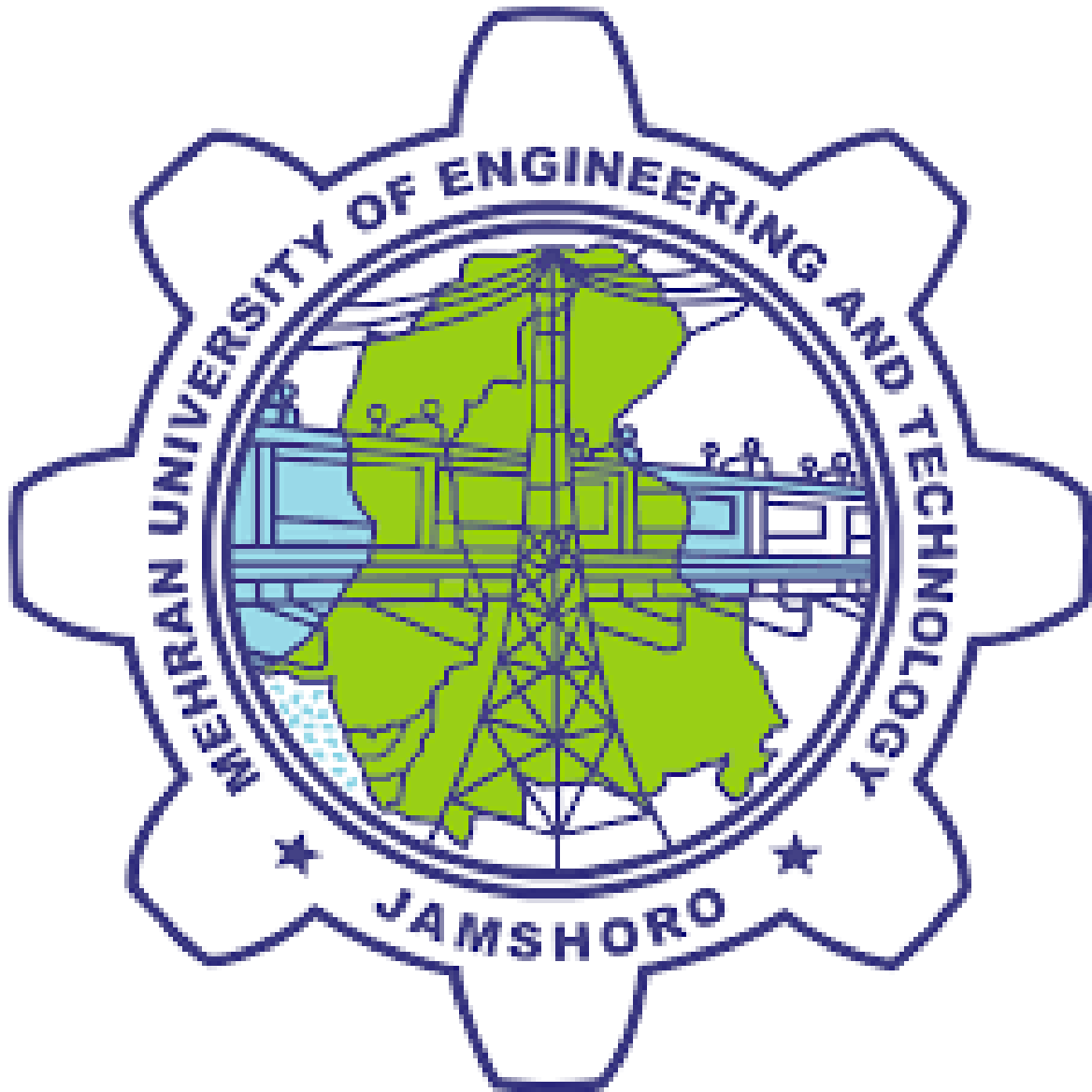


Name: ZOHAIB HASSAN SOOMRO

RollNo#: 19SW42

Subject: DBS



ASSIGNMENT

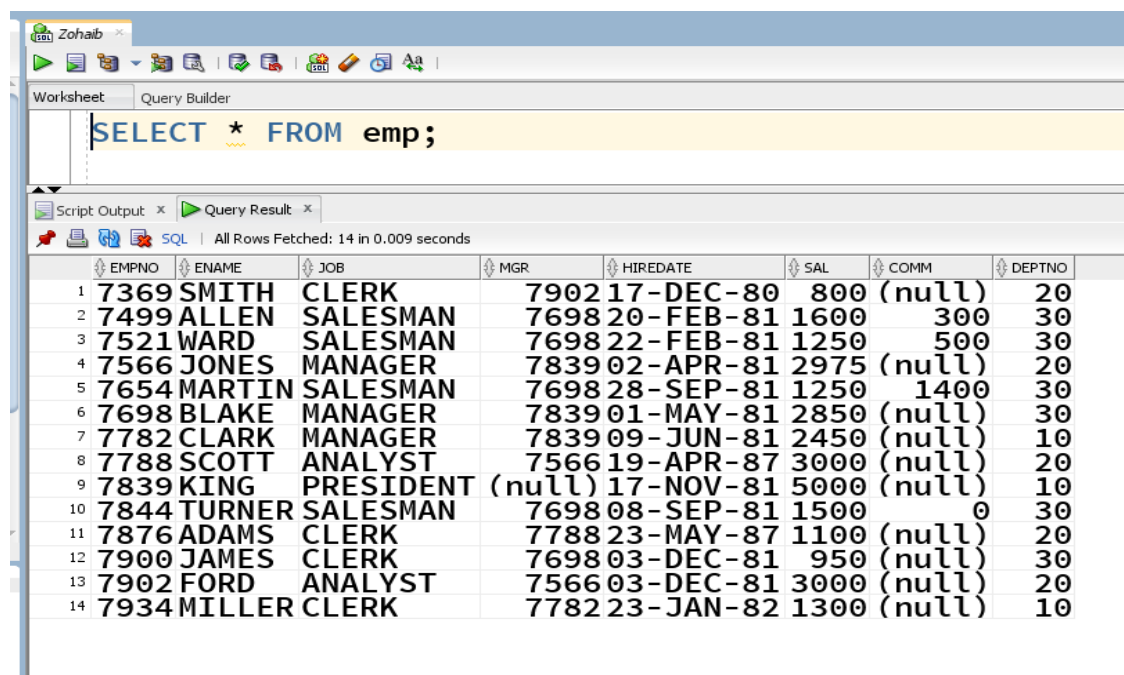
TASK: Find out how can one recover a column and its data once its logically deleted. Elaborate the procedure both theoretically as well as practically using queries).

RULES:

1. Make a new table and name it as **SW19_yourrollnumber** e.g., SW19_01.
2. Create the above table using the description of emp table i.e. make a copy of emp table but name it as described in Rule no 1.
3. Provide screenshots of executed queries with the outputs.
4. Document the queries in the exact sequence in which you executed them to perform the task.

DUE DATE: 5TH MARCH 2021 **SUBMISSION THROUGH MS FORMS**

Emp Table:



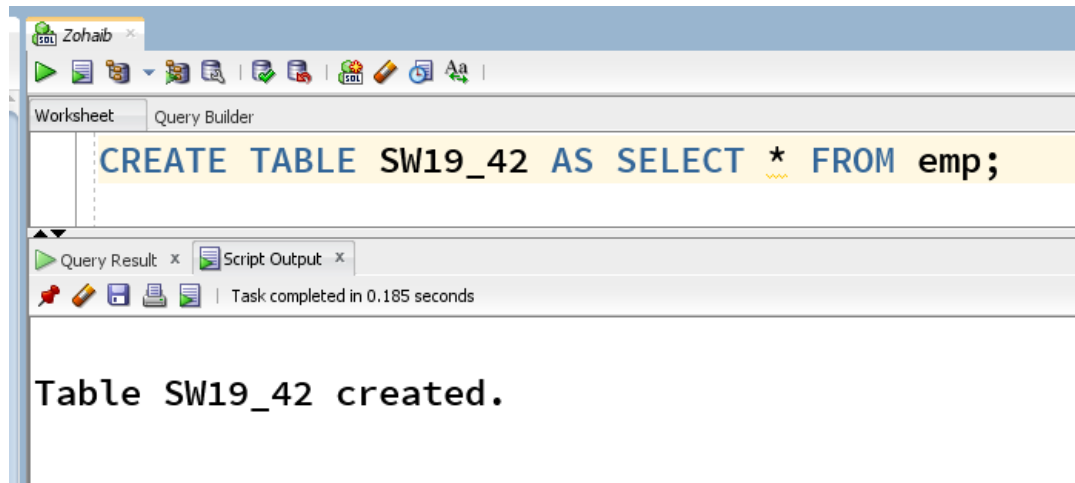
The screenshot shows a SQL query execution window with the following components:

- Query Builder:** Contains the query `SELECT * FROM emp;`
- Script Output:** Shows the status "All Rows Fetched: 14 in 0.009 seconds".
- Query Result:** A table with 14 rows and 8 columns: EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, and DEPTNO.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	17-DEC-80	800	(null)	20
2	7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
3	7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
4	7566	JONES	MANAGER	7839	02-APR-81	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
6	7698	BLAKE	MANAGER	7839	01-MAY-81	2850	(null)	30
7	7782	CLARK	MANAGER	7839	09-JUN-81	2450	(null)	10
8	7788	SCOTT	ANALYST	7566	19-APR-87	3000	(null)	20
9	7839	KING	PRESIDENT	(null)	17-NOV-81	5000	(null)	10
10	7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
11	7876	ADAMS	CLERK	7788	23-MAY-87	1100	(null)	20
12	7900	JAMES	CLERK	7698	03-DEC-81	950	(null)	30
13	7902	FORD	ANALYST	7566	03-DEC-81	3000	(null)	20
14	7934	MILLER	CLERK	7782	23-JAN-82	1300	(null)	10

Step-1: Making new Table as SW19_42 as a copy of 'EMP' table:

⇒ We will create our new table named 'SW19_42' using 'CREATE' COMMAND.

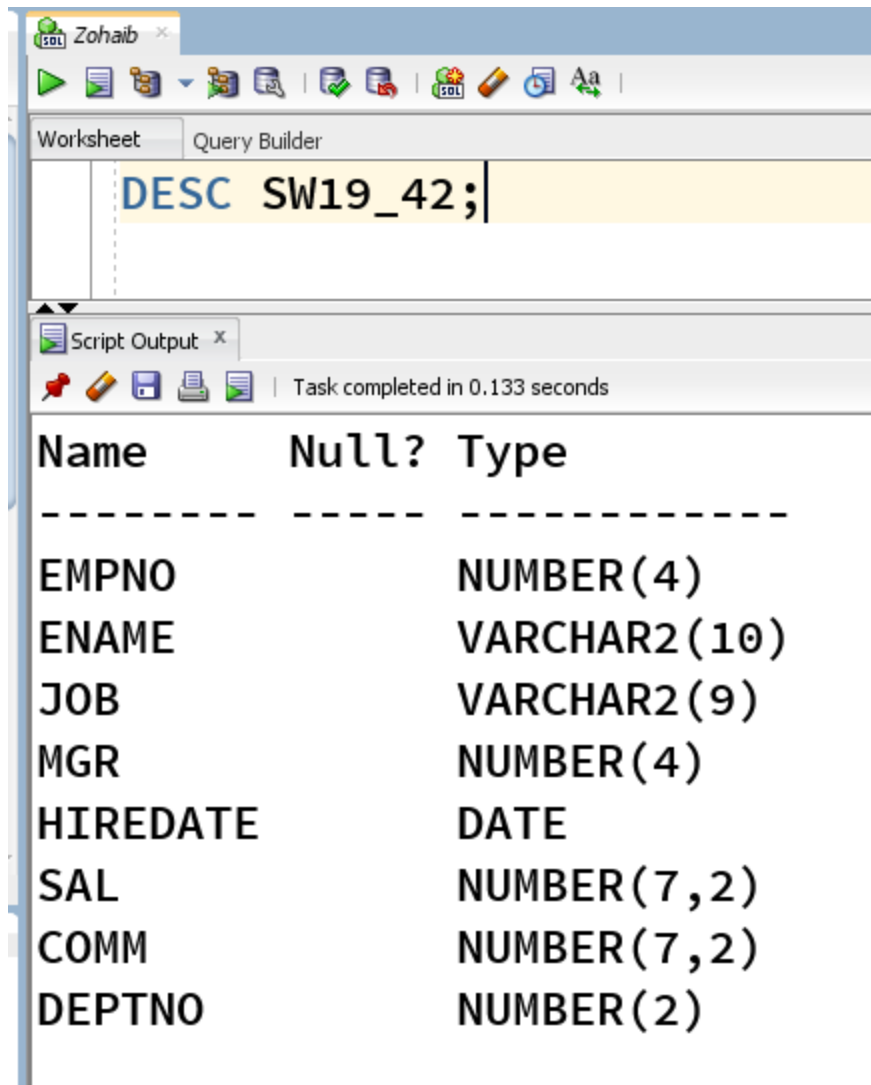


SW19_42 Table:

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL statement entered is 'SELECT * FROM SW19_42;'. Below the statement, the 'Query Result' tab shows 'All Rows Fetched: 14 in 0.011 seconds'. Below the screenshot, the data from the SW19_42 table is displayed in a table format.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK		17-DEC-80	800	(null)	20
2	7499	ALLEN	SALESMAN		20-FEB-81	1600	300	30
3	7521	WARD	SALESMAN		22-FEB-81	1250	500	30
4	7566	JONES	MANAGER		02-APR-81	2975	(null)	20
5	7654	MARTIN	SALESMAN		28-SEP-81	1250	1400	30
6	7698	BLAKE	MANAGER		01-MAY-81	2850	(null)	30
7	7782	CLARK	MANAGER		09-JUN-81	2450	(null)	10
8	7788	SCOTT	ANALYST		19-APR-87	3000	(null)	20
9	7839	KING	PRESIDENT	(null)	17-NOV-81	5000	(null)	10
10	7844	TURNER	SALESMAN		08-SEP-81	1500	0	30
11	7876	ADAMS	CLERK		23-MAY-87	1100	(null)	20
12	7900	JAMES	CLERK		03-DEC-81	950	(null)	30
13	7902	FORD	ANALYST		03-DEC-81	3000	(null)	20
14	7934	MILLER	CLERK		23-JAN-82	1300	(null)	10

SW19_42 Table's Description:

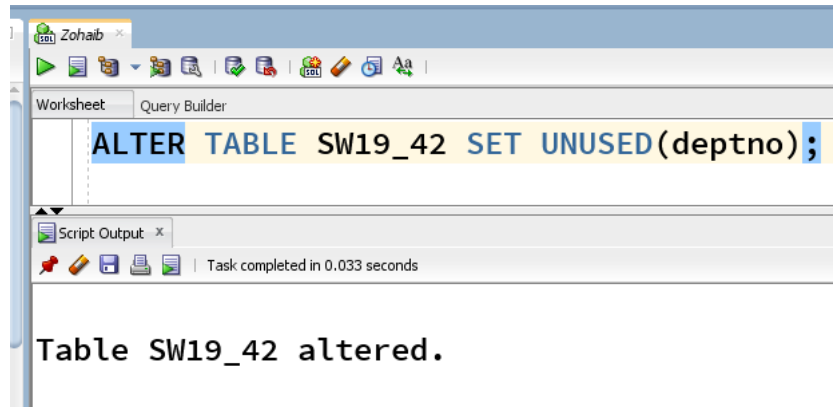


The screenshot shows a SQL query builder window with a tab named 'Zohaib'. The 'Query Builder' tab is active, displaying the query `DESC SW19_42;`. Below the query, the 'Script Output' window shows the execution results. The output is a table with three columns: 'Name', 'Null?', and 'Type'. The data rows are as follows:

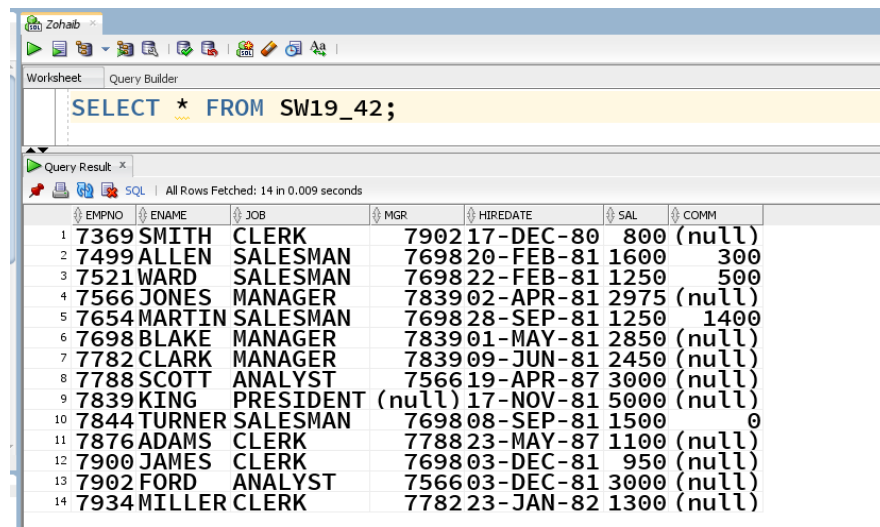
Name	Null?	Type
EMPNO		NUMBER(4)
ENAME		VARCHAR2(10)
JOB		VARCHAR2(9)
MGR		NUMBER(4)
HIREDATE		DATE
SAL		NUMBER(7,2)
COMM		NUMBER(7,2)
DEPTNO		NUMBER(2)

Step-2: Logically Deleting any of the columns in our table:

- ⇒ As we have created our table named 'SW19_42', so to recover a logically deleted column & its data first we have to soft/logically delete that column from our table.
- ⇒ So in our task we are going to logically delete the column 'deptno'.
- ⇒ To delete 'deptno' column logically we have to use 'SET UNUSED' keyword with 'deptno' preceded by 'ALTER TABLE SW19_42'.



⇒ Table 'SW19_42' will have no column like 'deptno' when selecting all from it:



Step-3: Adding new column with same name in our table:

- ⇒ We can't recover the unused column, as it is treated as it was dropped.
- ⇒ So now using ALTER command we will add a new column to our table 'SW19_42' having same name as of logically deleted column (i.e. deptno) with the same description as it was before.

DEPTNO **NUMBER(2)**

- ⇒ Now we can add it to our table:

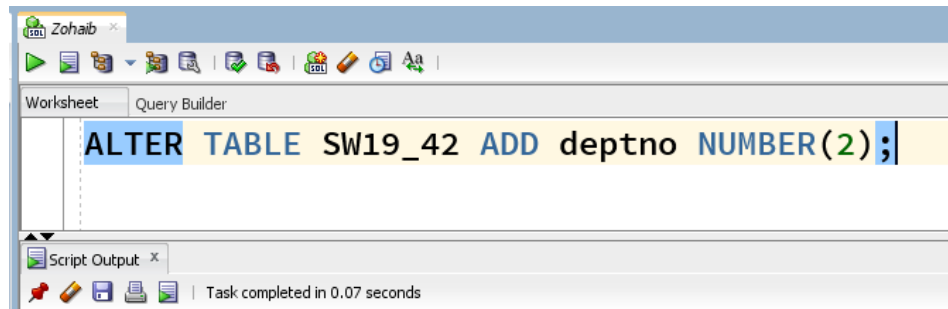


Table SW19_42 altered.

⇒ Table 'SW19_42' will have now column like 'deptno' having null values when selecting all from it:

The screenshot shows the SQL Developer interface with the 'Query Result' tab active. The SQL statement entered is: `SELECT * FROM SW19_42;`. The query result is displayed in a table with 14 rows and 9 columns: EMPNO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, and DEPTNO. The DEPTNO column contains null values for all rows.

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK		17-DEC-80	800	(null)	(null)
2	7499	ALLEN	SALESMAN		20-FEB-81	1600	300	(null)
3	7521	WARD	SALESMAN		22-FEB-81	1250	500	(null)
4	7566	JONES	MANAGER		02-APR-81	2975	(null)	(null)
5	7654	MARTIN	SALESMAN		28-SEP-81	1250	1400	(null)
6	7698	BLAKE	MANAGER		01-MAY-81	2850	(null)	(null)
7	7782	CLARK	MANAGER		09-JUN-81	2450	(null)	(null)
8	7788	SCOTT	ANALYST		19-APR-87	3000	(null)	(null)
9	7839	KING	PRESIDENT	(null)	17-NOV-81	5000	(null)	(null)
10	7844	TURNER	SALESMAN		08-SEP-81	1500	0	(null)
11	7876	ADAMS	CLERK		23-MAY-87	1100	(null)	(null)
12	7900	JAMES	CLERK		03-DEC-81	950	(null)	(null)
13	7902	FORD	ANALYST		03-DEC-81	3000	(null)	(null)
14	7934	MILLER	CLERK		23-JAN-82	1300	(null)	(null)

Step-4: Now we'll truncate our table using TRUNCATE TABLE command:

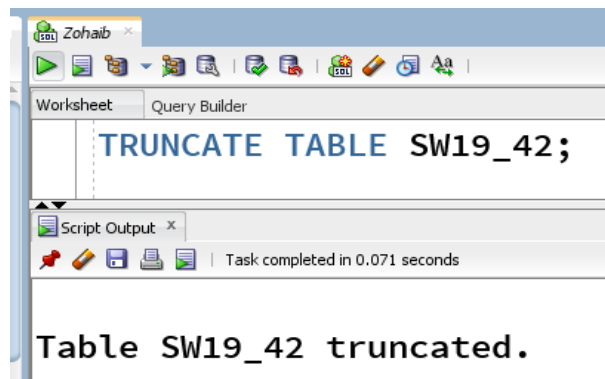
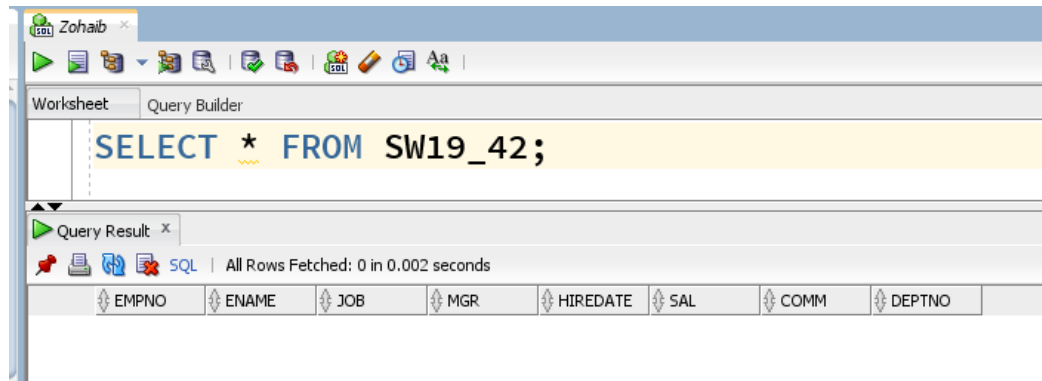
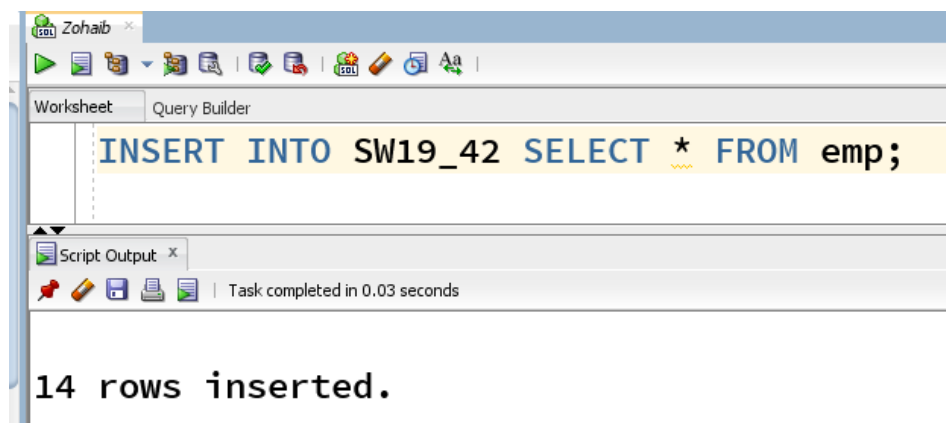


Table SW19_42 truncated.

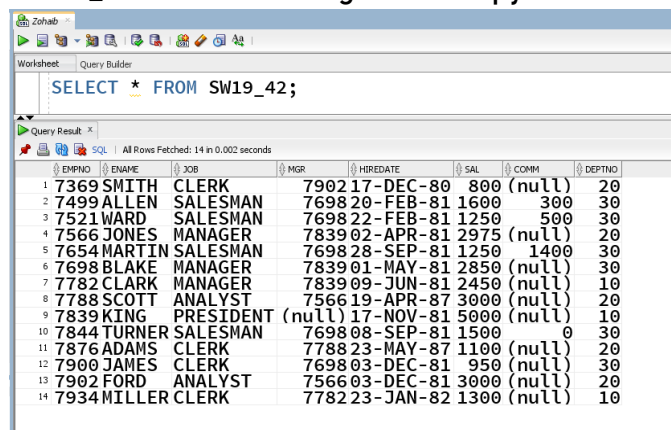
- ⇒ Our table will have now no any record in it, for checking we'll issue SELECT command:



Step-5: Now we'll insert all data of EMP table into our table 'SW19_42' using INSERT command:



- ⇒ Now the same data has been inserted into our table, that was in our 'SW19_42' while creating it as a copy of EMP table.



- ⇒ Hence our column and its data is back, without any recreation of our 'SW19_42' table.