Module 2 – Schema Design and Data Modelling

Case Study - 1

Business Requirement

An automation giant was storing data of their products in many databases and data warehouses with different data structures. This sometimes also led to storage of repeated or outdated information.

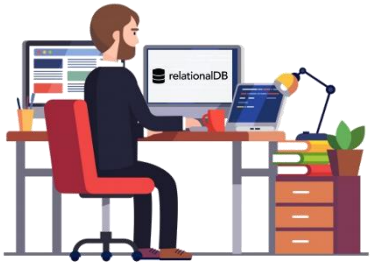
To get rid of this redundant information and to save time, storage memory, and cost of maintenance, the organization invested in creating a personalized server to be employed as master data storage.

Key Issues

- Data must be integrated from various applications in JSON format.
- Different data modelling techniques are used to store data in different databases.
- Storing redundant data resulted in improper utilization of resources.

Additional Information

- The Personalized server must be created and deployed at minimal cost and in stipulated period.
- Two data administrators shared their plans:
  - **Data Administrator A's plan:**

	Database Type	Relational (Oracle)
	Employees required	20
	Time Required	14 - 15 months
	Resource Requirement	3 instances
	Performance	3 iteration for performance enhancement

- **Data Administrator B's Plan:**

	Database Type	NoSQL Database (Mongo DB)
	Employees required	3 - 4
	Time Required	4 months
	Resource Requirement	1 instance
	Performance	Official drivers can be installed to integrate it with other applications

Approach to Solve

- List the advantages and disadvantages of both the plans and select one plan to implement
- Choose a data model after analyzing the source files provided to you with this case study
- Select appropriate data model and create your personalized server
- Create collections in your database
- Insert records in each collection