Q-1 You work in the CEO's team at ABC Retail Limited - an e-commerce apparel platform.  
It is year end and you are doing a review of the pandemic year 2020 and its impact on revenue and profitability for your organisation.

Go through the following problems to test your SQL / analytical skills as part of the team.

First lets look at sample entries from the table - write a query to return 10 sample rows from the table - 'Financials'.

Expected output

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│ Month │ Revenue │ Profit\_loss │ Division │ Product\_type │

├───────┼─────────┼─────────────┼──────────┼──────────────┤

│ Jan │ 50000 │ 10000 │ Menswear │ Low\_Margin │

│ Feb │ 75000 │ 15000 │ Menswear │ Low\_Margin │

│ Mar │ 15000 │ -3000 │ Menswear │ Low\_Margin │

│ Apr │ 15000 │ -3000 │ Menswear │ Low\_Margin │

│ May │ 15000 │ -3000 │ Menswear │ Low\_Margin │

│ Jun │ 12000 │ 2400 │ Menswear │ Low\_Margin │

│ Jul │ 12000 │ 2400 │ Menswear │ Low\_Margin │

│ Aug │ 12000 │ 2400 │ Menswear │ Low\_Margin │

│ Sep │ 50000 │ 10000 │ Menswear │ Low\_Margin │

│ Oct │ 60000 │ 12000 │ Menswear │ Low\_Margin │

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SELECT \* FROM Financials

LIMIT 10;

**Q**-2 Write a query to output all entries of the table

in the month of March when the pandemic lockdowns were initiated

and in the month of February - just before the pandemic.

Expected output

┌───────┬─────────┬─────────────┬────────────┬──────────────┐

│ Month │ Revenue │ Profit\_loss │ Division │ Product\_type │

├───────┼─────────┼─────────────┼────────────┼──────────────┤

│ Feb │ 75000 │ 15000 │ Menswear │ Low\_Margin │

│ Mar │ 15000 │ -3000 │ Menswear │ Low\_Margin │

│ Feb │ 150000 │ 37500 │ Menswear │ High\_Margin │

│ Mar │ 30000 │ -7500 │ Menswear │ High\_Margin │

│ Feb │ 30000 │ -7500 │ Menswear │ New\_Products │

│ Mar │ 6000 │ -1500 │ Menswear │ New\_Products │

│ Feb │ 82500 │ 15000 │ Womenswear │ Low\_Margin │

│ Mar │ 16500 │ -3000 │ Womenswear │ Low\_Margin │

│ Feb │ 165000 │ 37500 │ Womenswear │ High\_Margin │

│ Mar │ 33000 │ -7500 │ Womenswear │ High\_Margin │

│ Feb │ 33000 │ -7500 │ Womenswear │ New\_Products │

│ Mar │ 6600 │ -1500 │ Womenswear │ New\_Products │

│ Feb │ 86250 │ 15000 │ Kidswear │ Low\_Margin │

│ Mar │ 17250 │ -3000 │ Kidswear │ Low\_Margin │

│ Feb │ 172500 │ 37500 │ Kidswear │ High\_Margin │

│ Mar │ 34500 │ -7500 │ Kidswear │ High\_Margin │

│ Feb │ 34500 │ -7500 │ Kidswear │ New\_Products │

│ Mar │ 6900 │ -1500 │ Kidswear │ New\_Products │

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Table structure

Month - Text

Revenue - Integer

Profit\_loss - Integer

Division - Text

Product\_type – Text

SELECT \*

FROM Financials

WHERE Month IN ('Feb', 'Mar');

Q-3 Write a query to output the following

* Month-wise revenue and loss for the complete year 2020
* Order by decreasing profits for each month
* Rename the monthwise revenue column as 'monthly\_revenue' and montwise profit / loss column as 'monthly\_pnl' while running the query

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│ Month │ monthly\_revenue │ monthly\_pnl │

├───────┼─────────────────┼─────────────┤

│ Dec │ 884000 │ 144000 │

│ Feb │ 828750 │ 135000 │

│ Nov │ 773500 │ 126000 │

│ Oct │ 663000 │ 108000 │

│ Sep │ 552500 │ 90000 │

│ Jan │ 552500 │ 90000 │

│ Jun │ 132600 │ 21600 │

│ Jul │ 132600 │ 21600 │

│ Aug │ 132600 │ 21600 │

│ May │ 165750 │ -36000 │

│ Mar │ 165750 │ -36000 │

│ Apr │ 165750 │ -36000 │

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**Table structure**

Table name - Financials

* Month - Text
* Revenue - Integer
* Profit\_loss - Integer
* Division - Text
* Product\_type - Text

SELECT

Month,

Revenue AS monthly\_revenue,

Profit\_loss AS monthly\_pnl

FROM

Financials

WHERE

EXTRACT(YEAR FROM Date) = 2020

ORDER BY

monthly\_pnl DESC;