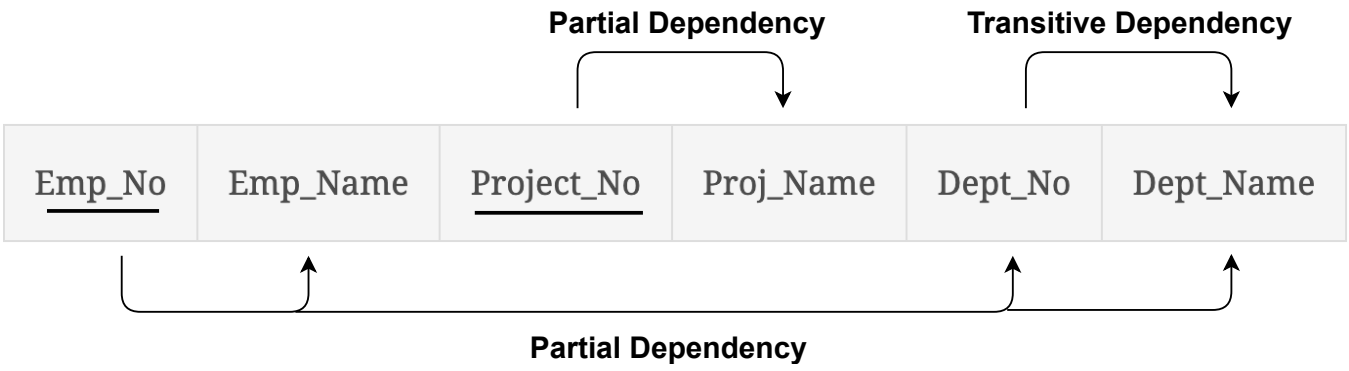
Dependency Diagrams

In this lesson, we will look at the diagrammatic representation of functional dependencies.

WE'LL COVER THE FOLLOWING

Dependency diagrams

A dependency diagram illustrates the various dependencies that might exist in a **non-normalized** table. A non-normalized table is one that has data redundancy in it. This is illustrated below:



An example of a dependency diagram

As we can observe from the table above, `Project_No` and `Emp_No`, combined, are the primary key (as the combination of these two attributes can be used to identify each record uniquely).

The following dependencies can be identified from this table:

Partial dependencies:

- `Project_No` → `Proj_Name`

Reason: Since the name of the project is only dependent upon part of the multi-attribute PK, i.e., Project_No, this results in partial dependency.

- `Emp_No` → `Emp_Name`, `Dept_No`

Reason: Similar to the example above, we see that these two attributes only depend on part of the composite key and not the whole.

Transitive dependency:

- `Dept_No` → `Dept_Name`

Reason: Since a non-key attribute (`Dept_Name`) is dependent on another non-key attribute (`Dept_No`), this results in a transitive dependency.

We have highlighted some of the dependencies that exist in this table, but there are many more.

The next lesson will include a short quiz to test your knowledge of functional dependencies.