1. We can import data into msql from various external resources like for eg CSV here.
   - Using Load Data infile command in workbench.
   - For correct sorting formatted date to a valid format YYYY-MM-DD for all 6 stocks.
   - Calculated 20day and 50day MA from close_price data for 6 stocks using windows function OVER() aggregating it with AVG() sorted by Date in ascending order.
     (bajaj1, eichermotors1, heromotocorp1, infosys1, tcs1, tvsmotors1)
   - 20/50 day average is calculated as summation of close_price at 20^{th} / 50^{th} row and preceding 19/49 rows divided by 20/50 respectively.
   - 20dayaverage for first 19rows and 50day average for first 49 rows will be NULL as no preceding rows.
2. Created a master table namely "stock_mastertable" having close_price data for all 6 stocks using 5 inner joins on tables created in step 1.
3. Created Buy/Sell/Hold signal tables for 6 stocks. (bajaj2,eichermotors2,heromotocorp2, infosys2,tcs2,tvsmotors2)

   - Used LAG() window function for comparing current and previous row MA's. (CR: Current Row PR:Previous Row)
   - Logic for BUY/SELL/HOLD signal calculation:
     20day MA (CR) > 50day MA (CR) and 20day MA (PR) < 50day MA (PR) then "BUY"
     20day MA (CR) < 50day MA (CR) and 20day MA (PR) > 50day MA (PR) then "SELL"
     Else signal is "HOLD"

     Bajaj Stock – 12 BUY's 11 SELL's (Exception – First Sell at first 50^{day} MA).
     Eicher Motors – 6 BUY's 7 SELL's.
     Hero MotoCorp - 9 BUY's 9 SELL's.
     Infosys - 9 BUY's 9 SELL's.
     TCS - 12 BUY's 13 SELL's.
     TVS Motors - 8 BUY's 8 SELL's.

4. Created a UDF for Bajaj stock which accepts date as input,returns signal from bajaj2 table.