

# Database Management System Keys

Course Code: CIS231

Module Title: Database Management System

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# What are Keys?

A DBMS key is an attribute or set of an attribute which helps you to identify a row(tuple) in a relation(table).

They allow us to find the relation between two tables.

# Why do we need Keys?

- Keys help us to identify any row of data in a table. In a real-world application, a table could contain thousands of records.
- Moreover, the records could be duplicated. Keys ensure that you can uniquely identify a table record despite these challenges.
- Allows us to establish a relationship between and identify the relation between tables

# Primary Key

An attribute in a table which helps to uniquely identifies a row or a record in that table is known as primary key.

This attribute cannot be a duplicated. The same value should not appear more than once in the table.

# Example of a Primary Key



A red circle highlights the 'StudID' column header, and a blue arrow points from the title 'Example of a Primary Key' to this circle, indicating that 'StudID' is the primary key for this table.

StudID	Roll No	First Name	LastName	Email
1	11	Tom	Price	abc@gmail.com
2	12	Nick	Wright	xyz@gmail.com
3	13	Dana	Natan	mno@yahoo.com

# Foreign Key

When a primary key of a table is used in another table to create a relationship to navigate data between them is known as a foreign key.

# Example of a Foreign Key-1

DeptCode	DeptName
001	Science
002	English
005	Computer

  

Teacher ID	Fname	Lname
B002	David	Warner
B017	Sara	Joseph
B009	Mike	Brunton

In this example, we have two table, teach and department in a school. However, there is no way to see which search work in which department.

In this table, adding the foreign key in Deptcode to the Teacher name, we can create a relationship between the two tables.

# Example of a Foreign Key-2

In this table, adding the foreign key in Deptcode to the Teacher name, we can create a relationship between the two tables.



Teacher ID	DeptCode	Fname	Lname
B002	002	David	Warner
B017	002	Sara	Joseph
B009	001	Mike	Brunton



# Super Key

A super key is a group of attributes which uniquely identifies a row or record of a table.

This is usually required when all of the attribute values found are duplicated and no single attribute can be set uniquely to identify a row of a table.

# Example of a Super Key

EmpSSN	EmpNum	Empname
9812345098	AB05	Shown
9876512345	AB06	Roslyn
199937890	AB07	James