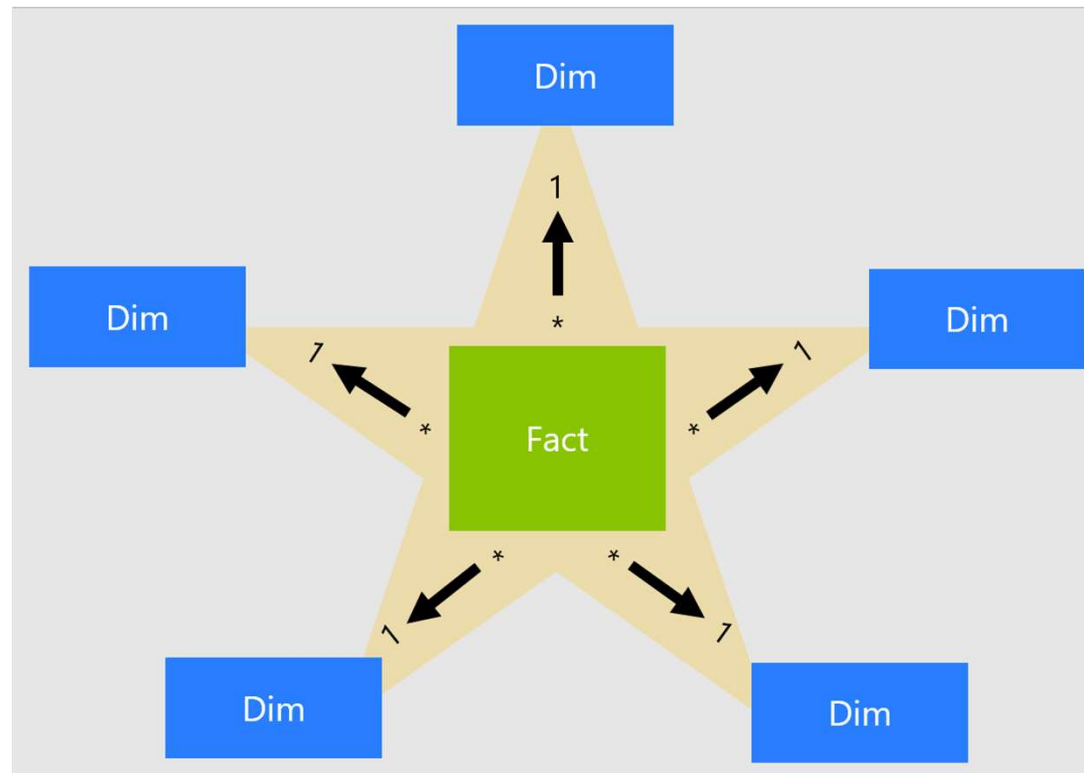# Data Modelling

Zyead Ahmed.
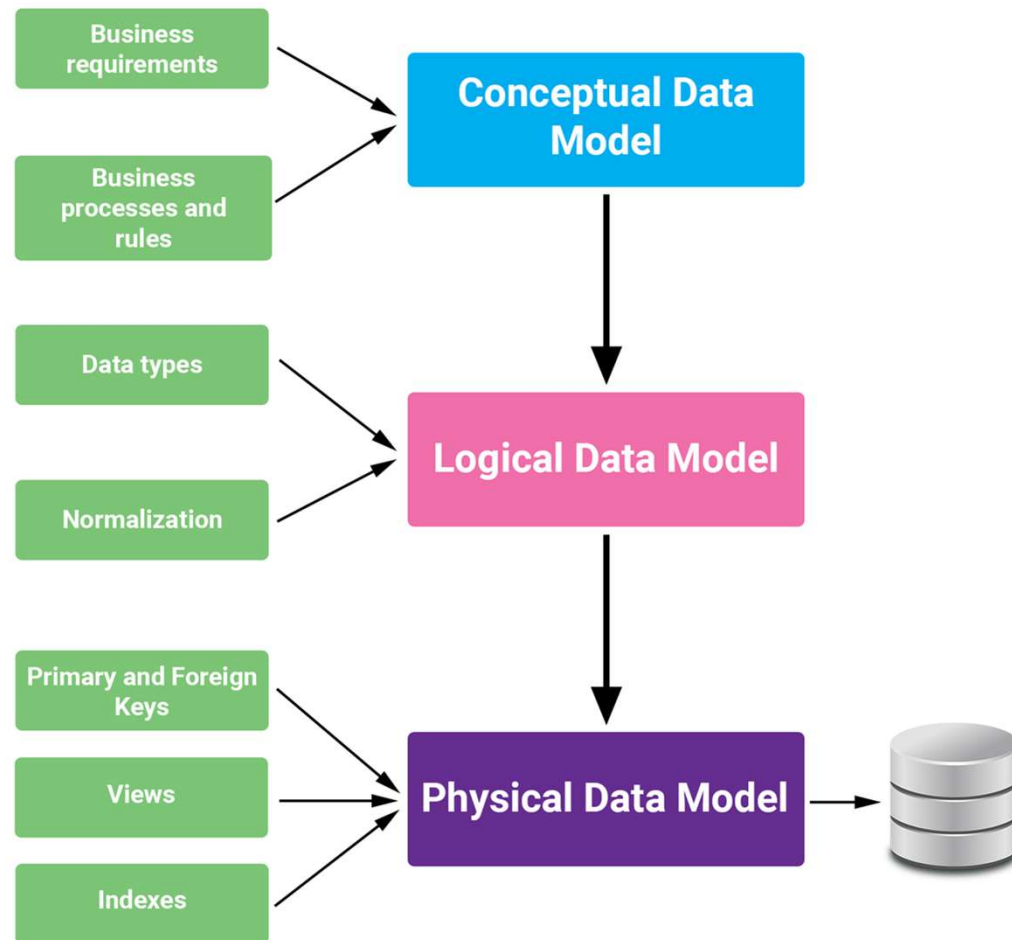**Aspiring To Learning Data Engineer.**
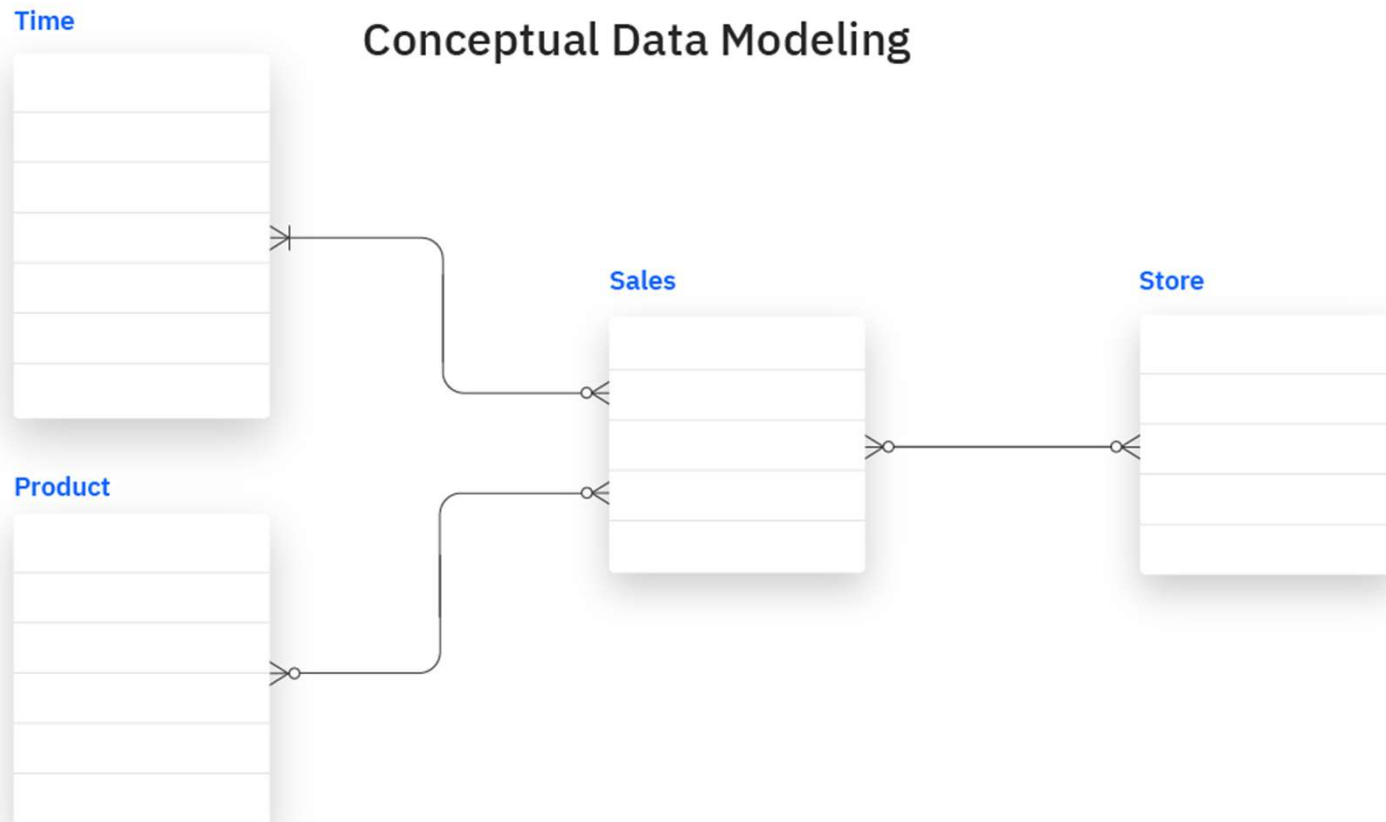
Data Modelling

Data modeling is the process of creating a visual representation of either a whole information system or parts of it to communicate connections between data points and structures.

Data Modelling Steps

Business requirements → Conceptual Data Model

Business processes and rules → Conceptual Data Model

Conceptual Data Model → Logical Data Model

Data types → Logical Data Model

Normalization → Logical Data Model

Logical Data Model → Physical Data Model

Primary and Foreign Keys → Physical Data Model

Views → Physical Data Model

Indexes → Physical Data Model

Data Modelling Steps

Conceptual Data Modeling

Time

Product

Sales

Store

Data Modelling Steps

Logical Data Modeling

Time

Date
Date description
Month
Month description
Year
Week
Week description

Product

Product ID
Product description
Category
Category description
Unit price
Created

Sales

Product ID (FK)
Store ID (FK)
Date (FK)
Items sold
Sales amount

Store

Store ID
Product description
Region
Region name
Created

Data Modelling Steps

Physical Data Modeling
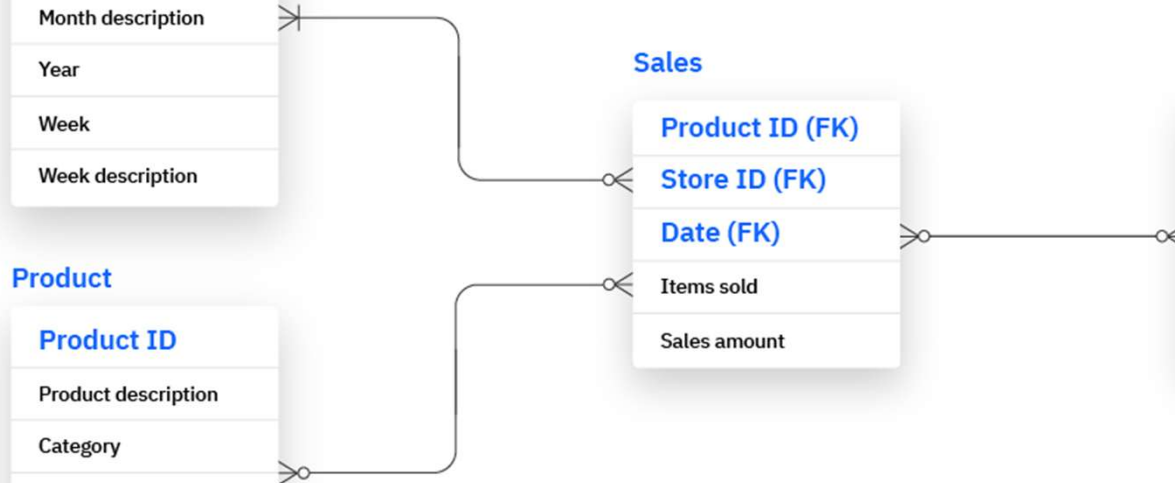
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Date_dec	Varchar(30)
Month_ID	Integer
Month_desc	Varchar(30)
Year	Integer
Week_ID	Integer
Week_desc	Varchar(30)

DIM_Product

Product_ID	Integer
Prod_Dec	Varchar(30)
Category_ID	Integer
Category_desc	Varchar(30)
Unit_price	Float
Created	Date

Fact_Sales

Product_ID	Integer
Store_ID	Integer
Date_ID	Integer
Items_sold	Integer
Sales_amount	Float

DIM_Store

Store_ID	Integer
Store_desc	Varchar(30)
Region_ID	Integer
Region_name	Varchar(30)
Created	Date