Basics of SQL

CREATE DATABASE ORG;

SHOW DATABASES;

Use ORG;

CREATE TABLE Worker (

WORKER\_ID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

FIRST\_NAME CHAR(25),

LAST\_NAME CHAR(25),

SALARY INT (15),

JOINING\_DATE DATETIME,

DEPARTMENT CHAR(25)

);

INSERT INTO Worker

(WORKER\_ID,FIRST\_NAME,LAST\_NAME,SALARY,JOINING\_DATE,DEPARTMENT) VALUES

(001,'Monika','Arora', 100000, '14-02-20 09.00.00','HR'),

(002, 'Niharika', 'Verma', 80000, '14-06-11 09.00.00','Admin'),

(003, 'Vishal','Singhal', 300000, '14-02-20 09.00.00','HR'),

(004, 'Amitabh', 'Singh', 500000, '14-02-20 09.00.00','Admin'),

(005,'Vivek', 'Bhati', 500000, '14-06-11 09.00.00','Admin'),

(006, 'Vipul', 'Diwan', 200000, '14-06-11 09.00.00','Account'),

(007, 'Satish', 'Kumar', 75000, '14-01-20 09.00.00','Account'),

(008, 'Geetika', 'Chauhan', 90000, '14-04-11 09.00.00','Admin');

CREATE TABLE Bonus (

WORKER\_REF\_ID INT,

BONUS\_AMOUNT INT (10),

BONUS\_DATE DATETIME,

FOREIGN KEY (WORKER\_REF\_ID)

REFERENCES Worker (WORKER\_ID)

ON DELETE CASCADE

ON UPDATE CASCADE

);

INSERT INTO Bonus

(WORKER\_REF\_ID, BONUS\_AMOUNT, BONUS\_DATE) VALUES

(001, 5000, '16-02-20'),

(002, 3000, '16-06-11'),

(003, 4000, '16-02-20'),

(004, 4500, '16-02-20'),

(005, 3500, '16-06-11');

CREATE TABLE Title (

WORKER\_REF\_ID INT,

WORKER\_TITLE CHAR(25),

AFFECTED\_FROM DATETIME,

FOREIGN KEY (WORKER\_REF\_ID)

REFERENCES Worker (WORKER\_ID)

ON DELETE SET NULL

ON UPDATE CASCADE

);

INSERT INTO Title

(WORKER\_REF\_ID, WORKER\_TITLE, AFFECTED\_FROM) VALUES

(001, 'Manager', '2016-02-20 00:00:00'),

(002, 'Executive', '2016-06-11 00:00:00'),

(008, 'Executive', '2016-06-11 00:00:00'),

(005, 'Manager', '2016-06-11 00:00:00'),

(004, 'Asst. Manager', '2016-06-11 00:00:00'),

(007, 'Executive', '2016-06-11 00:00:00'),

(006, 'Lead', '2016-06-11 00:00:00'),

(003, 'Lead', '2016-06-11 00:00:00');

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DROP DATABASE IF EXISTS org;

DROP TABLE IF EXISTS worker;

truncate table worker;

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-- DATA RETERIVAL LANGUAGE

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-- SELECT

SELECT \* FROM Worker;

SELECT SALARY FROM Worker;

SELECT FIRST\_NAME,SALARY FROM Worker;

-- DUAL Tables

SELECT 55+11;

SELECT now();

SELECT ucase('Aadish');

SELECT lcase('Aadish');

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-- WHERE

SELECT \* FROM Worker WHERE SALARY > 80000;

SELECT FIRST\_NAME,DEPARTMENT FROM Worker WHERE SALARY>80000;

SELECT \* FROM Worker WHERE DEPARTMENT='HR';

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-- between

SELECT \* FROM Worker WHERE SALARY between 80000 AND 300000;

SELECT FIRST\_NAME,DEPARTMENT FROM Worker WHERE SALARY between 80000 AND 300000;

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-- or

SELECT \* FROM Worker WHERE DEPARTMENT='HR' or DEPARTMENT='Admin';

SELECT FIRST\_NAME, SALARY FROM Worker WHERE DEPARTMENT='HR' or DEPARTMENT='Admin' AND SALARY>80000;

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-- and

SELECT \* FROM Worker WHERE DEPARTMENT='HR' AND SALARY>=80000;

SELECT \* FROM Worker WHERE SALARY>=80000 AND SALARY<=300000;

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-- in

SELECT \* FROM Worker WHERE DEPARTMENT IN('HR','Admin');

SELECT FIRST\_NAME,SALARY FROM Worker WHERE DEPARTMENT IN('HR','Admin');

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-- NOT IN

SELECT \* FROM Worker WHERE DEPARTMENT NOT IN('HR','Admin');

SELECT FIRST\_NAME,SALARY FROM Worker Where DEPARTMENT NOT IN('HR','Admin');

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-- Pattern Seraching/Wild Card

SELECT \* FROM Worker WHERE FIRST\_NAME Like '\_i%';

SELECT FIRST\_NAME,SALARY FROM Worker WHERE FIRST\_NAME Like '\_i%';

SELECT FIRST\_NAME FROM Worker WHERE FIRST\_NAME Like '\_i%';

SELECT FIRST\_NAME FROM Worker WHERE FIRST\_NAME Like 'N%';

SELECT FIRST\_NAME FROM Worker WHERE FIRST\_NAME Like 'N';

SELECT FIRST\_NAME FROM Worker WHERE FIRST\_NAME Like '\_\_h%';

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-- Order By

SELECT \* FROM Worker ORDER BY SALARY;

SELECT FIRST\_NAME,SALARY FROM Worker ORDER BY SALARY;

SELECT \* FROM Worker ORDER BY SALARY DESC;

SELECT FIRST\_NAME,SALARY FROM Worker ORDER BY SALARY DESC;

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-- DISTICT

SELECT DISTINCT DEPARTMENT FROM Worker;

SELECT DISTINCT DEPARTMENT,SALARY FROM Worker;

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-- Group By

SELECT DEPARTMENT FROM Worker GROUP BY DEPARTMENT;

SELECT SALARY,DEPARTMENT,COUNT(SALARY) FROM Worker GROUP BY SALARY,DEPARTMENT;

SELECT FIRST\_NAME,SALARY,DEPARTMENT,COUNT(DEPARTMENT) FROM Worker GROUP BY FIRST\_NAME,SALARY,DEPARTMENT;

SELECT DEPARTMENT,AVG(SALARY) FROM Worker GROUP BY DEPARTMENT;

SELECT DEPARTMENT,MIN(SALARY) FROM Worker GROUP BY DEPARTMENT;

SELECT DEPARTMENT,SALARY,COUNT(DEPARTMENT),SUM(SALARY) FROM Worker GROUP BY DEPARTMENT,SALARY;

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-- Group By Having

SELECT DEPARTMENT,COUNT(DEPARTMENT) FROM Worker GROUP BY DEPARTMENT HAVING COUNT(DEPARTMENT)>2;

SELECT DEPARTMENT,COUNT(DEPARTMENT) FROM Worker GROUP BY DEPARTMENT HAVING AVG(DEPARTMENT)>2;

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-- ALTER OPERATION

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-- Add new coloumn

ALTER TABLE Worker ADD GRADE CHAR(1) NOT NULL DEFAULT 'C';

SELECT \* FROM Worker;

----------------------------------------

-- Modify

ALTER TABLE Worker MODIFY GRADE VARCHAR(255) NOT NULL DEFAULT 'Joining';

DESC Worker;

----------------------------------------

-- Change Column Name

ALTER TABLE Worker CHANGE GRADE POSITION CHAR(1) NOT NULL DEFAULT 'C';

SELECT \* FROM Worker;

DESC Worker;

----------------------------------------

-- Drop Coloumn

ALTER TABLE Worker DROP COLUMN POSITION;

SELECT \*FROM Worker;

----------------------------------------

-- Change Table name

ALTER TABLE Worker RENAME TO Worker\_data;

SELECT \* FROM Worker\_data;

ALTER TABLE Worker\_data RENAME TO Worker;

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-- Data Manipulation Language

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-- Insert

INSERT INTO Worker

(WORKER\_ID,FIRST\_NAME,LAST\_NAME,SALARY,JOINING\_DATE,DEPARTMENT) VALUES

(009, 'Choota', 'Bheem', 95000, '16-04-11 09.00.00','Admin');

SELECT \* FROM Worker;

INSERT INTO Worker

(Worker\_id,FIRST\_NAME) VALUES

(0199,'Seziuka');

INSERT INTO Worker

(FIRST\_NAME) VALUES

('Hattori');

SELECT \* FROM Worker;

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-- Update

UPDATE Worker SET Worker\_id=36,SALARY=20,DEPARTMENT='PEON' WHERE Worker\_id=007;

SELECT \* from title;

UPDATE Worker SET Worker\_id=057,SALARY='20',DEPARTMENT='PEON' WHERE Worker\_id=058;

SELECT \* FROM Worker;

SET SQL\_SAFE\_UPDATES=0;

UPDATE Worker SET SALARY=SALARY\*0;

SELECT \* FROM Worker;

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--- Delete

DELETE FROM Worker WHERE Worker\_id=1;

-- ON DELETE CASCADE

SELECT \* FROM Bonus;

-- ON DELETE SET NULL

SELECT \* FROM Title;

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-- Replace

REPLACE INTO Worker(Worker\_id,SALARY)VALUES(2,45);

REPLACE INTO Worker(Worker\_id,FIRST\_NAME)VALUES(2,'AAA');

-- Add a new tuple

REPLACE INTO Worker(SALARY) VALUES(89);

REPLACE INTO Worker(Worker\_id,SALARY)VALUE(100,789456123);

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