- Indicators formulation and explainable outcome using data sources

  ➢ What is Open Interest:

  * It is the number of contracts (options or futures) that are in active positions held by investors and traders. Meaning, the positions have not been closed out or exercised or expired. Thus we can say that **Open interest** decreases when Holders (or buyers) and writers (or sellers) of contracts closes out more positions than were opened that day.

  * Hence, a trader would be exercising their option or must be exercising the option or must be taken an offsetting to close out the position.

Example: Below is the Mind tree FUTSTK where the interim value of the volume is turned out to as 1725 on the date of 8th March 22 and 9th March 2022 as 2637600, now let's understand other params and features of the data extracted and will be preparing some of the references outcome and indicators for the same FUTSTK.

Note: MIDCPNIFTY details are as below

SYMBOL	INSTRUMENT	Price: 8th March	Price: 9th March	PRICE CHANGE %	Volume: 8th March	Volume: 9th March
MIDCPNIFTY	FUTIDX	7369.95	7369.95	-	0	75
MINDTREE	FUTSTK	4011	4138.2	-43.85	1725	2637600

Name: MINDTREE

Type: FUTSTK

Price as of 8th March 2022: 4011

Price as of 9th March 2022: 4138.2

Volume as of 8th March 2022: 1725

Volume as of 9th March 2022: 2637600

Let's calculate the **Price interest change and its percentage** with respect to our data provided we are using Price for this Analysis:

= ((Volume of next day – Volume of last day)/ (Volume of Last day*100)

= ((7369.95–4138.2)/ (4138.2*100)

= - 43.85

Now Let's calculate the **Volume Change and its percentage** with respect to our data provided we are using Volume for this Analysis:

= ((Price of next day – Price of last day)/ (Price of Last day*100)

= ((2637600 – 1725)/ (1725* 100)

= 152804.3478

Long Build up are basically those Open Interest change, where it's changes are greater than 12 % and price change greater than 2 %, hence let's setup the same check the current status of Open Interest using above stream:

Short helper method:

If Open Interest Change Greater than 12 % Multiple Price Changes greater than 2 ,

"Then refer it as LONGBUILDUP",

Else value is ZERO

Formula Output = IF((152804.3478>12%) * AND(-43.85 >2%),"LONGBUILDUP",0)

Thus we are not going to call it up as LONGBUILDUP

Short Build up are basically those Open Interest change, where it's changes are greater than 12 % and price change lesser than 2 %, hence let's setup the same check the current status of Open Interest using above stream:

helper method:

If Open Interest Change Greater than 12 % Multiple Price Changes lesser than 2% ,

"Then refer it as SHORTBUILDUP",

Else value is ZERO

Formula Output = IF((152804.3478>12%) * AND(-43.85 < 2%),"SHORTBUILDUP",0)

Thus we are going to call it up as SHORTBUILDUP

Short Covering are basically those Open Interest change, where it's changes are lesser than -12 % and price change greater than 2 %, hence let's setup the same check the current status of Open Interest using above stream:

helper method:

If Open Interest Change lesser than - 12 % Multiple Price Changes greater than 2% ,

"Then refer it as SHORT COVERING",

Else value is ZERO

Formula Output = IF ((152804.3478 < -12%) * AND (43.85 > 2%),"SHORTCOVERING",0)

Thus we are not going to call it up as SHORTCOVERING

Long unwinding are basically those Open Interest change, where it's changes are lesser than -12 % and price change lesser than - 2 %, hence let's setup the same check the current status of Open Interest using above stream:

helper method:

If Open Interest Change lesser than -12 % Multiple Price Changes lesser than - 2% ,

"Then refer it as LONG UNWINDING ",

Else value is ZERO

Formula Output = IF((152804.3478 < -12%) * AND(-43.85 < -2 %),"SHORTBUILDUP",0)

Thus we are not going to call it up as LONGWINDING