1. HOW TO INSERT DATA INTO TABLE

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'SHUBHAM','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',30000,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE;

OUTPOU

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE 30000 SCIENCE

5 SHRI MACH 5000 AGRI

DISTINCT FUNCTION AND WHERE CLAUSE

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'SHUBHAM','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',NULL,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE WHERE SALARY>5000;

SELECT\*FROM EMPLOYEE WHERE SALARY<=5000;

SELECT\*FROM EMPLOYEE WHERE EMP\_ID=5;

SELECT\*FROM EMPLOYEE WHERE LAST\_NAME='RATHI';

SELECT DISTINCT SALARY FROM EMPLOYEE;

SELECT DISTINCT FIRST\_NAME FROM EMPLOYEE;

SELECT DISTINCT\*FROM EMPLOYEE;

SELECT\*FROM EMPLOYEE WHERE SALARY IS NULL;

SELECT\*FROM EMPLOYEE;

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

SALARY

10000

20000

NULL

5000

FIRST\_NAME

KIRAN

SACHIN

SHUBHAM

ADI

SHRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

4 ADI RATHODE NULL SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

ARITHMETIC OPERATORS

* , < , >= , <= , = , !=

SOME ARITHMATIC OPERATION WE CAN USE WHERE CLAUSE

LOGICAL OPERATORS

AND

OR

NOT

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'SHUBHAM','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',50000,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE WHERE SALARY>10000 AND DEPARTMENT ='SCIENCE';

SELECT\*FROM EMPLOYEE WHERE SALARY>10000 OR DEPARTMENT='AGRI';

SELECT\*FROM EMPLOYEE WHERE NOT FIRST\_NAME='KIRAN';

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

4 ADI RATHODE 50000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE 50000 SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE 50000 SCIENCE

5 SHRI MACH 5000 AGRI

BETWEEN AND IN AND NOT IN OPERATOR

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'SHUBHAM','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',30000,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE WHERE SALARY BETWEEN 10000 AND 30000;

SELECT\*FROM EMPLOYEE WHERE SALARY NOT BETWEEN 10000 AND 30000;

SELECT\*FROM EMPLOYEE WHERE SALARY IN (10000,30000);

SELECT\*FROM EMPLOYEE WHERE SALARY NOT IN (10000,30000);

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME NOT IN ('KIRAN','SHUBHAM');

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME IN ('KIRAN','SHUBHAM');

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

3 SHUBHAM THAKUR 20000 COMMERCE

4 ADI RATHODE 30000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

4 ADI RATHODE 30000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 SHUBHAM THAKUR 20000 COMMERCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

4 ADI RATHODE 30000 SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

3 SHUBHAM THAKUR 20000 COMMERCE

PARAMETER MATCHING OPERATORS

WILDCARD

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'NIRAJ','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',30000,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE 'S%';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE '%N';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE 'K%N';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE '%K%N';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE '%IN%';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE '%A\_';

SELECT\*FROM EMPLOYEE WHERE FIRST\_NAME LIKE '------';

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

3 NIRAJ THAKUR 20000 COMMERCE

HOW TO FIND HIGHEST SALARY FROM TABLE

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',10000,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),

(3,'NIRAJ','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',30000,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

SELECT\*FROM EMPLOYEE ORDER BY SALARY DESC

LIMIT 1;

SELECT\*FROM EMPLOYEE ORDER BY SALARY DESC

LIMIT 1,1;

SELECT\*FROM EMPLOYEE ORDER BY SALARY DESC

LIMIT 2,2;

SELECT\*FROM EMPLOYEE ORDER BY SALARY DESC

LIMIT 3,1 ;

SELECT\*FROM EMPLOYEE ORDER BY SALARY DESC

LIMIT 4,1;

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

4 ADI RATHODE 30000 SCIENCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 NIRAJ THAKUR 20000 COMMERCE

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

1 KIRAN PATIL 10000 SCIENCE

2 SACHIN RATHI 10000 ART

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

5 SHRI MACH 5000 AGRI

DELETE AND UPDATE THE TABLE

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',NULL,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),(3,'NIRAJ','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',NULL,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

DELETE FROM EMPLOYEE WHERE EMP\_ID=1;

SELECT\*FROM EMPLOYEE;

DELETE FROM EMPLOYEE WHERE SALARY=10000;

SELECT\*FROM EMPLOYEE;

UPDATE EMPLOYEE SET FIRST\_NAME='SHRINIVAS'WHERE EMP\_ID=1;

SELECT\*FROM EMPLOYEE;

UPDATE EMPLOYEE SET SALARY=0 WHERE SALARY IS NULL;

SELECT\*FROM EMPLOYEE;

SELECT SUM (SALARY) FROM EMPLOYEE;

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE 0 SCIENCE

5 SHRI MACH 5000 AGRI

SUM(SALARY)

25000

DDL COMANDS [DATA DEFINATION LANGUAGE]

1 create

2 alter

3 rename

4 truncate

5 drop

CREATE TABLE EMPLOYEE(EMP\_ID INT(5), FIRST\_NAME VARCHAR(100), LAST\_NAME VARCHAR(100),SALARY DOUBLE, DEPARTMENT VARCHAR(20));

INSERT INTO EMPLOYEE VALUES (1,'KIRAN','PATIL',NULL,'SCIENCE'),(2,'SACHIN','RATHI',10000,'ART'),(3,'NIRAJ','THAKUR',20000,'COMMERCE'),(4,'ADI','RATHODE',NULL,'SCIENCE'),(5,'SHRI','MACH',5000,'AGRI');

DELETE FROM EMPLOYEE WHERE EMP\_ID=1;

SELECT\*FROM EMPLOYEE;

DELETE FROM EMPLOYEE WHERE FIRST\_NAME='SACHIN';

SELECT\*FROM EMPLOYEE;

ALTER TABLE EMPLOYEE ADD(GRADE VARCHAR(2));

SELECT\*FROM EMPLOYEE;

ALTER TABLE EMPLOYEE ADD(DOB DATE);

SELECT\*FROM EMPLOYEE;

RENAME TABLE EMPLOYEE TO EMPLOYEE\_1;

SELECT\*FROM EMPLOYEE\_1;

OUTPUT

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

2 SACHIN RATHI 10000 ART

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT

3 NIRAJ THAKUR 20000 COMMERCE

4 ADI RATHODE NULL SCIENCE

5 SHRI MACH 5000 AGRI

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT GRADE

3 NIRAJ THAKUR 20000 COMMERCE NULL

4 ADI RATHODE NULL SCIENCE NULL

5 SHRI MACH 5000 AGRI NULL

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT GRADE DOB

3 NIRAJ THAKUR 20000 COMMERCE NULL NULL

4 ADI RATHODE NULL SCIENCE NULL NULL

5 SHRI MACH 5000 AGRI NULL NULL

EMP\_ID FIRST\_NAME LAST\_NAME SALARY DEPARTMENT GRADE DOB

3 NIRAJ THAKUR 20000 COMMERCE NULL NULL

4 ADI RATHODE NULL SCIENCE NULL NULL

5 SHRI MACH 5000 AGRI NULL NULL

GROUP BY FUNCTION

CREATE TABLE EMPLOYEE(ROLL\_NO INT(100),NAME VARCHAR(100),SALARY INT(10),DEP\_NAME VARCHAR(10));

INSERT INTO EMPLOYEE VALUES (1,'SHRI',1000,'ELECTRICAL'),(2,'KIRAN',3000,'MECHANICAL'),(3,'SHUBHAM',7000,'VIVIL'),

(4,'SACHIN',9000,'ELECTRICAL'),(5,'ROHIT',7000,'COMPUTER'),(6,'HARDIK',9000,'ELECTRICAL'),(7,'RAM',9000,'ELECTRICAL'),(8,'NITESH',7000,'COMPUTER');

SELECT DEP\_NAME,SUM(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME;

SELECT DEP\_NAME,AVG(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME;

SELECT DEP\_NAME,MAX(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME;

SELECT DEP\_NAME,MIN(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME;

SELECT DEP\_NAME,COUNT(\*) FROM EMPLOYEE GROUP BY DEP\_NAME;

SELECT DEP\_NAME,COUNT(\*) FROM EMPLOYEE GROUP BY DEP\_NAME HAVING COUNT(\*)>2;

SELECT DEP\_NAME, SUM(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME HAVING SUM(SALARY)>15000;

SELECT DEP\_NAME, SUM(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME HAVING SUM(SALARY)>11000 ORDER BY

SUM(SALARY)DESC;

SELECT DEP\_NAME, SUM(SALARY) FROM EMPLOYEE GROUP BY DEP\_NAME HAVING SUM(SALARY)>11000 ORDER BY

SUM(SALARY)ASC;

OUTPUT

DEP\_NAME SUM(SALARY)

ELECTRICAL 28000

MECHANICAL 3000

VIVIL 7000

COMPUTER 14000

DEP\_NAME AVG(SALARY)

ELECTRICAL 7000.0000

MECHANICAL 3000.0000

VIVIL 7000.0000

COMPUTER 7000.0000

DEP\_NAME MAX(SALARY)

ELECTRICAL 9000

MECHANICAL 3000

VIVIL 7000

COMPUTER 7000

DEP\_NAME MIN(SALARY)

ELECTRICAL 1000

MECHANICAL 3000

VIVIL 7000

COMPUTER 7000

DEP\_NAME COUNT(\*)

ELECTRICAL 4

MECHANICAL 1

VIVIL 1

COMPUTER 2

DEP\_NAME COUNT(\*)

ELECTRICAL 4

DEP\_NAME SUM(SALARY)

ELECTRICAL 28000

DEP\_NAME SUM(SALARY)

ELECTRICAL 28000

COMPUTER 14000

DEP\_NAME SUM(SALARY)

COMPUTER 14000

ELECTRICAL 28000

UNION FUNCTION

CREATE TABLE EMPLOYEE(ROLL\_NO INT(100),NAME VARCHAR(100),SALARY INT(10),DEP\_NAME VARCHAR(10));

INSERT INTO EMPLOYEE VALUES (1,'SHRI',1000,'ELECTRICAL'),(2,'KIRAN',3000,'MECHANICAL'),(3,'SHUBHAM',7000,'VIVIL'),

(4,'SACHIN',9000,'ELECTRICAL'),(5,'ROHIT',7000,'COMPUTER'),(6,'HARDIK',9000,'ELECTRICAL'),(7,'RAM',9000,'ELECTRICAL'),(8,'NITESH',7000,'COMPUTER');

CREATE TABLE EMPLOYEE\_1(ROLL\_NO INT(100),NAME VARCHAR(100),SALARY INT(10),DEP\_NAME VARCHAR(10));

INSERT INTO EMPLOYEE\_1 VALUES (1,'SHRI',1000,'ELECTRICAL'),(2,'HARSH',3000,'MECHANICAL'),(3,'RAHUL',7000,'MECHANICAL'),(4,'SACHIN',9000,'ELECTRICAL');

SELECT NAME,SALARY FROM EMPLOYEE UNION SELECT NAME,SALARY FROM EMPLOYEE\_1;

SELECT NAME,SALARY FROM EMPLOYEE UNION ALL SELECT NAME,SALARY FROM EMPLOYEE\_1;

OUTPUT

NAME SALARY

SHRI 1000

KIRAN 3000

SHUBHAM 7000

SACHIN 9000

ROHIT 7000

HARDIK 9000

RAM 9000

NITESH 7000

HARSH 3000

RAHUL 7000

NAME SALARY

SHRI 1000

KIRAN 3000

SHUBHAM 7000

SACHIN 9000

ROHIT 7000

HARDIK 9000

RAM 9000

NITESH 7000

SHRI 1000

HARSH 3000

RAHUL 7000

SACHIN 9000

JOINS

CREATE TABLE TAB1(NUMID INT (3));

INSERT INTO TAB1 VALUES(10);

INSERT INTO TAB1 VALUES(11);

INSERT INTO TAB1 VALUES(12);

INSERT INTO TAB1 VALUES(14);

CREATE TABLE TAB2(NUMID INT(3));

INSERT INTO TAB2 VALUES(11);

INSERT INTO TAB2 VALUES(12);

INSERT INTO TAB2 VALUES(13);

INSERT INTO TAB2 VALUES(15);

SELECT\*FROM TAB1;

SELECT\*FROM TAB2;

SELECT\*FROM TAB1 INNER JOIN TAB2 ON TAB1.NUMID=TAB2.NUMID; /\*INNER JOIN\*/

SELECT\*FROM TAB1 RIGHT JOIN TAB2 ON TAB1.NUMID=TAB2.NUMID; /\*FROM RIGHT JOIN\*/

SELECT\*FROM TAB1 LEFT JOIN TAB2 ON TAB1.NUMID=TAB2.NUMID; /\*FROM LEFT JOIN\*/

OUTPUT

NUMID

10

11

12

14

NUMID

11

12

13

15

NUMID NUMID

11 11

12 12

NUMID NUMID

11 11

12 12

NULL 13

NULL 15

NUMID NUMID

10 NULL

11 11

12 12

14 NULL