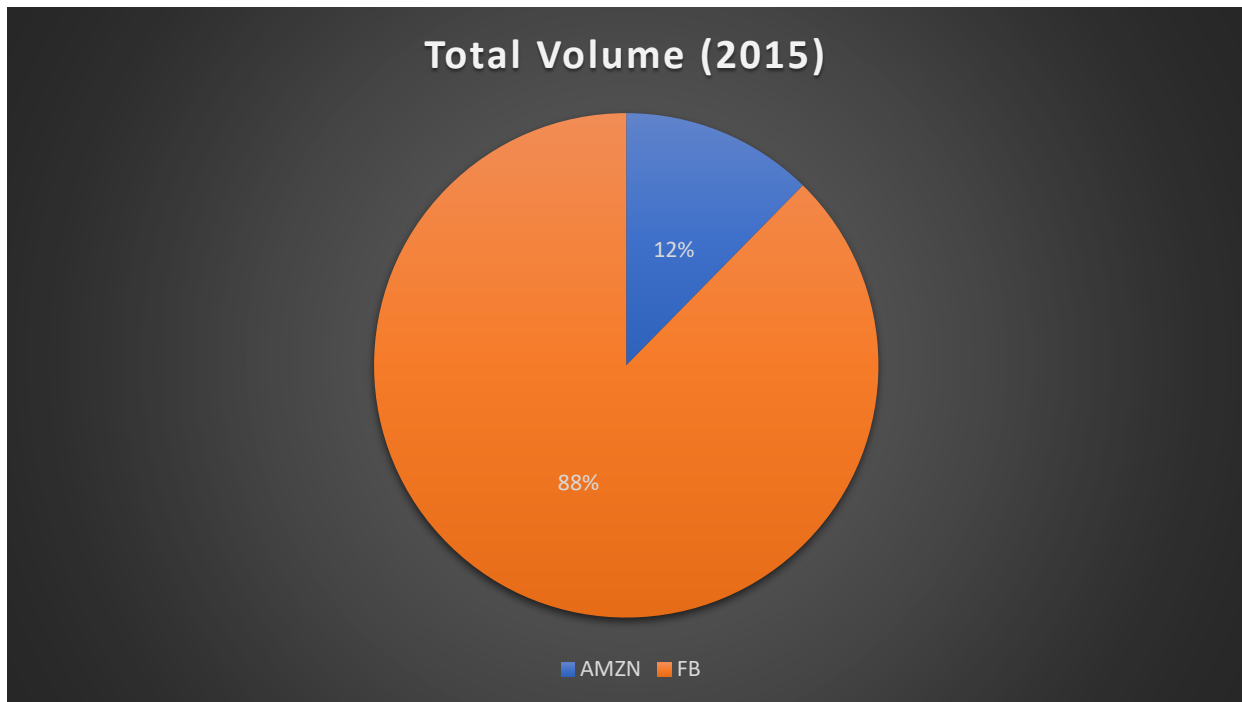
Ans:

Query:

Select 'AMZN' " ", format(sum(volume), 'N0') as 'Total Volume (2015)' from amzn where YEAR(Date) = 2015
Union
Select 'FB' " ", format(sum(volume),'N0') as 'Total Volume (2015)' from fb where YEAR(Date) = 2015

OUTPUT:

	Total Volume (2015)
AMZN	957,045,957
FB	6,792,836,309

Pie Chart:

Total Volume (2015)

12%

88%

■AMZN ■FB

Q.3) For both stocks AMZN and FB, during the period 2012-2015 what Day of the Week represents the highest traded volume for each stock? Provide the SQL script used to obtain the answer and provide the final output in the format below. For total Volume show the final answer using two decimals (1 billion=1,000 millions) Generate a Combo chart that shows Total Volume by DOW for each of the stocks. Produce a line chart for FB and a Clustered column graph for AMZN (secondary axis), provide appropriate Title and labelling.
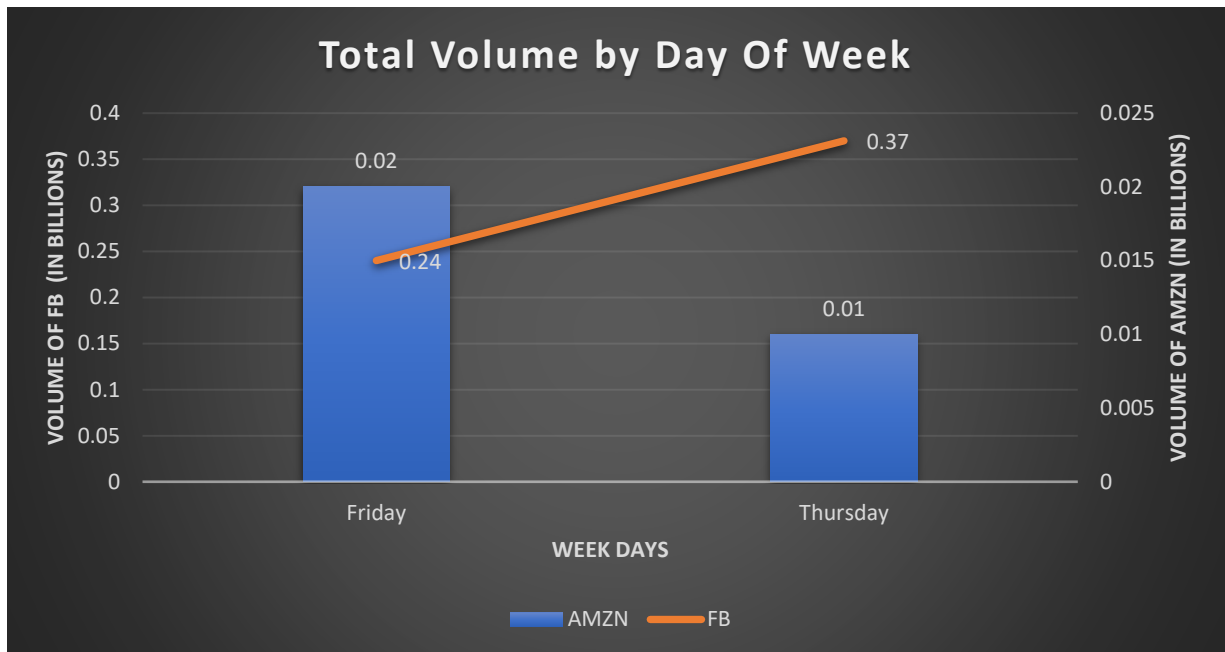
Ans:

Query:

Select 'AMZN' " ", datename(weekday, date) as 'DOW', format(Volume/1000000000,'N2') as 'Volume (Billions)' from amzn
where YEAR(Date) between 2012 and 2015 and Volume = (Select max(Volume) from amzn)
Union
Select 'FB' " ",datename(weekday, date) as 'DOW', format(Volume/1000000000,'N2') as 'Volume (Billions)' from fb
where YEAR(Date) between 2012 and 2015 and Volume = (Select max(Volume) from fb)

OUTPUT:

	DOW	Volume (Billions)
AMZN	Friday	0.02
FB	Thursday	0.37

Chart:

Part 2

<u>**Introduction:**</u>

We can see that the data we have is of Amazon & Facebook stock price, below are some important variables that we have in our data: -

<u>Open</u>: The price at which the stock has opened on a particular day also known as opening price.

<u>High</u>: The highest price which the stock has touched on a particular day.

<u>Low</u>: The lowest price till which the stock has fallen on a particular day.

<u>Volume</u>: The total number of stocks traded on a particular day, also know as the number of shares exchanged hands on a particular day.

Analysis 1:

We did analysis on volume; on which weekday we have high volume for both AMZN & FB, after analysing the data we come to know that volume of FB stock is much higher than AMZN, which is the clear sign that people are more interested in FB stock also as the volume is high so we can say that this is a volatile stock, we can also do intraday trading in FB stock as more people are engaging so price will be going up and down during the market hours, whereas in amazon there is less volatility so we can buy and hold this stock for future. Now if we talk about a particular weekday, we can say that when it comes to AMZN the volume is highest on Friday's and for FB volume is highest on Thursday's.

Analysis 2:

In this section after analysis, we will come to know that how many times the stock closing price is less than opening price, how many times the closing price is greater than opening prices & how many time price is equal for both closing and opening, than we will group by weekdays.

After analysis and visualizing the result, we can clearly see a pattern in opening and closing price of stocks. We can see that for AMZN on Monday, Wednesday, Friday most of the times the closing price is higher than opening price and for FB on Tuesday, Thursday, Friday the closing price higher than the opening price.
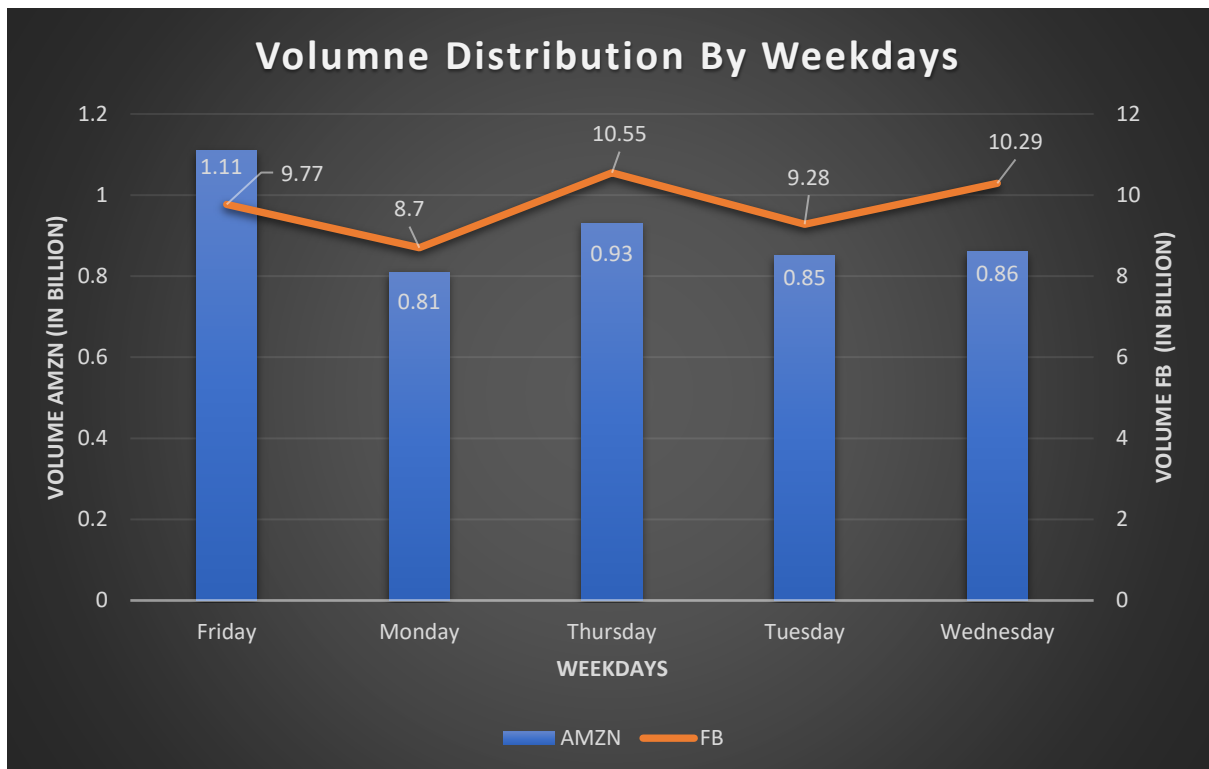
Body of The Analysis:

Analysis 1:

Query:

```
select 'AMZN' " ",(datename(weekday, [date])) as 'Weekday',
format(sum(volume/1000000000),'N2') as 'Volume'
from amzn group by (datename(weekday, [date]))
Union
select 'FB' " ",(datename(weekday, [date])) as 'Weekday',
format(sum(volume/1000000000),'N2') as 'Volume'
from fb group by (datename(weekday, [date]))
```

OUTPUT:

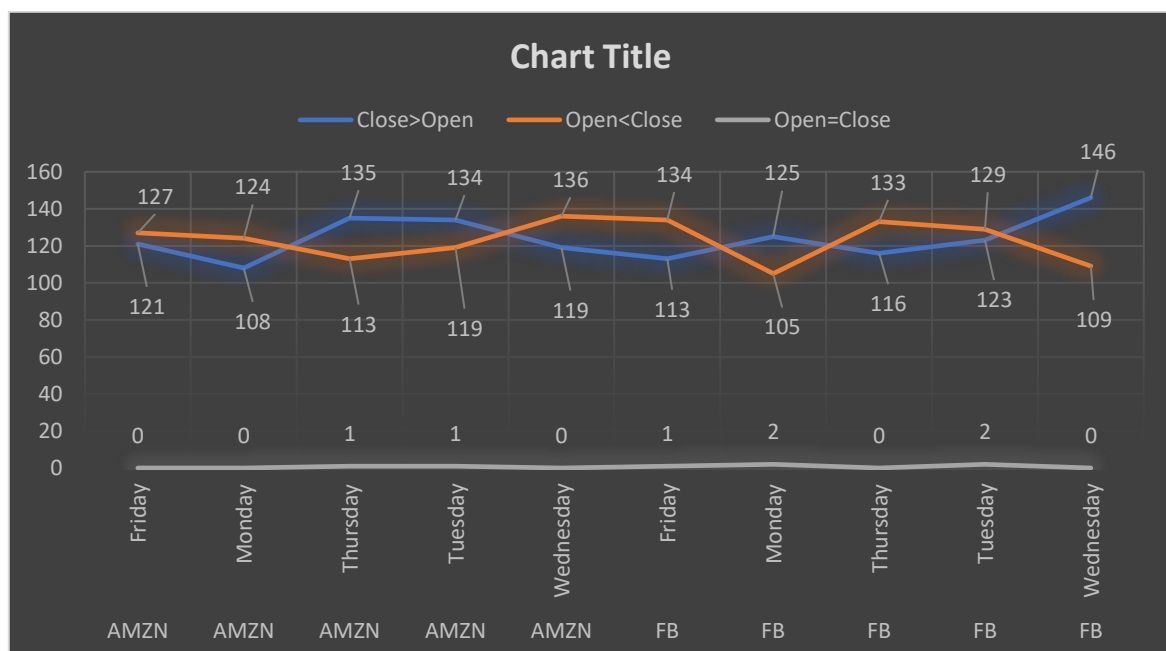|	Weekday	Volume (in billion)
AMZN	Friday	1.11
AMZN	Monday	0.81
AMZN	Thursday	0.93
AMZN	Tuesday	0.85
AMZN	Wednesday	0.86
FB	Friday	9.77
FB	Monday	8.7
FB	Thursday	10.55
FB	Tuesday	9.28
FB	Wednesday	10.29

Chart:

Analysis 2:

Query:

select 'AMZN' " ", (datename(weekday, [date])) as 'Weekday', sum(case when [close]>[open]
then 1 else 0 end) as 'Close>Open',
sum(case when [close]<[open] then 1 else 0 end) as 'Open<Close',
sum(case when [close]=[open] then 1 else 0 end) as 'Open=Close'
from amzn group by (datename(weekday, [date]))
union
select 'FB' " ", (datename(weekday, [date])) as 'Weekday', sum(case when [close]>[open]
then 1 else 0 end) as 'Close>Open',
sum(case when [close]<[open] then 1 else 0 end) as 'Open<Close',
sum(case when [close]=[open] then 1 else 0 end) as 'Open=Close'
from fb group by (datename(weekday, [date]))

Output:

	Weekday	Close>Open	Open<Close	Open=Close
AMZN	Friday	121	127	0
AMZN	Monday	108	124	0
AMZN	Thursday	135	113	1
AMZN	Tuesday	134	119	1
AMZN	Wednesday	119	136	0
FB	Friday	113	134	1
FB	Monday	125	105	2
FB	Thursday	116	133	0
FB	Tuesday	123	129	2
FB	Wednesday	146	109	0

Chart:

<u>Conclusion:</u>

After doing all analysis we can say that both the stocks has a great potential of trading but according to me if you are a intraday trader than go for FB as it is more volatile as seen in Analysis 1, and after doing analysis 2 and visualizing it we got a pattern in opening and closing price and we can say that on the days where closing price is greater than opening price there are chances that the market will be bullish (Buyers are more than sellers so market will go up) so we can do intraday trading by buying the stock at low price in morning and selling at the time of closing at higher price, we cannot say that this will happen for sure but there are chances and probability that closing price will be higher than opening price on those days.