School Of Computer
Science and Engineering

ASSIGNMENT -5
(Winter Sem 2021-2022)

Course Code: *CSE2007*   **Course Title:**   **DBMS**

Faculty Name: Manomita Chakraborty (70296)

Date : 06-05-2022

Student Name: SUDULAGUNTA BRAHMANYA ASHRITH

Reg No: 20BCE7236

Consider the following schema:

Table Name: Employee

Attribute	Data Type
First Name	VARCHAR2(15)
Mid Name	CHAR(2)
Last Name	VARCHAR2(15)
SSN Number	CHAR(9)
Birthday	DATE
Address	VARCHAR2(50)
Sex	CHAR(1)
Salary	NUMBER (7)
Supervisor SSN	CHAR(9)
Department Number	NUMBER (5)

Employee

FIRST_NAME	MID_NAME	LAST_NAME	SSN_NUMBER	BIRTHDAY	ADDRESS	SEX	SALARY	SUPERVISOR_SSN	DEPARTMENT_NUMBER
Doug	E	Gilbert	554433221	09-06-60	11 S 59 E, Salt Lake City, UT	M	80000	(null)	3
Joyce	(null)	PAN	543216789	07-02-78	35 S 18 E, Salt Lake City, UT	F	70000	(null)	2
Frankin	T	Wong	333445555	08-12-45	638 Voss, Houston, TX	M	40000	554433221	5
Jennifer	S	Wallace	987654321	20-06-31	291 Berry, Bellaire, TX	F	43000	554433221	4
Johny	B	Smith	123456789	09-01-55	731 Fondren, Houston, TX	M	30000	333445555	5
Ramesh	K	Narayan	666884444	15-09-52	975 Fire Oak, Humble, TX	M	38000	333445555	5
Joyce	A	English	453453453	31-07-62	5631 Rice, Houston, TX	F	25000	333445555	5
James	E	Borg	888665555	10-11-27	450 Stone, Houston, TX	M	55000	543216789	1
Alicia	J	Zelaya	999887777	19-07-58	3321 Castle, Spring, TX	F	25000	987654321	4
Ahmad	V	Jabbar	987987987	29-03-59	980 Dallas, Houston, TX	M	25000	987654321	4

CREATE TABLE EMPLOYEE_20BCE7236 (FIRST_NAME VARCHAR(15),MID_NAME CHAR(2),LAST_NAME VARCHAR(15),SSN_NUMBER CHAR(9),

BIRTHDAY DATE,ADDRESS VARCHAR2(50),SEX CHAR(1),SALARY NUMBER(7),SUPERVISOR_SSN CHAR(9),DEPARTMENT_NUMBER NUMBER(5));

CREATE TABLE DEPARTMENT_20BCE7236 (DEPT_NAME VARCHAR2(15),DEPT_NO NUMBER (5),MANAGERSSN CHAR (9),MANAGESTARTDATE DATE);

CREATE TABLE PROJECT_20BCE7236(PROJECTNAME VARCHAR(15),PROJECTNUMBER NUMERIC(5),PROJECTLOCATION VARCHAR(15),DEPT_NO NUMERIC(5));

```sql
1   CREATE TABLE EMPLOYEE_20BCE7236 (FIRST_NAME VARCHAR(15),MID_NAME CHAR(2),LAST_NAME VARCHAR(15),SSN_NUMBER CHAR(9),
2   BIRTHDAY DATE,ADDRESS VARCHAR(50),SEX CHAR(1),SALARY NUMERIC(7),SUPERVISOR_SSN CHAR(9),DEPARTMENT_NUMBER NUMERIC(5));
3   CREATE TABLE DEPARTMENT_20BCE7236 (DEPT_NAME VARCHAR(15),DEPT_NO NUMERIC(5),MANAGERSSN CHAR(9),MANAGESTARTDATE DATE);
4   CREATE TABLE PROJECT_20BCE7236(PROJECTNAME VARCHAR(15),PROJECTNUMBER NUMERIC(5),PROJECTLOCATION VARCHAR(15),DEPT_NO NUMERI
5
6   INSERT INTO EMPLOYEE_20BCE7236 VALUES('Doug', 'E', 'Gilbert', 554433221, '1960-06-09', '11 S 59 E, Salt Lake City, UT', 'M
7   INSERT INTO EMPLOYEE_20BCE7236 VALUES('Joyce', NULL, 'PAN', 543216789, '1978-02-07', '35 S 18 E, Salt LakeCity, UT
8   INSERT INTO EMPLOYEE_20BCE7236 VALUES('Frankin', 'T', 'Wong', 333445555, '1945-12-08', '638 Voss, Houston, TX', 'M', 40000
9   INSERT INTO EMPLOYEE_20BCE7236 VALUES('Jennifer', 'S', 'Wallace', 987654321, '1931-06-20', '291 Berry, Bellaire, TX', 'F'
10  INSERT INTO EMPLOYEE_20BCE7236 VALUES('Johny', 'B', 'Smith', 123456789, '1955-01-09', '731 Fondren, Houston, TX',
11  INSERT INTO EMPLOYEE_20BCE7236 VALUES('Ramesh', 'K', 'Narayan', 666884444, '1952-09-15', '975 Fire Oak, Humble,
12  INSERT INTO EMPLOYEE_20BCE7236 VALUES('Joyce', 'A', 'English', 453453453, '1962-07-31', '5631 Rice, Houston, TX', 'F', 250
13  INSERT INTO EMPLOYEE_20BCE7236 VALUES('James', 'E', 'Borg', 888665555, '1927-11-10', '450 Stone, Houston, TX', 'M', 55000
14  INSERT INTO EMPLOYEE_20BCE7236 VALUES('Alicia', 'J', 'Zelaya', 999887777, '1958-07-19', '3321 Castle, Spring, TX', 'F', 25
15  INSERT INTO EMPLOYEE_20BCE7236 VALUES('Ahmad', 'V', 'Jabbar', 987987987, '1959-03-29', '980 Dallas, Houston, TX', 'M', 250
16
```

Output

Action Output

#	Time	Action	Message
1	21:31:18	CREATE TABLE EMPLOYEE_20BCE7236 (FIRST_NAME VARCHAR(15),MID_NAME CHAR(2),LA...	0 row(s) affected
2	21:31:18	CREATE TABLE DEPARTMENT_20BCE7236 (DEPT_NAME VARCHAR(15),DEPT_NO NUMERI...	0 row(s) affected
3	21:31:19	CREATE TABLE PROJECT_20BCE7236(PROJECTNAME VARCHAR(15),PROJECTNUMBER NU...	0 row(s) affected

Table Name: Department

Attribute	Data Type
Department Name	Varchar2(15)
Department Number	Number(5)
ManagerSSN	CHAR(9)
ManageStartDate	DATE

Department

DEPT_NAME	DEPT_NO	MANAGERSSN	MANAGESTARTDATE
Administration	2	543216789	04-01-99
Headquarter	3	554433221	22-09-55
Finance	4	987654321	01-01-85
Research	5	333445555	22-05-78

Table Name: Project

Attribute	Data Type
Project Name	VARCHAR2(15)
Project Number	NUMBER(5)
Project Location	VARCHAR2(15)
Department Number	NUMBER(5)

Project

PROJECTNAME	PROJECTNUMBER	PROJECTLOCATION	DEPT_NO
ProjectA	3388	Houston	1
ProjectB	1945	Salt Lake City	3
ProjectC	6688	Houston	5
ProjectD	2423	Bellaire	4
ProjectE	7745	Sugarland	5
ProjectF	1566	Salt Lake City	3
ProjectG	1234	New York	2
ProjectH	3467	Stafford	4
ProjectI	4345	Chicago	1
ProjectJ	2212	San Francisco	2

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Doug', 'E', 'Gilbert', 554433221, '1960-06-09', '11 S 59 E, Salt Lake City, UT', 'M', 80000, NULL , 3);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Joyce', NULL, 'PAN', 543216789, '1978-02-07', '35 S 18 E, Salt LakeCity, UT', 'F', 70000, NULL, 2);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Frankin', 'T', 'Wong', 333445555, '1945-12-08', '638 Voss, Houston, TX', 'M', 40000, 554433221, 5);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Jennifer', 'S', 'Wallace', 987654321, '1931-06-20', '291 Berry, Bellaire, TX', 'F', 43000, 554433221, 4);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Johny', 'B', 'Smith', 123456789, '1955-01-09', '731 Fondren, Houston, TX', 'M', 30000, 333445555, 5);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Ramesh', 'K', 'Narayan', 666884444, '1952-09-15', '975 Fire Oak, Humble, TX', 'M', 38000, 333445555, 5);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Joyce', 'A', 'English', 453453453, '1962-07-31', '5631 Rice, Houston, TX', 'F', 25000, 333445555, 5);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('James', 'E', 'Borg', 888665555, '1927-11-10', '450 Stone, Houston, TX', 'M', 55000, 543216789, 1);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Alicia', 'J', 'Zelaya', 999887777, '1958-07-19', '3321 Castle, Spring, TX', 'F', 25000, 987654321, 4);

INSERT INTO EMPLOYEE_20BCE7236 VALUES('Ahmad', 'V', 'Jabbar', 987987987, '1959-03-29', '980 Dallas, Houston, TX', 'M', 25000, 987654321, 4);

INSERT INTO DEPARTMENT_20BCE7236 VALUES('Administration', 2, 543216789, '1999-01-04');

INSERT INTO DEPARTMENT_20BCE7236 VALUES('Headquarter', 3, 554433221, '1955-09-22');

INSERT INTO DEPARTMENT_20BCE7236 VALUES('Finance', 4, 987654321, '1985-01-01');

INSERT INTO DEPARTMENT_20BCE7236 VALUES('Research', 5, 333445555, '1978-05-22');

```
25 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectD', 2423, 'Bellaire', 4 );
26 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectE', 7745, 'Sugarland', 5 );
27 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectF', 1566, 'Salt Lake City', 3 );
28 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectG', 1234, 'New York', 2 );
29 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectH', 3467, 'Stafford', 4 );
30 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectI', 4345, 'Chicago', 1 );
31 •   INSERT INTO PROJECT_20BCE7236 VALUES('ProjectJ', 2212, 'San Francisco', 2);
32
33 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SEX='F' AND SALARY>25000;
34 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SALARY BETWEEN 30000 AND 70000;
35 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SUPERVISOR_SSN IS NULL;
36 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE BIRTHDAY<'1962-01-01';
37 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST_NAME LIKE 'J%_';
38
39 •   SELECT * FROM EMPLOYEE_20BCE7236 WHERE MID_NAME IS NULL;
40 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE   SEX = 'M' AND ADDRESS LIKE ('%HOUSTON%');
```

Output

Action Output

#	Time	Action	Message
✓	22 21:34:07	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectE', 7745, 'Sugarland', 5)	1 row(s) affected
✓	23 21:34:07	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectF', 1566, 'Salt Lake City', 3)	1 row(s) affected
✓	24 21:34:07	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectG', 1234, 'New York', 2)	1 row(s) affected
✓	25 21:34:08	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectH', 3467, 'Stafford', 4)	1 row(s) affected
✓	26 21:34:08	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectI', 4345, 'Chicago', 1)	1 row(s) affected
✓	27 21:34:08	INSERT INTO PROJECT_20BCE7236 VALUES('ProjectJ', 2212, 'San Francisco', 2)	1 row(s) affected

Questions

1.Find the female employee names having salary greater than Rs.25000.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SEX='F' AND SALARY>25000;


```
32
33 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SEX='F' AND SALARY>25000;
34 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SALARY BETWEEN 30000 AND 70000;
35 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SUPERVISOR_SSN IS NULL;
36 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE BIRTHDAY<'1962-01-01';
37 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST_NAME
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

FIRST_NAME	MID_NAME	LAST_NAME
Joyce	NULL	PAN
Jennifer	S	Wallace

2.Find the employee names whose salary falls in the range of 30000 and 70000.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SALARY > 30000 AND SALARY <70000;

```
34 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SALARY BETWEEN 30000 AND 70000;
35 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SUPERVISOR_SSN IS NULL;
36 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE BIRTHDAY<'1962-01-01';
37 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST_NAME
38
39 •   SELECT * FROM EMPLOYEE_20BCE7236 WHERE MID_NAME IS NULL;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FIRST_NAME	MID_NAME	LAST_NAME
Joyce	NULL	PAN
Frankin	T	Wong
Jennifer	S	Wallace
Johny	B	Smith
Ramesh	K	Narayan
James	E	Borg

3.Find all the employees who have no supervisor.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE SUPERVISOR_SSN IS NULL;

```
35 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE SUPERVISOR_SSN IS NULL;
36 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE BIRTHDAY<'1962-01-01';
37 •   SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST_N
38
39 •   SELECT * FROM EMPLOYEE_20BCE7236 WHERE MID_NAME IS NULL;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FIRST_NAME	MID_NAME	LAST_NAME
Doug	E	Gilbert
Joyce	NULL	PAN

4.Get the employee names whose birthday isnot later than 1962.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE BIRTHDAY <'01-JAN-1962';

```
36  •    SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE BIRTHDAY<'1962-01-01';
37  •    SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST
38
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ፲A

FIRST_NAME	MID_NAME	LAST_NAME
Doug	E	Gilbert
Frankin	T	Wong
Jennifer	S	Wallace
Johny	B	Smith
Ramesh	K	Narayan
James	E	Borg
Alicia	J	Zelaya
Ahmad	V	Jabbar

5.Retrieve the employee names whose first name start with 'J' and have 5 characters intotal.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE LENGTH(FIRST_NAME)=5 AND FIRST_NAME LIKE 'J%_';

```
37  •    SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE LENGTH(FIRST_NAME)=5 AND FIRST_NAME LIKE 'J%_';
38
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ፲A

FIRST_NAME	MID_NAME	LAST_NAME
Joyce	NULL	PAN
Johny	B	Smith
Joyce	A	English
James	E	Borg

6.Find the employee details whose middle initial is null.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE MID_NAME IS NULL;

| 39 ● | SELECT * FROM EMPLOYEE_20BCE7236 WHERE MID_NAME IS NULL; |

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FIRST_NAME	MID_NAME	LAST_NAME	SSN_NUMBER	BIRTHDAY	ADDRESS	SEX	SALARY	SUPERVISOR_SSN	DEPARTMENT_I
Joyce	NULL	PAN	543216789	1978-02-07	35 S 18 E, Salt LakeCity, UT	F	70000	NULL	2

7.Get the male employee details whose address contains sub string 'Houston'.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE   SEX = 'M' AND ADDRESS LIKE ('%HOUSTON%');

| 40 ● | SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236 WHERE   SEX = 'M' AND ADDRESS LIKE ('%HOUSTON%'); |

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FIRST_NAME	MID_NAME	LAST_NAME
Frankin	T	Wong
Johny	B	Smith
James	E	Borg
Ahmad	V	Jabbar

8.Display the department names that ends with 'e'.

SELECT DEPT_NAME FROM DEPARTMENT_20BCE7236

WHERE DEPT_NAME LIKE '_e%';

| 41 ● | SELECT DEPT_NAME FROM DEPARTMENT_20BCE7236 WHERE DEPT_NAME LIKE '_e%'; |

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

DEPT_NAME
Headquarter
Research

9. Display the names of all the employees having supervisor with any of the followingSSN 554433221, 333445555.

SELECT FIRST_NAME,MID_NAME,LAST_NAME FROM EMPLOYEE_20BCE7236

WHERE   SUPERVISOR_SSN = 554433221 OR SUPERVISOR_SSN = 333445555 ;

10. Display all the department names in upper case and lower case.

SELECT UPPER(DEPT_NAME),LOWER(DEPT_NAME) FROM DEPARTMENT_20BCE7236;

11. Display the first four characters and last four characters of the department namesusing substring function.

SELECT SUBSTR(DEPT_NAME,1,4),SUBSTR(DEPT_NAME,-4) FROM DEPARTMENT_20BCE7236;

```
44 •      SELECT SUBSTR(DEPT_NAME,1,4),SUBSTR(DEPT_NAME,-4) FROM DEPARTMENT_20BCE7236;
```

SUBSTR(DEPT_NAME,1,4)	SUBSTR(DEPT_NAME,-4)
Admi	tion
Head	rter
Fina	ance
Rese	arch

12. Display the substring of the address (starting from 5th position to 11th position) of all employees.

SELECT SUBSTR(ADDRESS,5,11) FROM EMPLOYEE_20BCE7236;

```
45 •      SELECT SUBSTR(ADDRESS,5,11) FROM EMPLOYEE_20BCE7236;
46 •      SELECT ADD_MONTHS(MANAGESTARTDATE, 2) FROM DEPARTMENT_20BCE7236;
47
48
49
```

SUBSTR(ADDRESS,5,11)
59 E, Salt
18 E, Sa
Voss, Houst
Berry, Bell
Fondren,
Fire Oak,
Rice, Hous
Stone, Hous
Castle, Sp
Dallas, Hou

13.Display the ManagStartDateon adding two months to it.

SELECT ADD_MONTHS(MANAGESTARTDATE, 2) FROM DEPARTMENT_20BCE7236;

```
46 ●     SELECT MANAGESTARTDATE,DATE_ADD(MANAGESTARTDATE, INTERVAL 2 MONTH) FROM DEPARTMENT_20BCE7236;
47
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

MANAGESTARTDATE	DATE_ADD(MANAGESTARTDATE, INTERVAL 2 MONTH)
1999-01-04	1999-03-04
1955-09-22	1955-11-22
1985-01-01	1985-03-01
1978-05-22	1978-07-22

Result 1 ×

Output

Action Output

#	Time	Action	Message
✓	1 22:34:56	SELECT MANAGESTARTDATE,DATE_ADD(MANAGESTARTDATE, INTERVAL 2 MONT...	4 row(s) returned