

1.Create emp table and dept table with appropriate field and apply table constraints.

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Connected to:

Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production

With the Partitioning, OLAP and Data Mining options

```
SQL> create table emp(eno number(3) primary key,ename char(10),eadd char(10),ecom  
char(6) not null,esal number(6) check(esal between 10000 and 50000));
```

Table created.

```
SQL> create table dept(dno number(3) primary key,dname char(8),dratio number(2) default  
4,eno number(3) references emp(eno));
```

Table created.

2.Create student table with appropriate fields and apply DDL and DML commands.

```
SQL> create table stud(sno number(3) primary key,sname char(10),sadd char(10),sclass  
varchar(5),smks number(3));
```

Table created.

```
SQL> insert into stud values(1,'Rahul','phaltan','BCS2',78);
```

1 row created.

```
SQL> insert into stud values(2,'Yogesh','phaltan','BCS2',87);
```

1 row created.

```
SQL> insert into stud values(3,'Pranav','Pune','BCS2',88);
```

1 row created.

```
SQL> insert into stud values(4,'Raj','Pune','BCS1',78);
```

1 row created.

```
SQL> insert into stud values(5,'Ganesh','Satara','BCS1',89);
```

1 row created.

```
SQL> insert into stud values(6,'Yash','Satara','BCA1',75);
```

1 row created.

```
SQL> insert into stud values(7,'Sagar','Phaltan','BCS3',89);
```

1 row created.

```
SQL> insert into stud values(8,'Mahesh','Phaltan','BCS3',88);
```

1 row created.

```
SQL> insert into stud values(9,'Dinesh','Mumbai','BBA2',77);
```

1 row created.

```
SQL> insert into stud values(10,'Vaibhav','Mumbai','BBA3',85);
```

1 row created.

```
SQL> select * from stud;
```

SNO	SNAME	SADD	SCLAS	SMKS
-----	-----	-----	----	-----
1	Rahul	phaltan	BCS2	78
2	Yogesh	phaltan	BCS2	87
3	Pranav	Pune	BCS2	88
4	Raj	Pune	BCS1	78
5	Ganesh	Satara	BCS1	89
6	Yash	Satara	BCA1	75
7	Sagar	Phaltan	BCS3	89
8	Mahesh	Phaltan	BCS3	88
9	Dinesh	Mumbai	BBA2	77
10	Vaibhav	Mumbai	BBA3	85

10 rows selected.

```
SQL> update stud set sclass='BCS1' where sclass='BCS2';
```

3 rows updated.

SQL> select * from stud;

SNO	SNAME	SADD	SCLAS	SMKS
1	Rahul	phaltan	BCS1	78
2	Yogesh	phaltan	BCS1	87
3	Pranav	Pune	BCS1	88
4	Raj	Pune	BCS1	78
5	Ganesh	Satara	BCS1	89
6	Yash	Satara	BCA1	75
7	Sagar	Phaltan	BCS3	89
8	Mahesh	Phaltan	BCS3	88
9	Dinesh	Mumbai	BBA2	77
10	Vaibhav	Mumbai	BBA3	85

10 rows selected.

SQL> delete from stud where sadd='Mumbai';

2 rows deleted.

SQL> select * from stud;

SNO	SNAME	SADD	SCLAS	SMKS
1	Rahul	phaltan	BCS1	78
2	Yogesh	phaltan	BCS1	87
3	Pranav	Pune	BCS1	88
4	Raj	Pune	BCS1	78
5	Ganesh	Satara	BCS1	89
6	Yash	Satara	BCA1	75
7	Sagar	Phaltan	BCS3	89
8	Mahesh	Phaltan	BCS3	88

8 rows selected.

SQL> alter table stud add(sphno number(10));

Table altered.

SQL> alter table stud modify(sadd varchar(10));

Table altered.

SQL> drop table stud;

Table dropped.

3. Use any table and do select operations using operators.

```
SQL> create table dept(dno number(4) primary key,dname char(10));
```

Table created.

```
SQL> insert into dept values(10,'production');
```

1 row created.

```
SQL> insert into dept values(20,'Account');
```

1 row created.

```
SQL> insert into dept values(30,'Sales');
```

1 row created.

```
SQL> select * from dept;
```

DNO	DNAME
10	production
20	Account
30	Sales

```
SQL> create table emp(eno number(4) primary key,ename char(7),ejob char(10),jdate date,esal number(6),dno number(4) references dept(dno));
```

Table created.

```
SQL> insert into emp values(1,'smith','clerk','17-Dec-80',800,20);
```

1 row created.

```
SQL> insert into emp values(2,'Allen','salesman','20-Feb-81',1600,30);
```

1 row created.

```
SQL> insert into emp values(3,'Jones','Manager','22-Feb-81',2975,20);
```

1 row created.

```
SQL> insert into emp values(4,'Martin','Salesman','28-Sep-81',1250,10);
```

1 row created.

```
SQL> insert into emp values(5,'Scott','Manager','19-Apr-87',3000,20);
```

1 row created.

```
SQL> select * from emp;
```

ENO	ENAME	EJOB	JDATE	ESAL	DNO
1	smith	clerk	17-DEC-80	800	20
2	Allen	salesman	20-FEB-81	1600	30
3	Jones	Manager	22-FEB-81	2975	20
4	Martin	Salesman	28-SEP-81	1250	10
5	Scott	Manager	19-APR-87	3000	20

```
SQL> select eno,ename from emp where dno in(10,20);
```

ENO	ENAME
1	smith
3	Jones
4	Martin
5	Scott

SQL> select eno,ename from emp where dno not in(10,20);

ENO	ENAME
2	Allen

SQL> select eno,ename from emp where esal between 1000 and 2000;

ENO	ENAME
2	Allen
4	Martin

SQL> select eno,ename from emp where esal not between 1000 and 2000;

ENO	ENAME
1	smith
3	Jones
5	Scott

SQL> select * from emp where ename like 'S%';

ENO	ENAME	EJOB	JDATE	ESAL	DNO
5	Scott	Manager	19-APR-87	3000	20

SQL> Select * from emp where ename like '_l%';

ENO	ENAME	EJOB	JDATE	ESAL	DNO
2	Allen	salesman	20-FEB-81	1600	30

4. Use any table and do select operations using clauses.

SQL> select eno,ename,esal from emp order by dno;

ENO	ENAME	ESAL
-----	-----	-----
4	Martin	1250
5	Scott	3000
1	Smith	800
3	Jones	2975
2	Allen	1600

SQL> select eno,ename,esal from emp order by dno desc;

ENO	ENAME	ESAL
-----	-----	-----
2	Allen	1600
5	Scott	3000
1	Smith	800
3	Jones	2975
4	Martin	1250

SQL> select dno,sum(esal) as "Total salary" from emp group by dno;

DNO	Total salary
-----	-----
30	1600
20	6775
10	1250

SQL> select dno, max(esal) as "Highest salary" from emp group by dno;

DNO	Highest salary
-----	-----
30	1600
20	3000
10	1250

SQL> select dno, count(*) as "Number of emp" from emp group by dno having dno=20;

DNO	Number of emp
-----	-----
20	3

5. Use any tables and do select operations using aggregate functions.

```
SQL> select min(esal),max(esal) from emp;
```

MIN(ESAL)	MAX(ESAL)
800	3000

```
SQL> select count(*) from emp;
```

COUNT(*)
5

```
SQL> select sum(esal) from emp;
```

SUM(ESAL)
9625

```
SQL> select avg(esal) from emp;
```

AVG(ESAL)
1925

6. Use any tables and do Sub query and Join operations.

SQL> select ename,esal,ejob from emp where esal=(select min(esal) from emp);

ENAME	ESAL	EJOB
smith	800	clerk

SQL> select * from emp where dno in(select dno from dept);

ENO	ENAME	EJOB	JDATE	ESAL	DNO
1	smith	clerk	17-DEC-80	800	20
2	Allen	salesman	20-FEB-81	1600	30
3	Jones	Manager	22-FEB-81	2975	20
4	Martin	Salesman	28-SEP-81	1250	10
5	Scott	Manager	19-APR-87	3000	20

SQL> select * from emp where esal>all(select esal from emp where dno=30);

ENO	ENAME	EJOB	JDATE	ESAL	DNO
3	Jones	Manager	22-FEB-81	2975	20
5	Scott	Manager	19-APR-87	3000	20

SQL> select emp.dno,ename,esal,dname from emp,dept where emp.dno=dept.dno;

DNO	ENAME	ESAL	DNAME
20	smith	800	Account
30	Allen	1600	Sales
20	Jones	2975	Account
10	Martin	1250	production
20	Scott	3000	Account

SQL> select emp.dno,ename,esal,dname from emp,dept where emp.dno(+)=dept.dno;

DNO	ENAME	ESAL	DNAME
20	smith	800	Account
30	Allen	1600	Sales
20	Jones	2975	Account
10	Martin	1250	production
20	Scott	3000	Account

SQL> select emp.dno,ename,esal,dname from emp,dept where emp.dno=dept.dno(+);

DNO	ENAME	ESAL	DNAME
-----	-----	-----	-----
10	Martin	1250	production
20	Scott	3000	Account
20	Jones	2975	Account
20	smith	800	Account
30	Allen	1600	Sales

SQL> select e.eno,e.ename,e.ejob,d.dno,d.dname from emp e,dept d where e.dno=d.dno;

ENO	ENAME	EJOB	DNO	DNAME
-----	-----	-----	-----	-----
1	smith	clerk	20	Account
2	Allen	salesman	30	Sales
3	Jones	Manager	20	Account
4	Martin	Salesman	10	production
5	Scott	Manager	20	Account

7. Use any tables and do select operations using different string functions.

SQL> select * from emp;

eno	ename	ejob	esal	dno
22	jones	salesman	1600	30
23	scott	salesman	1250	30
24	allen	manager	2450	10

SQL> select lower('jones') from emp;

lower('jones')
jones
jones
jones

SQL> select upper('scott') from emp;

upper('scott')
SCOTT
SCOTT
SCOTT

SQL> select length('allen') from emp;

length('allen')
5
5
5

SQL> select substr('allen',3,5) from emp;

substr('allen',3,5)
len
len
len

SQL> select concat('computer','science') from dual;

concat('computer','science')
computerscience

```
SQL> select lpad('abcd',6,'a') from dual;
```

```
+-----+  
| lpad('abcd',6,'a') |  
+-----+  
| aaabcd           |  
+-----+
```

```
SQL> select rpad('abcd',6,'d') from dual;
```

```
+-----+  
| rpad('abcd',6,'d') |  
+-----+  
| abcd           |  
+-----+
```

```
SQL> select trim('w' from 'welcome') from dual;
```

```
+-----+  
| elcome           |  
+-----+
```

8. To show the table index, view on existing table.

```
SQL> create index emp1index on emp(eno);
Index created
```

```
SQL> select ename as emp1index from emp;
+-----+
| emp1index |
+-----+
| jones    |
| scott    |
| allen    |
+-----+
3 rows selected
```

```
SQL> select esal as emp1index from emp
+-----+
| 1600 |
| 2450 |
+-----+
2 rows selected
```

```
SQL> drop index emp1index;
Index dropped
```

```
SQL> create view empview as select ename,ejob,esal from emp;
View created
```

```
SQL> desc empview;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ename | char(10) | YES  |     | NULL    |       |
| ejob  | char(10) | YES  |     | NULL    |       |
| esal  | int(11)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

```
SQL> update empview set esal=2000 where esal=1600;
1 row updated
```

```
SQL> select * from empview;
+-----+-----+-----+
| ename | ejob   | esal |
+-----+-----+-----+
| jones | salesman | 2000 |
| scott | salesman | 1250 |
| allen | manager  | 2450 |
+-----+-----+-----+
```

```
SQL> delete from empview where esal=1250;
1 row deleted
```

```
SQL> select * from empview;
```

```
+-----+-----+-----+  
| ename | ejob   | esal |  
+-----+-----+-----+  
| jones | salesman | 2000 |  
| allen | manager  | 2450 |  
+-----+-----+-----+
```

```
SQL> drop view empview;
```

```
View dropped
```

