



Data Modeling and Architecture: **MLS-2 Case Study**

Problem Definition

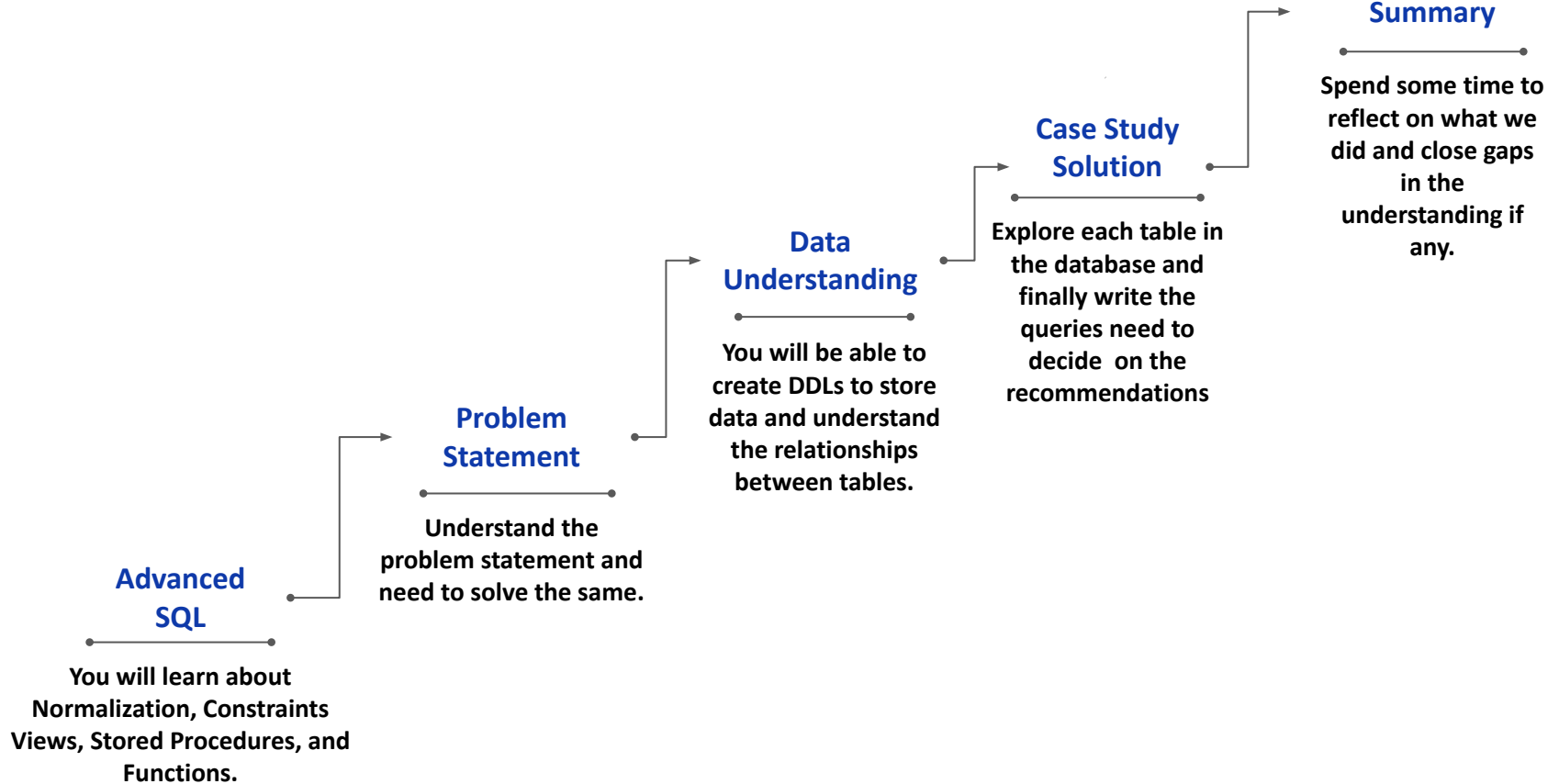
Business Context:

DSLBank's Managing Director has received a request from the Human Resource (HR) department regarding the hiring of more support representatives. The Support Team has reported that many of their employees (Support Representatives) are working overtime as more support queries are being logged. The M.D. has demanded a report to analyse the issue to permit or deny the request.

Our Objective:

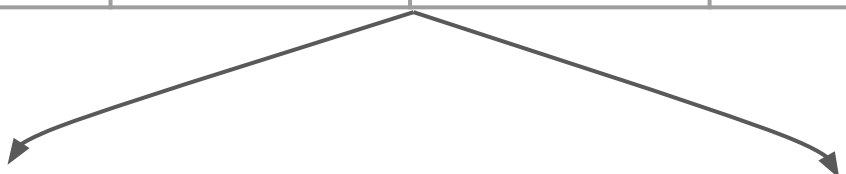
As part of the **Data and Analytics Team**, our goal is to **Architect a data pipeline in MySQL** to cater to all the questions asked by the Managing Director, by creating and maintaining a database through which we can ingest our data and finally create reusable tables that can be used to create a report that can convey the need for hiring more support representatives, whenever needed.

Learning Journey and Outcomes



Normalization

ID	Name	Department	Manager
1	Jack	10	Harry
2	Jim	10	Harry



ID	Name	Department
1	Jack	10
2	Jim	10

Department	Manager
10	Harry

Table 1

A	B	C	D

Select A, C, D

Table 2

E	F	G	H

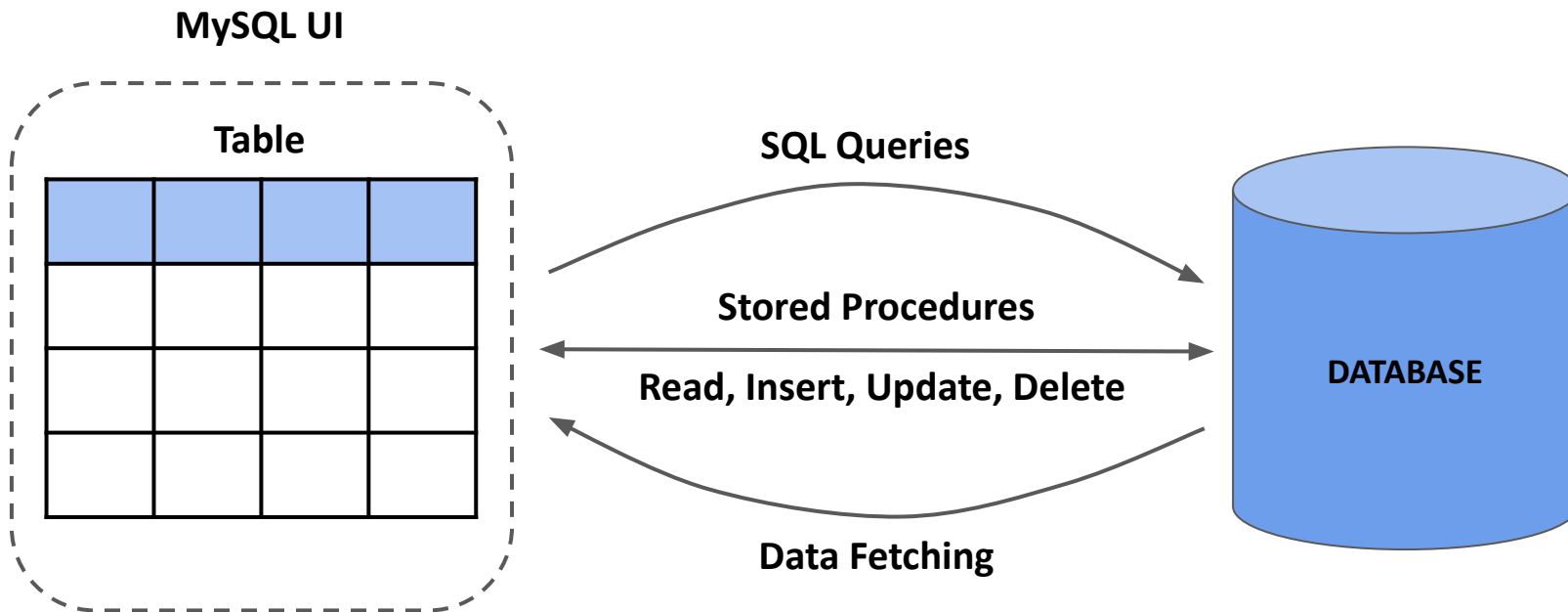
Select G, H

Apply Join

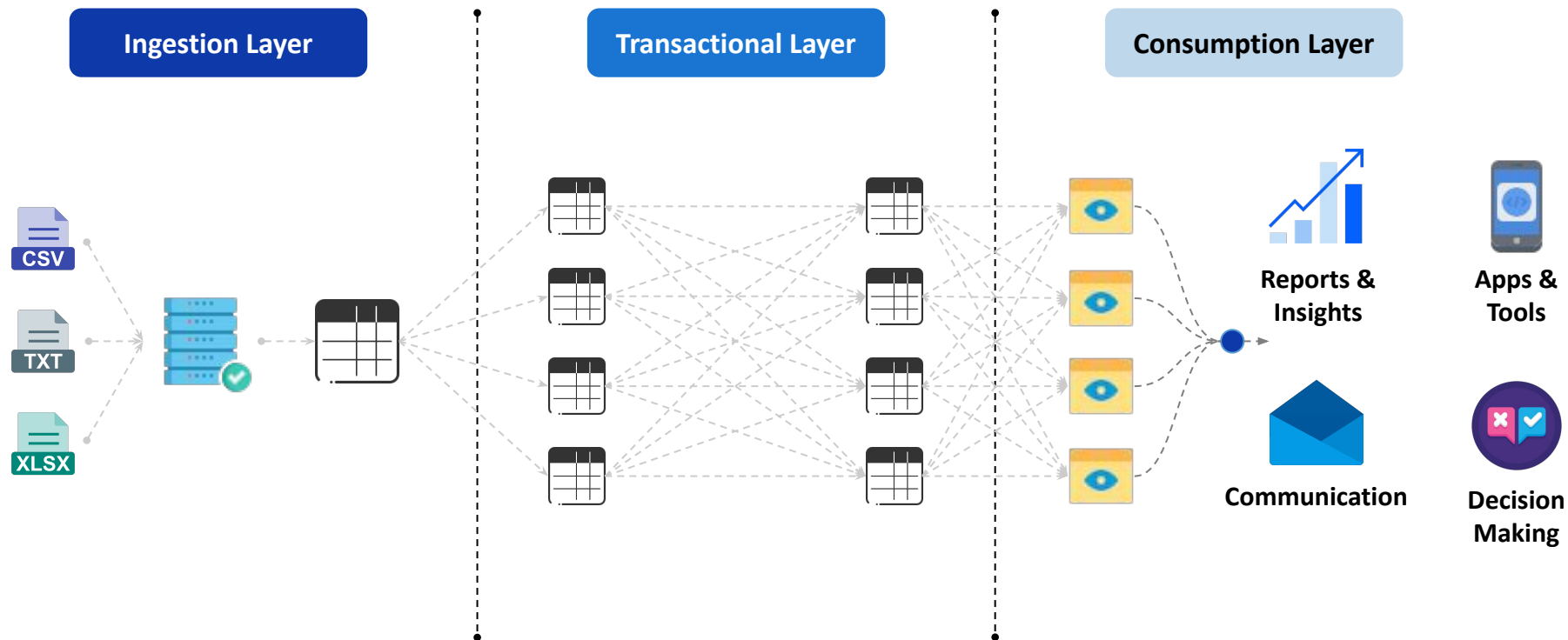
View

Restricting access to column
B from Table 1 and columns E
and F from Table 2

Stored Procedures



What does a typical **Data Pipeline** look like?



Few questions to be answered

What is the distribution of customers across states and cities?

Assuming 8 hours as expected working hours, how many employees are working overtime?

What is the total call duration of each employee?

How many Support Representatives are currently employed?

List of all support queries having the call duration more than 8 minutes

Which specific city and state has reported more number of support queries?

What are the different type of support queries?

What are the different types of support queries?

How many Customers are using our services so far, across Countries?

Which category of support query is mostly being logged?

How many customers have raised more than 3 support queries?

Which branch has reported more queries related to Home Loan?

How many support queries each employee has answered?

What are the different support query categories and count of each?

How many support queries have been in work for more than 3 days?

Is there any specific branch where more queries have been logged?

Questions related to Support Queries

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Questions related to Employees

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Questions related to Branch

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Happy Learning !

