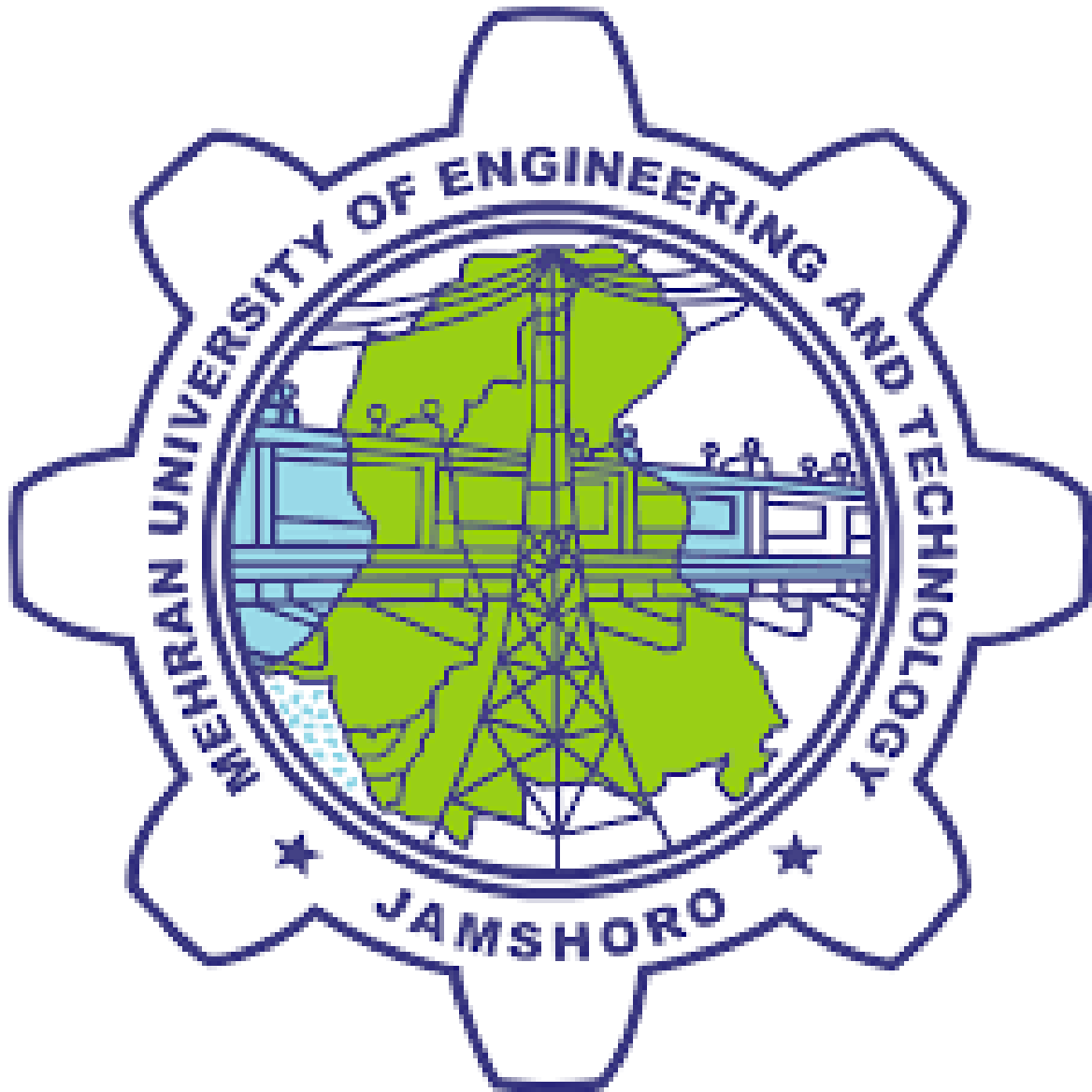


Name: ZOHAIB HASSAN SOOMRO

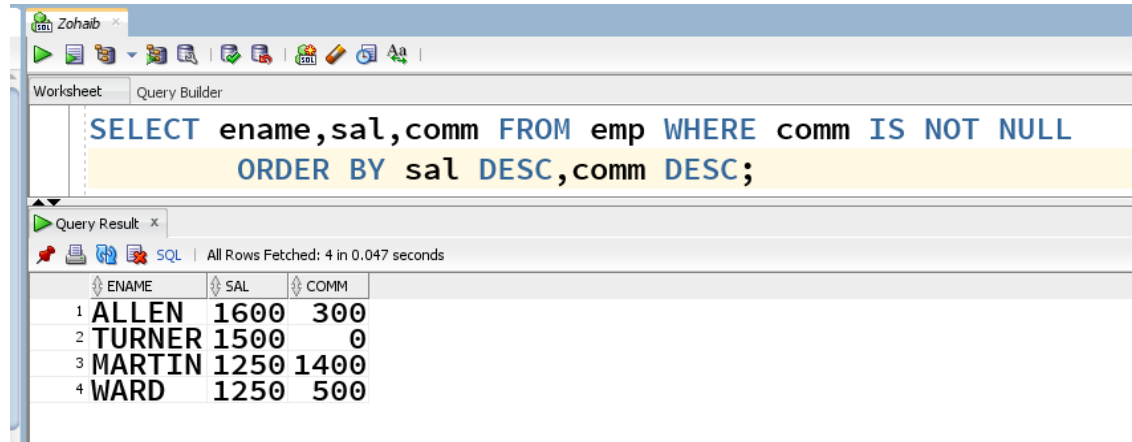
RollNo#: 19SW42

Subject: DBS



- **Q1. Execute the following queries and display their outputs:**
- i. Display the emp name, salary, and commission for all employees who earn commissions. Sort data in descending order of salary and commissions.

**ANS :**

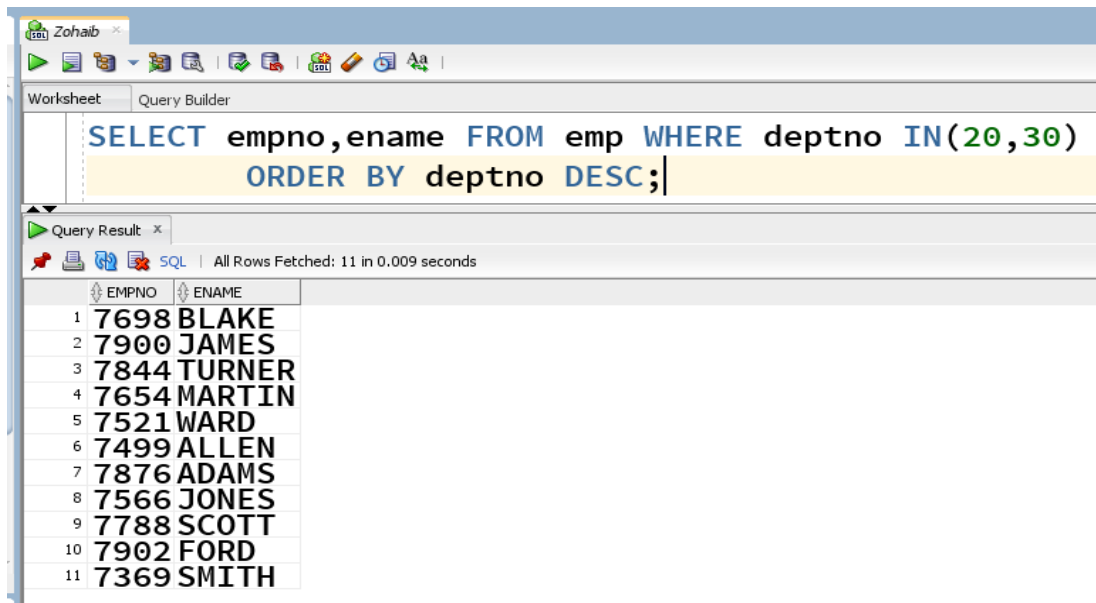


The screenshot shows the SQL Developer interface with a query entered in the Query Builder: `SELECT ename,sal,comm FROM emp WHERE comm IS NOT NULL ORDER BY sal DESC,comm DESC;`. The Query Result pane shows 4 rows fetched in 0.047 seconds.

	ENAME	SAL	COMM
1	ALLEN	1600	300
2	TURNER	1500	0
3	MARTIN	1250	1400
4	WARD	1250	500

- ii) Show empno and ename having deptno 20 or 30 in descending order

**ANS:**



The screenshot shows the SQL Developer interface with a query entered in the Query Builder: `SELECT empno,ename FROM emp WHERE deptno IN(20,30) ORDER BY deptno DESC;`. The Query Result pane shows 11 rows fetched in 0.009 seconds.

	EMPNO	ENAME
1	7698	BLAKE
2	7900	JAMES
3	7844	TURNER
4	7654	MARTIN
5	7521	WARD
6	7499	ALLEN
7	7876	ADAMS
8	7566	JONES
9	7788	SCOTT
10	7902	FORD
11	7369	SMITH

- iii. Write a query that displays the employee name (with the first letter uppercase and all other letters lowercase) and the length of the name for all employees whose name starts with the letters J, A, or M. Give each column an appropriate label. Sort the results descending order of the employee name.

**ANS:**

Worksheet Query Builder

```
SELECT INITCAP(ename) "Employee Names", LENGTH(ename) "No# of Characters"
FROM emp WHERE SUBSTR(ename,1,1) IN('J','A','M')
ORDER BY ename DESC;
```

Query Result x

All Rows Fetched: 6 in 0.003 seconds

	Employee Names	No# of Characters
1	Miller	6
2	Martin	6
3	Jones	5
4	James	5
5	Allen	5
6	Adams	5

- iv. Display the emp name and calculate the number of months between today and the date on which the employee was hired. Label the column MONTHS\_WORKED. Order your results in descending order by the number of months employed.

ANS:

Worksheet Query Builder

```
SELECT ename, MONTHS_BETWEEN(SYSDATE,hiredate) AS "MONTHS WORKED"
FROM emp
ORDER BY "MONTHS WORKED" DESC;
```

Query Result x

All Rows Fetched: 14 in 0.009 seconds

	ENAME	MONTHS WORKED
1	SMITH	482.063331839904420549581839904420549582
2	ALLEN	479.966557646356033452807646356033452808
3	WARD	479.902041517323775388291517323775388292
4	JONES	478.547202807646356033452807646356033453
5	BLAKE	477.579460872162485065710872162485065711
6	CLARK	476.321396356033452807646356033452807646
7	TURNER	473.353654420549581839904420549581839904
8	MARTIN	472.708493130227001194743130227001194743
9	KING	471.063331839904420549581839904420549582
10	JAMES	470.514944743130227001194743130227001195
11	FORD	470.514944743130227001194743130227001195
12	MILLER	468.869783452807646356033452807646356033
13	SCOTT	405.998815710872162485065710872162485066
14	ADAMS	404.869783452807646356033452807646356033

- iii. Display the emp name and salary for all employees. Format the salary to be 15 characters long, left-padded with the “\$” symbol. Label the column SALARY.

ANS:

Worksheet Query Builder

```
SELECT ename,LPAD(sal,15,'$') SALARY
FROM emp;
```

Query Result x

All Rows Fetched: 14 in 0.004 seconds

	ENAME	SALARY
1	SMITH	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$800
2	ALLEN	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1600
3	WARD	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1250
4	JONES	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$2975
5	MARTIN	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1250
6	BLAKE	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$2850
7	CLARK	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$2450
8	SCOTT	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$3000
9	KING	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$5000
10	TURNER	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1500
11	ADAMS	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1100
12	JAMES	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$950
13	FORD	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$3000
14	MILLER	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$1300

- iv. Write a query to display the current date. Label the column Date.

ANS:

Worksheet Query Builder

```
SELECT SYSDATE "DATE" FROM DUAL;
```

Script Output x Query Result x

All Rows Fetched: 1 in 0.002 seconds

	DATE
1	18-FEB-21

- v. Display the employee number, hire date, number of months employed, first Friday after hire date, and last day of the month.

ANS:

Worksheet Query Builder

```
SELECT empno,hiredate,TRUNC(MONTHS_BETWEEN(SYSDATE,hiredate)) "WORKED MONTHS",
NEXT_DAY(hiredate,'FRIDAY') ,LAST_DAY(hiredate)
FROM emp;
```

Script Output x Query Result x

SQL All Rows Fetched: 14 in 0.005 seconds

	EMPNO	HIREDATE	WORKED MONTHS	NEXT_DAY(HIREDATE,'FRIDAY')	LAST_DAY(HIREDATE)
1	7369	17-DEC-80	482	19-DEC-80	31-DEC-80
2	7499	20-FEB-81	479	27-FEB-81	28-FEB-81
3	7521	22-FEB-81	479	27-FEB-81	28-FEB-81
4	7566	02-APR-81	478	03-APR-81	30-APR-81
5	7654	28-SEP-81	472	02-OCT-81	30-SEP-81
6	7698	01-MAY-81	477	08-MAY-81	31-MAY-81
7	7782	09-JUN-81	476	12-JUN-81	30-JUN-81
8	7788	19-APR-87	405	24-APR-87	30-APR-87
9	7839	17-NOV-81	471	20-NOV-81	30-NOV-81
10	7844	08-SEP-81	473	11-SEP-81	30-SEP-81
11	7876	23-MAY-87	404	29-MAY-87	31-MAY-87
12	7900	03-DEC-81	470	04-DEC-81	31-DEC-81
13	7902	03-DEC-81	470	04-DEC-81	31-DEC-81
14	7934	23-JAN-82	468	29-JAN-82	31-JAN-82

- vi. Create a query that displays the employees names and commission amounts. If an employee does not earn commission, show “No Commission.” Label the column COMM. (Hint: Use NVL Function)

ANS:

Worksheet Query Builder

```
SELECT ename,NVL (TO_CHAR(comm),'No Commission') AS COMM
FROM emp;
```

Script Output x Query Result x

SQL All Rows Fetched: 14 in 0.002 seconds

	ENAME	COMM
1	SMITH	No Commission
2	ALLEN	300
3	WARD	500
4	JONES	No Commission
5	MARTIN	1400
6	BLAKE	No Commission
7	CLARK	No Commission
8	SCOTT	No Commission
9	KING	No Commission
10	TURNER	0
11	ADAMS	No Commission
12	JAMES	No Commission
13	FORD	No Commission
14	MILLER	No Commission

- Q2. Run the following queries and display their outputs:**
- i. Display ename, hiredate and print the date in DD Month YYYY Format. Label the coulumn as “DATE FORMAT”. (Hint: Use To\_CHAR Function)

ANS:

Worksheet Query Builder

```
SELECT ename, hiredate, TO_CHAR(hiredate, 'DD Month YYYY') AS "DATE FORMAT"
FROM emp;
```

Script Output x Query Result x

All Rows Fetched: 14 in 0.005 seconds

	ENAME	HIREDATE	DATE FORMAT
1	SMITH	17-DEC-80	17 December 1980
2	ALLEN	20-FEB-81	20 February 1981
3	WARD	22-FEB-81	22 February 1981
4	JONES	02-APR-81	02 April 1981
5	MARTIN	28-SEP-81	28 September 1981
6	BLAKE	01-MAY-81	01 May 1981
7	CLARK	09-JUN-81	09 June 1981
8	SCOTT	19-APR-87	19 April 1987
9	KING	17-NOV-81	17 November 1981
10	TURNER	08-SEP-81	08 September 1981
11	ADAMS	23-MAY-87	23 May 1987
12	JAMES	03-DEC-81	03 December 1981
13	FORD	03-DEC-81	03 December 1981
14	MILLER	23-JAN-82	23 January 1982

- ii. Write a query that generates the following output:
- (OPTIONAL QUERY)
- 1. Display the emp name, and email address. The email address will be composed from the four first letters of emp name concatenated with the string “@gmail.com”
- (For example : LEVI MARIO     [levi@gmail.com](mailto:levi@gmail.com))

ANS:

Worksheet Query Builder

```
SELECT ename, CONCAT(SUBSTR(ename, 1, 4), '@gmail.com') AS "Email Address"
FROM emp;
```

Script Output x Query Result x

All Rows Fetched: 14 in 0.004 seconds

	ENAME	Email Address
1	SMITH	SMIT@gmail.com
2	ALLEN	ALLE@gmail.com
3	WARD	WARD@gmail.com
4	JONES	JONE@gmail.com
5	MARTIN	MART@gmail.com
6	BLAKE	BLAK@gmail.com
7	CLARK	CLAR@gmail.com
8	SCOTT	SCOT@gmail.com
9	KING	KING@gmail.com
10	TURNER	TURN@gmail.com
11	ADAMS	ADAM@gmail.com
12	JAMES	JAME@gmail.com
13	FORD	FORD@gmail.com
14	MILLER	MILL@gmail.com