Introduction to Databases and Fundamentals of SQL

Agenda

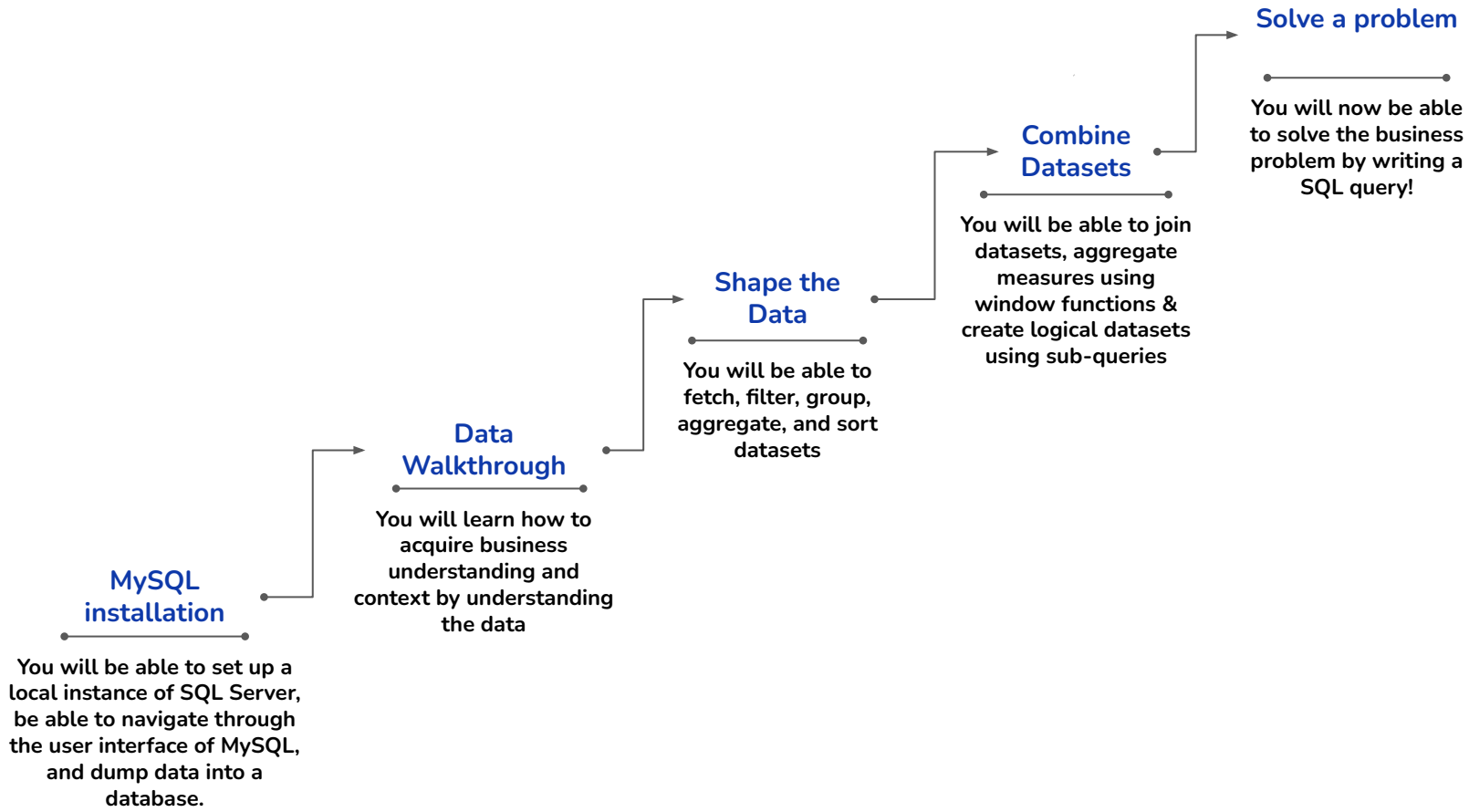
- Problem Definition
- Learning Outcomes
- Setting up MySQL
- Data Understanding
- Data Manipulation using SQL
- Problem Solution
- Summary

Problem Statement

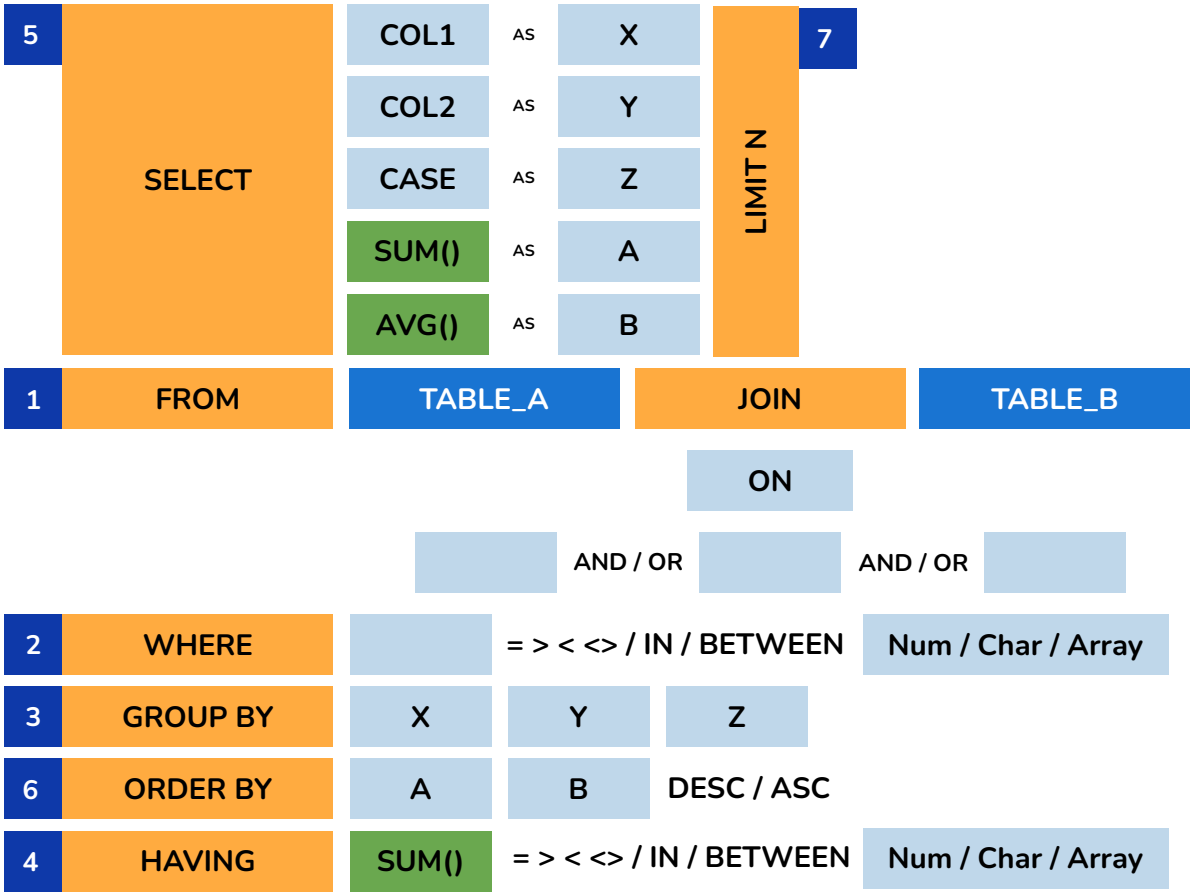
GL-Kart's Supply and Inventory Team wants to prepare for the upcoming spike in demand during the holiday season. The demand forecasting team has predicted a 25% spike in demand for all the product categories that are expected to occur over the next few months. As a data scientist, your objective is to

1. Find the current **supply to demand** ratio and identify the **products at risk** to be delivered
    - You are **safe** if you have stock >= 10% of the demand
    - You are **just matched** if you have stock equal to demand
    - You are **at risk** if your stock is less than the demand
2. Who are the **customers** that have **all their orders at risk**?
3. Find the new supply to demand ratio based on the **25% spike in demand**, and identify the products which will move to be **at risk in the future**
    - What are those products?
    - What is the difference ? How much more supply do you need to get out of risk?

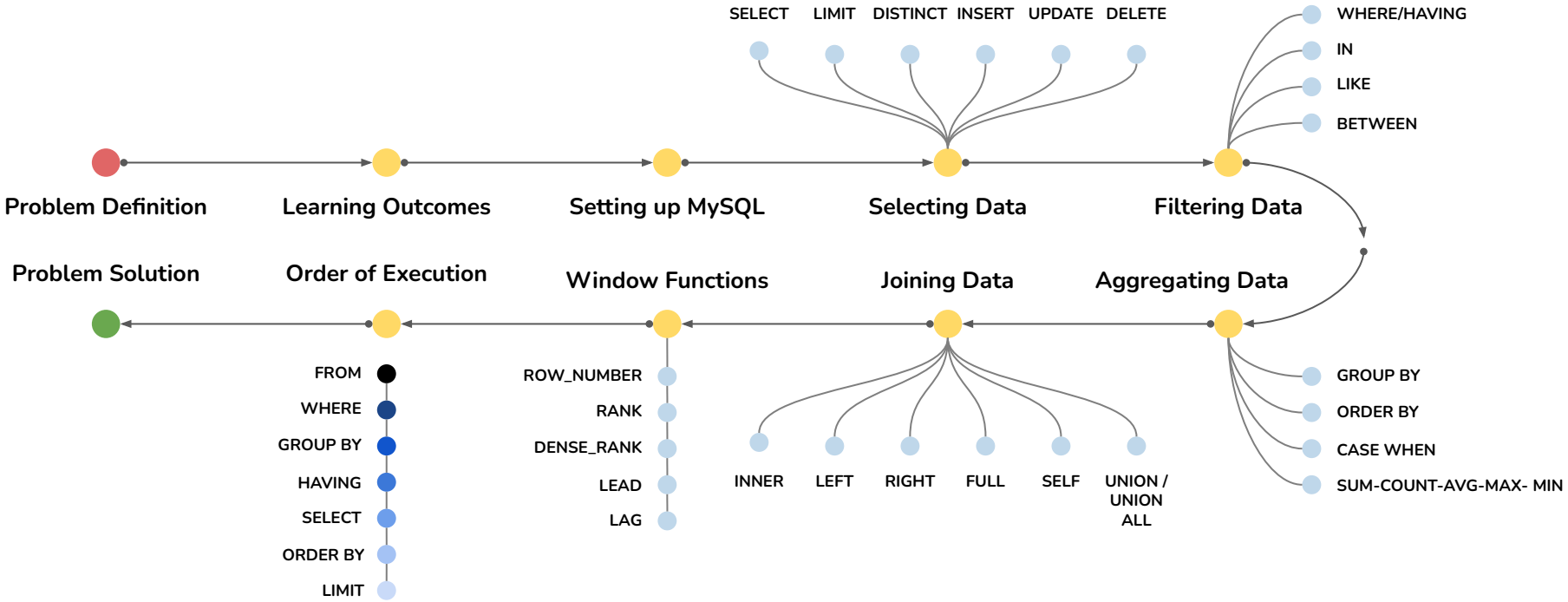
Learning Journey



Order of Execution in SQL



Summary


SELECT
LIMIT
DISTINCT
INSERT
UPDATE
DELETE
WHERE/HAVING
IN
LIKE
BETWEEN
Problem Definition
Learning Outcomes
Setting up MySQL
Selecting Data
Filtering Data
Problem Solution
Order of Execution
Window Functions
Joining Data
Aggregating Data
FROM
WHERE
GROUP BY
HAVING
SELECT
ORDER BY
LIMIT
ROW_NUMBER
RANK
DENSE_RANK
LEAD
LAG
INNER
LEFT
RIGHT
FULL
SELF
UNION / UNION ALL
GROUP BY
ORDER BY
CASE WHEN
SUM-COUNT-AVG-MAX- MIN

Great Learning

Happy Learning !