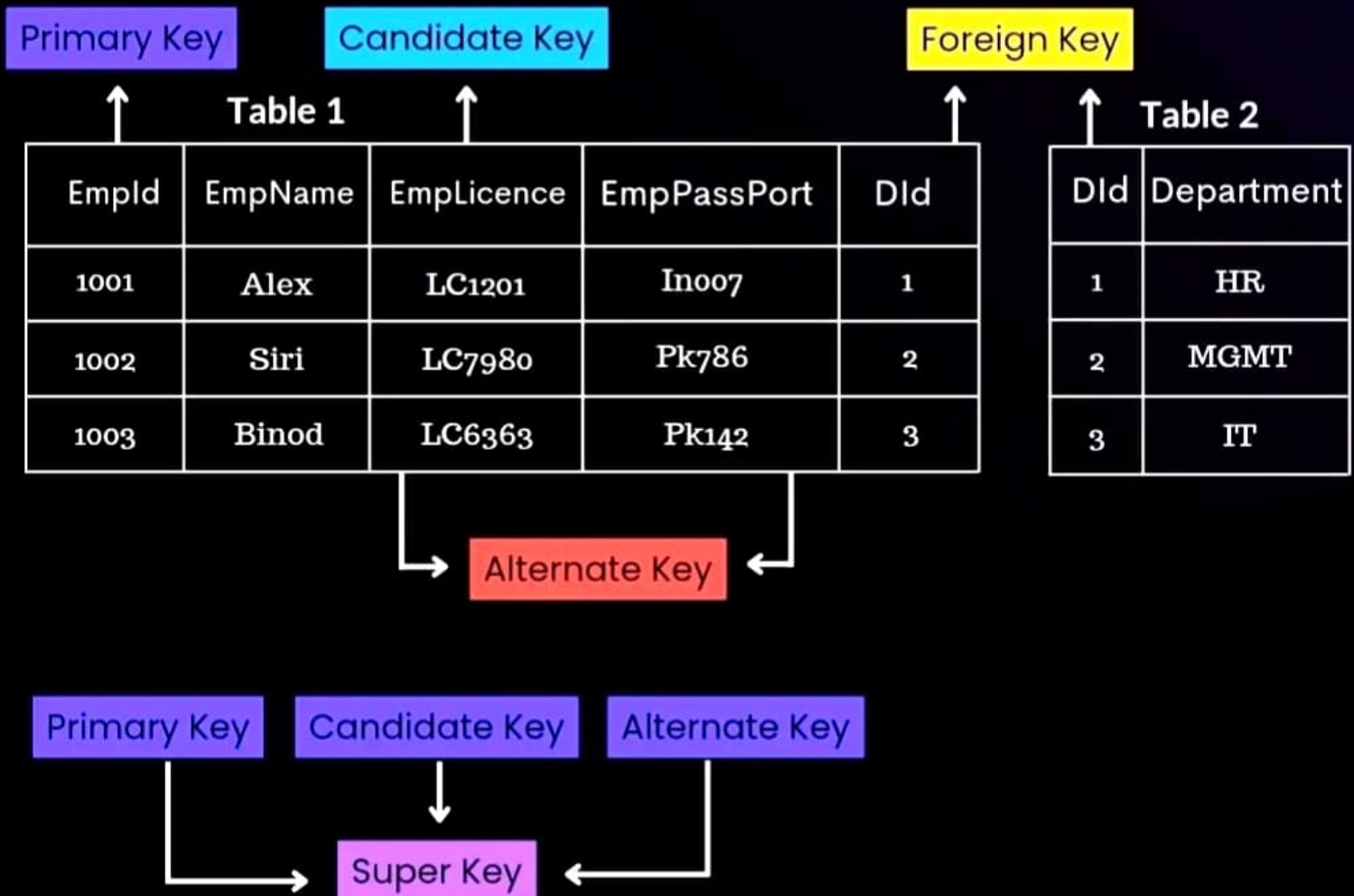# Types Of Keys
# In SQL

# What is a KEY in SQL?

A key in SQL is an attribute or a set of attribute which helps you uniquely identify a record or a row of data in a relation/table.

# Types Of Key:

In This post, we are going to see five common types of keys available in SQL.

| Primary Key | | Candidate Key | | Foreign Key | |

**Table 1**

| EmpId | EmpName | EmpLicence | EmpPassPort | DId |
|-------|---------|------------|-------------|-----|
| 1001 | Alex | LC1201 | In007 | 1 |
| 1002 | Siri | LC7980 | Pk786 | 2 |
| 1003 | Binod | LC6363 | Pk142 | 3 |

**Table 2**

| DId | Department |
|-----|------------|
| 1 | HR |
| 2 | MGMT |
| 3 | IT |

Alternate Key

Primary Key    Candidate Key    Alternate Key

Super Key

# 1. Primary Key:

A primary key is a table attribute or column that identify every record present in a table uniquely.

There can be only one primary key attribute in a table and primary key column element can;t be same or has Null value.

| EmpId | EmpName | EmpLicence | EmpPassPort | DId |
|-------|---------|-----------|-------------|-----|
| 1001 | Alex | LC1201 | In007 | 1 |
| 1002 | Siri | LC7980 | Pk786 | 2 |
| 1003 | Binod | LC6363 | Pk142 | 3 |

In the above table, EmpId is the primary key.

## 2. Super Key:

It is the set of columns that helps to identify rows in a table uniquely.

Super Key

| EmpId | EmpName | EmpLicence | EmpPassPort |
|-------|---------|------------|-------------|
| 1001 | Alex | LC1201 | In007 |
| 1002 | Siri | LC7980 | Pk786 |
| 1003 | Binod | LC6363 | Pk142 |

## 3. Candidate Key:

A candidate key is a column or a set of columns the can qualify as a primary key in the database.

There can be multiple candidate keys in a table and only one candidate key can qualify as the primary key.

The candidate key other than the primary key is called an Alternate Key.

Candidate Key

| EmpId | EmpName | EmpLicence | EmpPassPort |
|-------|---------|------------|-------------|
| 1001 | Alex | LC1201 | In007 |
| 1002 | Siri | LC7980 | Pk786 |
| 1003 | Binod | LC6363 | Pk142 |

## 4. Composite Key:

It is a set of two or more attributes that helps to identify each tuple in a table uniquely.
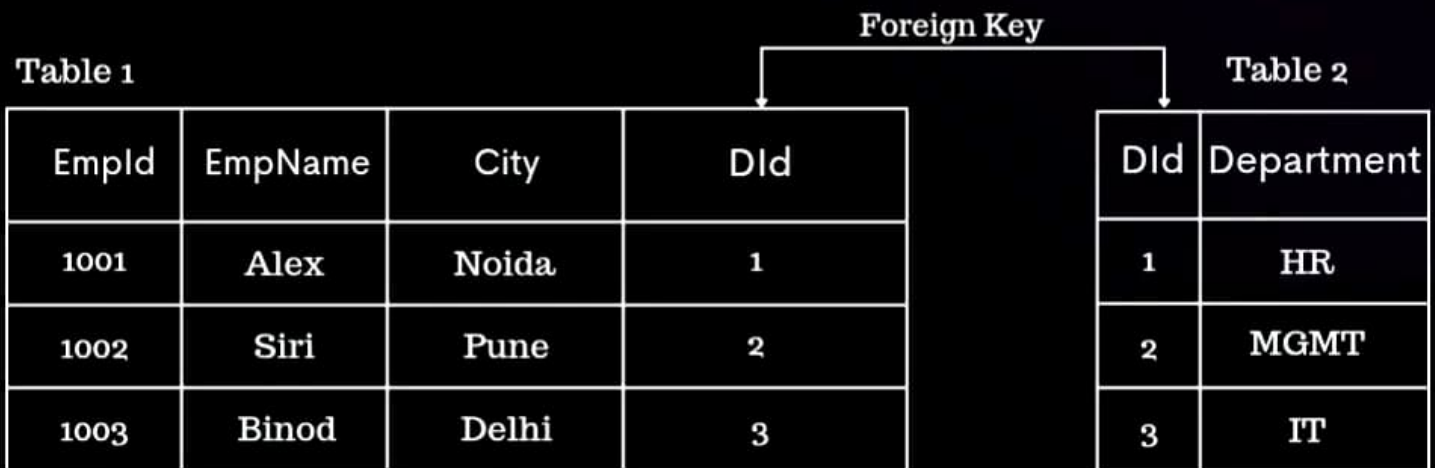
Any key such as super, primary, or candidate key can be called a composite key if it has more than one attribute.

| EmpId | EmpName | City | EmpPassPort |
|-------|---------|------|-------------|
| 1001 | Alex | Noida | In007 |
| 1002 | Siri | Pune | Pk786 |
| 1003 | Binod | Delhi | Pk142 |

Composite Key (EmpName + City)

## 5. Foreign Key:

A foreign key is a key used to link two tables together. It is sometimes also called as referencing key.

Foreign Key

Table 1

| EmpId | EmpName | City | DId |
|-------|---------|-------|-----|
| 1001 | Alex | Noida | 1 |
| 1002 | Siri | Pune | 2 |
| 1003 | Binod | Delhi | 3 |

Table 2

| DId | Department |
|-----|------------|
| 1 | HR |
| 2 | MGMT |
| 3 | IT |

DId ( Department ID) is used to join two tables.