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# DATABASE

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**Lab task Week # 08**



**APRIL 6, 2023**

**Muhammad Noman – 35152 cs**

Query # 01: Group Function:

```
select deptno, avg(sal), min(sal), max(sal), count(sal) from emp  
  
2 group by deptno;
```

```
SQL> select deptno, avg(sal), min(sal), max(sal), count(sal) from emp  
2 group by deptno;
```

DEPTNO	AVG(SAL)	MIN(SAL)	MAX(SAL)	COUNT(SAL)
30	1566.66667	950	2850	6
20	2175	800	3000	5
10	2916.66667	1300	5000	3

Query # 02: Tochar → used to convert time to current time.

```
select hiredate , to_char(hiredate, 'mm,dd,yyyy') New_format from emp;
```

```
SQL> select hiredate , to_char(hiredate, 'mm,dd,yyyy') New_format from emp;
```

HIREDATE	NEW_FORMAT
17-DEC-80	12,17,1980
20-FEB-81	02,20,1981
22-FEB-81	02,22,1981
02-APR-81	04,02,1981
28-SEP-81	09,28,1981
01-MAY-81	05,01,1981
09-JUN-81	06,09,1981
19-APR-87	04,19,1987
17-NOV-81	11,17,1981
08-SEP-81	09,08,1981
23-MAY-87	05,23,1987
03-DEC-81	12,03,1981
03-DEC-81	12,03,1981
23-JAN-82	01,23,1982

14 rows selected.

Query # 03: Show current Time and Date

select sysdate, to\_char(sysdate , 'Month, dd , yyyy HH:MI PM') "New\_Date and Time " from dual;

```
SQL> select sysdate, to_char(sysdate , 'Month, dd , yyyy HH:MI PM') "New_Date and Time " from dual;

SYSDATE      New_Date and Time
-----
06-APR-23 April      , 06 , 2023 08:38 AM
```

Query # 04: Decode

select deptno , dname, decode(deptno, 10 , 'A' , 20, 'B' , 'Z') from dept;

```
SQL> select deptno , dname, decode(deptno, 10 , 'A' , 20, 'B' , 'Z') from dept;

DEPTNO DNAME      D
-----
10 ACCOUNTING    A
20 RESEARCH      B
30 SALES         Z
40 OPERATIONS    Z
```

Query # 05: Case

```
select deptno, CASE deptno
2  when 10 Then 'Accounting'
3  when 20 Then 'Sales'
4  else 'Other'
5  end
6  from dept;
```

```
SQL> select deptno, CASE deptno
2  when 10 Then 'Accounting'
3  when 20 Then 'Sales'
4  else 'Other'
5  end
6  from dept;

DEPTNO CASEDEPTNO
-----
10 Accounting
20 Sales
30 Other
40 Other
```

Query # 06:

```
select ename , comm, case nvl(comm,0)
2  when 0 then 'NULL'
3  else 'NOT NULL'
4  end
5  from emp;
```

ENAME	COMM	CASE NVL (
SMITH		NULL
ALLEN	300	NOT NULL
WARD	500	NOT NULL
JONES		NULL
MARTIN	1400	NOT NULL
BLAKE		NULL
CLARK		NULL
SCOTT		NULL
KING		NULL
TURNER	0	NULL
ADAMS		NULL
JAMES		NULL
FORD		NULL
MILLER		NULL

14 rows selected.

Query # 07: Insert into tables

1. insert into emp values (123 , 'Nomi' , 'MANAGER' , 6677 , '4-APR-23',10000,500,30);
2. insert into emp values (124 , 'Haris' , 'PRESIDENT' , 5566 , '4-APR-23',1000 ,400,30);
3. insert into emp values (125 , 'Akhtar' , 'ANALYST' , 7788 , '4-APR-23',5000 , 300 , 30);

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

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
-----						
DEPTNO						
-----						
123	Nomi	MANAGER	6677	04-APR-23	10000	500
30						
124	Haris	PRESIDENT	5566	04-APR-23	1000	400
30						
125	Akhtar	ANALYST	7788	04-APR-23	5000	300
30						
-----						
EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
-----						

4. insert into emp(empno,ename,job,deptno,sal) values (126 , 'Umair' , 'CLERK', 30 , 3000);

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

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
-----						
DEPTNO						
-----						
123 30	Nomi	MANAGER	6677	04-APR-23	10000	500
124 30	Haris	PRESIDENT	5566	04-APR-23	1000	400
125 30	Akhtar	ANALYST	7788	04-APR-23	5000	300
-----						
EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
-----						
DEPTNO						
-----						
126 30	Umair	CLERK			3000	
7369 20	SMITH	CLERK	7902	17-DEC-80	800	

Commit and rollback: only performed on DML not on DDL

Commit: Used to store data permanently

Rollback: all values will be deleted which were inserted after commit operation.

If you delete the record then rollback the value before commit operation.

```
SQL> commit
2 /

Commit complete.
```

```
SQL> Rollback
2 /

Rollback complete.
```

Query # 08: Update command. comma separated multiple values can be updated except **PK**.

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
-----						
DEPTNO						
-----						
126	Umais	CLERK			3000	
30						
12	10	CLERK			3000	
30						

The Name = 10 will be updated below by following command.

Query:

update emp

2 set ename = 'Boult'

3 where empno = 12;

```
SQL> update emp
  2  set ename = 'Boult'
  3  where empno = 12;
```

1 row updated.

```
SQL> select * from emp
  2  where job = 'CLERK';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
126	Umai	CLERK			3000	
12	Boult	CLERK			3000	
7369	SMITH	CLERK	7902	17-DEC-80	800	

