

CSE2007 DBMS LAB

SLOT: L39+L40

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EXPERIMENT NO.-1

1. create following tables:

i. bonus:

Name	Null?	Type
ENAME		VARCHAR2 (10 CHAR)
JOB		VARCHAR2 (9 CHAR)
SAL		NUMBER
COMM		NUMBER

CODE-

```
CREATE TABLE bonus(ENAME varchar2(10),JOB varchar2(9),SAL number(9),COMM number(9));
```

OUTPUT-

Bonus

ENAME	JOB	SAL	COMM
empty			

ii. emp:

Name	Null?	Type
EMPNO	NOT NULL	NUMBER (4)
ENAME		VARCHAR2 (10 CHAR)
JOB		VARCHAR2 (9 CHAR)
MGR		NUMBER (4)
HIREDATE		DATE
SAL		NUMBER (7,2)
COMM		NUMBER (7,2)
DEPTNO		NUMBER (2)

CODE-

```
CREATE TABLE emp(EMPNO number(4) not null,ENAME varchar(10),JOB varchar2(9),MGR number(4),HIREDATE date,SAL number(7,2),COMM number(7,2),DEPTNO number(2));
```

OUTPUT-

Emp

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
empty							

iii. dept:

Name	Null?	Type

DEPTNO	NOT NULL	NUMBER(2)
DNAME		VARCHAR2(14 CHAR)
LOC		VARCHAR2(13 CHAR)

CODE-

```
CREATE TABLE dept(DEPTNO number(2) not null,DNAME varchar2(14),LOC
varchar2(13));
```

OUTPUT-

Dept

DEPTNO	DNAME	LOC
empty		

iv. salgrade:

Name	Null?	Type

GRADE	NOT NULL	NUMBER
LOSAL		NUMBER
HISAL		NUMBER

CODE-

```
CREATE TABLE salgrade(GRADE number not null,LOSAL number,HISAL number);
```

OUTPUT-

Salgrade

GRADE	LOSAL	HISAL
empty		

2. Insert the following data into tables:

emp table:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-1980	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7566	JONES	MANAGER	7839	02-APR-1981	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850		30
7782	CLARK	MANAGER	7839	09-JUN-1981	2450		10
7788	SCOTT	ANALYST	7566	19-APR-1987	3000		20
7839	KING	PRESIDENT		17-NOV-1981	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-1987	1100		20
7900	JAMES	CLERK	7698	03-DEC-1981	950		30
7902	FORD	ANALYST	7566	03-DEC-1981	3000		20
7934	MILLER	CLERK	7782	23-JAN-1982	1300		10

CODE-

```
CREATE TABLE emp(EMPNO number(4) not null,ENAME varchar(10),JOB
varchar2(9),MGR number(4),HIREDATE date,SAL number(7,2),COMM
number(7,2),DEPTNO number(2));
INSERT INTO emp (EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, DEPTNO)
VALUES
(7369, 'SMITH', 'CLERK', 7902,'17-DEC-1980', 800, NULL, 20),
(7499, 'ALLEN', 'SALESMAN', 7698, '20-FEB-1981', 1600, 300, 30),
(7521, 'WARD', 'SALESMAN', 7698, '22-FEB-1981', 1250, 500, 30),
(7566, 'JONES', 'MANAGER', 7839, '02-APR-1981', 2975, NULL, 20),
(7654, 'MARTIN', 'SALESMAN', 7698, '28-SEP-1981', 1250, 1400, 30),
(7698, 'BLAKE', 'MANAGER', 7839, '01-MAY-1981', 2850, NULL, 30),
(7782, 'CLARK', 'MANAGER', 7839, '09-JUN-1981', 2450, NULL, 10),
(7788, 'SCOTT', 'ANALYST', 7566, '19-APR-1987', 3000, NULL, 20),
(7839, 'KING', 'PRESIDENT', NULL, '17-NOV-1981', 5000, NULL, 10),
(7844, 'TURNER', 'SALESMAN', 7698, '08-SEP-1981', 1500, 0, 30),
(7876, 'ADAMS', 'CLERK', 7788, '23-MAY-1987', 1100, NULL, 20),
(7900, 'JAMES', 'CLERK', 7698, '03-DEC-1981', 950, NULL, 30),
(7902, 'FORD', 'ANALYST', 7566, '03-DEC-1981', 3000, NULL, 20),
(7934, 'MILLER', 'CLERK', 7782, '23-JAN-1982', 1300, NULL, 10);
```

OUTPUT-

Emp

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-1980	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7566	JONES	MANAGER	7839	02-APR-1981	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850		30
7782	CLARK	MANAGER	7839	09-JUN-1981	2450		10
7788	SCOTT	ANALYST	7566	19-APR-1987	3000		20
7839	KING	PRESIDENT		17-NOV-1981	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-1987	1100		20
7900	JAMES	CLERK	7698	03-DEC-1981	950		30
7902	FORD	ANALYST	7566	03-DEC-1981	3000		20
7934	MILLER	CLERK	7782	23-JAN-1982	1300		10

dept table:

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

CODE-

```
CREATE TABLE dept(DEPTNO number(2) not null,DNAME varchar2(14),LOC
varchar2(13));
INSERT INTO dept(DEPTNO, DNAME,LOC)
VALUES
(10, 'ACCOUNTING', 'NEW YORK'),
(20, 'RESEARCH', 'DALLAS'),
(30, 'SALES', 'CHICAGO'),
(40, 'OPERATIONS', 'BOSTON');
```

OUTPUT-

Dept

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

salgrade table:

GRADE	LOSAL	HISAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

CODE-

```
CREATE TABLE salgrade(GRADE number not null,LOSAL number,HISAL number);
INSERT INTO salgrade(GRADE,LOSAL,HISAL)
VALUES
(1,700,1200),
(2,1201,1400),
(3,1401,2000),
(4,2001,3000),
(5,3001,9999);
```

OUTPUT-

Salgrade

GRADE	LOSAL	HISAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

Answer the following queries:

0. describe all table structures and data in inserted order.

Ans0.

```
DESCRIBE bonus;
DESCRIBE emp;
DESCRIBE dept;
DESCRIBE salgrade;
```

TABLE BONUS

Column	Null?	Type
ENAME	-	VARCHAR2(10)
JOB	-	VARCHAR2(9)
SAL	-	NUMBER(9,0)
COMM	-	NUMBER(9,0)

TABLE EMP

Column	Null?	Type
EMPNO	NOT NULL	NUMBER(4,0)
ENAME	-	VARCHAR2(10)
JOB	-	VARCHAR2(9)
MGR	-	NUMBER(4,0)
HIREDATE	-	DATE
SAL	-	NUMBER(7,2)
COMM	-	NUMBER(7,2)
DEPTNO	-	NUMBER(2,0)

Table created.

TABLE DEPT

Column	Null?	Type
DEPTNO	NOT NULL	NUMBER(2,0)
DNAME	-	VARCHAR2(14)
LOC	-	VARCHAR2(13)

TABLE SALGRADE

Column	Null?	Type
GRADE	NOT NULL	NUMBER
LOSAL	-	NUMBER
HISAL	-	NUMBER

```
SELECT * FROM bonus ORDER BY ENAME;
SELECT * FROM emp ORDER BY EMPNO;
SELECT * FROM dept ORDER BY DEPTNO;
SELECT * FROM salgrade ORDER BY GRADE;
```

Output

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-1980	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7566	JONES	MANAGER	7839	02-APR-1981	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-1981	2850		30
7782	CLARK	MANAGER	7839	09-JUN-1981	2450		10
7788	SCOTT	ANALYST	7566	19-APR-1987	3000		20
7839	KING	PRESIDENT		17-NOV-1981	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-1987	1100		20
7900	JAMES	CLERK	7698	03-DEC-1981	950		30
7902	FORD	ANALYST	7566	03-DEC-1981	3000		20
7934	MILLER	CLERK	7782	23-JAN-1982	1300		10

Output

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

GRADE	LOSAL	HISAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

1. select all the information from the emp table.
Ans.

```
SELECT * FROM emp;
```

2. Display ename, job, hiredate from emp table.
Ans.

```
SELECT ENAME, JOB, HIREDATE FROM emp;
```

Output

ENAME	JOB	HIREDATE
SMITH	CLERK	17-DEC-1980
ALLEN	SALESMAN	20-FEB-1981
WARD	SALESMAN	22-FEB-1981
JONES	MANAGER	02-APR-1981
MARTIN	SALESMAN	28-SEP-1981
BLAKE	MANAGER	01-MAY-1981
CLARK	MANAGER	09-JUN-1981
SCOTT	ANALYST	19-APR-1987
KING	PRESIDENT	17-NOV-1981
TURNER	SALESMAN	08-SEP-1981
ADAMS	CLERK	23-MAY-1987
JAMES	CLERK	03-DEC-1981
FORD	ANALYST	03-DEC-1981
MILLER	CLERK	23-JAN-1982

3. select all employees whose salary between 1000 and 2000.
Ans.

```
SELECT * FROM emp WHERE SAL BETWEEN 1000 AND 2000;
```

Output

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	20-FEB-1981	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-1981	1250	500	30
7654	MARTIN	SALESMAN	7698	28-SEP-1981	1250	1400	30
7844	TURNER	SALESMAN	7698	08-SEP-1981	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-1987	1100		20
7934	MILLER	CLERK	7782	23-JAN-1982	1300		10

4. List department names and numbers in the department name order
Ans.

```
SELECT DNAME, DEPTNO FROM dept ORDER BY DNAME;
```

Output

DNAME	DEPTNO
ACCOUNTING	10
OPERATIONS	40
RESEARCH	20
SALES	30

5. List the details of the employees in dept 10 and 20 in alphabetical order of names.
Ans.

```
SELECT * FROM emp WHERE DEPTNO IN (10, 20) ORDER BY ENAME;
```

Output

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7876	ADAMS	CLERK	7788	23-MAY-1987	1100		20
7782	CLARK	MANAGER	7839	09-JUN-1981	2450		10
7902	FORD	ANALYST	7566	03-DEC-1981	3000		20
7566	JONES	MANAGER	7839	02-APR-1981	2975		20
7839	KING	PRESIDENT		17-NOV-1981	5000		10
7934	MILLER	CLERK	7782	23-JAN-1982	1300		10
7788	SCOTT	ANALYST	7566	19-APR-1987	3000		20
7369	SMITH	CLERK	7902	17-DEC-1980	800		20

6. List the names of all clerks in dept 20.

Ans.

```
SELECT ENAME FROM emp WHERE JOB = 'CLERK' AND DEPTNO = 20;
```

Output

ENAME
SMITH
ADAMS

3.

Create the following tables:

i) client_master

columnname	datatype	size
client_no	varchar2	6
name	varchar2	20
address1	varchar2	30
address2	varchar2	30
city	varchar2	15
state	varchar2	15
pincode	number	6
bal_due	number	10,2

CODE-

```
CREATE TABLE client_master (  
  client_no varchar2(6) not null,  
  name      varchar2(20),  
  address1  varchar2(30),  
  address2  varchar2(30),  
  city      varchar2(15),  
  state     varchar2(15),  
  pincode   number(6),  
  bal_due   number(10,2)  
);
```

OUTPUT-

Client_master

client_no	name	address1	address2	city	state	pincode	bal_due
empty							

ii) Product_master

Columnname	datatype	size
Product_no	varchar2	
Description	varchar2	
Profit_percent	number	
Unit_measure	varchar2	
Qty_on_hand	number	
Reoder_lvl	number	
Sell_price	number	
Cost_price	number	

CODE-

```
CREATE TABLE product_master (  
  Product_no  varchar2(20),  
  Description  varchar2(20),  
  Profit_percent  number,  
  Unit_measure  varchar2(20),  
  Qty_on_hand  number,  
  Reorder_lvl  number,  
  Sell_price  number,  
  Cost_price  number  
);
```

OUTPUT-

Product_master

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price
empty							

4. Insert the following data

Clientno	Name	city	pincode	state	bal_due
0001	Ivan	Bombay	400054	Maharashtra	15000
0002	Vandana	Madras	780001	Tamilnadu	0
0003	Pramada	Bombay	400057	Maharashtra	5000
0004	Basu	Bombay	400056	Maharashtra	0
0005	Ravi	Delhi	100001		2000
0006	Rukmini	Bombay	400050	Maharashtra	0

CODE-

```
INSERT INTO client_master (client_no, name, city, pincode, state, bal_due)  
VALUES  
  ('0001', 'Ivan', 'Bombay', 400054, 'Maharashtra', 15000),  
  ('0002', 'Vandana', 'Madras', 780001, 'Tamilnadu', 0),  
  ('0003', 'Pramada', 'Bombay', 400057, 'Maharashtra', 5000),  
  ('0004', 'Basu', 'Bombay', 400056, 'Maharashtra', 0),  
  ('0005', 'Ravi', 'Delhi', 100001, NULL, 2000),  
  ('0006', 'Rukmini', 'Bombay', 400050, 'Maharashtra', 0);
```

OUTPUT-

Client_master

client_no	name	address1	address2	city	state	pincode	bal_due
0001	Ivan			Bombay	Maharashtra	400054	15000
0002	Vandana			Madras	Tamilnadu	780001	0
0003	Pramada			Bombay	Maharashtra	400057	5000
0004	Basu			Bombay	Maharashtra	400056	0
0005	Ravi			Delhi		100001	2000
0006	Rukmini			Bombay	Maharashtra	400050	0

Product No.	Description	Profit	Unit	Qty	Reorder	Sell Cost	on hand	lv1	price
		Percent	measured						
P00001	1.44floppies	5	piece	100	20	525	500		
P03453	Monitors	6	piece	10	3	12000	11200		
P06734	Mouse	5	piece	20	5	1050	500		
P07865	1.22 floppies	5	piece	100	20	525	500		
P07868	Keyboards	2	piece	10	3	3150	3050		
P07885	CD Drive	2.5	piece	10	3	5250	5100		
P07965	540 HDD	4	piece	10	3	8400	8000		
P07975	1.44 Drive	5	piece	10	3	1050	1000		
P08865	1.22 Drive	5	piece	2	3	1050	1000		

CODE-

```
INSERT INTO product_master (Product_no, Description, Profit_percent,
Unit_measure, Qty_on_hand, Reorder_lv1, Sell_price, Cost_price)
VALUES
('P00001','1.44floppies', 5, 'piece', 100, 20, 525, 500),
('P03453', 'Monitors', 6, 'piece', 10, 3, 12000, 11200),
('P06734', 'Mouse', 5, 'piece', 20, 5, 1050, 500),
('P07865', '1.22 floppies', 5, 'piece', 100, 20, 525, 500),
('P07868', 'Keyboards', 2, 'piece', 10, 3, 3150, 3050),
('P07885', 'CD Drive', 2.5, 'piece', 10, 3, 5250, 5100),
('P07965', '540 HDD', 4, 'piece', 10, 3, 8400, 8000),
('P07975', '1.44 Drive', 5, 'piece', 10, 3, 1050, 1000),
('P08865', '1.22 Drive', 5, 'piece', 2, 3, 1050, 1000);
```

OUTPUT-

product_no	description	profit_percent	unit_measure	qty_on_hand	reorder_lv1	sell_price	cost_price
P00001	1.44floppies	5	piece	100	20	525	500
P03453	Monitors	6	piece	10	3	12000	11200
P06734	Mouse	5	piece	20	5	1050	500
P07865	1.22 floppies	5	piece	100	20	525	500
P07868	Keyboards	2	piece	10	3	3150	3050
P07885	CD Drive	2.5	piece	10	3	5250	5100
P07965	540 HDD	4	piece	10	3	8400	8000
P07975	1.44 Drive	5	piece	10	3	1050	1000
P08865	1.22 Drive	5	piece	2	3	1050	1000

Answer the queries:

i) Find out the names of all the clients.

Ans.

```
SELECT name FROM client_master;
```

Output

name
Ivan
Vandana
Pramada
Basu
Ravi
Rukmini

ii) Retrieve the list of names and cities of all the clients.
Ans.

```
SELECT name, city FROM client_master;
```

Output

name	city
Ivan	Bombay
Vandana	Madras
Pramada	Bombay
Basu	Bombay
Ravi	Delhi
Rukmini	Bombay

iii) List the various products available from the product_master table.
Ans.

```
SELECT * FROM Product_master;
```

iv) List all the clients who are located in Bombay.
Ans.

```
SELECT * FROM client_master WHERE city = 'Bombay';
```

Output

client_no	name	address1	address2	city	state	pincode	bal_due
0001	Ivan			Bombay	Maharashtra	400054	15000
0003	Pramada			Bombay	Maharashtra	400057	5000
0004	Basu			Bombay	Maharashtra	400056	0
0006	Rukmini			Bombay	Maharashtra	400050	0

v) Display the information for client no 0001 and 0002.
Ans.

```
SELECT * FROM client_master WHERE client_no IN ('0001', '0002');
```

Output

client_no	name	address1	address2	city	state	pincode	bal_due
0001	Ivan			Bombay	Maharashtra	400054	15000
0002	Vandana			Madras	Tamilnadu	780001	0

vi) Find the products with description as '1.44 drive' and '1.22 Drive'.
Ans.

```
SELECT * FROM Product_master WHERE Description IN ('1.44 Drive', '1.22 Drive');
```

Output

product_no	description	profit_percent	unit_measure	qty_on_hand	reorder_lvl	sell_price	cost_price
P07975	1.44 Drive	5	piece	10	3	1050	1000
P08865	1.22 Drive	5	piece	2	3	1050	1000

vii) Find all the products whose sell price is greater than 5000.

Ans.

```
SELECT * FROM Product_master WHERE Sell_price > 5000;
```

Output

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price
P03453	Monitors	6	piece	10	3	12000	11200
P07885	CD Drive	2.5	piece	10	3	5250	5100
P07965	540 HDD	4	piece	10	3	8400	8000

viii) Find the list of all clients who stay in in city 'Bombay' or city 'Delhi' or 'Madras'.

Ans.

```
SELECT * FROM client_master WHERE city IN ('Bombay', 'Delhi', 'Madras');
```

Output

client_no	name	address1	address2	city	state	pincode	bal_due
0001	Ivan			Bombay	Maharashtra	400054	15000
0002	Vandana			Madras	Tamilnadu	780001	0
0003	Pramada			Bombay	Maharashtra	400057	5000
0004	Basu			Bombay	Maharashtra	400056	0
0005	Ravi			Delhi		100001	2000
0006	Rukmini			Bombay	Maharashtra	400050	0

ix) Find the product whose selling price is greater than 2000 and less than or equal to 5000.

Ans.

```
SELECT * FROM Product_master WHERE Sell_price BETWEEN 2000 AND 5000
```

Output

Product_no	Description	Profit_percent	Unit_measure	Qty_on_hand	Reorder_lvl	Sell_price	Cost_price
P07868	Keyboards	2	piece	10	3	3150	3050

x) List the name, city and state of clients not in the state of 'Maharashtra'.

Ans.

```
SELECT name, city, state FROM client_master WHERE state != 'Maharashtra';
```

Output

name	city	state
Vandana	Madras	Tamilnadu