PRACTICAL 3

AIM: Perform Data Definition Language (DDL) commands and change the existing schema as per given information.

Constraints –

• Not Null Constraints: Ensure critical fields are not null.

• Unique Constraints: Ensure data integrity by limiting column values.

• Check Constraints: Ensure columns have unique values where required.

DESCRIPTION:

1) Select column_name from table_name – This command retireves all the data from thae particular columns and display in the output. For whole data we can simply use * instead of column_names.
2) Where – This clause is used with select command, to store / display / change a particular data. For eg. Where no.=22 , where name = “akfbasb“ etc.
3) Between , and – this command / clause are used when we want to find the data between the particular given things. Eg. Between 2 dates, between 2 days, between 2 years etc.
4) Update , set – This are used when we want to change something in a table , when we want to update some data and set it to another data.
5) Delete- This query is used to permanently delete a tuple/row from a table.
6) MAX, MIN ,AVG – This are all used when we want to find maximum, minimum or avg from a particular column. Simple write MAX/MIN/AVG(column_name).
7) >,<,= - This are all the operators which are used with a where clause for finding some particular data.
8) Order by , desc , asc - This is used when we want to display that data in a particular order, ascending or descending. Order by column_name asc/desc .
9) Concat – This is used for merging the data of the 2 column Into a column, which can be helpful many a times.

OUTPUT:

1) Retrieve all data from employee, jobs and deposit.

QUERY:

```
select * from employee, job , deposit;
```

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE	JOB_ID	JOB_TITEL	MIN_SAL	MAX_SAL	EMP_NO	NAME	BNAME	AMOUNT	A_DATE
13	dharmik	99999	123	2	-	23dit01	it	1500	15000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	23dit02	-	-	-	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	it_prog	programer	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	mk_mgr	marketing manger	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	fi_mgr	finance manger	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	fi_acc	account	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	lec	lecter	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
13	dharmik	99999	123	2	-	comp_op	computer opreter	4000	10000	13	dharmik gohil	depstar	15000	01-JUN-23
101	smith	800	500	20	-	23dit01	it	1500	15000	13	dharmik gohil	depstar	15000	01-JUN-23
101	smith	800	500	20	-	23dit02	-	-	-	13	dharmik gohil	depstar	15000	01-JUN-23

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.01 seconds CSV Export

2) Display job title and maximum salary of all jobs.

QUERY:

select job_titel , max_sal from job1;

JOB_TITEL	MAX_SAL
it	15000
-	-
programer	10000
marketing manger	10000
finance manger	10000
account	10000
lecter	10000
computer opreter	10000

8 rows returned in 0.02 seconds

3) Write a query to find out all the branches.

QUERY:

SELECT DISTINCT bname FROM deposit;

BNAME
andheri
depstar
virar
surat

4 rows returned

4) Display all the account no. into which rupees are between dates 01-01-06 and 25-07-06.

QUERY:

SELECT emp_no,a_date FROM deposit
WHERE a_date between '01-jun-23' and '03-jun-23';

EMP_NO	A_DATE
13	01-JUN-23

1 rows returned in 0.02 seconds CSV Export

5) Display names of all customers whose account is deposited after 09-oct-06.

QUERY:

```
select name,amount from deposit
        where a_date>'09-jan-06';
```

NAME	AMOUNT
dharmik gohil	15000
sunil	70
jay	5000

3 rows returned in 0.00 seconds

6) Display name and salary of employee whose department no is 20. Give alias name to name of employee.

QUERY:

```
select emp_name,emp_sal from employee
where dept_no = '20';
```

EMP_NAME	EMP_SAL
smith	800
dharmik2	800

2 rows returned in 0.00 seconds

7) Display employee no, name and department details of those employee whose department lies in(10,20).

QUERY:

```
select emp_no,emp_name,dept_no from employee
where dept_no in(10,20);
```

EMP_NO	EMP_NAME	DEPT_NO
101	smith	20
103	dharmik2	20
105	amita	10

3 rows returned in 0.01 seconds CSV Export

8) Display employee no, name and department details of those employee whose department not in(15,30) except 25 .

QUERY:

```
select emp_no,emp_name,dept_no from employee
where not dept_no in(10,20)
or dept_no = 25;
```

EMP_NO	EMP_NAME	DEPT_NO
13	dharmik	2
102	snehal	25
104	aman	15
106	anamika	30
106	anamika	30

5 rows returned in 0.02 seconds CSV Export

9) Display employee no, name and department details of those employee whose department no is between 15 and 25.

QUERY:

```
select emp_no,emp_name,dept_no from employee

where dept_no between '15' and '25';
```

EMP_NO	EMP_NAME	DEPT_NO
101	smith	20
102	snehal	25
103	dharmik2	20
104	aman	15

4 rows returned in 0.00 seconds CSV Export

10) Display name of all employee whose emp_comm contains the non-null values.

QUERY:

```
select emp_name,emp_comm from employee
where emp_comm is not null;
```

EMP_NAME	EMP_COMM
dharmik	123
smith	500
snehal	0
dharmik2	500
aman	0
amita	0
anamika	50000
anamika	50000

8 rows returned in 0.02 seconds CSV Export

11) Combine two columns min_sal and max_sal and display it one column using common alias name.

QUERY:

```
SELECT CONCAT(min_sal, max_sal) AS salary_range
FROM job1;
```

SALARY_RANGE
150015000
-
400010000
400010000
400010000
400010000
400010000
400010000

8 rows returned in 0.00 seconds

16) Update the value of employee name whose employee number is 103.

QUERY:

```
insert into sup2 select * from employee;
select * from sup2;
```

Results Explain Describe S

```
1 row(s) updated.
```

0.03 seconds

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
13	dharmik	99999	123	2	-
101	smith	800	500	20	-
102	snehal	800	0	25	-
103	dharmik2	800	500	20	-
104	aman	800	0	15	-
105	amita	800	0	10	-
106	anamika	800	50000	30	-
106	anamika	800	50000	30	-

8 rows returned in 0.00 seconds CSV Export

17)Find out the maximum and minimum salary form job table.

QUERY:

select max_sal,min_sal from job1;

MAX_SAL	MIN_SAL
15000	1500
-	-
10000	4000
10000	4000
10000	4000
10000	4000
10000	4000
10000	4000

8 rows returned in 0.00 seconds CSV Export

18)Find out the average salary of employee.

QUERY:

```
SELECT AVG(emp_sal) AS average_salary
FROM employee;
```

AVERAGE_SALARY
13199.875

1 rows returned in 0.01 seconds

19) Count the total no as well as distinct rows in dept_no column with a condition of salary greater than 1000 of employee.

QUERY:

```
select count (dept_no) as count , count(*) as count2 from employee where emp_sal > 1000;
```

Results Explain Describe Saved SQL History

COUNT	COUNT2
5	5

1 rows returned in 0.02 seconds CSV Export

20)Display the detail of all employees in ascending order, descending order of their name and no.

QUERY:

```
select emp_no from employee order by emp_no desc;
select emp_name from employee order by emp_name desc;
select emp_name from employee order by emp_name asc;
select emp_no from employee order by emp_no asc;
```

```
select emp_no from employee order by emp_no desc;
```

Results Explain Describe Saved SQL History

EMP_NO
106
105
104
103
102
101

6 rows returned in 0.02 seconds CSV Export

```
select emp_name from employee order by emp_name asc;
select emp_no from employee order by emp_no asc;
```

Results Explain Describe Saved SQL History

EMP_NAME
ANITAA
aman
aman
anamika
smith
snehal

6 rows returned in 0.00 seconds CSV Export

```
select emp_no from employee order by emp_no asc;
```

Results Explain Describe Saved SQL History

EMP_NO
101
102
103
104
105
106

6 rows returned in 0.00 seconds CSV Export

```
select emp_name from employee order by emp_name desc;
```

Results Explain Describe Saved SQL History

EMP_NAME
snehal
smith
anamika
aman
aman
ANITAA

6 rows returned in 0.00 seconds CSV Export

21)Display the dept_no in ascending order and accordingly display emp_comm in descending order.

QUERY:

select dept_no,emp_comm from employee order by dept_no asc , emp_comm desc;

```
select dept_no,emp_comm  from employee order by dept_no asc , emp_comm desc;
```

Results Explain Describe Saved SQL History

DEPT_NO	EMP_COMM
10	50000
15	-
20	455
20	425
25	0
30	-

6 rows returned in 0.00 seconds CSV Export

22)Update the value of emp_comm to 500 where dept_no is 20.

QUERY:

```
update employee set emp_comm=500 where dept_no=20;
select * from employee;
```

Results Explain Describe Saved SQL History

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	PHONE
101	smith	800	500	20	-
102	snehal	1600	0	25	-
103	ANITAA	1100	500	20	-
104	aman	3000	-	15	-
105	aman	5000	50000	10	-
106	anamika	2975	-	30	-

6 rows returned in 0.00 seconds CSV Export

23) Display the emp_comm in ascending order with null value first and accordingly sort employee salary in descending order.

QUERY:

select emp_sal,emp_comm from employee order by emp_comm asc nulls first , emp_sal desc;

Results Explain Describe Saved SQL History

EMP_SAL	EMP_COMM
3000	-
2975	-
1600	0
1100	500
800	500
5000	50000

6 rows returned in 0.01 seconds CSV Export

24) Display the emp_comm in ascending order with null value last and accordingly sort emp_no in descending order.

QUERY:

```
select emp_comm from employee order by emp_comm asc nulls last;
select emp_sal from employee order by emp_sal desc;
```

Results Explain Describe Saved SQL History

EMP_COMM
0
500
500
50000
-
-

6 rows returned in 0.00 seconds CSV Export

Results Explain Describe Saved SQL History

EMP_SAL
3000
2975
5000
800
1100
1600

6 rows returned in 0.00 seconds CSV Export

CONCLUSION:

I have learnt how to delete respective rows/tuples using Delete query. Then I learned how to update data using Update and Set clauses. Then I learned how to sort and display data using "order by", "desc" and "asc" queries. Then I learnt mathematical count, average, min and max queries required to process one column at a time in database. Combining/merging two columns can be done using Concat query. You can also find data from a table between two specific things.