MySQL Project

Problem Statement:

We were given the data of daily closing prices of various stocks across Automobile and technology sectors and our objective is to time the decision of BUY, SELL and HOLD stock based on past observations of the stock price.

APPROACH:

This problem mainly consists of 4 tasks.

1. Calculate the 20-day moving average and 50 -day moving average of each stock individually.
2. Create a master table containing closing prices of all the stocks.
3. Estimate the market signal for buying, selling or holding a stock signal based on the moving average values.
   - Considering the fact that prices have a mean reverting tendencies, moving averages are good indicators of market signal.
   - Intuitively, it is understood that 20-day moving average is more influence by the recent price than the 50-day moving average.
   - Market signal happens when these two averages cross each other.
   - Calculate the difference between 20-day moving average and 50-day moving average and name the attribute and 'flag'.
   - Signal happens when the difference of this flag changes sign on two consecutive days.
   - For example, when flag changes from a negative value to positive value, this means that 20-day moving average has gone past the 50-day moving average and therefore, the signal is sell as the price is expected to revert back to mean.
   - Similarly, when flag changes from a positive value to negative value, this means that 20-day moving average has gone below the 50-day moving average and therefore, the signal is buy as the price is expected to revert back to mean.
4. Based on this logic, I have modelled our signal attribute and finally created a user defined function to return signal when date is given as input.