

**CS - 514 DATABASE THEORY & IMPLEMENTATION**

**HOMEWORK - 3**

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### LAB 3 - OUTPUT : *lab3.lst*

```
> vi lab3.lst
"lab3.lst" 1354 lines, 40882 characters
SQL> set pause on
SQL> set pages 50
SQL> --THIS IS A COMMENT
SQL> --1.Display last name,first name and department name for employees not in d
epartment 40 or 50
SQL>
SQL> SELECT e.ename AS "Last Name" ,i.fname AS "First Name",d.dname AS "Departme
nt Name"
      2 FROM empbb02 e,info02 i,deptbb02 d WHERE e.deptno NOT IN(40,50)
      3 AND (e.empno =i.empno AND e.deptno = d.deptno);
```

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Last Name	First Name	Departme
musial	stan	outfield
gehrig	lou	infield
minos	orestes	infield
sandberg	ryne	infield
cey	ron	infield
williams	ted	outfield
johnson	randy	pitcher
brown	mordecai	pitcher
mays	willie	outfield
mungo	van lingle	pitcher

Report Done

10 rows selected.

```
SQL>
SQL>
SQL> --2.Display dname,restaurant and location in the format: The dname departm
ent dines at restaurant in location for all the departments
SQL>
SQL> SELECT 'The'||d.dname||' department dines at '||d.restaurant||' in '||d.loc
ation AS
      2 "Department Dining" FROM deptbb02 d;
```

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Department Dining

```
-----
Theinfield department dines at Jade in Clairmont
Theoutfield department dines at House of Pasta in Santee
Thepitcher department dines at Crab Shack in Pacific Beach
Thestaff department dines at Burger King in Lakeside
Thecatchers department dines at Pinnacle Peak in Santee
```

Report Done

```
SQL> --3.Create a copy of empbb02 called tempbb02
SQL>
SQL> CREATE TABLE tempbb02 AS SELECT * FROM empbb02;
```

Table created.

```
SQL>
SQL> --Table tempbb02
SQL>
SQL> DESC tempbb02;
```

Name	Null?	Type
EMPNO		VARCHAR2(5)
ENAME	NOT NULL	VARCHAR2(10)
POS		VARCHAR2(12)
BOSS		VARCHAR2(4)
HIREDATE		DATE
SAL		NUMBER(6)
DEPTNO		NUMBER(2)
INCENTIVES		NUMBER(6)

```
SQL> SELECT * FROM tempbb02;
```

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EMPNO	ENAME	POS	BOSS	HIREDATE	SAL	DEPTNO	INCENTIVES
712	rickey	gm		01-JAN-98	10000	40	
735	lasorda	coach	712	10-JAN-98	2000	40	
707	bochy	coach	712	11-JAN-98	2000	40	
798	berra	coach	712	12-JAN-98	2000	40	
782	musial	right field	707	01-FEB-98	42000	20	
763	gehrig	first base	735	11-MAR-98	85000	10	
777	minos	shortstop	735	05-MAY-98	85000	10	6000
721	sandberg	second base	735	28-FEB-98	25000	10	
788	cey	third base	735	10-JAN-99	15000	10	8000
720	williams	left field	707	05-JAN-99	150000	20	
755	johnson	pitcher	798	08-NOV-98	50000	30	
744	brown	pitcher	798	18-OCT-99	40000	30	4000
730	mays	center field	707	01-JAN-96	240000	20	
799	mungo	pitcher	798	10-MAR-00	20000	30	12000
766	rodriguez	catcher	735	16-OCT-01	100000	50	

Report Done

15 rows selected.

```
SQL>
SQL> --4.In tempbb02, for each employee salary add his deptno to it
SQL>
SQL> --Original Salary of all the employees
SQL>
SQL> SELECT ename AS "Last Name",sal AS "Original Salary",deptno FROM tempbb02;
```

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Last Name	Original Salary	DEPTNO
rickey	10000	40
lasorda	2000	40
bochy	2000	40
berra	2000	40
musial	42000	20
gehrig	85000	10
minos	85000	10
sandberg	25000	10
cey	15000	10
williams	150000	20
johnson	50000	30
brown	40000	30
mays	240000	20
mungo	20000	30
rodriguez	100000	50

Report Done

15 rows selected.

SQL>

SQL> --Updated Salary of all the employees

SQL> UPDATE tempbb02 SET sal=sal+deptno;

15 rows updated.

SQL> SELECT ename AS "Last Name",sal AS "Updated Salary" FROM tempbb02;

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Last Name	Updated Salary
rickey	10040
lasorda	2040
bochy	2040
berra	2040
musial	42020
gehrig	85010
minos	85010
sandberg	25010
cey	15010
williams	150020
johnson	50030
brown	40030
mays	240020
mungo	20030
rodriguez	100050

Report Done

15 rows selected.

```
SQL> --5.In tempbb02, for each employee salary,add the uniform number to it
SQL>
SQL> --First Updated salary with deptno added
SQL>
SQL> SELECT ename AS "Last Name",sal AS "First Updated Salary" FROM tempbb02;
```

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Last Name	First Updated Salary
rickey	10040
lasorda	2040
bochy	2040
berra	2040
musial	42020
gehrig	85010
minos	85010
sandberg	25010
cey	15010
williams	150020
johnson	50030
brown	40030
mays	240020
mungo	20030
rodriguez	100050

Report Done

15 rows selected.

```
SQL>
SQL> --Second Updated Salary with uniform number added
SQL>
1 UPDATE
2 (SELECT t.sal as OLD,t.sal+i.uni as NEW
3 FROM tempbb02 t
4 INNER JOIN infobb02 i
5 ON t.empno = i.empno
6 )t
7 SET t.OLD = t.NEW;
```

15 rows updated.

```
SQL> select e.sal AS "Original Salary",t.sal AS "Updated Salary",i.uni AS "Uniform
Identifier",e.deptno AS "Department Number" from empbb02 e,tempbb02 t,infobb02 i where
e.empno =t.empno and t.empno=i.empno;
```

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Original Salary	Updated Salary	Unif	Department	Number
10000	10096	56		40
2000	2102	62		40
2000	2104	64		40
2000	2106	66		40
42000	42039	19		20
85000	85024	14		10
85000	85037	27		10
25000	25027	17		10
15000	15045	35		10
150000	150030	10		20
50000	50038	8		30
40000	40055	25		30
240000	240032	12		20
20000	20061	31		30
100000	100054	4		50

Report Done

15 rows selected.

```
SQL>
SQL> --6.Display last name, salary and position of all the employees making more
    than highest paid pitcher
SQL>
SQL> SELECT ename AS "Last Name",sal AS "Salary",pos AS "Position" FROM empbb02
    2  WHERE sal > ALL(SELECT sal FROM empbb02 WHERE pos ='pitcher');
```

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Last Name	Salary	Position
gehrig	85000	first base
minos	85000	shortstop
williams	150000	left field
mays	240000	center field
rodriguez	100000	catcher

Report Done

```
SQL> --7.Display employee name with time of service in years and months
SQL>
SQL> SELECT e.ename||','||i.fname AS "Name",floor(months_between(sysdate,e.hired
ate)/12) AS "Years",round(mod(months_between(sysdate,e.hiredate),12)) AS "Months
" FROM empbb02 e,infobb02 i WHERE e.empno=i.empno;
```

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Name	Years	Months
rickey,branch	17	7
lasorda,tommy	17	6
bochy,bruce	17	6
berra,larry	17	6
musial,stan	17	6
gehrig,lou	17	4
minosso,orestes	17	3
sandberg,ryne	17	5
cey,ron	16	6
williams,ted	16	7
johnson,randy	16	8
brown,mordecai	15	9
mays,willie	19	7
mungo,van lingle	15	4
rodriguez,ivan	13	9

Report Done

15 rows selected.

```
SQL> --8. Add Jackie Robinson to both the tables empbb02 and infobb02
SQL>
SQL> --a) Adding into table empbb02
SQL>
SQL> INSERT INTO empbb02 VALUES('715','robinson','second base','712','02-JAN-199
8',30000,10,NULL);
```

1 row created.

```
SQL> --Updated Table
SQL>
SQL> SELECT * FROM empbb02;
```

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EMPNO	ENAME	POS	BOSS	HIREDATE	SAL	DEPTNO	INCENTIVES
712	rickey	gm		01-JAN-98	10000	40	
735	lasorda	coach	712	10-JAN-98	2000	40	
707	bochy	coach	712	11-JAN-98	2000	40	
798	berra	coach	712	12-JAN-98	2000	40	
782	musial	right field	707	01-FEB-98	42000	20	
763	gehrig	first base	735	11-MAR-98	85000	10	
777	minosso	shortstop	735	05-MAY-98	85000	10	6000
721	sandberg	second base	735	28-FEB-98	25000	10	
788	cey	third base	735	10-JAN-99	15000	10	8000
720	williams	left field	707	05-JAN-99	150000	20	
755	johnson	pitcher	798	08-NOV-98	50000	30	
744	brown	pitcher	798	18-OCT-99	40000	30	4000
730	mays	center field	707	01-JAN-96	240000	20	

799	mungo	pitcher	798	10-MAR-00	20000	30	12000
766	rodriguez	catcher	735	16-OCT-01	100000	50	
715	robinson	second base	712	02-JAN-98	30000	1	

Report Done

16 rows selected.

SQL>

SQL> --b) Adding into table infobb02

SQL>

SQL> INSERT INTO infobb02 VALUES('715','jack','Jackie','42',311,NULL);

1 row created.

SQL>

SQL> --UPdated Table

SQL>

SQL> SELECT \* FROM infobb02;

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EMPNO	FNAME	NICK	UNI	AVERAGE	ERA
712	branch		56		
735	tommy		62		
707	bruce		64	220	
777	orestes	minnie	27	270	32
763	lou	iron horse	14	350	
782	stan	the man	19	342	
798	larry	yogi	66	290	
788	ron	penguin	35	287	
730	willie	say hey kid	12	335	
755	randy	the big unit	8	123	2.15
744	mordecai	3 fingers	25	168	3.27
721	ryne	rhino	17	294	
799	van lingle		31	230	2.82
720	ted	teddy ballgame	10	350	
766	ivan	pudge	4	339	
715	jack	Jackie	42	311	

Report Done

16 rows selected.

SQL>

SQL> --9.Add a column for Spousal first name into infobb02 named as "Spouse" and  
set its value as "NA" for all the employees

SQL>

SQL> ALTER TABLE infobb02 ADD Spouse VARCHAR2(10);



Table altered.

SQL>

SQL> UPDATE infobb02 SET Spouse = 'NA';

16 rows updated.

SQL>

SQL> --Updated infobb02

SQL>

SQL> DESC infobb02

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
FNAME		VARCHAR2(10)
NICK		VARCHAR2(15)
UNI		VARCHAR2(4)
AVERAGE		NUMBER(4)
ERA		NUMBER(6,3)
SPOUSE		VARCHAR2(10)

SQL>

SQL> SELECT \* FROM infobb02;

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EMPNO	FNAME	NICK	UNI	AVERAGE	ERA	SPOUSE
712	branch		56			NA
735	tommy		62			NA
707	bruce		64	220		NA
777	orestes	minnie	27	270	32	NA
763	lou	iron horse	14	350		NA
782	stan	the man	19	342		NA
798	larry	yogi	66	290		NA
788	ron	penguin	35	287		NA
730	willie	say hey kid	12	335		NA
755	randy	the big unit	8	123	2.15	NA
744	mordecai	3 fingers	25	168	3.27	NA
721	ryne	rhino	17	294		NA
799	van lingle		31	230	2.82	NA
720	ted	teddy ballgame	10	350		NA
766	ivan	pudge	4	339		NA
715	jack	Jackie	42	311		NA

Report Done

16 rows selected.

SQL>

SQL> --Include employee 42's Spouse first name in the table

SQL>

SQL> UPDATE infobb02 SET Spouse = 'Rachel' WHERE uni = '42';

1 row updated.

```
SQL>
SQL> --Display updated table with new entry
SQL>
SQL> SELECT * FROM infobb02;
```

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EMPNO	FNAME	NICK	UNI	AVERAGE	ERA	SPOUSE
712	branch		56			NA
735	tommy		62			NA
707	bruce		64	220		NA
777	orestes	minnie	27	270	32	NA
763	lou	iron horse	14	350		NA
782	stan	the man	19	342		NA
798	larry	yogi	66	290		NA
788	ron	penguin	35	287		NA
730	willie	say hey kid	12	335		NA
755	randy	the big unit	8	123	2.15	NA
744	mordecai	3 fingers	25	168	3.27	NA
721	ryne	rhino	17	294		NA
799	van lingle		31	230	2.82	NA
720	ted	teddy ballgame	10	350		NA
766	ivan	pudge	4	339		NA
715	jack	Jackie	42	311		Rachel

Report Done

16 rows selected.

```
SQL>
SQL> --10.a)Rename the Column name from "Spouse" to "Wife"
SQL>
SQL> --Before rename
SQL>
SQL> DESC infobb02
```

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
FNAME		VARCHAR2(10)
NICK		VARCHAR2(15)
UNI		VARCHAR2(4)
AVERAGE		NUMBER(4)
ERA		NUMBER(6,3)
SPOUSE		VARCHAR2(10)

```
SQL> --After renaming
SQL>
SQL> ALTER TABLE infobb02 RENAME COLUMN Spouse TO Wife;
```

Table altered.

```
SQL>
```

SQL> DESC infobb02

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
FNAME		VARCHAR2(10)
NICK		VARCHAR2(15)
UNI		VARCHAR2(4)
AVERAGE		NUMBER(4)
ERA		NUMBER(6,3)
WIFE		VARCHAR2(10)

SQL>

SQL> --b)Remove the column "Wife"

SQL>

SQL> ALTER TABLE infobb02 DROP COLUMN Wife;

Table altered.

SQL>

SQL> DESC infobb02

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
FNAME		VARCHAR2(10)
NICK		VARCHAR2(15)
UNI		VARCHAR2(4)
AVERAGE		NUMBER(4)
ERA		NUMBER(6,3)

SQL>

SQL> --\*\*\*\*\*

```
SQL> --LIST OF TABLES
SQL> SELECT * FROM CAT;
```

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TABLE_NAME	TABLE_TYPE
EMPBB02	TABLE
DEPTBB02	TABLE
TEMPBB02	TABLE
INFOBB02	TABLE
SALSB02	TABLE

Report Done

```
SQL> --TABLE DESCRIPTIONS AND DATA
```

```
SQL> --(i) TABLE : empbb02
```

```
SQL>
```

```
SQL> DESC empbb02
```

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
ENAME	NOT NULL	VARCHAR2(10)
POS		VARCHAR2(12)
BOSS		VARCHAR2(4)
HIREDATE		DATE
SAL		NUMBER(6)
DEPTNO		NUMBER(2)
INCENTIVES		NUMBER(6)

```
SQL> SELECT * FROM empbb02;
```

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EMPNO	ENAME	POS	BOSS	HIREDATE	SAL	DEPTNO	INCENTIVES
712	rickey	gm		01-JAN-98	10000	40	
735	lasorda	coach	712	10-JAN-98	2000	40	
707	bochy	coach	712	11-JAN-98	2000	40	
798	berra	coach	712	12-JAN-98	2000	40	
782	musial	right field	707	01-FEB-98	42000	20	
763	gehrig	first base	735	11-MAR-98	85000	10	
777	minos	shortstop	735	05-MAY-98	85000	10	6000
721	sandberg	second base	735	28-FEB-98	25000	10	
788	cey	third base	735	10-JAN-99	15000	10	8000
720	williams	left field	707	05-JAN-99	150000	20	
755	johnson	pitcher	798	08-NOV-98	50000	30	
744	brown	pitcher	798	18-OCT-99	40000	30	4000
730	mays	center field	707	01-JAN-96	240000	20	
799	mungo	pitcher	798	10-MAR-00	20000	30	12000
766	rodriguez	catcher	735	16-OCT-01	100000	50	
715	robinson	second base	712	02-JAN-98	30000	10	

Report Done

16 rows selected.

SQL> --(ii) TABLE : infobb02

SQL>

SQL> DESC infobb02

Name	Null?	Type
EMPNO	NOT NULL	VARCHAR2(5)
FNAME		VARCHAR2(10)
NICK		VARCHAR2(15)
UNI		VARCHAR2(4)
AVERAGE		NUMBER(4)
ERA		NUMBER(6,3)

SQL> SELECT \* FROM infobb02;

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EMPNO	FNAME	NICK	UNI	AVERAGE	ERA
712	branch		56		
735	tommy		62		
707	bruce		64	220	
777	orestes	minnie	27	270	32
763	lou	iron horse	14	350	
782	stan	the man	19	342	
798	larry	yogi	66	290	
788	ron	penguin	35	287	
730	willie	say hey kid	12	335	
755	randy	the big unit	8	123	2.15
744	mordecai	3 fingers	25	168	3.27
721	ryne	rhino	17	294	
799	van lingle		31	230	2.82
720	ted	teddy ballgame	10	350	
766	ivan	pudge	4	339	
715	jack	Jackie	42	311	

Report Done

16 rows selected.

SQL> --(iii) TABLE : salsbb02

SQL>

SQL> DESC salsbb02

Name	Null?	Type
GRADE	NOT NULL	NUMBER(2)
ROLE	NOT NULL	VARCHAR2(8)
LOSAL		NUMBER(6)
HISAL		NUMBER(6)

```
SQL> SELECT * FROM salsbb02;
```

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GRADE	ROLE	LOSAL	HISAL
1	staff	1000	5000
2	staff	5001	10000
1	hitter	5000	15000
2	hitter	15001	50000
3	hitter	50001	250000
1	pitcher	5000	25000
2	pitcher	25001	125000

Report Done

7 rows selected.

```
SQL> --(iv) TABLE : deptbb02
```

```
SQL>
```

```
SQL> DESC deptbb02
```

Name	Null?	Type
DEPTNO	NOT NULL	NUMBER(3)
DNAME		VARCHAR2(8)
RESTAURANT		VARCHAR2(15)
LOCATION		VARCHAR2(15)
MOTTO		VARCHAR2(30)

```
SQL> SELECT * FROM deptbb02;
```

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DEPTNO	DNAME	RESTAURANT	LOCATION
MOTTO			
10	infield	Jade	Clairmont
Let's play two!			
20	outfield	House of Pasta	Santee
Alea iacta est			
30	pitcher	Crab Shack	Pacific Beach
Semper paratus			
40	staff	Burger King	Lakeside
Experientia docet			
50	catchers	Pinnacle Peak	Santee
Non bastardi carborundum			

Report Done

SQL> --(v) TABLE : tempbb02

SQL>

SQL> DESC tempbb02

Name	Null?	Type
EMPNO		VARCHAR2(5)
ENAME	NOT NULL	VARCHAR2(10)
POS		VARCHAR2(12)
BOSS		VARCHAR2(4)
HIREDATE		DATE
SAL		NUMBER(6)
DEPTNO		NUMBER(2)
INCENTIVES		NUMBER(6)

SQL>

SQL> SELECT \* FROM tempbb02;

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EMPNO	ENAME	POS	BOSS	HIREDATE	SAL	DEPTNO	INCENTIVES
712	rickey	gm		01-JAN-98	10096	40	
735	lasorda	coach	712	10-JAN-98	2102	40	
707	bochy	coach	712	11-JAN-98	2104	40	
798	berra	coach	712	12-JAN-98	2106	40	
782	musial	right field	707	01-FEB-98	42039	20	
763	gehrig	first base	735	11-MAR-98	85024	10	
777	minos	shortstop	735	05-MAY-98	85037	10	6000
721	sandberg	second base	735	28-FEB-98	25027	10	
788	cey	third base	735	10-JAN-99	15045	10	8000
720	williams	left field	707	05-JAN-99	150030	20	
755	johnson	pitcher	798	08-NOV-98	50038	30	
744	brown	pitcher	798	18-OCT-99	40055	30	4000
730	mays	center field	707	01-JAN-96	240032	20	
799	mungo	pitcher	798	10-MAR-00	20061	30	12000
766	rodriguez	catcher	735	16-OCT-01	100054	50	

Report Done

15 rows selected.