## \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## DDL - Data Definition Language

## \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

CREATE SCHEMA sql\_exercises;

USE sql\_exercises;

show tables;

###

### CREATE table

###

CREATE TABLE employee

( employee\_id INT PRIMARY KEY,

emp\_name VARCHAR(50) NOT NULL,

email varchar(50)

);

show tables;

select \*

from employee;

describe employee;

show tables;

DESCRIBE employee;

DROP TABLE employee;

DESCRIBE employee;

drop table employee;

# Unique key and Default

CREATE TABLE employee

( employee\_id INT PRIMARY KEY,

emp\_name VARCHAR(50) NOT NULL,

email varchar(50),

national\_identity\_number VARCHAR(20) NOT NULL UNIQUE,

salary INT NOT NULL,

department\_id INT DEFAULT 1

);

select \* from employee;

DESCRIBE employee;

INSERT INTO employee (employee\_id, emp\_name, email, national\_identity\_number,

salary, department\_id)

VALUES (1, 'abc', 'abc@company.com', 'A-123', 10000, 20);

SELECT \*

FROM employee;

INSERT INTO employee (employee\_id, emp\_name, email, national\_identity\_number,

salary, department\_id)

VALUES (2, 'bcd', 'bcd@company.com', 'B-123', 10000, 20);

INSERT INTO employee (employee\_id, emp\_name, email, national\_identity\_number,

salary, department\_id)

VALUES (3, 'xyz', 'bcd@company.com', 'A-234', 10000, 20);

INSERT INTO employee (employee\_id, emp\_name, email, national\_identity\_number,

salary)

VALUES (4, 'bcd', 'bcd@company.com', 'B-234', 10000);

SELECT \* FROM employee;

DROP TABLE employee;

# Composite Primary key

CREATE TABLE marksheet (

student\_id INT NOT NULL,

subject varchar(20) NOT NULL,

attempt\_number INT NOT NULL,

marks\_scored INT NOT NULL,

total\_marks INT NOT NULL,

PRIMARY KEY (student\_id, subject, attempt\_number) );

DESCRIBE marksheet;

# Define Foreign key

CREATE TABLE department (

department\_id INT PRIMARY KEY,

department\_name VARCHAR(20) NOT NULL);

CREATE TABLE employee (

employee\_id INT,

emp\_name VARCHAR(50) NOT NULL,

department\_id INT NOT NULL,

PRIMARY KEY (employee\_id),

FOREIGN KEY (department\_id) references department (department\_id));

DESCRIBE department;

DESCRIBE employee;

DROP TABLE employee;

DROP TABLE department;

# "CHECK" to validate values

CREATE TABLE employee (

employee\_id INT PRIMARY KEY,

emp\_name VARCHAR(50) NOT NULL,

emp\_type CHAR(1) CHECK (emp\_type = 'R' or emp\_type = 'C'),

salary INT NOT NULL);

INSERT INTO employee

VALUES (1, 'abc', 'R', 1000);

INSERT INTO employee

VALUES (2, 'bcd', 'C', 1000);

INSERT INTO employee

VALUES (3, 'cde', 'A', 1000);

DROP TABLE employee;

# "CHECK" to validate values (additional example)

CREATE TABLE employee

(

employee\_id INT PRIMARY KEY,

emp\_name VARCHAR(50) NOT NULL,

emp\_type CHAR(1),

salary INT NOT NULL,

CONSTRAINT c1\_emp\_type CHECK (emp\_type = 'R' or emp\_type = 'C'),

CONSTRAINT c1\_salary CHECK (salary>1000)

);

INSERT INTO employee

VALUES (1, 'abc', 'R', 1001);

INSERT INTO employee

VALUES (2, 'bcd', 'R', 1000);

DROP TABLE employee;

###

### ALTER TABLE

###

CREATE TABLE employee

(

employee\_id INT PRIMARY KEY,

emp\_name VARCHAR(50) NOT NULL,

email varchar(50),

national\_identity\_number VARCHAR(20) NOT NULL UNIQUE,

salary INT NOT NULL,

department\_id INT DEFAULT 1

);

INSERT INTO employee ( employee\_id, emp\_name, email, national\_identity\_number, salary, department\_id)

VALUES (1, 'abc', 'abc@company.com', 'A-123', 10000, 10);

SELECT \* FROM employee;

ALTER TABLE employee

ADD COLUMN career\_bandd CHAR(2) NOT NULL DEFAULT 'AA';

SELECT \* FROM employee;

ALTER TABLE employee

RENAME COLUMN career\_bandd TO career\_band;

ALTER TABLE employee

MODIFY COLUMN career\_band CHAR(2) NULL;

DESCRIBE employee;

ALTER TABLE employee

DROP COLUMN career\_band;

DESCRIBE employee;

SELECT \* FROM employee;

DROP TABLE employee;

# ALTER TABLE - PRIMARY KEY

CREATE TABLE employee

(

employee\_id INT NOT NULL,

emp\_name VARCHAR(50) NOT NULL PRIMARY KEY,

email varchar(50),

national\_identity\_number VARCHAR(20) NOT NULL UNIQUE,

salary INT NOT NULL,

department\_id INT DEFAULT 1

);

DESCRIBE employee;

ALTER TABLE employee

DROP PRIMARY KEY;

ALTER TABLE employee

ADD PRIMARY KEY (employee\_id);

DESCRIBE employee;

###

### TRUNCATE TABLE

###

# Insert rows to learn TRUNCATE

INSERT INTO employee ( employee\_id, emp\_name, email, national\_identity\_number, salary, department\_id)

VALUES (1, 'abc', 'abc@company.com', 'A-123', 10000, 10);

INSERT INTO employee (employee\_id, emp\_name, email, national\_identity\_number, salary, department\_id)

VALUES (2, 'bcd', 'bcd@company.com', 'A-234', 10000, 10);

SELECT \* FROM employee;

TRUNCATE TABLE employee;

SELECT \* FROM employee;

###

### DROP

###

DROP TABLE employee;

DROP DATABASE learning;

### END