

1. **What is primary key?**
2. **What is Foreign Key and why it is needed?**

A **Primary Key** is a column (or a set of columns) in a database table that uniquely identifies each row in that table. It ensures that no two rows have the same value for the primary key and that the column cannot contain NULL values.

Key Features of a Primary Key:

1. **Uniqueness:** Each value in the primary key column must be unique across all rows in the table.
2. **Non-Nullable:** Primary key columns cannot contain NULL values.
3. **Single Key Per Table:** Each table can have only one primary key.

A **Foreign Key** is a column (or a set of columns) in one table that establishes a relationship with the **Primary Key** in another table. It is used to enforce referential integrity and define how the tables are related.

Key Features of a Foreign Key:

1. **Links Tables:** It connects two tables, usually a parent and child table.
2. **Ensures Data Validity:** The foreign key values in the child table must match the primary key values in the parent table or be NULL.
3. **Referential Integrity:** Prevents actions that would destroy the link between tables, such as deleting or updating a referenced row.

Why is a Foreign Key Needed?

1. **To Maintain Data Integrity:** Ensures that data in the child table corresponds to valid data in the parent table.