SQL ASSIGNMENT REPORT

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TASKS GIVEN

1. Create a new table named 'bajaj1' containing the date, close price, 20 Day MA and 50 Day MA. (This has to be done for all 6 stocks.)
2. 2. Create a master table containing the date and close price of all the six stocks. (Column header for the price is the name of the stock.)
3. Use the table created in Part (1) to generate buy and sell signal. Store this in another table named 'bajaj2'. Perform this operation for all stocks.
4. Create a User defined function, that takes the date as input and returns the signal for that particular day (Buy/Sell/Hold) for the Bajaj stock. (**Hint**: The signal of sell and buy for that particular day is generated by subtracting the previous day's flag value. Flag value is generated using short-term and long-term moving averages.)

Process of Accomplishment of Tasks

First of all, we need to import the given data into tables in our database. I created a database called 'Assignment' and imported all the data into tables named according to the given file names (such as Eicher_motors, tcs and so on). After importing date, we need to make sure that the data is in correct format. So, I converted the given date format to a proper date format(%Y%M%D). For the first task, I created a new table, named it as per the instructions and used window functions to calculate the '20 Day Moving Average' and '50 Day Moving Average' of the 'Closed Price' each stock for all the tables. Sorting the

table according to date will give us accurate results of moving averages since it depends on previous values. For the second task, I used 'left join' to achieve the required table. We can simply join all the table according to the 'closed price' to get the required result. I used 'case' statements to get the value of the column 'signal' in the third task and created the table consisting of 'closed price', 'date' and 'signal'. At last I wrote a user defined function using 'case' statements which were use to generate the signal column in the second table and returned 'char' (either 'BUY' or 'SELL', or 'HOLD') using the function. To check the function, I called it using the 'Select' statement. The task would be very useful in practical life for any customer to get insight to their respective stocks.

SYNOPSIS & INSIGHTS

The Stock Market Dataset included equities from a variety of companies. Only a few variables were included for analysis because the raw data had too many variables that were of little value during analysis. Eicher's stock close prices were far higher than those of any other firm, and while it may appear at first glance that investing in Eicher is a smart idea, a closer examination reveals that it is not. While the 'Signals' given by TCS and Bajaj are nearly identical, trading in TCS equities is like trading on the safe side. In TCS and Bajaj, a trader can put will receive more opportunities to shell out stock or trade in a higher number of times. While with Eicher, profits can be substantially bigger because the closing price is much higher at Buy or Sell signals. Because there is no prior data for MAs, judging the Signal will be challenging at first. As a result, if somebody owns a share, it is safer to hold. Null values were present in the raw data, and the date format was incorrect (text). Also, additional information of when the stock market is open for business, such as when it is closed on holidays. Shorter-term MAs are used to decide on or investigate the next trend. The trend is given for a longer period as the MAs range rises, i.e. for more than 100MAs. For a shorter trend, look at 10 to 50 MAs, and for a longer trend, look at 200 or more MAs. The nearest numbers are given more weight in the exponential moving average. As a result, it is more popular nowadays. Maximum for TCS with 12 Buy and 13 Sell and then Bajaj with 12 Buy and 11 Sell.

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