

DBMS ASSIGNMENT

Lab Sheet-2

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CSE-C

Department Schema

Dept(deptno:integer, dname:String, loc:String)

constraints: deptno is Primary Key.

DEPT table values

10, 'ACCOUNTING', 'NEW YORK'

20, 'RESEARCH', 'DALLAS'

30, 'SALES', 'CHICAGO'

40, 'OPERATIONS', 'BOSTON'

Creating Table Department:

```
CREATE TABLE DEPT (  
  DEPTNO NUMBER PRIMARY KEY,  
  DNAME VARCHAR(50),  
  LOC VARCHAR(50)  
)
```

Table created.

Inserting Values in Table Department:

```
INSERT INTO DEPT VALUES (10, 'ACCOUNTING', 'NEWYORK')
```

1 row(s) inserted.

```
INSERT INTO DEPT VALUES (20, 'RESEARCH', 'DELLAS')
```

1 row(s) inserted.

```
INSERT INTO DEPT VALUES (30, 'SALES', 'CHICAGO')
```

1 row(s) inserted.

```
INSERT INTO DEPT VALUES (40, 'OPERATIONS', 'BOSTON')
```

1 row(s) inserted.

```
select * from dept
```

DEPTNO	DNAME	LOC
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
20	RESEARCH	DELLAS
10	ACCOUNTING	NEWYORK

4 rows selected.

Employee Schema

Employee(empno:integer, ename:string, job:string, mgr:number, hiredate: date, sal:real, comm:real, deptno:integer)

constraints: empno id Primary Key, deptno is Foreign Key

Employee Table values

```
7839, 'KING', 'PRESIDENT', null, 17-11-1981, 5000, null, 10
7698, 'BLAKE', 'MANAGER', 7839, 1-5-1981, 2850, null, 30
7782, 'CLARK', 'MANAGER', 7839, 9-6-1981, 2450, null, 10
7566, 'JONES', 'MANAGER', 7839, 2-4-1981, 2975, null, 20
7788, 'SCOTT', 'ANALYST', 7566, 13-07-87, 85, 3000, null, 20
7902, 'FORD', 'ANALYST', 7566, 3-12-1981, 3000, null, 20
7369, 'SMITH', 'CLERK', 7902, 17-12-1980, 800, null, 20
7499, 'ALLEN', 'SALESMAN', 7698, 20-2-1981, 1600, 300, 30
7521, 'WARD', 'SALESMAN', 7698, 22-2-1981, 1250, 500, 30
7654, 'MARTIN', 'SALESMAN', 7698, 28-9-1981, 1250, 1400, 30
7844, 'TURNER', 'SALESMAN', 7698, 8-9-1981, 1500, 0, 30
7876, 'ADAMS', 'CLERK', 7788, 13-07-87, 51, 1100, null, 20
7900, 'JAMES', 'CLERK', 7698, 3-12-1981, 950, null, 30
```

7934, 'MILLER', 'CLERK', 7782, 23-1-1982', 1300, null, 10

Creating Table Employee:

```
CREATE TABLE EMP(  
EMPNO NUMBER PRIMARY KEY,  
ENAME VARCHAR(50),  
JOB VARCHAR(50),  
MGR NUMBER,  
HIREDATE DATE,  
SAL NUMBER(10,2),  
COMM NUMBER(10,2),  
DEPTNO NUMBER  
)
```

Table created.

ALTER

```
ALTER TABLE EMP ADD FOREIGN KEY(DEPTNO) REFERENCES DEPT(DEPTNO)
```

Table altered.

Inserting Values in Table Employee:

```
INSERT INTO EMP VALUES (7839, 'KING', 'PRESIDENT', null, To_Date('17-11-1981', 'dd-mm-yyyy'), 5000, null, 10)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7698, 'BLAKE', 'MANAGER', 7839, To_Date('1-5-1981', 'dd-mm-yyyy'), 2850, null, 30)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7782, 'CLARK', 'MANAGER', 7839, To_Date('9-6-1981', 'dd-mm-yyyy'), 2450, null, 10)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7566, 'JONES', 'MANAGER', 7839, To_Date('2-4-1981', 'dd-mm-yyyy'), 2975, null, 20)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7788, 'SCOTT', 'ANALYST', 7566, To_Date('13-07-1987', 'dd-mm-yyyy'), 3000, null, 20)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7902, 'FORD', 'ANALYST', 7566, To_Date('3-12-1981', 'dd-mm-yyyy'), 3000, null, 20)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7369, 'SMITH', 'CLERK', 7902, To_Date('17-12-1980', 'dd-mm-yyyy'), 800, null, 20)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7499, 'ALLEN', 'SALESMAN', 7698, To_Date('20-2-1981', 'dd-mm-yyyy'), 1600, 300, 30)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7521, 'WARD', 'SALESMAN', 7698, To_Date('22-2-1981', 'dd-mm-yyyy'), 1250, 500, 30)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7844, 'TURNER', 'SALESMAN', 7698, to_date('8-9-1981', 'dd-mm-yyyy'), 1500, 0, 30)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7876, 'ADAMS', 'CLERK', 7788, To_Date('13-07-1987', 'dd-mm-yyyy'), 1100, null, 20)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7900, 'JAMES', 'CLERK', 7698, To_Date('3-12-1981', 'dd-mm-yyyy'), 950, null, 30)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7934, 'MILLER', 'CLERK', 7782, To_Date('23-1-1982', 'dd-mm-yyyy'), 1300, null, 10)
```

1 row(s) inserted.

```
INSERT INTO EMP VALUES(7654, 'MARTIN', 'SALESMAN', 7698, to_date('28-9-1981', 'dd-mm-yyyy'), 1250, 1400, 30)
```

1 row(s) inserted.

```
select * from emp
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10
7788	SCOTT	ANALYST	7566	13-JUL-87	3000	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7876	ADAMS	CLERK	7788	13-JUL-87	1100	-	20

14 rows selected.

SALGRADE schema

Salgrade(grade:integer,losal:integer,hisal:integer)

SALGRADE table values

1, 700, 1200
2, 1201, 1400
3, 1401, 2000
4, 2001, 3000
5, 3001, 9999

Creating Table Salgrade:

```
CREATE TABLE SALGRADE (  
  GRADE NUMBER,  
  LOSAL NUMBER,  
  HISAL NUMBER  
)
```

Table created.

Inserting Values in Table Salgrade:

```
INSERT INTO SALGRADE VALUES(1,700,1200)
```

1 row(s) inserted.

```
INSERT INTO SALGRADE VALUES(2,1201,1400)
```

1 row(s) inserted.

```
INSERT INTO SALGRADE VALUES(3,1401,2000)
```

1 row(s) inserted.

```
INSERT INTO SALGRADE VALUES(4,2001,3000)
```

1 row(s) inserted.

```
INSERT INTO SALGRADE VALUES(5,3001,9999)
```

1 row(s) inserted.

```
select * from salgrade
```

GRADE	LOSAL	HISAL
-------	-------	-------

3	1401	2000
---	------	------

2	1201	1400
---	------	------

5	3001	9999
---	------	------

1	700	1200
---	-----	------

4	2001	3000
---	------	------

5 rows selected.

1) List empno,ename and salary?

```
SELECT EMPNO,ENAME,SAL FROM EMP
```

EMPNO	ENAME	SAL
7839	KING	5000
7698	BLAKE	2850
7782	CLARK	2450
7566	JONES	2975
7788	SCOTT	3000
7902	FORD	3000
7369	SMITH	800
7499	ALLEN	1600
7521	WARD	1250
7844	TURNER	1500
7876	ADAMS	1100
7900	JAMES	950
7934	MILLER	1300
7654	MARTIN	1250

14 rows selected.

2) List the names of all managers?

```
SELECT ENAME FROM EMP WHERE JOB='MANAGER'
```

ENAME

BLAKE

CLARK

JONES

3 rows selected.

3) List all clerks in deptno 30?

```
SELECT * FROM EMP WHERE JOB='CLERK' AND DEPTNO=30
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30

4) List the employees to who manager is 7698?

```
SELECT ENAME FROM EMP WHERE MGR=7698
```

ENAME

ALLEN

WARD

TURNER

JAMES

MARTIN

5 rows selected.

.5) List jobs in dept 20?

```
SELECT DISTINCT(JOB) FROM EMP WHERE DEPTNO=20
```

JOB

ANALYST

CLERK

MANAGER

3 rows selected.

6) List employee names whose salary is between 2000 and 3000?

```
SELECT ENAME FROM EMP WHERE SAL BETWEEN 2000 AND 3000
```

ENAME

BLAKE

CLARK

JONES

SCOTT

FORD

5 rows selected.

7) List employees in departments 10,20?

```
SELECT * FROM EMP WHERE DEPTNO IN(10,20)
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
-------	-------	-----	-----	----------	-----	------	--------

7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7788	SCOTT	ANALYST	7566	13-JUL-87	3000	-	20
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7876	ADAMS	CLERK	7788	13-JUL-87	1100	-	20
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10

8 rows selected.

8) List ename which begin with s?

```
SELECT ENAME FROM EMP WHERE ENAME LIKE 'S%'
```

ENAME

SCOTT

SMITH

2 rows selected.

9) List ename having 'A' in their names?

```
SELECT ENAME FROM EMP WHERE ENAME LIKE '%A%'
```

ENAME

BLAKE

CLARK

ALLEN

WARD

ADAMS

JAMES

MARTIN

7 rows selected.

10) List employees who have joined in JAN?

```
SELECT ENAME,TO_CHAR(HIREDATE,'MON') FROM EMP WHERE
```

```
TO_CHAR(HIREDATE,'MON')='JAN'
```

ENAME TO_CHAR(HIREDATE,'MON')

MILLER JAN

11) List employees who have joined in the year 81?

```
SELECT ENAME, TO_CHAR(HIREDATE, 'YYYY') AS YEAR FROM EMP WHERE  
TO_CHAR(HIREDATE, 'YYYY')=1981
```

ENAME	YEAR
-------	------

KING	1981
------	------

BLAKE	1981
-------	------

CLARK	1981
-------	------

JONES	1981
-------	------

FORD	1981
------	------

ALLEN	1981
-------	------

WARD	1981
------	------

TURNER	1981
--------	------

JAMES	1981
-------	------

MARTIN	1981
--------	------

10 rows selected.

12) List all distinct jobs?

```
SELECT DISTINCT JOB FROM EMP
```

JOB

ANALYST

CLERK

SALESMAN

MANAGER

PRESIDENT

5 rows selected.

13) List ename in alphabetical order?

```
SELECT ENAME FROM EMP ORDER BY ENAME
```

ENAME

ADAMS

ALLEN

BLAKE

CLARK

FORD

JAMES

JONES

KING

MARTIN

MILLER

SCOTT

SMITH

TURNER

WARD

14 rows selected.

14) List ename alphabetically department wise?

```
SELECT ENAME,DEPTNO FROM EMP ORDER BY DEPTNO, ENAME
```

ENAME DEPTNO

CLARK 10

KING 10

MILLER 10

ADAMS 20

FORD 20

JONES 20

SCOTT 20

SMITH 20

ALLEN 30

BLAKE 30

JAMES 30

MARTIN 30

TURNER 30

WARD 30

14 rows selected.

15) List employee names alphabetically job wise?

SELECT ENAME **FROM** EMP **ORDER BY** JOB

ENAME

FORD

SCOTT

SMITH

MILLER

JAMES

ADAMS

BLAKE

JONES

CLARK

KING

MARTIN

ALLEN

WARD

TURNER

14 rows selected.

16) List eno,ename,sal,DA(15% of sal) and PF(10% of sal)?

SELECT EMPNO,ENAME,SAL,SAL/100*15 **AS** DA,SAL/100*10 **AS** PF **FROM** EMP

EMPNO ENAME SAL DA PF

7839	KING	5000	750	500
7698	BLAKE	2850	427.5	285
7782	CLARK	2450	367.5	245
7566	JONES	2975	446.25	297.5
7788	SCOTT	3000	450	300
7902	FORD	3000	450	300
7369	SMITH	800	120	80
7499	ALLEN	1600	240	160
7521	WARD	1250	187.5	125
7844	TURNER	1500	225	150
7876	ADAMS	1100	165	110
7900	JAMES	950	142.5	95
7934	MILLER	1300	195	130
7654	MARTIN	1250	187.5	125

14 rows selected.

17) List enames having an experience more than 15 years?

```
SELECT ENAME FROM EMP WHERE ((months_between(sysdate,hiredate))/12) > 15
```

ENAME

KING

BLAKE

CLARK

JONES

SCOTT

FORD

SMITH

ALLEN

WARD

TURNER

ADAMS

JAMES

MILLER

MARTIN

14 rows selected.

18) List ename whose commission is NULL?

SELECT ENAME FROM EMP WHERE COMM IS NULL

ENAME

KING

BLAKE

CLARK

JONES

SCOTT

FORD

SMITH

ADAMS

JAMES

MILLER

10 rows selected.

19) List employees who donot report to anybody?

SELECT ename,mgr **FROM** emp **WHERE** mgr is null

ENAME MGR

KING -

20) List max sal,min sal,avg sal?

SELECT MAX(SAL),MIN(SAL),AVG(SAL) FROM EMP

MAX(SAL) MIN(SAL) AVG(SAL)

5000 800 2073.214285714285714285714285714286

21) List number of jobs?

SELECT COUNT(DISTINCT(JOB)) FROM EMP

COUNT(DISTINCT(JOB))

5

22) List the numbers of people and average salary in deptno 30?

```
SELECT COUNT(*),AVG(SAL) FROM EMP WHERE DEPTNO=30
```

COUNT(EMPNO)	AVG(SAL)
6	1566.666666666666666666666666666666666667

23) List max sal and min sal in the designation SALESMAN and CLERK?

```
SELECT count(*),max(sal),avg(sal) from emp where job in('SALESMAN','CLERK')
```

COUNT(*)	MAX(SAL)	AVG(SAL)
8	1600	1218.75

24) List the number of people and average salary of employees joined in 81,82 and 83?

```
SELECT COUNT(*),AVG(SAL) FROM EMP WHERE TO_CHAR(HIREDATE,'YY') IN ('81','82','83')
```

[illegible]

25) List jobs that are unique to dept 20?

```
SELECT DISTINCT JOB FROM EMP WHERE DEPTNO = 20 AND JOB NOT
IN(SELECT DISTINCT JOB FROM EMP WHERE DEPTNO <> 20)
```

JOB
ANALYST

26) Display today's date and present time

```
SELECT CURRENT_TIMESTAMP FROM DUAL
```

CURRENT_TIMESTAMP
02-JUL-21 07.25.44.528890 AM US/PACIFIC

27) Display a given date as a string in different formats.

```
SELECT TO_CHAR(SYSDATE, 'DDSPTH MONTH YEAR') FROM DUAL
```

TO_CHAR(SYSDATE,'DDSPTHMONTHYEAR')

THIRD JULY TWENTY TWENTY-ONE

28) List employee names and there experience in years?

SELECT ENAME,((months_between(sysdate,hiredate))/12) **AS** EXPERIENCE **FROM** EMP

ENAME	EXPERIENCE
KING	39.62798763565312624452409398645957785742
BLAKE	40.17099838834129828753484667463162086817
CLARK	40.0661596786638789326961369972122660295
JONES	40.25
SCOTT	33.97207365715850258861011549183592194342
FORD	39.5822887109219434488251692552767821585
SMITH	40.54465430231979291119076065312624452408
ALLEN	40.36992311952409398645957785742731979292
WARD	40.36454677543807248108323377140581441658
TURNER	39.81884785070688968538430904022301871767
ADAMS	33.97207365715850258861011549183592194342
JAMES	39.5822887109219434488251692552767821585
MILLER	39.44519193672839506172839506172839506175
MARTIN	39.76508440984667463162086818000796495417

14 rows selected.

29) List empnames who joined in DEC and on MONDAY or FRIDAY?

SELECT ENAME,TO_CHAR(HIREDATE,'DAY MON') **FROM** EMP

WHERE TO_CHAR(HIREDATE,'MON') = 'DEC'

AND TO_CHAR(HIREDATE,'DAY') = 'FRIDAY'

OR TO_CHAR(HIREDATE,'DAY') = 'MONDAY'

no data found

30) List ename and there joining date in the following formats

a) SMITH 17th DEC NINETEEN EIGHTY

```
SELECT ENAME || ' ' || TO_CHAR(HIREDATE, 'DDTH MON YEAR') FROM EMP WHERE ENAME = 'SMITH'
```

```
ENAME||' '||TO_CHAR(HIREDATE, 'DDTHMONYEAR')
```

```
SMITH 17TH DEC NINETEEN EIGHTY
```

b) Smith seventeenth dec nineteen eighty

```
SELECT ENAME || ' ' || TO_CHAR(HIREDATE, 'DDSPTH MON YEAR') FROM EMP WHERE ENAME = 'SMITH'
```

```
ENAME||' '||TO_CHAR(HIREDATE, 'DDSPTHMONYEAR')
```

```
SMITH SEVENTEENTH DEC NINETEEN EIGHTY
```

c) Smith weekday of joining

```
SELECT ENAME || ' ' || TO_CHAR(HIREDATE, 'DAY') FROM EMP WHERE ENAME = 'SMITH'
```

```
ENAME||' '||TO_CHAR(HIREDATE, 'DAY')
```

```
SMITH WEDNESDAY
```

d) Smith 17/12/1980

```
SELECT ENAME || ' ' || TO_CHAR(HIREDATE, 'DD/MM/YY') FROM EMP WHERE ENAME = 'SMITH'
```

```
ENAME||' '||TO_CHAR(HIREDATE, 'DD/MM/YY')
```

```
SMITH 17/12/80
```

LAB SHEET-3

1.list employee names and their hire dates sorted in the order of their experience.

```
SELECT ENAME, HIREDATE, ((months_between(sysdate, hiredate))/12) AS EXPERIENCE FROM EMP ORDER BY EXPERIENCE
```


ENAME	HIREDATE	EXPERIENCE
ADAMS	13-JUL-87	33.99557378783353245718837116686579052167
SCOTT	13-JUL-87	33.99557378783353245718837116686579052167
MILLER	23-JAN-82	39.46869206740342493030665073675826364
JAMES	03-DEC-81	39.60578884159697331740342493030665073675
FORD	03-DEC-81	39.60578884159697331740342493030665073675
KING	17-NOV-81	39.65148776632815611310234966148944643567
MARTIN	28-SEP-81	39.78858454052170450019912385503783353242
TURNER	08-SEP-81	39.84234798138191955396256471525288729592
CLARK	09-JUN-81	40.08965980933890880127439267224213460775
BLAKE	01-MAY-81	40.19449851901632815611310234966148944642
JONES	02-APR-81	40.27514368030665073675826363998407009158
WARD	22-FEB-81	40.38804690611310234966148944643568299483
ALLEN	20-FEB-81	40.39342325019912385503783353245718837117
SMITH	17-DEC-80	40.56815443299482277976901632815611310233

14 rows selected.

2. List managers names and their joining dates completely spelled in alphabetical order of names.

```
SELECT ENAME,TO_CHAR(HIREDATE,'DDSPTH MON YEAR') FROM EMP WHERE JOB='MANAGER'
ORDER BY ENAME
```

ENAME	TO_CHAR(HIREDATE,'DDSPTHMONYEAR')
-------	-----------------------------------

BLAKE	FIRST MAY NINETEEN EIGHTY-ONE
-------	-------------------------------

CLARK	NINTH JUN NINETEEN EIGHTY-ONE
-------	-------------------------------

JONES	SECOND APR NINETEEN EIGHTY-ONE
-------	--------------------------------

3 rows selected.

3. List employee names and their experience in years with names arranged in descending order.

```
SELECT ENAME,TO_CHAR(SYSDATE,'YYYY')-TO_CHAR(HIREDATE,'YYYY')EXPERIENCE FROM EMP
ORDER BY ENAME DESC
```

ENAME	EXPERIENCE
-------	------------

WARD	40
------	----

TURNER	40
--------	----

SMITH	41
SCOTT	34
MILLER	39
MARTIN	40
KING	40
JONES	40
JAMES	40
FORD	40
CLARK	40
BLAKE	40
ALLEN	40
ADAMS	34

14 rows selected.

4. List employee names having a minimum of 2 years experience sorted on experience.

```
SELECT ENAME FROM EMP WHERE ((months_between(sysdate,hiredate))/12)>=2
```

ENAME

KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ALLEN
WARD
TURNER
ADAMS
JAMES
MILLER
MARTIN

14 rows selected.

5. List employee names with all capital letters, with all small letters and with first letter only as Capital.

```
SELECT UPPER(ENAME),LOWER(ENAME),INITCAP(ENAME) FROM EMP
```

UPPER(ENAME)	LOWER(ENAME)	INITCAP(ENAME)
KING	king	King
BLAKE	blake	Blake
CLARK	clark	Clark
JONES	jones	Jones
SCOTT	scott	Scott
FORD	ford	Ford
SMITH	smith	Smith
ALLEN	allen	Allen
WARD	ward	Ward
TURNER	turner	Turner
ADAMS	adams	Adams
JAMES	james	James
MILLER	miller	Miller
MARTIN	martin	Martin

14 rows selected.

6. List employee names with length of the name sorted on length.

```
SELECT ENAME, LENGTH(ENAME) AS LENGTH FROM EMP ORDER BY LENGTH
```

ENAME	LENGTH
WARD	4
KING	4
FORD	4
SMITH	5
JONES	5
CLARK	5
BLAKE	5
ALLEN	5
SCOTT	5
JAMES	5
ADAMS	5
MILLER	6
TURNER	6
MARTIN	6

14 rows selected.

7. List employee names appending Sri to the beginning and Garu to the end.

```
SELECT CONCAT(CONCAT('SRI ',ENAME),' GARU') FROM EMP
```

```
CONCAT(CONCAT('SRI ',ENAME),' GARU')
```

```
SRI KING GARU
SRI BLAKE GARU
SRI CLARK GARU
SRI JONES GARU
SRI SCOTT GARU
SRI FORD GARU
SRI SMITH GARU
SRI ALLEN GARU
SRI WARD GARU
SRI TURNER GARU
SRI ADAMS GARU
SRI JAMES GARU
SRI MILLER GARU
SRI MARTIN GARU
```

14 rows selected.

8. List employee names and month names of joining.

```
SELECT ENAME,TO_CHAR(HIREDATE,'MONTH') FROM EMP
```

```
ENAME    TO_CHAR(HIREDATE,'MONTH')
```

```
KING      NOVEMBER
BLAKE     MAY
CLARK     JUNE
JONES     APRIL
SCOTT     JULY
FORD      DECEMBER
SMITH     DECEMBER
ALLEN     FEBRUARY
WARD      FEBRUARY
TURNER    SEPTEMBER
ADAMS     JULY
JAMES     DECEMBER
MILLER    JANUARY
```

MARTIN SEPTEMBER

14 rows selected.

9. List employee names and year of joining in words.

```
SELECT ENAME,TO_CHAR(HIREDATE,'YEAR') FROM EMP
```

ENAME	TO_CHAR(HIREDATE,'YEAR')
-------	--------------------------

KING	NINETEEN EIGHTY-ONE
BLAKE	NINETEEN EIGHTY-ONE
CLARK	NINETEEN EIGHTY-ONE
JONES	NINETEEN EIGHTY-ONE
SCOTT	NINETEEN EIGHTY-SEVEN
FORD	NINETEEN EIGHTY-ONE
SMITH	NINETEEN EIGHTY
ALLEN	NINETEEN EIGHTY-ONE
WARD	NINETEEN EIGHTY-ONE
TURNER	NINETEEN EIGHTY-ONE
ADAMS	NINETEEN EIGHTY-SEVEN
JAMES	NINETEEN EIGHTY-ONE
MILLER	NINETEEN EIGHTY-TWO
MARTIN	NINETEEN EIGHTY-ONE

14 rows selected.

10. List employees names, job and salary with 5 hyphens in between.

```
SELECT ENAME || '-' || JOB || '-' || SAL FROM EMP
```

ENAME	JOB	SAL
-------	-----	-----

KING	PRESIDENT	5000
BLAKE	MANAGER	2850
CLARK	MANAGER	2450
JONES	MANAGER	2975
SCOTT	ANALYST	3000
FORD	ANALYST	3000
SMITH	CLERK	800
ALLEN	SALESMAN	1600
WARD	SALESMAN	1250
TURNER	SALESMAN	1500

ADAMS-----CLERK-----1100
JAMES-----CLERK-----950
MILLER-----CLERK-----1300
MARTIN-----SALESMAN-----1250
14 rows selected.

11. List employee names and position of first occurrence of I in their name.

```
SELECT ENAME,INSTR(ENAME,'I') FROM EMP
```

ENAME	INSTR(ENAME,'I')
KING	2
BLAKE	0
CLARK	0
JONES	0
SCOTT	0
FORD	0
SMITH	3
ALLEN	0
WARD	0
TURNER	0
ADAMS	0
JAMES	0
MILLER	2
MARTIN	5

14 rows selected.

12. List employee names and the string without first character and last character in their name.

```
SELECT ENAME,SUBSTR(ENAME,2, LENGTH(ENAME)-2) FROM EMP
```

ENAME	SUBSTR(ENAME,2,LENGTH(ENAME)-2)
KING	IN
BLAKE	LAK
CLARK	LAR
JONES	ONE
SCOTT	COT
FORD	OR

14 rows selected.

```
SELECT * FROM EMP WHERE HIREDATE BETWEEN '01-APR-81' AND '30-APR-82'
```

9 rows selected.

```
SELECT MAX(SAL),MIN(SAL),AVG(SAL) FROM EMP WHERE DEPTNO IN (10,30)
```

15. List the designation in dept 30 but not in 20.

WHERE DEPTNO=20

JOB

SALESMAN

16. List the number of employees in each department along with dept numbers.

```
SELECT COUNT(*) AS EMPLOYEES,DEPTNO FROM EMP GROUP BY DEPTNO
```

EMPLOYEES	DEPTNO
-----------	--------

6	30
---	----

3	10
---	----

5	20
---	----

3 rows selected.

17. List number of employees joined year wise.

```
SELECT COUNT(*) AS EMPLOYEES,TO_CHAR(HIREDATE,'YYYY')FROM EMP GROUP BY  
TO_CHAR(HIREDATE,'YYYY')
```

EMPLOYEES	TO_CHAR(HIREDATE,'YYYY')
-----------	--------------------------

10	1981
----	------

2	1987
---	------

1	1980
---	------

1	1982
---	------

4 rows selected.

18. List number of employees job wise.

```
SELECT COUNT(*) AS EMPLOYEES,JOB FROM EMP GROUP BY JOB
```

EMPLOYEES	JOB
-----------	-----

2	ANALYST
---	---------

4	CLERK
---	-------

4	SALESMAN
---	----------

3	MANAGER
---	---------

1	PRESIDENT
---	-----------

5 rows selected.

19. List max sal, min sal, average salary dept wise.

```
SELECT MAX(SAL),MIN(SAL),AVG(SAL),DEPTNO FROM EMP GROUP BY DEPTNO
```


3 rows selected.

```
SELECT MAX(SAL),MIN(SAL),AVG(SAL),JOB FROM EMP GROUP BY JOB
```

5 rows selected.

```
SELECT JOB ,MAX(SAL),MIN(SAL) FROM EMP WHERE JOB IN ('MANAGER','CLERK') GROUP BY
JOB
```

2 rows selected.

```
SELECT DEPTNO,MIN(SAL),MAX(SAL),AVG(SAL) FROM EMP GROUP BY DEPTNO HAVING
COUNT(*)>2
```

DEPTNO	MIN(SAL)	MAX(SAL)	AVG(SAL)
30	950	2850	1566.6666666666666666666666666667
10	1300	5000	2916.6666666666666666666666666667
20	800	3000	2175

3 rows selected.

23. List the number of employees in each job in each department.

SELECT COUNT(*) AS EMPLOYEES, JOB, DEPTNO FROM EMP GROUP BY JOB, DEPTNO

EMPLOYEES	JOB	DEPTNO
2	CLERK	20
1	MANAGER	20
1	MANAGER	30
1	MANAGER	10
1	PRESIDENT	10
4	SALESMAN	30
2	ANALYST	20
1	CLERK	30
1	CLERK	10

9 rows selected.

24. List MGR and the number of employees report to them in the sorted order.

SELECT COUNT(*) AS EMPLOYEES, MGR FROM EMP WHERE MGR IS NOT NULL GROUP BY MGR ORDER BY EMPLOYEES

EMPLOYEES	MGR
1	7788
1	7782
1	7902
2	7566
3	7839
5	7698

6 rows selected.

25. List emp numbers of employees to whom a minimum of 3 people report.

SELECT DISTINCT(MGR), COUNT(*) FROM EMP WHERE MGR IS NOT NULL GROUP BY MGR HAVING COUNT(*) > 2

MGR	COUNT(*)
7698	5
7839	3

2 rows selected.

26. List dept numbers having a minimum of 3 persons.

```
SELECT DEPTNO,COUNT(*) FROM EMP GROUP BY DEPTNO HAVING COUNT(*)>=3
```

DEPTNO	COUNT(*)
--------	----------

30	6
----	---

10	3
----	---

20	5
----	---

3 rows selected.

27. List names of jobs having a minimum of 3 persons in that job.

```
SELECT JOB FROM EMP GROUP BY JOB HAVING COUNT(*)>=3
```

JOB

CLERK

SALESMAN

MANAGER

3 rows selected.

28. List names of months in which a minimum of 3 persons joined.

```
SELECT TO_CHAR(HIREDATE,'MONTH') FROM EMP GROUP BY TO_CHAR(HIREDATE,'MONTH')  
HAVING COUNT(*)>=3
```

TO_CHAR(HIREDATE,'MONTH')

DECEMBER

29. List hiredates of employees having 2 or more employees having the same hiredate.

```
SELECT HIREDATE FROM EMP GROUP BY HIREDATE HAVING COUNT(*)>=2
```

HIREDATE

03-DEC-81

13-JUL-87

2 rows selected.

30. List departments having minimum of 3 people having a minimum of 17

years of experience

```
SELECT DEPTNO FROM EMP WHERE (SYSDATE-HIREDATE)/365>=17 GROUP BY
```

```
DEPTNO HAVING COUNT(*)>=3
```

DEPTNO

30

10

20

3 rows selected.