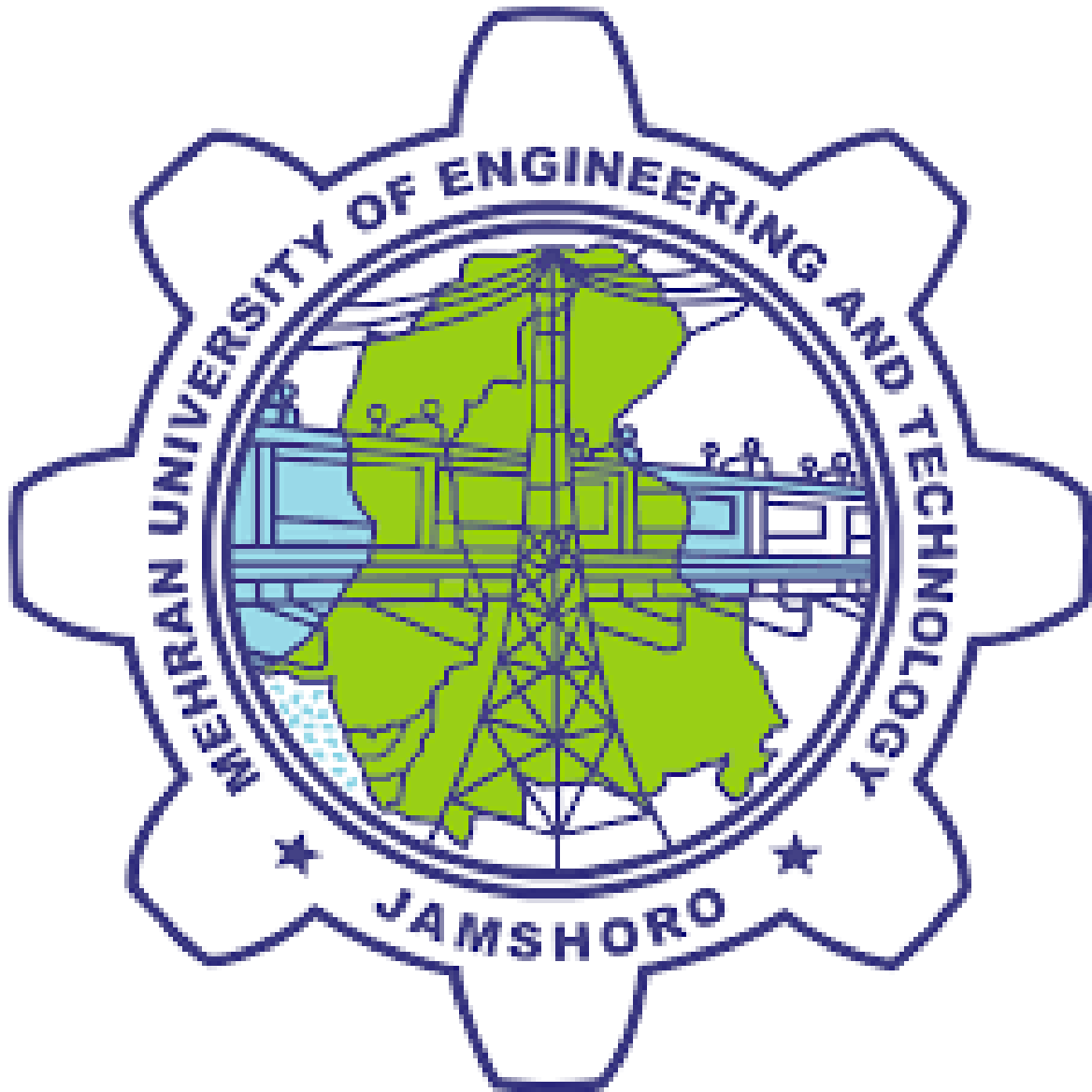


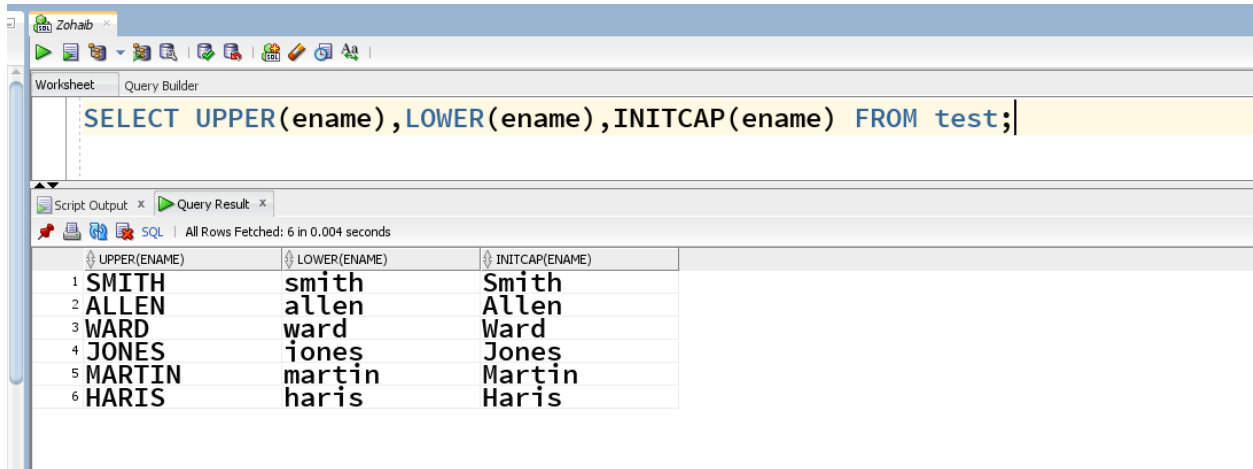
Name: ZOHAIB HASSAN SOOMRO

RollNo#: 19SW42

Subject: DBS



## 1. Character Case Conversion Example of (UPPER, LOWER, INITCAP):

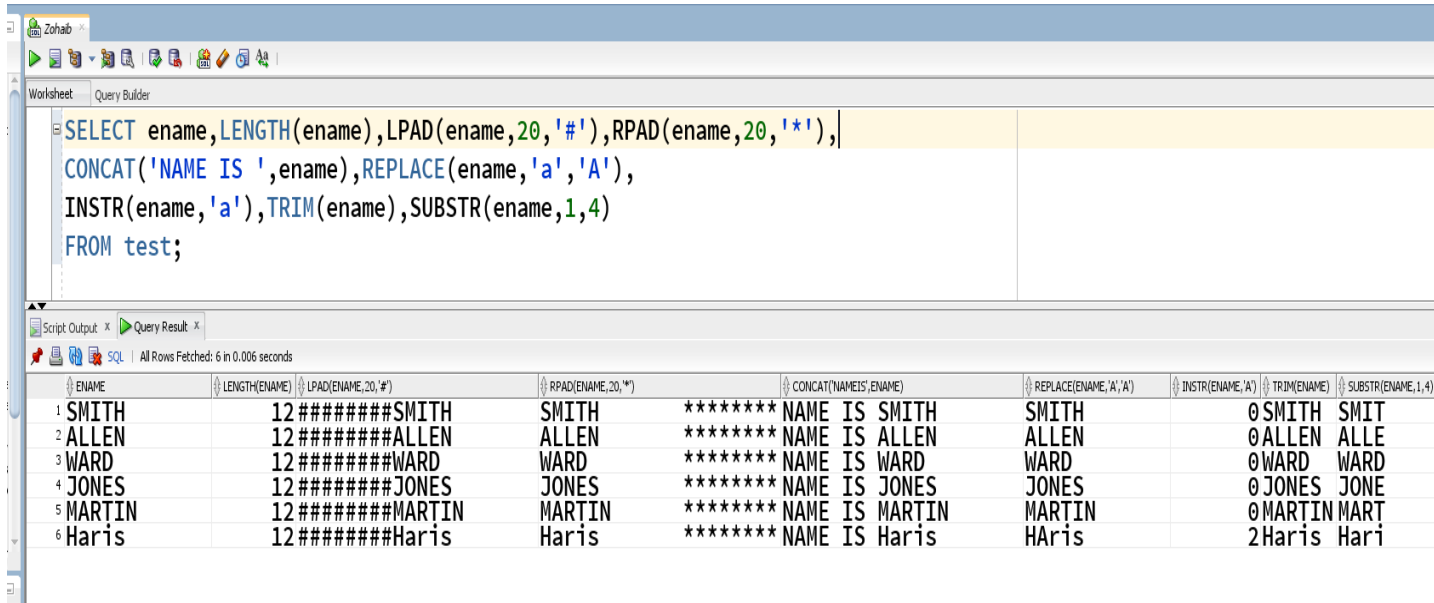


The screenshot shows a SQL Developer window with a query in the Query Builder. The query is: `SELECT UPPER(ename), LOWER(ename), INITCAP(ename) FROM test;`. The results are displayed in a table with three columns: `UPPER(ENAME)`, `LOWER(ENAME)`, and `INITCAP(ENAME)`. The data is as follows:

	UPPER(ENAME)	LOWER(ENAME)	INITCAP(ENAME)
1	SMITH	smith	Smith
2	ALLEN	allen	Allen
3	WARD	ward	Ward
4	JONES	jones	Jones
5	MARTIN	martin	Martin
6	HARIS	haris	Haris

## 2. Character Manipulation

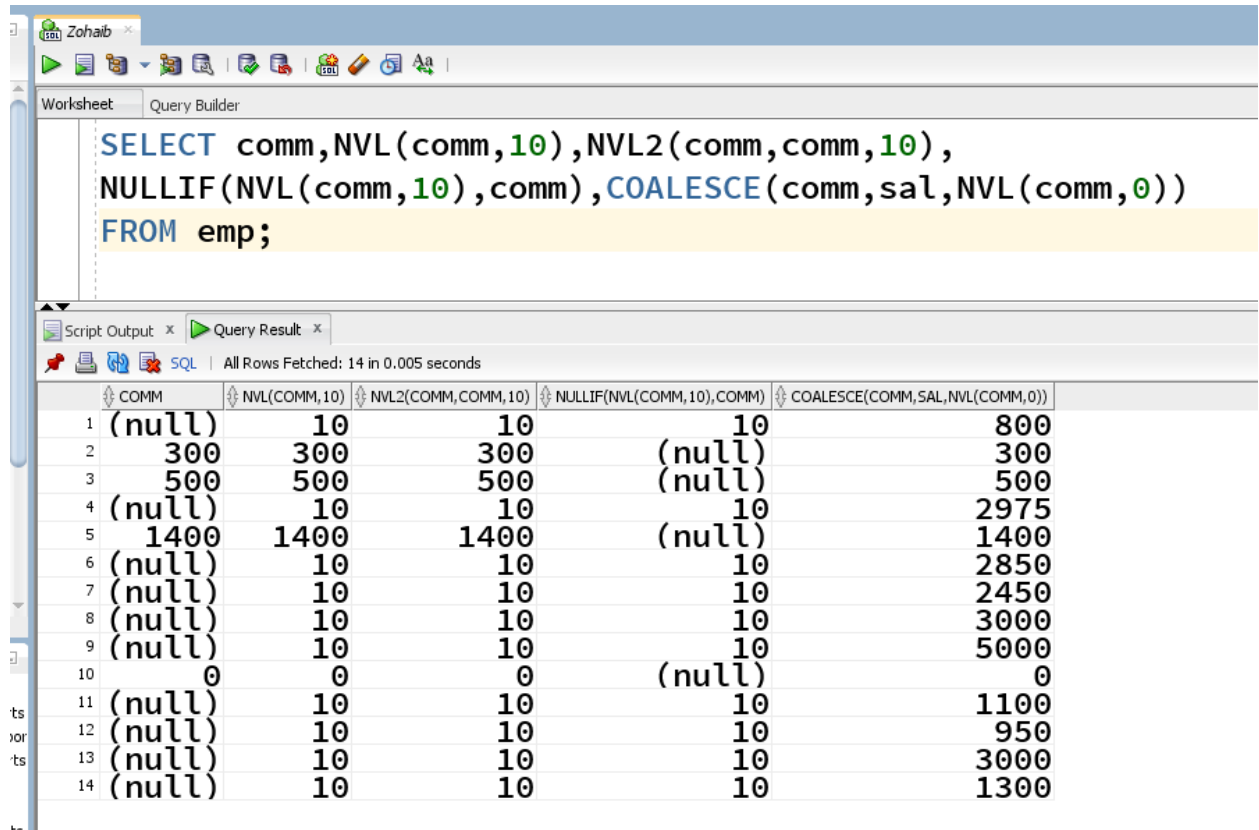
Example(LENGTH,LPAD,RPAD,CONCAT,REPLACE,INSTR,TRIM,SUBSTR):



The screenshot shows a SQL Developer window with a query in the Query Builder. The query is: `SELECT ename, LENGTH(ename), LPAD(ename, 20, '#'), RPAD(ename, 20, '*'), CONCAT('NAME IS ', ename), REPLACE(ename, 'a', 'A'), INSTR(ename, 'a'), TRIM(ename), SUBSTR(ename, 1, 4) FROM test;`. The results are displayed in a table with nine columns: `ENAME`, `LENGTH(ENAME)`, `LPAD(ENAME, 20, '#')`, `RPAD(ENAME, 20, '*')`, `CONCAT('NAME IS ', ENAME)`, `REPLACE(ENAME, 'A', 'A')`, `INSTR(ENAME, 'A')`, `TRIM(ENAME)`, and `SUBSTR(ENAME, 1, 4)`. The data is as follows:

	ENAME	LENGTH(ENAME)	LPAD(ENAME, 20, '#')	RPAD(ENAME, 20, '*')	CONCAT('NAME IS ', ENAME)	REPLACE(ENAME, 'A', 'A')	INSTR(ENAME, 'A')	TRIM(ENAME)	SUBSTR(ENAME, 1, 4)
1	SMITH	12	#####SMITH	SMITH	NAME IS SMITH	SMITH	0	SMITH	SMIT
2	ALLEN	12	#####ALLEN	ALLEN	NAME IS ALLEN	ALLEN	0	ALLEN	ALLE
3	WARD	12	#####WARD	WARD	NAME IS WARD	WARD	0	WARD	WARD
4	JONES	12	#####JONES	JONES	NAME IS JONES	JONES	0	JONES	JONE
5	MARTIN	12	#####MARTIN	MARTIN	NAME IS MARTIN	MARTIN	0	MARTIN	MART
6	Haris	12	#####Haris	Haris	NAME IS Haris	Haris	2	Haris	Hari

### 3. General Functions Example(NVL,NVL2,NULLIF,COALESCE):



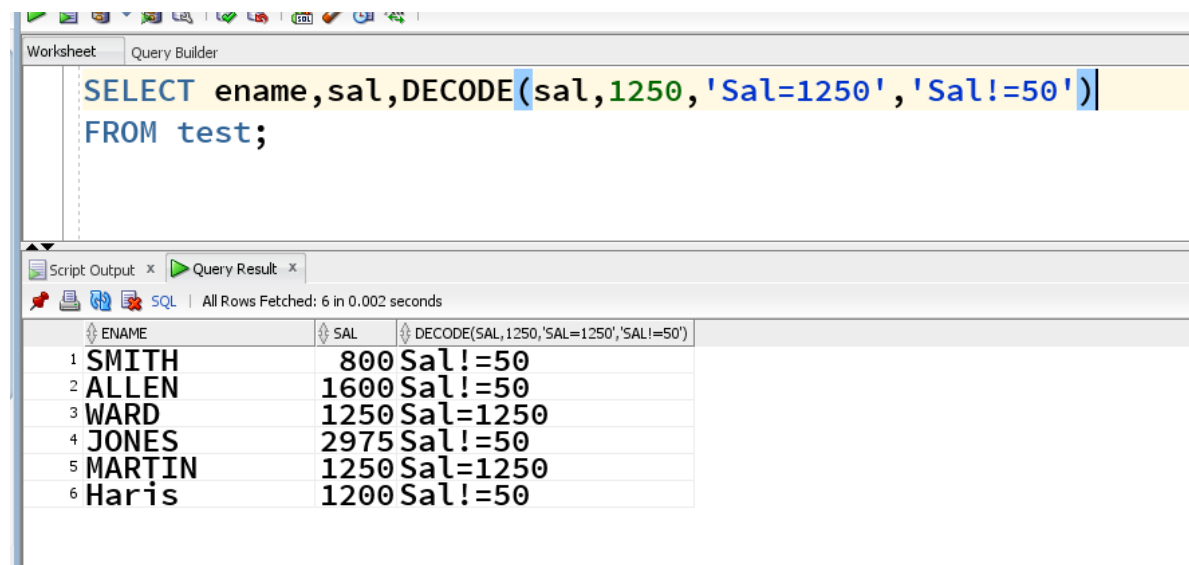
The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is:

```
SELECT comm,NVL(comm,10),NVL2(comm,comm,10),
NULLIF(NVL(comm,10),comm),COALESCE(comm,sal,NVL(comm,0))
FROM emp;
```

The Query Result tab shows 14 rows of data. The columns are: COMM, NVL(COMM,10), NVL2(COMM,COMM,10), NULLIF(NVL(COMM,10),COMM), and COALESCE(COMM,SAL,NVL(COMM,0)).

	COMM	NVL(COMM,10)	NVL2(COMM,COMM,10)	NULLIF(NVL(COMM,10),COMM)	COALESCE(COMM,SAL,NVL(COMM,0))
1	(null)	10	10	10	800
2	300	300	300	(null)	300
3	500	500	500	(null)	500
4	(null)	10	10	10	2975
5	1400	1400	1400	(null)	1400
6	(null)	10	10	10	2850
7	(null)	10	10	10	2450
8	(null)	10	10	10	3000
9	(null)	10	10	10	5000
10	0	0	0	(null)	0
11	(null)	10	10	10	1100
12	(null)	10	10	10	950
13	(null)	10	10	10	3000
14	(null)	10	10	10	1300

### 4. DECODE FUNCTION EXAMPLE:



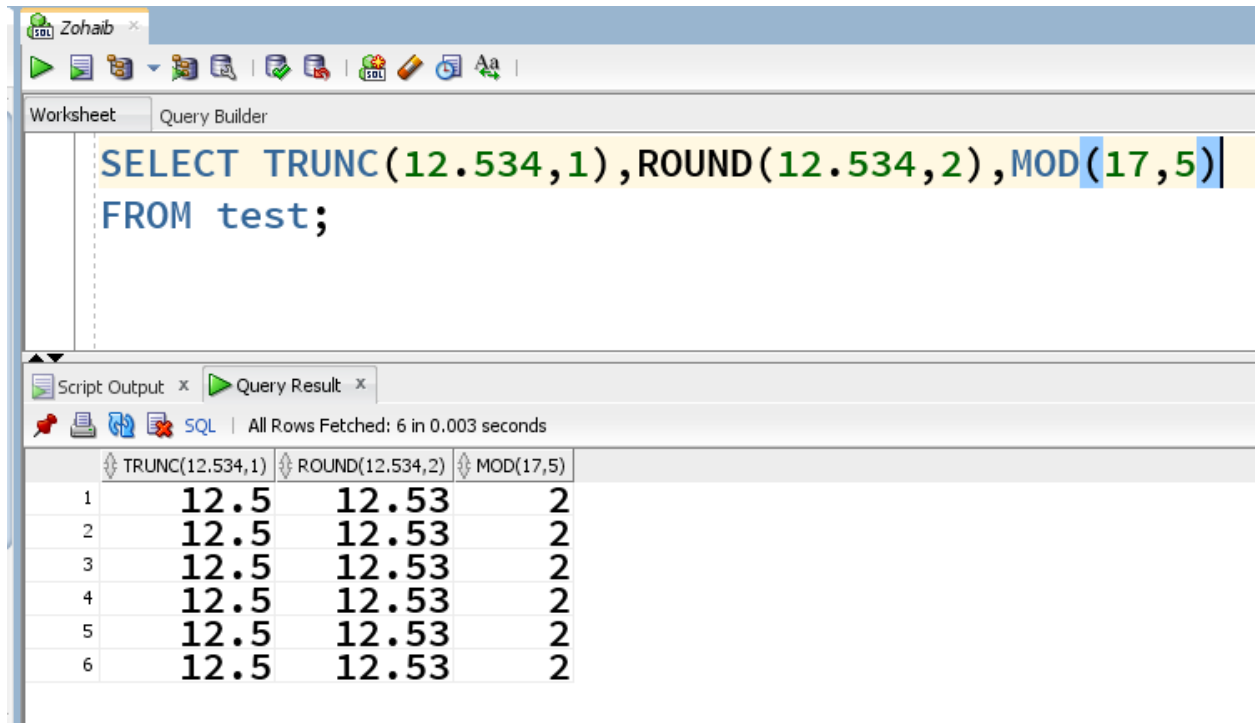
The screenshot shows the SQL Developer interface with a query in the Query Builder. The query is:

```
SELECT ename,sal,DECODE(sal,1250,'Sal=1250','Sal!=50')
FROM test;
```

The Query Result tab shows 6 rows of data. The columns are: ENAME, SAL, and DECODE(SAL,1250,'SAL=1250','SAL!=50').

	ENAME	SAL	DECODE(SAL,1250,'SAL=1250','SAL!=50')
1	SMITH	800	Sal!=50
2	ALLEN	1600	Sal!=50
3	WARD	1250	Sal=1250
4	JONES	2975	Sal!=50
5	MARTIN	1250	Sal=1250
6	Haris	1200	Sal!=50

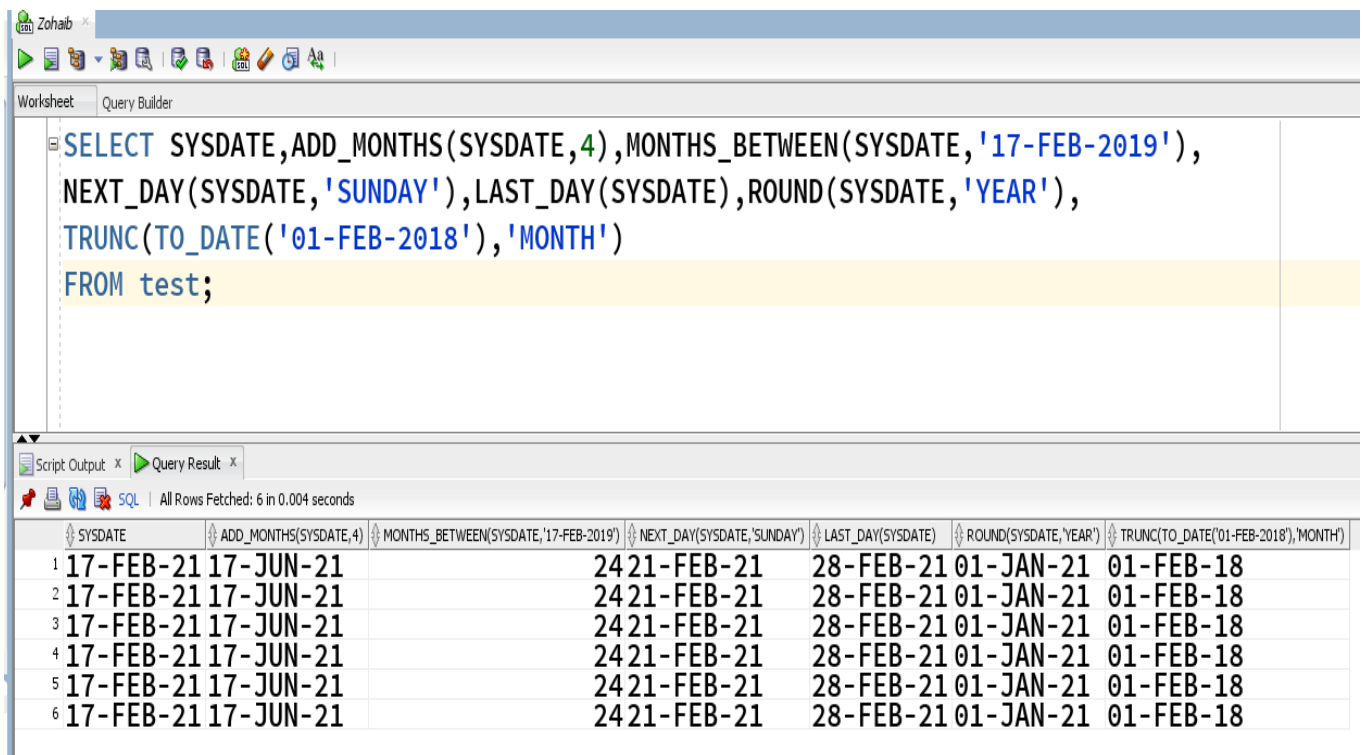
## 5. NUMBER FUNCTIONS EXAMPLE(ROUND,MOD,TRUNC):



The screenshot shows the SQL Developer interface with a query window titled 'Zohaib'. The query is: `SELECT TRUNC(12.534,1),ROUND(12.534,2),MOD(17,5) FROM test;`. The 'Query Result' tab is active, showing 6 rows of data. The columns are labeled as `TRUNC(12.534,1)`, `ROUND(12.534,2)`, and `MOD(17,5)`. The results are: 12.5, 12.53, 2 for all 6 rows.

	TRUNC(12.534,1)	ROUND(12.534,2)	MOD(17,5)
1	12.5	12.53	2
2	12.5	12.53	2
3	12.5	12.53	2
4	12.5	12.53	2
5	12.5	12.53	2
6	12.5	12.53	2

## 6. DATE FUNCTIONS EXAMPLE():



The screenshot shows the SQL Developer interface with a query window titled 'Zohaib'. The query is: `SELECT SYSDATE,ADD_MONTHS(SYSDATE,4),MONTHS_BETWEEN(SYSDATE,'17-FEB-2019'),NEXT_DAY(SYSDATE,'SUNDAY'),LAST_DAY(SYSDATE),ROUND(SYSDATE,'YEAR'),TRUNC(TO_DATE('01-FEB-2018'),'MONTH') FROM test;`. The 'Query Result' tab is active, showing 6 rows of data. The columns are labeled as `SYSDATE`, `ADD_MONTHS(SYSDATE,4)`, `MONTHS_BETWEEN(SYSDATE,'17-FEB-2019')`, `NEXT_DAY(SYSDATE,'SUNDAY')`, `LAST_DAY(SYSDATE)`, `ROUND(SYSDATE,'YEAR')`, and `TRUNC(TO_DATE('01-FEB-2018'),'MONTH')`. The results are: 17-FEB-21 17-JUN-21, 24 21-FEB-21, 28-FEB-21 01-JAN-21, 01-FEB-18 for all 6 rows.

	SYSDATE	ADD_MONTHS(SYSDATE,4)	MONTHS_BETWEEN(SYSDATE,'17-FEB-2019')	NEXT_DAY(SYSDATE,'SUNDAY')	LAST_DAY(SYSDATE)	ROUND(SYSDATE,'YEAR')	TRUNC(TO_DATE('01-FEB-2018'),'MONTH')
1	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			
2	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			
3	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			
4	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			
5	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			
6	17-FEB-21 17-JUN-21	24 21-FEB-21	28-FEB-21 01-JAN-21	01-FEB-18			

## 7. CONVERSION FUNCTION EXAMPLE(TO\_CHAR,TO\_NUMBER,TO\_DATE):

The screenshot shows the SQL Developer interface with a query in the 'Query Builder' tab. The query is:

```
SELECT SYSDATE,TO_CHAR(hiredate,'MONTH DD,YYYY'),  
TO_NUMBER('12.345'),TO_DATE('FEB 1,2019','MON DD,YYYY')  
FROM emp where rownum<5;
```

The 'Query Result' tab shows the output of the query. The results are displayed in a table with 4 rows and 4 columns. The columns are: SYSDATE, TO\_CHAR(HIREDATE,'MONTHDD,YYYY'), TO\_NUMBER('12.345'), and TO\_DATE('FEB1,2019','MONDD,YYYY').

	SYSDATE	TO_CHAR(HIREDATE,'MONTHDD,YYYY')	TO_NUMBER('12.345')	TO_DATE('FEB1,2019','MONDD,YYYY')
1	17-FEB-21	DECEMBER 17,1980	12.345	01-FEB-19
2	17-FEB-21	FEBRUARY 20,1981	12.345	01-FEB-19
3	17-FEB-21	FEBRUARY 22,1981	12.345	01-FEB-19
4	17-FEB-21	APRIL 02,1981	12.345	01-FEB-19