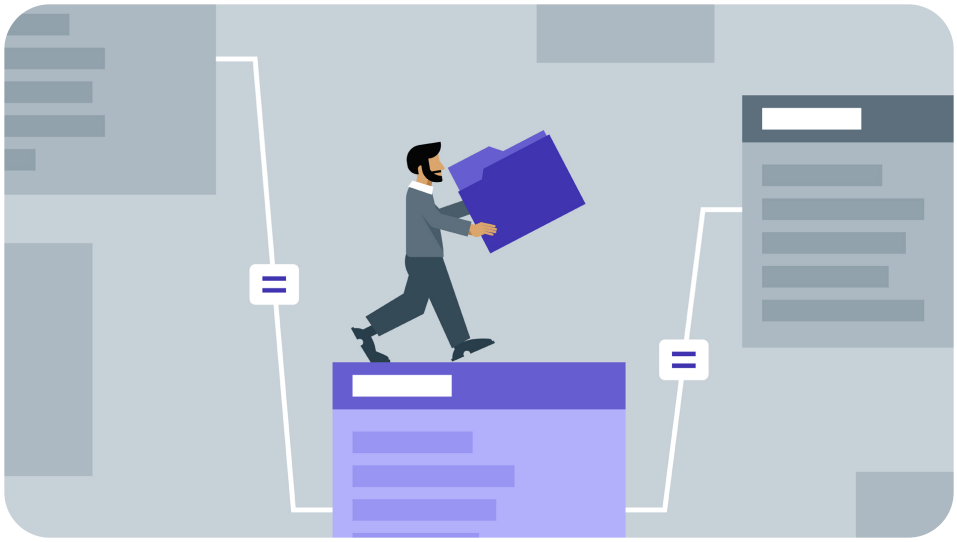
Lesson:

Relationship Data Model

PW SKILLS

In this lecture, let's have a look at the relationship data model, a brief history, its significance, and a real-life example.



Relationship Data Model.

While discussing the data models in the previous module, we had a look at different data models. One of the most important data models was the relationship data model.

Relationship data model by the name itself conveys that it can be applied for data with relationships and represents the relationship between data entities.

Let's now have a look at a company database.

Employee Table

Empno (PK)	Ename	Job	Deptno (FK)
101	A	Salesman	10
102	B	Manager	10
103	c	Manager	20

Department Table

Deptno (PK)	dname	loc
10	Sales	Chicago
20	Sales	Chicago
30	Finance	New York

In the above example we can see that we have two tables one is for employees and the other is for departments in the company. Even if the data is present in two separate tables they are not totally independent.

The relationship between the two tables is every employee in the organization must be a part of at least one department and every department must have at least one employee.

Here in the above example, the data is represented as a table with rows and columns. Each table stores data of one entity and has there exists some relationship between the data in the two tables. This is what is called a relationship data model. It is important to note that in some places tables are often referred to as relations.

Looking at the history of the relationship data model was introduced by Edgar F. Codd in 1969, and is now the most widely used data model in modern databases.

The relationship data model focuses on two things:

1. Tables.
2. Relationships.

The relationship data model focuses on the structure and organization of tables and the relationships between them. This is done to accurately represent the relationships and dependencies between different entities.

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Deptno (PK)	dname	loc
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If we look at the above table we can see that both the tables and the relationships between them are very much clear. Each entity has its own table. In this case, the entity employee has the employee table which stores some data about the employees. In the other table, we have data about another entity which is the department.

Both the employee table and department table are interconnected with the department number. The department number here in this example is the relationship between the employee table and the department table.