

CSE1004 - DBMS - DIGITAL ASSIGNMENT -2

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Assignment Due Date: 07.10.2021

DBMS DIGITAL ASSIGNMENT 2 MEHER SHRISHTI NIGAM 20BRS1193

Creating the tables -

CREATE TABLE WORKER_20BRS1193 (WORKER_ID INT PRIMARY KEY, FIRST_NAME VARCHAR2(20), LAST_NAME VARCHAR2(20), SALARY INT, JOIN_DATE DATE, DEPARTMENT VARCHAR(20));

INSERT ALL

INTO WORKER_20BRS1193 VALUES (1, 'Balasundaram', 'Ananth', 100000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'HR')

INTO WORKER_20BRS1193 VALUES (2, 'Kumar', 'Verma', 80000, TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (3, 'Vishal', 'Singhal', 300000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'HR')

INTO WORKER_20BRS1193 VALUES (4, 'Amitabh', 'Singh', 500000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (5, 'Vivek', 'Bhati', 500000, TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (6, 'Vipul', 'Diwan', 200000 , TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Account')

INTO WORKER_20BRS1193 VALUES (7, 'Satish', 'Kumar', 75000, TO_DATE('20-01-2014 09:00','DD-MM-YYYY HH24:MI'), 'Account')

INTO WORKER_20BRS1193 VALUES (8, 'Rishabh', 'Chauhan', 90000, TO_DATE('11-04-2014 09:00', 'DD-MM-YYYY HH24:MI'), 'Admin')

SELECT * FROM DUAL;

CREATE TABLE BONUS_20BRS1193 (WORKER_REF_ID INT, BONUS_DATE DATE , BONUS_AMOUNT INT, CONSTRAINT FK_G1 FOREIGN KEY (WORKER_REF_ID) REFERENCES WORKER_20BRS1193(WORKER_ID));

INSERT ALL

INTO BONUS_20BRS1193 VALUES (1, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 5000)

INTO BONUS_20BRS1193 VALUES (2, TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'), 3000)

INTO BONUS_20BRS1193 VALUES (3, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 4000)

INTO BONUS_20BRS1193 VALUES (1, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 4500)

INTO BONUS_20BRS1193 VALUES (2, TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'), 3500)

```
CREATE TABLE TITLE_20BRS1193 (WORKER_REF_ID INT, WORKER_TITLE VARCHAR2(20), AFFECTED_FROM DATE, CONSTRAINT FK_G2 FOREIGN KEY (WORKER_REF_ID) REFERENCES WORKER_20BRS1193(WORKER_ID));

INSERT ALL

INTO TITLE_20BRS1193 VALUES (1, 'Manager', TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (2, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (8, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (5, 'Manager', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (4, 'Asst. Manager', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))
```

INTO TITLE_20BRS1193 VALUES (7, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (6, 'Lead', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (3, 'Lead', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

SELECT * FROM DUAL;

```
QL> CREATE TABLE WORKER_20BRS1193 (WORKER_ID INT PRIMARY KEY, FIRST_NAME VARCHAR2(20), LAST_NAME VARCHAR2(20), SALARY INT, JOIN
 DATE DATE, DEPARTMENT VARCHAR(20));
Table created.
 SOL> INSERT ALL
            INSERT ALL

INTO WORKER_20BRS1193 VALUES (1, 'Balasundaram', 'Ananth', 100000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'HR'

INTO WORKER_20BRS1193 VALUES (2, 'Kumar', 'Verma', 80000, TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (3, 'Vishal', 'Singhal', 300000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'HR')

INTO WORKER_20BRS1193 VALUES (4, 'Amitabh', 'Singh', 500000, TO_DATE('20-02-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (5, 'Vivek', 'Bhati', 500000, TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

INTO WORKER_20BRS1193 VALUES (6, 'Vipul', 'Diwan', 200000, TO_DATE('11-06-2014 09:00','DD-MM-YYYY HH24:MI'), 'Account')

INTO WORKER_20BRS1193 VALUES (7, 'Satish', 'Kumar', 75000, TO_DATE('10-01-2014 09:00','DD-MM-YYYY HH24:MI'), 'Account')

INTO WORKER_20BRS1193 VALUES (8, 'Rishabh', 'Chauhan', 90000', TO_DATE('11-04-2014 09:00','DD-MM-YYYY HH24:MI'), 'Admin')

SELECT * FROM DUAL:
             SELECT * FROM DUAL;
8 rows created.
SOL>
SQL> CREATE TABLE BONUS_20BRS1193 (WORKER_REF_ID INT, BONUS_DATE DATE , BONUS_AMOUNT INT, CONSTRAINT FK_G1 FOREIGN KEY (WORKER_R
EF_ID) REFERENCES WORKER_20BRS1193(WORKER_ID));
Table created.
SOL> INSERT ALL
            INTO BONUS_20BRS1193 VALUES (1, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 5000)
INTO BONUS_20BRS1193 VALUES (2, TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'), 3000)
INTO BONUS_20BRS1193 VALUES (3, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 4000)
INTO BONUS_20BRS1193 VALUES (1, TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'), 4500)
INTO BONUS_20BRS1193 VALUES (2, TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'), 3500)
             SELECT * FROM DUAL;
5 rows created.
 SQL>
SOL>
SQL> CREATE TABLE TITLE_20BRS1193 (WORKER_REF_ID INT, WORKER_TITLE VARCHAR2(20), AFFECTED_FROM DATE , CONSTRAINT FK_G2 FOREIGN K
EY (WORKER_REF_ID) REFERENCES WORKER_20BRS1193(WORKER_ID));
Table created.
SQL> INSERT ALL
            INSERT ALL

INTO TITLE_20BRS1193 VALUES (1, 'Manager', TO_DATE('20-02-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (2, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (8, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (5, 'Manager', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (4, 'Asst. Manager', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (7, 'Executive', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (6, 'Lead', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))

INTO TITLE_20BRS1193 VALUES (3, 'Lead', TO_DATE('11-06-2016 00:00','DD-MM-YYYY HH24:MI'))
     6
     8
              SELECT * FROM DUAL;
```

1. Write an SQL query to fetch FIRST_NAME using the alias name WORKER_NAME from Worker table.

SELECT FIRST NAME AS WORKER NAME FROM WORKER 20BRS1193;

```
SQL> SELECT FIRST_NAME AS WORKER_NAME FROM WORKER_20BRS1193;

WORKER_NAME
Balasundaram
Kumar
Vishal
Amitabh
Vivek
Vipul
Satish
Rishabh
8 rows selected.
```

2. Write an SQL query to fetch FIRST_NAME from Worker table in upper case.

SELECT UPPER(FIRST_NAME) AS WORKER_NAME FROM WORKER_20BRS1193;

```
SQL> SELECT UPPER(FIRST_NAME) AS WORKER_NAME FROM WORKER_20BRS1193;

WORKER_NAME
BALASUNDARAM
KUMAR
VISHAL
AMITABH
VIVEK
VIPUL
SATISH
RISHABH
8 rows selected.
```

3. Write an SQL query to fetch unique values of DEPARTMENT from Worker table.

SELECT DISTINCT DEPARTMENT FROM WORKER 20BRS1193;

```
SQL> SELECT DISTINCT DEPARTMENT FROM WORKER_20BRS1193;

DEPARTMENT
------
Admin
Account
HR
```

4. Write an SQL query to print the first three characters of FIRST_NAME from Worker table.

SELECT SUBSTR(FIRST_NAME,1,3) FROM WORKER_20BRS1193;

```
SQL> SELECT SUBSTR(FIRST_NAME,1,3) FROM WORKER_20BRS1193;

SUBSTR(FIRST
------
Bal
Kum
Vis
Ami
Viv
Vip
Sat
Ris
8 rows selected.
```

5. Write an SQL query that fetches the unique values of DEPARTMENT from Worker table and prints its length.

SELECT DISTINCT DEPARTMENT, LENGTH(DEPARTMENT) AS LEN FROM WORKER_20BRS1193;

```
SQL> SELECT DISTINCT DEPARTMENT, LENGTH(DEPARTMENT) AS LEN FROM WORKER_20BRS1193;

DEPARTMENT LEN
Admin 5
HR 2
Account 7
```

6. Write an SQL query to print the FIRST_NAME and LAST_NAME from Worker table into a single column COMPLETE_NAME. A space char should separate them.

SELECT FIRST_NAME | | ' ' | | LAST_NAME AS COMPLETE_NAME FROM WORKER_20BRS1193;

```
SQL> SELECT FIRST_NAME || ' ' || LAST_NAME AS COMPLETE_NAME FROM WORKER_20BRS1193;

COMPLETE_NAME
Balasundaram Ananth
Kumar Verma
Vishal Singhal
Amitabh Singh
Vivek Bhati
Vipul Diwan
Satish Kumar
Rishabh Chauhan

8 rows selected.
```

7. Write an SQL query to print all Worker details from the Worker table order by FIRST_NAME Ascending and DEPARTMENT Descending.

SELECT * FROM WORKER_20BRS1193 ORDER BY FIRST_NAME ASC, DEPARTMENT DESC;

SQL> SEL	ECT * FROM WORKER_20BR	51193 ORDER BY FIRST_NAME	ASC, DEPARTMENT DESC;
WORKER_	ID FIRST_NAME	LAST_NAME	SALARY JOIN_DATE
DEPARTME	NT		
Admin	4 Amitabh	Singh	500000 20-FEB-14
HR	1 Balasundaram	Ananth	100000 20-FEB-14
Admin	2 Kumar	Verma	80000 11-JUN-14
WORKER_ DEPARTME		LAST_NAME	SALARY JOIN_DATE
Admin	8 Rishabh	Chauhan	90000 11-APR-14
Account	7 Satish	Kumar	75000 20-JAN-14
Account	6 Vipul	Diwan	200000 11-JUN-14
WORKER_	ID FIRST_NAME	LAST_NAME	SALARY JOIN_DATE
DEPARTME	NT		
HR	3 Vishal	Singhal	300000 20-FEB-14
Admin	5 Vivek	Bhati	500000 11-JUN-14
8 rows s	elected.		

8. Write an SQL query to print details of Workers with DEPARTMENT name as Admin.

SELECT * FROM WORKER_20BRS1193 WHERE DEPARTMENT = 'Admin';

SQL> SELE	CT * FROM WORKER_20BRS	1193 WHERE DEPARTMENT =	'Admin';	
WORKER_I	D FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMEN	т Т			
Admin	2 Kumar	Verma	80000	11-JUN-14
Admin	4 Amitabh	Singh	500000	20-FEB-14
Admin	5 Vivek	Bhati	500000	11-JUN-14
		LAST_NAME	SALARY	JOIN_DATE
DEPARTMEN Admin	I 8 Rishabh	Chauhan	90000	11-APR-14

9. Write an SQL query to print details of the Workers whose FIRST_NAME contains 'a'.

SELECT * FROM WORKER_20BRS1193 WHERE FIRST_NAME LIKE 'A%';

SQL> SELECT * FROM WORKER_20BRS	1193 WHERE FIRST_NAME LIK	E 'A%';	
WORKER_ID FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMENT			
4 Amitabh Admin	Singh	500000	20-FEB-14

10. Write an SQL query to print details of the Workers whose SALARY lies between 100000 and 500000.

SELECT * FROM WORKER_20BRS1193 WHERE SALARY BETWEEN 100000 AND 500000;

SQL> SELEC	T * FROM WORKER_20BRS:	1193 WHERE SALARY BETWEEN	100000	AND 500000;
WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMENT				
1 HR	Balasundaram	Ananth	100000	20-FEB-14
HR	Vishal	Singhal	300000	20-FEB-14
4 Admin	Amitabh	Singh	500000	20-FEB-14
WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMENT				
5 Admin	Vivek	Bhati	500000	11-JUN-14
6 Account	Vipul	Diwan	200000	11-JUN-14

11. Write an SQL query to print details of the Workers who have joined in Feb'2014.

SELECT * FROM WORKER_20BRS1193 WHERE TO_CHAR(JOIN_DATE, 'MM-YYYY') = '02-2014';

SQL> SELECT * FROM WORKER_20	BRS1193 WHERE TO_CH	AR(JOIN_DATE,'MM-YYYY') = '02-2014';
WORKER_ID FIRST_NAME	LAST_NAME	SALARY JOIN_DATE
DEPARTMENT		
1 Balasundaram HR	Ananth	100000 20-FEB-14
3 Vishal HR	Singhal	300000 20-FEB-14
4 Amitabh Admin	Singh	500000 20-FEB-14

12. Write an SQL query to fetch the no. of workers for each department in the descending order.

SELECT COUNT(*), DEPARTMENT FROM WORKER_20BRS1193 GROUP BY DEPARTMENT ORDER BY DEPARTMENT DESC;

```
SQL> SELECT COUNT(*), DEPARTMENT FROM WORKER_20BRS1193 GROUP BY DEPARTMENT ORDER BY DEPARTMENT DESC;

COUNT(*) DEPARTMENT

2 HR
4 Admin
2 Account
```

13. Write an SQL query to print details of the Workers who are also Managers.

SELECT * FROM WORKER_20BRS1193 WHERE WORKER_ID = ANY(SELECT WORKER_REF_ID FROM TITLE_20BRS1193 WHERE WORKER_TITLE = 'Manager');

14. Write an SQL query to show only odd rows from a table. SELECT * FROM WORKER_20BRS1193 WHERE MOD(WORKER_ID, 2) != 0;

SQL> SELECT * FROM WORKER_20BRS:	1193 WHERE MOD(WORKER_ID,	2) != 0;
WORKER_ID FIRST_NAME	LAST_NAME	SALARY JOIN_DATE
DEPARTMENT		
1 Balasundaram HR	Ananth	100000 20-FEB-14
3 Vishal HR	Singhal	300000 20-FEB-14
5 Vivek Admin	Bhati	500000 11-JUN-14
WORKER_ID FIRST_NAME DEPARTMENT	LAST_NAME	SALARY JOIN_DATE
7 Satish Account	Kumar	75000 20-JAN-14

15. Write an SQL query to show only even rows from a table.

SELECT * FROM WORKER_20BRS1193 WHERE MOD(WORKER_ID, 2) = 0;

SQL> SELEC	T * FROM WORKER_20BRS:	1193 WHERE MOD(WORKER_ID,	2) = 0	;
_	_	LAST_NAME		_
DEPARTMENT				
	Kumar	Verma	80000	11-JUN-14
4 Admin	Amitabh	Singh	500000	20-FEB-14
6 Account	Vipul	Diwan	200000	11-JUN-14
WORKER_ID	FIRST_NAME	LAST_NAME		_
DEPARTMENT				
8 Admin	Rishabh	Chauhan	90000	11-APR-14

16. Write an SQL query to clone a new table from another table.

SELECT * FROM (SELECT * FROM WORKER_20BRS1193) NEW_TABLE;

SQL> SEL	ECT	* FROM (SELECT * FRO	M WORKER_20BRS1193) NI	EW_TABLE;	
WORKER_	ID F	IRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTME	NT				
HR	1 B	alasundaram	Ananth	100000	20-FEB-14
Admin	2 K	umar	Verma	80000	11-JUN-14
HR	3 V	ishal	Singhal	300000	20-FEB-14
WORKER_	ID F	IRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTME	NT				
Admin	4 A	mitabh	Singh	500000	20-FEB-14
Admin	5 V	ivek	Bhati	500000	11-JUN-14
Account	6 V	ipul	Diwan	200000	11-JUN-14
WORKER_: DEPARTMEI			LAST_NAME	SALARY	JOIN_DATE
Account	7 5	atish	Kumar	75000	20-JAN-14
Admin	8 R	ishabh	Chauhan	90000	11-APR-14
8 rows s	elec	ted.			

17. Write an SQL query to show the current date and time.

SELECT SYSDATE FROM DUAL;

SQL>	SELECT	SYSDATE	FROM	DUAL;
SYSDA	ATE			
05-00	CT-21			

18. Write an SQL query to show the top 10 records of a table.

SELECT FIRST_NAME FROM WORKER_20BRS1193 WHERE ROWNUM <= 10;

19. Write an SQL query to fetch the list of employees with the same salary.

SELECT FIRST_NAME, SALARY FROM WORKER_20BRS1193 WHERE SALARY IN (SELECT SALARY FROM WORKER 20BRS1193 GROUP BY SALARY HAVING COUNT(*) > 1);

```
SQL> SELECT FIRST_NAME, SALARY FROM WORKER_20BRS1193 WHERE SALARY IN (SELECT SALARY FROM WORKER_20BRS1193 GROUP BY SALARY HAVING COUNT(*) > 1);

FIRST_NAME SALARY

Amitabh 500000

Vivek 500000
```

20. Write an SQL query to show the second highest salary from a table.

SELECT MAX(SALARY) AS SECOND_HIGHEST FROM WORKER_20BRS1193 WHERE SALARY <(SELECT MAX(SALARY) FROM WORKER 20BRS1193);

```
SQL> SELECT MAX(SALARY) AS SECOND_HIGHEST FROM WORKER_20BRS1193 WHERE SALARY <(SELECT MAX(SALARY) FROM WORKER_20BRS1193);

SECOND_HIGHEST

300000
```

21. Write an SQL query to print the name of employees having the highest salary in each department.

SELECT DEPARTMENT, MAX(SALARY) AS HIGHEST_SALARY FROM WORKER_20BRS1193 GROUP BY DEPARTMENT:

```
SQL> SELECT DEPARTMENT, MAX(SALARY) AS HIGHEST_SALARY FROM WORKER_20BRS1193 GROUP BY DEPARTMENT;

DEPARTMENT HIGHEST_SALARY

Admin 500000
Account 200000
HR 300000
```

22. Write an SQL query to fetch departments along with the total salaries paid for each of them.

SELECT DEPARTMENT, SUM(SALARY) AS TOTAL_SALARY FROM WORKER_20BRS1193 GROUP BY DEPARTMENT;

```
SQL> SELECT DEPARTMENT, SUM(SALARY) AS TOTAL_SALARY FROM WORKER_20BRS1193 GROUP BY DEPARTMENT;

DEPARTMENT TOTAL_SALARY

Admin 1170000

Account 275000

HR 400000
```

23. Write an SQL query to fetch the names of workers who earn the highest salary.

SELECT FIRST_NAME, LAST_NAME, SALARY FROM WORKER_20BRS1193 WHERE SALARY = (SELECT MAX(SALARY) FROM WORKER 20BRS1193);

24. Write an SQL query to fetch the first 50% records from a table.

SELECT * FROM WORKER_20BRS1193 FETCH FIRST 4 ROWS ONLY;

SQL> SELEC	CT * FROM WORKER_20BRS	1193 FETCH FIRST 4 ROWS O	NLY;	
WORKER_I	FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMENT	Г			
HR	l Balasundaram	Ananth	100000	20-FEB-14
Admin	2 Kumar	Verma	80000	11-JUN-14
HR HR	3 Vishal	Singhal	300000	20-FEB-14
WORKER_I	FIRST_NAME	LAST_NAME	SALARY	JOIN_DATE
DEPARTMENT	Γ			
Admin	l Amitabh	Singh	500000	20-FEB-14

25. Write an SQL guery to show all departments along with the number of people in there.

SELECT COUNT(*), DEPARTMENT FROM WORKER 20BRS1193 GROUP BY DEPARTMENT;

```
SQL> SELECT COUNT(*), DEPARTMENT FROM WORKER_20BRS1193 GROUP BY DEPARTMENT;

COUNT(*) DEPARTMENT

4 Admin
2 Account
2 HR
```