

Summary of the SQL Assignment(Stock Market) Procedure

1. We imported the column date and closing price of 6 stocks from the data set provided then we converted the date format and modified the tables.
2. We created table for each stock and calculated the 20 day and 50 day moving average.

```
AVG(`Close Price`) OVER (w ROWS BETWEEN 19 PRECEDING AND  
CURRENT ROW), null) AS '20_Day_MA'
```

```
AVG(`Close Price`) OVER (w ROWS BETWEEN 49 PRECEDING AND  
CURRENT ROW),null) AS '50_Day_MA'
```

3. We created a Master table containing the close price.
of each stock.
4. We created the 6 tables 1 for each stock indicating the
buy/sell/hold signal based on moving average.

```
case
```

```
    when tab.`20 Day MA` > tab.`50 Day MA` and  
        LAG(tab.`20 Day MA`,1) OVER(w) < LAG(tab.`50 Day  
MA`,1) OVER(w)
```

```
        then 'Buy'
```

```
    when tab.`20 Day MA` < tab.`50 Day MA` and  
        LAG(tab.`20 Day MA`,1) OVER(w) > LAG(tab.`50 Day  
MA`,1) OVER(w)
```

```
        then 'Sell'
```

```
    else 'Hold'
```

```
end as 'Signal'
```

5. we created a UDF to return the signal if date is provided.

Result

1. From the below results we can observe that tcs and bajaj stocks has highest fluctuation then infosys, hero, tvs whereas Eicher stock has the least fluctuation.

```
select count(*) from bajaj2 where `Signal` in ('Buy', 'Sell') ; -
```

```
- 23 , 12 Golden cross, 11 death cross
```

```
select count(*) from eicher2 where `Signal` in ('Buy' , 'Sell');
```

```
-- 13, 7 Golden cross, 6 death cross
```

```
select count(*) from hero2 where `Signal` in ('Buy' , 'Sell');
```

```
-- 18, 9 Golden cross, 9 death cross
```

```
select count(*) from infosys2 where `Signal` in ('Buy' , 'Sell');
```

```
-- 18, 9 Golden cross, 9 death cross
```

```
select count(*) from tcs2 where `Signal` in ('Buy' , 'Sell');
```

```
-- 25, 13 Golden cross, 12 death cross
```

```
select count(*) from tvs2 where `Signal` in ('Buy' , 'Sell');
```

```
-- 16, 8 Golden cross, 8 death cross
```

2. From the below table we can observe that

a) Price of these stocks Bajaj, TCS, TVS, Hero have increased over a period of 4 years whereas price of Eicher and Infosys has dropped

b) TCS is the most expensive stock whereas Hero is the least expensive stock.

c) we should invest in TCS and Hero for maximum gain

Date	Bajaj	tcs	tvs	Infosys	Eicher	Hero
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2015-01-01	2454.1	15239.15	3107.3	1975.	82548.	2276.85
2015-12-31	2533.5	16855.2	2695.25	1104.55	2439.2	289.65
2016-01-01	2520.05	17365.25	2687.85	1103.15	2416.25	287.1
2016-12-30	2633.85	21812.1	3044.75	1010.7	2361.95	360.65
2017-01-02	2596.8	22510.6	3028.7	1001.6	2359.05	366.15
2017-12-29	3323.2	30290.55	3786.3	1039.3	2700.4	771.3