**Database constraints**

Constraints are used to enforced rules on data in tables. They help maintain the data integrity and ensure that the database follow some certain rule which inserting data in table or it allow to not insert invalid data in tables.

We can use the contains while creating the table as well as after created table with help of alter command we can apply.

1. Not null : by default every column allow null value. If we want value for that particular column then we need to use not null constraints.

Syntax

columnName datatype not null, this column doesn’t allow null value we need to insert the record mandatory.

1. Key : while creating or planning to create the table. We can use key concept. Key mainly we can use only single column or many columns to find the records.
   1. Super : a single column/attribute or combination of more than one columns/attribute which help to make the records as unique in a table.

Faculty or teacher, students, exam, question, account, employee etc.

FI, Fname, lname,age, gender, phonumber, education, subject, city, state, accnnumber, bankname, pancard number, aadhar card number etc.

Super keys

Possibility set of column or single column to make unique between two records or tuple.

FI

PhoneNumber

Account number,

Pan card number

Aadhar car number

FI,Fname,

Accounumber,FName,

Aadhar card, FName

FI,Accno,PanCardNumber,Aadhar card number etc

Super key is a concept.

Candidate key : it can be defined as minimum super keys.

FI, PK it doesn’t allow null value.

PhoneNumber unique not null

PanCardNumber unique

Aadhar card number unique not null

AccountNumber unique

Emailid unique not null

Candidate key is type of super key but minimum super keys.

Candidate key also concept.

Primary key: Primary key is a type of candidate key which we can use while creating table. But in single table we can make any one of the column as PK. The column Pk doesn’t allow null value means we can’t leave blank. The column pk doesn’t allow duplicate records.

We use Pk concept while creating table in database.

Syntax

Columnname datatype primary key

Unique key : if column contains unique key that column doesn’t allow duplicate records. In single table we can create more than one column as unique key. By default unique key allow null value means we can leave blank.

**Syntax**

Columnname datatype unique

We can use unique key with not null combination

Columnname datatype unique not null

Composite primary key : while creating PK we can combine more than one column as PK.

Company Details.

**PK(Composite Primary key)**

ProductName CompanyName Price

A X 10

A Y 20

A Z 30

B X 15

B Y 25

B Z 30

A X 45

Each column can allow duplicate value but their combination must be unique.

Alternate key : it is a type of candidate key expect pk to find the records. Alternate key is a concept.

Secondary key : The attribute is not even super key but which help to find the record but not unique.

Surrogate key : this key help us to auto generate numbers. Generally we use with PK.

Ordered int primary key auto\_increment,