



KEYS IN SQL

keys

Keys play an important role in the relational database.

- It is used to uniquely identify any record or row of data from the table. It is also used to establish and identify relationships between tables.

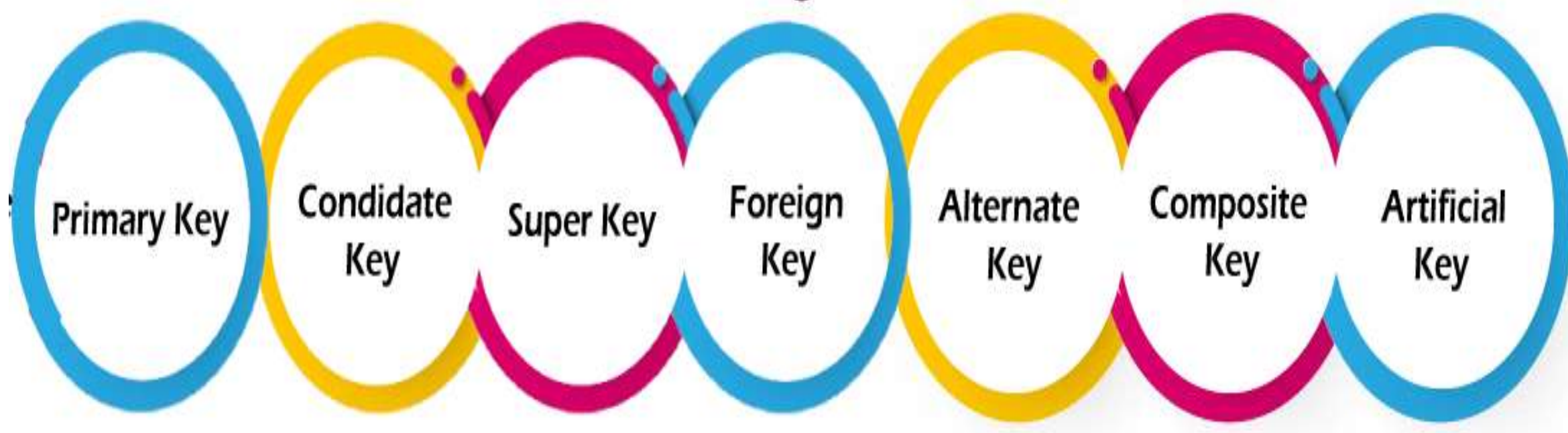


Why do we need Keys ?

Key are used to establish and identify relation between tables. They also ensure that each record within a table can be uniquely identified by combination of one or more fields within a table.

Types of Keys

Keys



Primary Key

- The **PRIMARY KEY** constraint uniquely identifies each record in a table.
- Primary key must contain UNIQUE values,
- A table can have only ONE primary key; and in the table, this primary key can consist of single or multiple columns (fields).
- It can identify only one tuple (a record) at a time.
- It has no duplicate values,
- It cannot be NULL.

Candidate Key

The minimal set of attributes that can uniquely identify a tuple is known as a **candidate key**.

- It is a minimal super key.
- It must contain unique values.
- It cannot contain NULL values.
- Every table must have at least a single candidate key

Super Key

Super key is an attribute set that can uniquely identify a tuple. A super key is a superset of a candidate key.

- Adding zero or more attributes to the candidate key generates the super key.
- A candidate key is a super key but vice versa is not true.
- Super Key values may also be NULL.

Foreign Key

- A **FOREIGN KEY** is a field (or collection of fields) in one table, that refers to the **PRIMARY KEY** in another table.
- The table with the foreign key is called the child table, and the table with the primary key is called the referenced or parent table.
- It combines two or more relations (tables) at a time.

Alternate key

The candidate key other than the primary key is called an **alternate key**.

- All the keys which are not primary keys are called alternate keys.
- It is a secondary key.
- It contains two or more fields to identify two or more records.
- These values are repeated.

Composite key

Whenever a primary key consists of more than one attribute, it is known as a **composite key**. This key is also known as Concatenated Key.

- It acts as a primary key if there is no primary key in a table.
- Two or more attributes are used together to make a composite key.

Artificial key

The key created using arbitrarily assigned data are known as **artificial keys**.

- These keys are created when a primary key is large and complex and has no relationship with many other relations.
- The data values of the artificial keys are usually numbered in a serial order.

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