



# DEPARTMENT OF ACADEMIC AFFAIRS

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## WORKSHEET 1.1

**Student Name:** Rajiv Paul

**Branch:** CSE

**Semester:** 3rd

**Subject Name:** DBMS Lab

**UID:** 20BCS1812

**Section/Group:** 6B

**Date of Performance:** 23/09/2021

**Subject Code:** 20CSP-215

**Q1.**

Create department table with the following structure.

Name Type

Deptno Number

Deptname Varchar2(10)

location Varchar2(10)

**1) Aim/Overview of the practical:**

To create table and add the structures stated as above.

**2) Task to be done:**

a. Add column designation to the department table.

The screenshot shows a SQL Worksheet interface. The code entered is:

```
1 ALTER TABLE department
2 ADD designation VARCHAR2(10);
3
```

The output below the code shows the result of the command:

Table altered.



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## b. Insert values into the table

```
INSERT INTO department
VALUES(1,'Civil','chandigarh','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(8,'MBA','Manipur','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(7,'CA','Kolkata','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(9,'BCA','Manipur','student')
```

1 row(s) inserted.

## c. List the records of dept table grouped by deptno.

### SQL Worksheet

```
1 SELECT *
2 FROM department;
3 SELECT deptno
4 FROM department
5 GROUP BY deptno;
```

4 rows selected.

DEPTNO
1
7
8
9

Download CSV

4 rows selected.



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d. Update the record where deptno is 9.

SQL Worksheet

```
1 UPDATE department
2 SET location = 'Assam'
3 WHERE deptno = 9;$|
```

1 row(s) updated.

e. Delete any column data from the table.

SQL Worksheet

```
1 DELETE FROM department
2 WHERE deptno = 7;|
```

1 row(s) deleted.

### 3) Software required:

Oracle Live SQL



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## 4) Source Code (Screenshot of the query executed):

```
CREATE TABLE department
(
deptno NUMBER,
deptname VARCHAR2(10),
location VARCHAR2(10)
)
```

Table created.

```
ALTER TABLE department
ADD designation VARCHAR2(10)
```

Table altered.

```
INSERT INTO department
VALUES(1,'Civil','chandigarh','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(8,'MBA','Manipur','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(7,'CA','Kolkata','student')
```

1 row(s) inserted.

```
INSERT INTO department
VALUES(9,'BCA','Manipur','student')
```

1 row(s) inserted.



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SELECT \*  
FROM department

DEPTNO	DEPTNAME	LOCATION	DESIGNATION
8	MBA	Manipur	student
9	BCA	Manipur	student
1	Civil	chandigarh	student
7	CA	Kolkata	student

[Download CSV](#)

4 rows selected.

SELECT deptno  
FROM department  
GROUP BY deptno

DEPTNO
1
7
8
9

[Download CSV](#)

UPDATE department  
SET location = 'Assam'  
WHERE deptno = 9

1 row(s) updated.

DELETE FROM department  
WHERE deptno = 7

1 row(s) deleted.



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## 5. Final Result/Output (after removing the errors): (Screenshot of output without any error)

SQL Worksheet

```
1 SELECT *
2 FROM department;
```

DEPTNO	DEPTNAME	LOCATION	DESIGNATION
8	MBA	Manipur	student
9	BCA	Assam	student
1	Civil	chandigarh	student

[Download CSV](#)  
3 rows selected.



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## Learning outcomes (What I have learnt):

- 1. How to alter table.**
- 2. How to update .**
- 3. How to delete.**
- 4. How to group.**
- 5.**



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**Q2.**

**1) Aim/Overview of the practical:**

**To create table and add the structures stated as above.**

**2) Task to be done:**

- List all employee names , salary and 15% rise in salary.**

SQL Worksheet

```
1 SELECT ename,
2      to_char(1.15*sal,'$99,999') AS "Sal"
3 FROM emp;
```

ENAME	Sal
rohan	\$3,450
rajiv	\$5,750
ravi	\$5,175
arpit	\$4,600
ashu	\$1,150

[Download CSV](#)

b. List ename whose manager is not NULL.

SQL Worksheet

```

1 SELECT Empno, Ename, Job, Sal
2 FROM Emp
3 WHERE Empno NOT IN (SELECT DISTINCT MGR FROM Emp WHERE MGR IS NOT NULL);

```

EMPNO	ENAME	JOB	SAL
1	ashu	developer	1000
2	arpit	manager	4000
4	rajiv	developer	5000
5	ravi	designer	4500
3	rohan	salesman	3000

[Download CSV](#)

c. Find no.of dept in employee table.

SQL Worksheet

```

1 SELECT deptno, COUNT(*)
2   FROM emp
3  GROUP BY deptno;

```

DEPTNO	COUNT(*)
10	1
20	4

[Download CSV](#)  
2 rows selected.



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d. List ename whose commission is NULL.

SQL Worksheet

```
1 SELECT ENAME FROM EMP WHERE COMM IS NULL;
```

no data found

e. Display ename of the dept. with deptno 20.

SQL Worksheet

```
1 SELECT ENAME FROM EMP WHERE DEPTNO =20;
```

ENAME
rohan
rajiv
ravi
ashu

[Download CSV](#)



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### 3) Software required:

Oracle Live SQL

### 4) Source Code (screenshot of the query executed):

```
create table EMP(
    EMPNO NUMBER(4) NOT NULL,
    ENAME VARCHAR(10),
    JOB VARCHAR(9),
    MGR NUMBER(4),
    HIREDATE DATE,
    SAL NUMBER(7,2),
    COMM NUMBER(7,2),
    DEPTNO NUMBER(3),
    AGE NUMBER(3),
    ESAL NUMBER
)
```

Table created.

```
insert into EMP
values(0001, 'ashu', 'developer', 7902, '14/feb/2020', 1000,
36.8, 20, 24, 4000 )
```

1 row(s) inserted.

```
insert into EMP
values(0002, 'arpit', 'manager', 7902, '14/sep/2018', 4000,
56.8, 10, 26, 4500 )
```

1 row(s) inserted.

```
insert into EMP
values(0003, 'rohan', 'salesman', 7875, '21/jan/2019', 3000,
66.8, 20, 24, 3000 )
```

1 row(s) inserted.

```
insert into EMP
values(0004, 'rajiv', 'developer', 7902, '21/jan/2020', 5000,
100, 20, 24, 5000 )
```

1 row(s) inserted.



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```
insert into EMP
values(0005, 'ravi', 'designer' , 7556, '09/jul/2020' ,4500,
125, 20 ,23, 5000 )
```

1 row(s) inserted.

```
SELECT ename,
       to_char(1.15*sal,'$99,999') AS "Sal"
FROM emp
```

ENAME	Sal
rohan	\$3,450
rajiv	\$5,750
ravi	\$5,175
arpit	\$4,600
ashu	\$1,150

[Download CSV](#)

5 rows selected.

```
SELECT Empno, Ename, Job, Sal
FROM Emp
WHERE Empno NOT IN (SELECT DISTINCT MGR FROM Emp WHERE MGR IS NOT NULL)
```

EMPNO	ENAME	JOB	SAL
1	ashu	developer	1000
2	arpit	manager	4000
4	rajiv	developer	5000
5	ravi	designer	4500
3	rohan	salesman	3000

[Download CSV](#)

5 rows selected.



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```
SELECT deptno, COUNT(*)  
FROM emp  
GROUP BY deptno
```

DEPTNO	COUNT(*)
10	1
20	4

[Download CSV](#)

2 rows selected.

```
SELECT Empno, Ename, Job, Sal  
FROM Emp  
WHERE Empno NOT IN (SELECT DISTINCT COMM FROM Emp WHERE COMM IS NULL)
```

EMPNO	ENAME	JOB	SAL
1	ashu	developer	1000
2	arpit	manager	4000
4	rajiv	developer	5000
5	ravi	designer	4500
3	rohan	salesman	3000

[Download CSV](#)

5 rows selected.

```
SELECT Empno, Ename, Job, Sal  
FROM Emp  
WHERE Empno NOT IN (SELECT DISTINCT COMM FROM Emp WHERE COMM IS not NULL)
```

EMPNO	ENAME	JOB	SAL
1	ashu	developer	1000
2	arpit	manager	4000
4	rajiv	developer	5000
5	ravi	designer	4500
3	rohan	salesman	3000

[Download CSV](#)

5 rows selected.

```
SELECT ENAME FROM EMP WHERE COMM IS NULL
```

no data found



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SELECT ENAME FROM EMP WHERE DEPTNO =20

ENAME
rohan
rajiv
ravi
ashu

[Download CSV](#)

4 rows selected.

## 5. Final Result/Output (after removing the errors): (Screenshot of output without any error)

SQL Worksheet

```
1 select * from EMP;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	AGE	ESAL
4	rajiv	developer	7902	21-JAN-20	5000	100	20	24	5000
1	ashu	developer	7902	14-FEB-20	1000	36.8	20	24	4000
2	arpit	manager	7902	14-SEP-18	4000	56.8	10	26	4500
3	rohan	salesman	7875	21-JAN-19	3000	66.8	20	24	3000
5	ravi	designer	7556	09-JUL-20	4500	125	20	23	5000

[Download CSV](#)

5 rows selected.



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## Learning outcomes (What I have learnt):

1. how to use percentage for calculation.

## Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			