**DDL Commands**

CREATE DATABASE campusx;

DROP DATABASE campusx;

CREATE DATABASE IF NOT EXISTS campusx;

DROP DATABASE IF EXISTS campusx

DDL commands for Tables

Syntax:

CREATE TABLE table\_name(

col\_name data\_type,

col\_name data\_type,

col\_name data\_type,

)

CREATE TABLE users(

user\_id INTEGER,

name VARCHAR(255),

email VARCHAR(255),

password VARCHAR(255)

)

TRUNCATE TABLE users;

DROP DATABASE IF EXISTS users

Ways to put constraints

CREATE TABLE users(

user\_id INTEGER NOT NULL,

name VARCHAR(255) NOT NULL,

email VARCHAR(255) NOT NULL UNIQUE,

password VARCHAR(255) NOT NULL

)

CREATE TABLE users(

user\_id INTEGER NOT NULL,

name VARCHAR(255) NOT NULL,

email VARCHAR(255) NOT NULL,

password VARCHAR(255) NOT NULL

CONSTRAINT users\_email\_unique UNIQUE (name, email)

)

* **Create a primary key**

CREATE TABLE users(

user\_id INTEGER NOT NULL PRIMARY KEY,

name VARCHAR(255) NOT NULL,

email VARCHAR(255) NOT NULL,

password VARCHAR(255) NOT NULL,

CONSTRAINT user\_email\_unique UNIQUE (name, email)

)

OR WE CAN DO LIKE THIS

CREATE TABLE users(

user\_id INTEGER NOT NULL,

name VARCHAR(255) NOT NULL,

email VARCHAR(255) NOT NULL,

password VARCHAR(255) NOT NULL,

CONSTRAINT user\_email\_unique UNIQUE (name, email),

CONSTRAINT user\_pk PRIMARY KEY (user\_id)

)

* **Create a CHECK constraint**

CREATE TABLE students(

student\_id INTEGER PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(50) NOT NULL,

age INTEGER CHECK (age > 6 and age < 25)

)

Or we can do it like this

CREATE TABLE students(

student\_id INTEGER PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(50) NOT NULL,

age INTEGER,

CONSTRAINT student\_age\_check CHECK (age < 6 and age < 25)

)

* **Create a DEFAULT constraint**

CREATE TABLE ticket(

ticket\_id INTEGER PRIMARY KEY,

name VARCHAR(255) NOT NULL,

travel\_date DATETIME DEFAULT CURRENT\_TIMESTAMP

)

* **Create a FOREIGN KEY constraint**

CREATE TABLE customers(

cid INTEGER PRIMARY KEY,

…….

)

CREATE TABLE orders(

order\_id INTEGER PRIMARY KEY,

cid INTEGER NOT NULL,

order\_date DATETIME NOT NULL DEFAULT CURRENT\_TIMESTAMP,

CONSTRAINT orders\_fk FOREIGN KEY (cid) REFERENCES customers(cid)

)

**Referential Actions**

* If 2 tables are related via a foreign key. Then making changes to one table, how will the other table responds.

**RESTRICT**

Here (in Create a FOREIGN KEY constraint) we have created two tables. If we try to delete the customers table. We will not be able to because its primary key is being used in the orders. Hence integrity will be saved.

**CASCADE**

While in CASCADE (see below code), when we create orders like this and try to update the cid of customers. Since, it is CASCADE it will update in the orders also. Also when we try to delete any customer from customers table. It will let us delete and will also delete from the orders table.

CREATE TABLE orders(

order\_id INTEGER PRIMARY KEY,

cid INTEGER NOT NULL,

order\_date DATETIME NOT NULL DEFAULT CURRENT\_TIMESTAMP,

CONSTRAINT orders\_fk FOREIGN KEY (cid) REFERENCES customers(cid)

ON DELETE CASCADE

ON UPDATE CASCADE

)

**SET NULL**

CREATE TABLE orders(

order\_id INTEGER PRIMARY KEY,

cid INTEGER NOT NULL,

order\_date DATETIME NOT NULL DEFAULT CURRENT\_TIMESTAMP,

CONSTRAINT orders\_fk FOREIGN KEY (cid) REFERENCES customers(cid)

ON DELETE SET NULL

ON UPDATE SET NULL

)

This code did not work for some reason

**SET DEAFULT**

**ALTER TABLE commands**

**ADD Columns**

ALTER TABLE customers ADD COLUMN password VARCHAR(255) NOT NULL

* We can enter any column after or before any particular column by using the AFTER and BEFORE keywords.

ALTER TABLE customers ADD COLUMN surname VARCHAR(255) NOT NULL AFTER name

ALTER TABLE customers ADD COLUMN surname VARCHAR(255) NOT NULL Before name

* If you would like to add 2 columns at a time then use this

ALTER TABLE customers

ADD COLUMN pan\_number VARCHAR(255) AFTER surname,

ADD COLUMN joining\_date DATETIME NOT NULL DEFAULT CURRENT\_TIMESTAMP

**DELETE columns**

ALTER TABLE customers DROP COLUMN pan\_number

* For dropping 2 at a time

ALTER TABLE customers

DROP COLUMN password,

DROP COLUMN joining\_date

**MODIFY columns**

When we want to change something in the existing column

ALTER TABLE customers MODIFY COLUMN surname INTEGER

**Editing and Deleting Constraints**

* Add

Adding a new column

ALTER TABLE customers ADD COLUMN age INTEGER NOT NULL

Adding a constraint

ALTER TABLE customers ADD CONSTRAINT customer\_age\_check CHECK (age > 13)

* Delete

ALTER TABLE customers DROP CONSTRAINT customer\_age\_check

First delete and then Create a new one if you want to edit

ALTER TABLE customers ADD CONSTRAINT customer\_age\_check CHECK (age > 6)

* Edit (NOT POSSIBLE)