



**MALAD KANDIVALI EDUCATION SOCIETY'S  
NAGINDAS KHANDWALA COLLEGE OF COMMERCE,  
ARTS & MANAGEMENT STUDIES & SHANTABEN NAGINDAS  
KHANDWALA COLLEGE OF SCIENCE**  
**MALAD [W], MUMBAI – 64**  
**(AUTONOMOUS)**

**(Reaccredited 'A' Grade by NAAC)  
(AFFILIATED TO UNIVERSITY OF MUMBAI)  
(ISO 9001:2015)**

**CERTIFICATE**

**Name:- Mr. GAUTAM CHANDRAKANT MANDALIYA**

**Roll No:- 27      Programme:- BSc Computer Science      Semester:- II**

This is certified to be a bonafide record of practical works done by the above student in the college laboratory for the course **Database Management Systems I**(Course Code:**2023UISPR**) for the partial fulfillment of Second Semester of BSc IT/CS during the academic year 2020-2021.

The journal work is the original study work that has been duly approved in the year 2020-2021 by the undersigned.

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**External Examiner  
(Ms. Sweety Garg)**

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**Subject-In-Charge**

**Date of Examination:**

**(College Stamp)**

Sr. No.	DATE	TITLE	SIGN
1.	28 <sup>th</sup> January 2021	Study of Data Definition Language Statement	
2.	4 <sup>th</sup> February 2021	Study of Data Manipulation Language Statement	
3.	12 <sup>th</sup> February 2021	Study of SELECT Statement.	
4.	18 <sup>th</sup> February 2021	Draw ER diagram for given scenario/project/case study	
5.	4 <sup>th</sup> March 2021	Study of various type of JOINS	
6.	18 <sup>th</sup> March 2021	Study of different functions	
7.	18 <sup>th</sup> March 2021	Study of various types of SET OPERATORS	
8.	25 <sup>th</sup> March 2021	Study of various types of views	
9.	25 <sup>th</sup> March 2021	Study of subqueries with all its clauses	
10.	8 <sup>th</sup> April 2021	Study of Transaction (Commit/ Rollback), Locks	

Name:- Gautam Chandrakant Mandaliya

Roll No:- 27

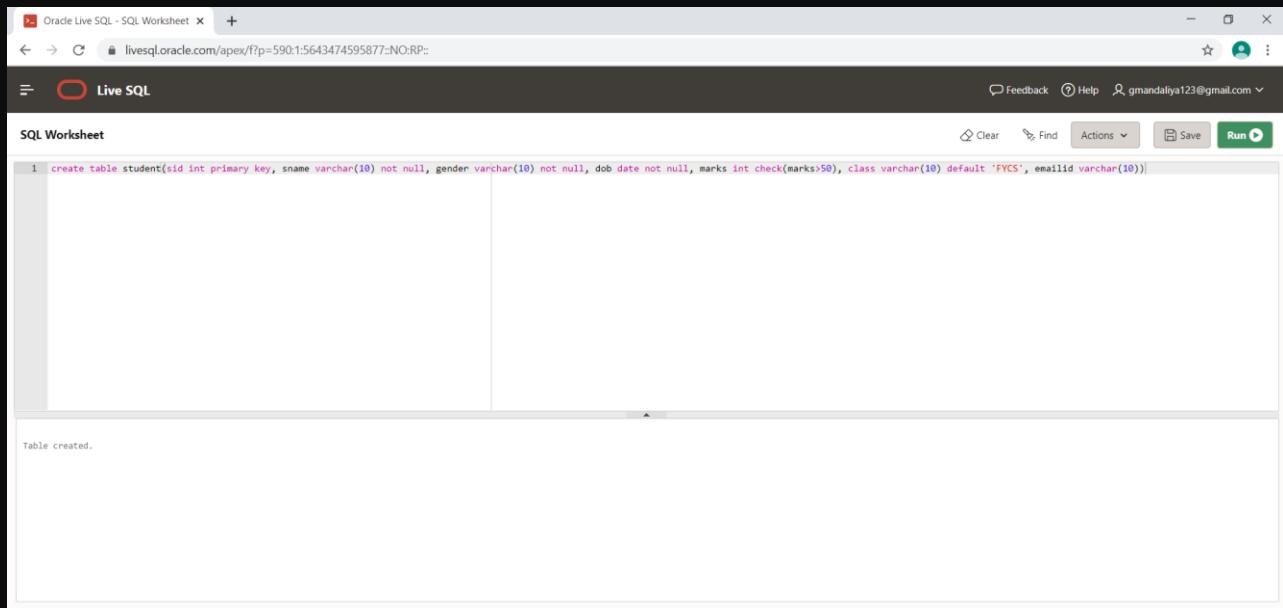
Class:-FYCS

Subject:- Data Base Management system

## **PRACTICAL 1:- Study of Data Definition Language Statement**

A) Write the query for the following:-

1. Create the following tables and includes the necessary constraints NOT NULL, DEFAULT, CHECK, PRIMARY KEY, UNIQUE.
  - a. Student (sid, sname, gender, dob, remark, marks, class, email)



The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::P::`. The main area is titled "SQL Worksheet". A single line of SQL code is present:

```
1 create table student(sid int primary key, sname varchar(10) not null, gender varchar(10) not null, dob date not null, marks int check(marks>50), class varchar(10) default 'FYCS', emailid varchar(10))
```

Below the code, the message "Table created." is displayed.

Oracle Live SQL - SQL Worksheet

```
create table student(sid int primary key, sname varchar(10) not null, gender varchar(10) not null, dob date not null, marks int check(marks>50), class varchar(10) default 'FYCS', emailid varchar(10))
desc student;
```

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
DOB	NOT NULL	DATE
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)

Download CSV  
7 rows selected.

## b. Course (cid, cname, credits)

Oracle Live SQL - SQL Worksheet

```
create table course(cid int primary key, cname varchar(10) not null, credits int not null);
```

Table created.

Oracle Live SQL - SQL Worksheet

```
1 create table course(cid int primary key, cname varchar(10) not null, credits int not null)
2 desc course|
```

SQL Worksheet

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(10)
CREDITS	NOT NULL	NUMBER

Download CSV  
3 rows selected.

Clear Find Actions Save Run

2. Alter the structure of Course table
  - a. Modify datatype of cname

Oracle Live SQL - SQL Worksheet

```
1 alter table course
2 modify cname varchar(28)|
```

SQL Worksheet

Table altered.

Clear Find Actions Save Run

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877:NO:RP:

Live SQL

SQL Worksheet

```
1 alter table course
2 modify cname varchar(20)
3 desc course|
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER

Download CSV  
3 rows selected.

Clear Find Actions Save Run

- b. Add a column coursehours with minimum course hours greater than 45.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877:NO:RP:

Live SQL

SQL Worksheet

```
1 alter table course
2 add coursehours int check(coursehours>45)|
```

Table altered.

Clear Find Actions Save Run

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 alter table course
2 add coursehours int check(coursehours>45)
3 desc course
```

TABLE COURSE

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER
COURSEHOURS	-	NUMBER

Download CSV  
4 rows selected.

Clear Find Actions Save Run

### c. Add a column cdesc

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 alter table course
2 add cdesc varchar(10)
```

Table altered.

Clear Find Actions Save Run

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table course
2 add cdsec varchar(10)
3 desc course
```

Below the worksheet, the results of the `desc course` command are displayed in a table:

Column	Null?	Type
CID	NOT NULL	NUMBER
CNAME	NOT NULL	VARCHAR2(20)
CREDITS	NOT NULL	NUMBER
COURSEHOURS	-	NUMBER
CDSEC	-	VARCHAR2(10)

At the bottom of the results, it says "5 rows selected."

### 3. Alter the structure of Student table

- Add column age with minimum age as 17.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table student
2 add age int check(age>17)
```

At the bottom of the results, it says "Table altered."

Oracle Live SQL - SQL Worksheet

```
1 alter table student
2 add age int check(age>17)
3 desc student
```

SQL Worksheet

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
DOB	NOT NULL	DATE
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER

Download CSV  
8 rows selected.

b. Delete the column dob.

Oracle Live SQL - SQL Worksheet

```
1 alter table student
2 drop column dob
3 desc student
```

SQL Worksheet

TABLE STUDENT

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER

Download CSV  
7 rows selected.

c. Add a column phoneno.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table student
2 add phoneno int
3 desc student
```

Below the worksheet, the table structure for 'STUDENT' is displayed in a table:

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
PHONENO	-	NUMBER

Below the table structure, a message indicates "8 rows selected."

d. Rename phoneno to contactno.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table student
2 rename column phoneno to contactno
```

Below the worksheet, the message "Table altered." is displayed.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is executed:

```
1 alter table student
2 rename column phoneno to contactno
3 desc student
```

After running the code, the results show the table structure of STUDENT:

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
CONTACTNO	-	NUMBER

8 rows selected.

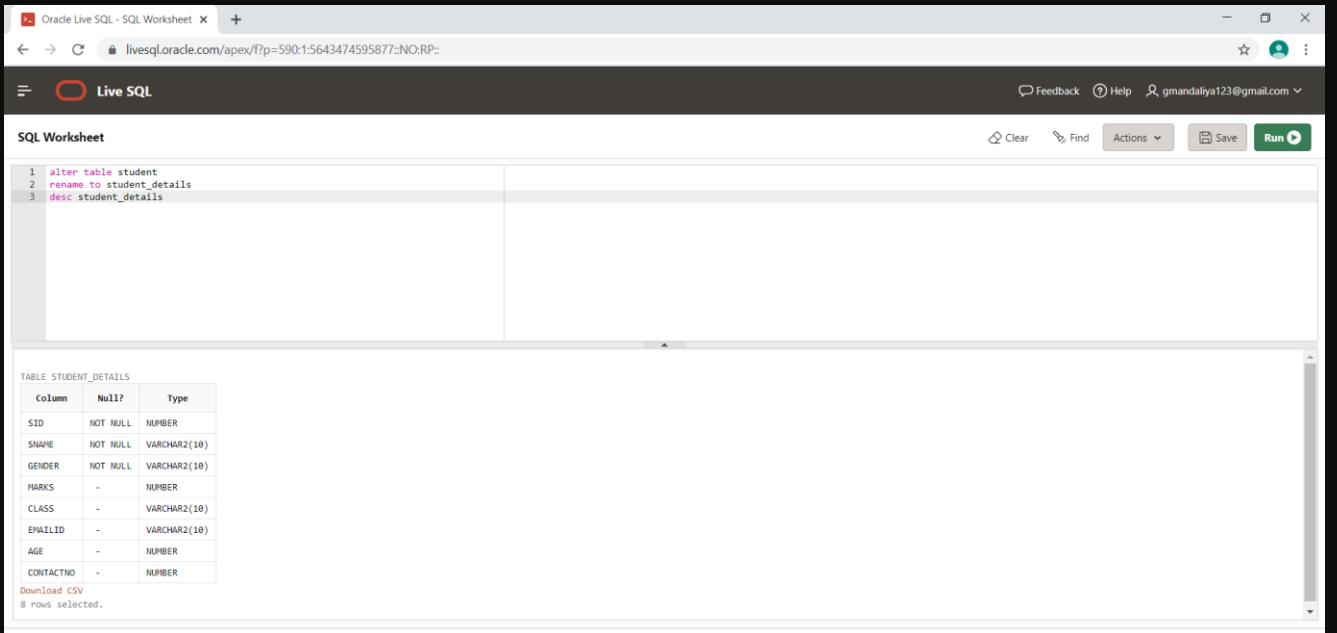
#### 4. Rename Student table to Student\_details.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is executed:

```
1 alter table student
2 rename to student_details
```

The output message indicates:

Table altered.



Oracle Live SQL - SQL Worksheet

SQL Worksheet

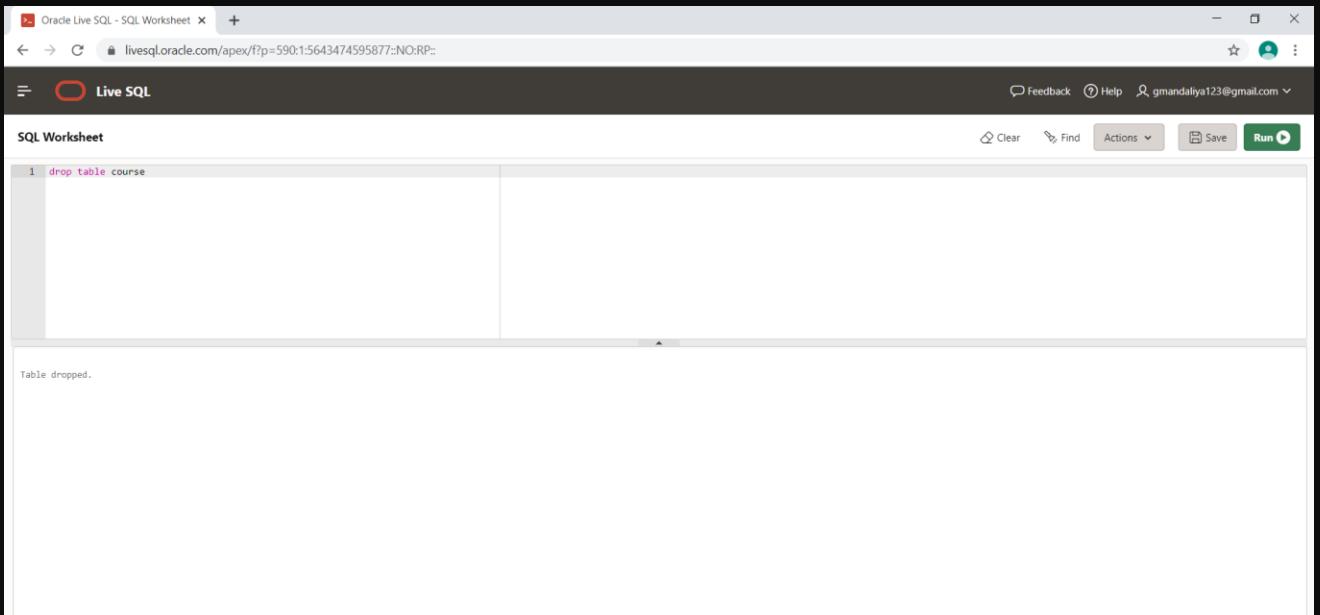
```
1 alter table student
2 rename to student_details
3 desc student_details
```

TABLE STUDENT\_DETAILS

Column	Null?	Type
SID	NOT NULL	NUMBER
SNAME	NOT NULL	VARCHAR2(10)
GENDER	NOT NULL	VARCHAR2(10)
MARKS	-	NUMBER
CLASS	-	VARCHAR2(10)
EMAILID	-	VARCHAR2(10)
AGE	-	NUMBER
CONTACTNO	-	NUMBER

Download CSV  
8 rows selected.

## 5. Drop the table Student\_datails and Course.



Oracle Live SQL - SQL Worksheet

SQL Worksheet

```
1 drop table course
```

Table dropped.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 drop table course
2 desc course
```

ORA-20001: object COURSE does not exist

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 drop table student_details
```

Table dropped.

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::P1](https://livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::P1). The title bar says "Live SQL". The main area is titled "SQL Worksheet". The code entered is:

```
1 drop table student_details
2 desc student_details;
```

The output shows an error message:

```
ORA-20001: object STUDENT_DETAILS does not exist
```

B)

1. Create a table EMPLOYEE with following attributes and specific data types and constraints required (Emp\_no, E\_name, E\_address, E\_ph\_no, Dept\_no, Dept\_name, Job\_id, Salary)

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::P1](https://livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::P1). The title bar says "Live SQL". The main area is titled "SQL Worksheet". The code entered is:

```
1 create table employee(Emp_no int primary key, E_name varchar(10) not null, E_address varchar(20), E_ph_no int, Dept_no int not null, Dept_name varchar(10), Job_id int, salary int);
```

The output shows the confirmation message:

```
Table created.
```

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create table employee(Emp_no int primary key, E_name varchar(10) not null, E_address varchar(20), E_ph_no int, Dept_no int not null, Dept_name varchar(10), Job_id int, salary int)
2 desc employee
```

Below the worksheet, a table named "TABLE\_EMPLOYEE" is displayed, showing the columns and their properties:

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	NUMBER
SALARY	-	NUMBER

At the bottom of the table view, there are links for "Download CSV" and "8 Rows Selected".

2. Add a new column HIREDATE to the existing relation.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 add hiredate date
```

After running the code, the message "Table altered." is displayed in the results pane.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 add hiredate date
3 desc employee;
```

Below the code, the results of the `desc employee` command are displayed in a table:

Column	Null?	Type
EMP_ID	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	NUMBER
SALARY	-	NUMBER
HIREDATE	-	DATE

A "Download CSV" link is also present at the bottom of the table.

### 3. Change the datatype of JOB\_ID from char to varchar2.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 modify Job_id varchar(20);
```

The output of the command is displayed below the worksheet:

Table altered.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 modify Job_id varchar(20)
3 desc employee|
```

Below the worksheet, the table structure for 'EMPLOYEE' is displayed in a table:

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(20)
SALARY	-	NUMBER
HIREDATE	-	DATE

At the bottom of the table structure, there is a link: [Download CSV](#).

#### 4. Change the name of column/field Emp\_no to E\_no.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 rename column Emp_no to E_no
```

Below the worksheet, the output of the command is shown:

```
Table altered.
```

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 rename column Emp_no to E_no
3 desc employee|
```

Below the worksheet, the table structure for 'EMPLOYEE' is displayed in a table:

Column	Null?	Type
E_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(20)
SALARY	-	NUMBER
HIREDATE	-	DATE

A 'Download CSV' button is located at the bottom left of the table preview.

## 5. Modify the column width of the job of emp table.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 modify Job_id varchar(10)|
```

The output window below the worksheet shows the message:

Table altered.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 alter table employee
2 modify Job_id varchar(10)
3 desc employee
```

The 'desc employee' command has been partially typed. Below the worksheet, the 'TABLE EMPLOYEE' section displays the table structure:

Column	Null?	Type
E_NO	NOT NULL	NUMBER
E_NAME	NOT NULL	VARCHAR2(10)
E_ADDRESS	-	VARCHAR2(20)
E_PH_NO	-	NUMBER
DEPT_NO	NOT NULL	NUMBER
DEPT_NAME	-	VARCHAR2(10)
JOB_ID	-	VARCHAR2(10)
SALARY	-	NUMBER
HIREDATE	-	DATE

A 'Download CSV' link is also visible at the bottom of the table section.

C) Create the following tables with specified attributes and constraints  
(Department\_Id varchar(20) primary key, Department\_name varchar2(25))  
with required data.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create table Department(Department_Id varchar(20) primary key, Department_Name varchar(25))
```

The code has been run, and the output message 'Table created.' is displayed below the worksheet.

Oracle Live SQL - SQL Worksheet

```
1 create table Department(Department_Id varchar(20) primary key, Department_Name varchar(25))
2 desc Department
```

SQL Worksheet

TABLE DEPARTMENT

Column	Null?	Type
DEPARTMENT_ID	NOT NULL	VARCHAR2(20)
DEPARTMENT_NAME	-	VARCHAR2(25)

Download CSV  
2 rows selected.

Clear Find Actions Save Run

Oracle Live SQL - SQL Worksheet

```
1 alter table Department
2 modify Department_Name varchar(25) not null
```

SQL Worksheet

Table altered.

Clear Find Actions Save Run

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 alter table Department
2 modify Department_Name varchar(25) not null
3 desc Department
```

Clear Find Actions Save Run

TABLE DEPARTMENT

Column	Null?	Type
DEPARTMENT_ID	NOT NULL	VARCHAR2(20)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(25)

Download CSV  
2 rows selected.

Instructor table: Instructor\_id varchar(20) primary key, Department\_Id varchar2(20) foreign key, Last\_name varchar2(25), First\_name varchar2(200) must have value, Telephone varchar2(20) must be unique, gender char(1) must be either 'F' or 'M', city varchar(10) default value must be 'MUMBAI'.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877::NO::RP::

Live SQL

SQL Worksheet

```
1 create table Instructor(Instructor_id varchar(20) primary key, Department_id varchar(20) references Department(Department_ID), Last_name varchar(25), First_name varchar(200) not null, Telephone varchar(20) unique, gender char(1) default 'M', city varchar(10) default 'MUMBAI');
```

Clear Find Actions Save Run

Table created.

Oracle Live SQL - SQL Worksheet

```

1 create table Instructor(Instructor_id varchar(20) primary key, Department_id varchar(20) references Department(Department_ID), Last_name varchar(20), First_name varchar(200) not null, Telephone varchar(20) unique, gender char(1));
2 desc Instructor;

```

SQL Worksheet

TABLE INSTRUCTOR

Column	Null?	Type
INSTRUCTOR_ID	NOT NULL	VARCHAR2(20)
DEPARTMENT_ID	-	VARCHAR2(20)
LAST_NAME	-	VARCHAR2(20)
FIRST_NAME	NOT NULL	VARCHAR2(200)
TELEPHONE	-	VARCHAR2(20)
GENDER	-	CHAR(1)
CITY	-	VARCHAR2(10)

Download CSV  
7 rows selected.

D) Create the following described below:

Table Name:- EMP

Oracle Live SQL - SQL Worksheet

```

1 create table gautam_EMP(EMP_no int primary key, Ename varchar(10) not null, Job varchar(9), MGR int, Hiredate date, SAL decimal(7,2), Comm int, Dept_no int references gautam_DEPT(Dept_no));

```

SQL Worksheet

Table created.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877:NO:RP:

Live SQL

SQL Worksheet

```
1 create table gautam_EMP(EMP_no int primary key, Ename varchar(10) not null, Job varchar(9), MGR int, Hiredate date, SAL decimal(7,2), Comm int, Dept_no int references gautam_DEPT(Dept_no))
2 desc gautam_EMP
```

Clear Find Actions Save Run

TABLE GAUTAM\_EMP

Column	Null?	Type
EMP_NO	NOT NULL	NUMBER
ENAME	NOT NULL	VARCHAR2(10)
JOB	-	VARCHAR2(9)
MGR	-	NUMBER
HIREDATE	-	DATE
SAL	-	NUMBER(7,2)
COMM	-	NUMBER
DEPT_NO	-	NUMBER

Download CSV  
8 rows selected.

## Table Name:- DEPT

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:5643474595877:NO:RP:

Live SQL

SQL Worksheet

```
1 create table gautam_DEPT(Dept_no int primary key, Dname varchar(14) not null, Loc varchar(13))
```

Clear Find Actions Save Run

Table created.

Oracle Live SQL - SQL Worksheet + livesql.oracle.com/apex/f?p=5901:5643474595877::NO:RP::

Live SQL

SQL Worksheet

1 create table gautam\_DEPT(Dept\_no int primary key, Dname varchar(14) not null, Loc varchar(13))  
2 desc gautam\_DEPT

Clear Find Actions Save Run

TABLE\_GAUTAM\_DEPT

Column	Null?	Type
DEPT_NO	NOT NULL	NUMBER
DNAME	NOT NULL	VARCHAR2(14)
LOC	-	VARCHAR2(13)

Download CSV  
3 rows selected.

-----X-----

Name:- Gautam Chandrakant Mandaliya

Roll No:- 27

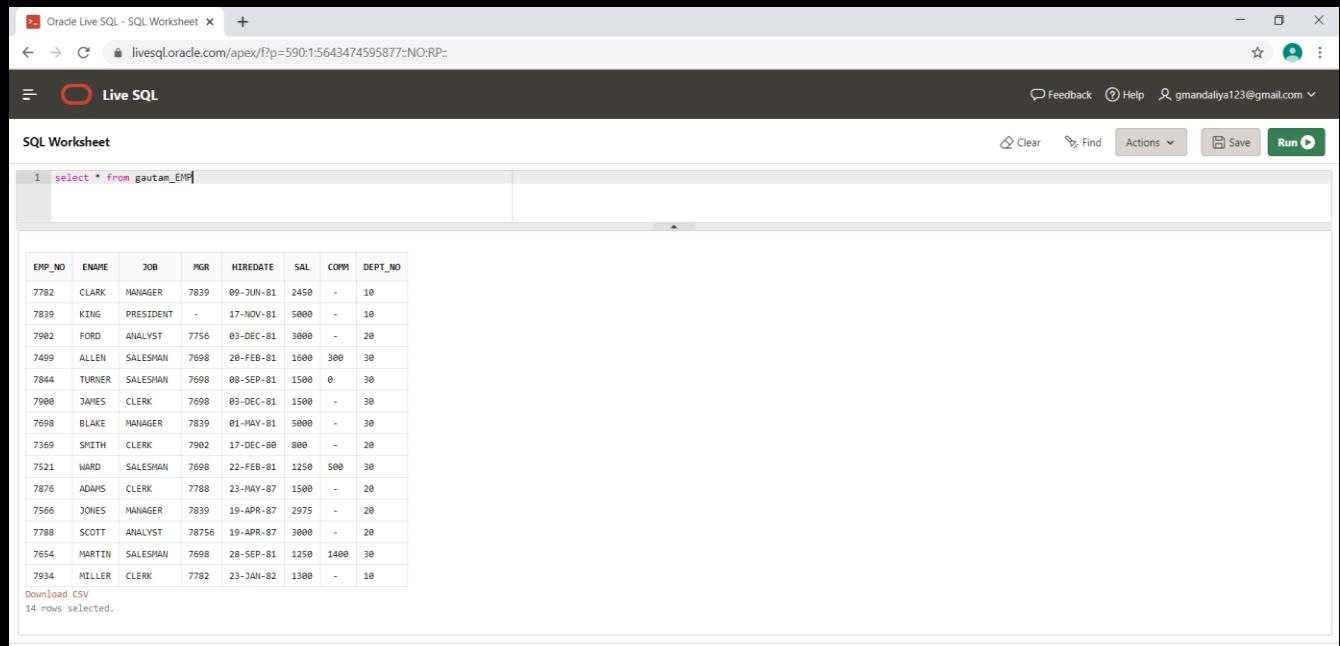
Class:-FYCS

Subject:- Data Base Management system

## PRACTICAL 2:- Study of Data Manipulation Language Statement

A) Insert the following records in above table.

1. Table Name:- EMP



The screenshot shows a browser window for 'Oracle Live SQL - SQL Worksheet'. The URL is 'livesql.oracle.com/apex/r/p=5901:5643474595877:NORP'. The page title is 'Live SQL'. The SQL Worksheet section contains the following code:

```
1 select * from gautam_EMP;
```

The results are displayed in a table:

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COPR	DEPT_NO
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7902	FORD	ANALYST	7756	03-DEC-81	3000	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7908	JAMES	CLERK	7698	03-DEC-81	1500	-	30
7698	BLAKE	MANAGER	7839	01-MAY-81	5000	-	30
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7876	ADAMS	CLERK	7788	23-MAY-87	1500	-	20
7566	JONES	MANAGER	7839	19-APR-87	2975	-	20
7788	SCOTT	ANALYST	78756	19-APR-87	3000	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10

Download CSV  
14 rows selected.

## 2. Table Name:- DEPT

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is run:

```
1 select * from gautam_DEPT
```

The results are displayed in a table:

DEPT_NO	DNAME	LOC
40	OPERATIONS	BOSTON
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO

Below the table, it says "Download CSV" and "4 rows selected."

### B) Update and Delete Queries:-

1. Update the salary of employees working as CLERK by 500.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is run:

```
1 update gautam_EMP
2 set SAL = SAL + 500
3 where Job = 'CLERK'
```

The results are displayed in the message area:

4 row(s) updated.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 update gautam_EMP
2 set SAL = SAL + 500
3 where Job = 'CLERK'
4 select * from gautam_EMP
```

The results of the query are displayed in a table:

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7902	FORD	ANALYST	7750	03-DEC-81	3000	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLERK	7698	03-DEC-81	2000	-	30
7698	BLAKE	MANAGER	7839	01-MAY-81	5000	-	30
7369	SMITH	CLERK	7902	17-DEC-80	1300	-	20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7876	ADAMS	CLERK	7788	23-MAY-87	2000	-	20
7566	JONES	MANAGER	7839	19-APR-87	2975	-	20
7788	SCOTT	ANALYST	7876	19-APR-87	3000	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7934	MILLER	CLERK	7782	23-JAN-82	1800	-	10

Download CSV  
14 rows selected.

## 2. Update the manager of James as CLARK.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 update gautam_EMP
2 set Job='CLARK'
3 where Ename='JAMES';
```

The results of the query are displayed in the message area:

1 row(s) updated.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 update gautam_EMP
2 set Job='CLARK'
3 where Ename='JAMES'
4 select * from gautam_EMP
```

The results show a table of employee data with 14 rows selected. The columns are EMP\_NO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, and DEPT\_NO. The data includes entries for CLARK, KING, FORD, ALLEN, TURNER, JAMES, BLAKE, SMITH, WARD, ADAMS, JONES, SCOTT, MARTIN, and MILLER.

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7902	FORD	ANALYST	7756	03-DEC-81	3000	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7908	JAMES	CLARK	7698	03-DEC-81	2000	-	30
7698	BLAKE	MANAGER	7839	01-MAY-81	5000	-	30
7369	SMITH	CLERK	7902	17-DEC-80	1300	-	20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7876	ADAMS	CLERK	7788	23-MAY-87	2000	-	20
7566	JONES	MANAGER	7839	19-APR-87	2975	-	20
7788	SCOTT	ANALYST	78756	19-APR-87	3000	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7934	MILLER	CLERK	7782	23-JAN-82	1800	-	10

Download CSV  
14 rows selected.

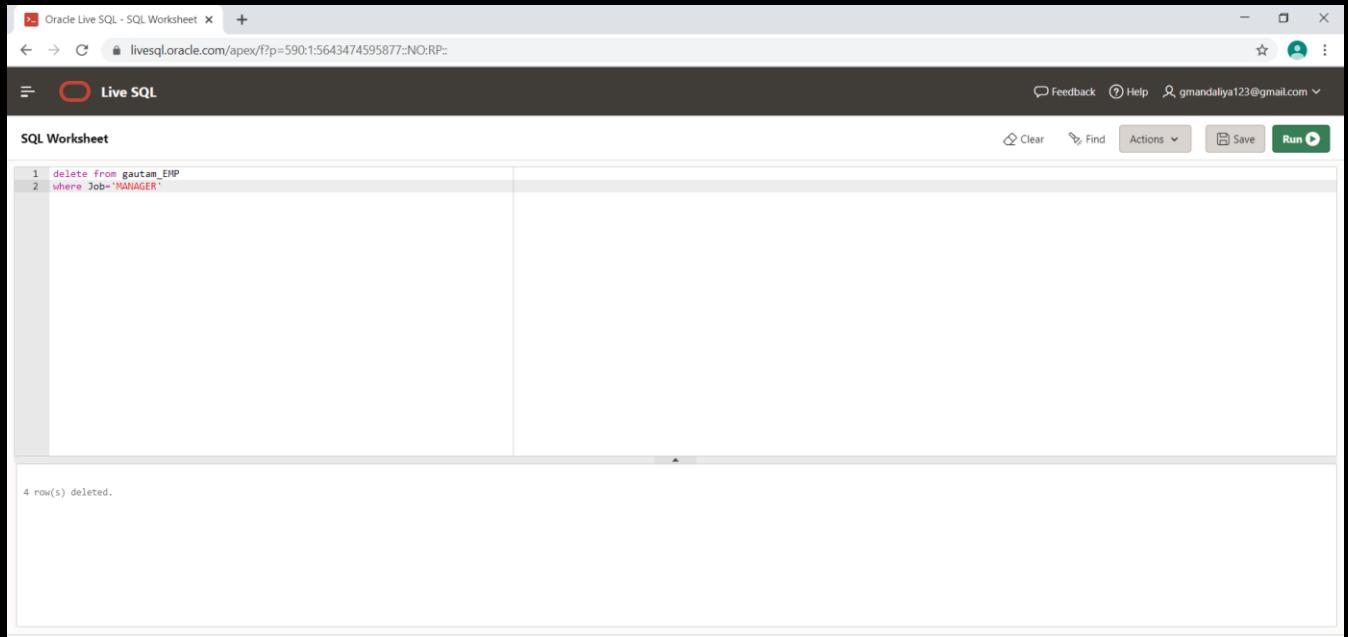
### 3. Change the role of Miller as MANAGER.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 update gautam_EMP
2 set Job='MANAGER'
3 where Ename='MILLER'
```

The results show a message indicating 1 row(s) updated.

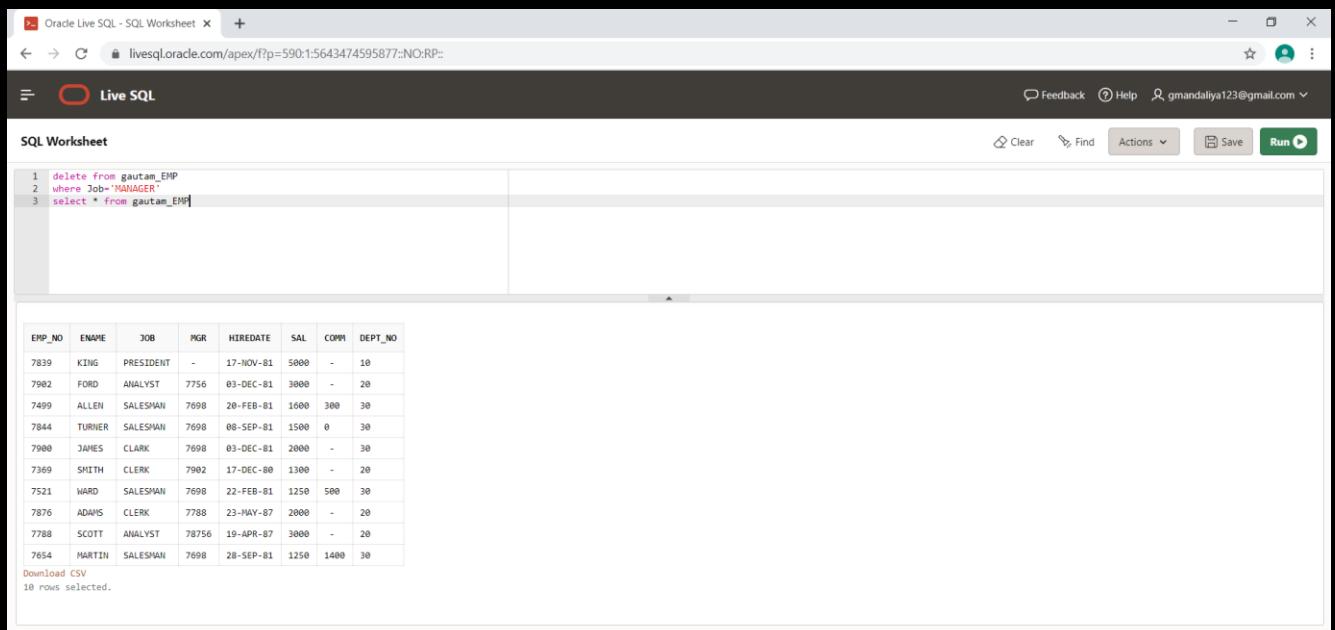
#### 4. Delete the records of Manager.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 delete from gautam_EMP
2 where Job='MANAGER'
```

After running the code, the message "4 row(s) deleted." is displayed in the results pane.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 delete from gautam_EMP
2 where Job='MANAGER'
3 select * from gautam_EMP
```

After running the code, the results pane displays a table of employee data. The table has the following columns: EMP\_NO, ENAME, JOB, MGR, HIREDATE, SAL, COMM, and DEPT\_NO. The data is as follows:

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7902	FORD	ANALYST	7756	03-DEC-81	3000	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLARK	7698	03-DEC-81	2000	-	30
7369	SMITH	CLERK	7902	17-DEC-80	1300	-	20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7876	ADAMS	CLERK	7788	23-MAY-87	2000	-	20
7788	SCOTT	ANALYST	78756	19-APR-87	3000	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30

Below the table, the message "Download CSV" and "10 rows selected." is visible.

5. Delete the records when salary is greater than 1000.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 delete from gautam_EMP
2 where SAL > 1000
```

The output below the worksheet shows the result of the delete operation:

10 row(s) deleted.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL code is run:

```
1 delete from gautam_EMP
2 where SAL > 1000
3 select * from gautam_EMP
```

The output below the worksheet shows the result of the select operation:

no data found

-----X-----

**Name:- Gautam Chandrakant Mandaliya**

**Roll No:- 27**

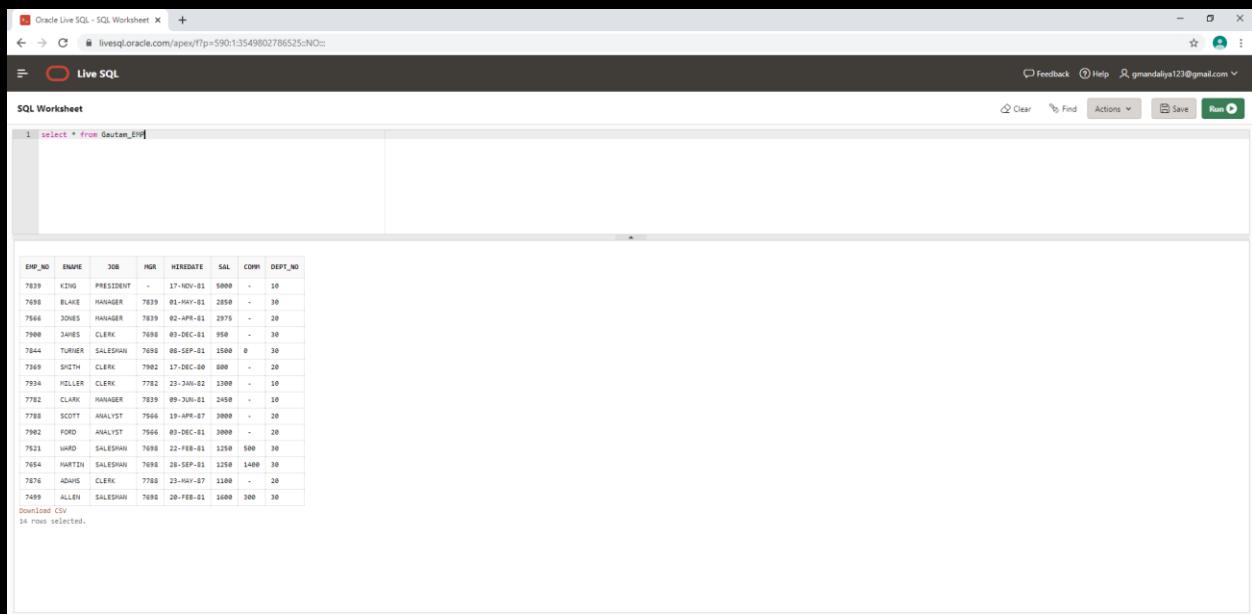
**Class:-FYCS**

**Subject:- Data Base Management system**

### **PRACTICAL 3:-**

#### **A) Using emp table, perform the following queries:**

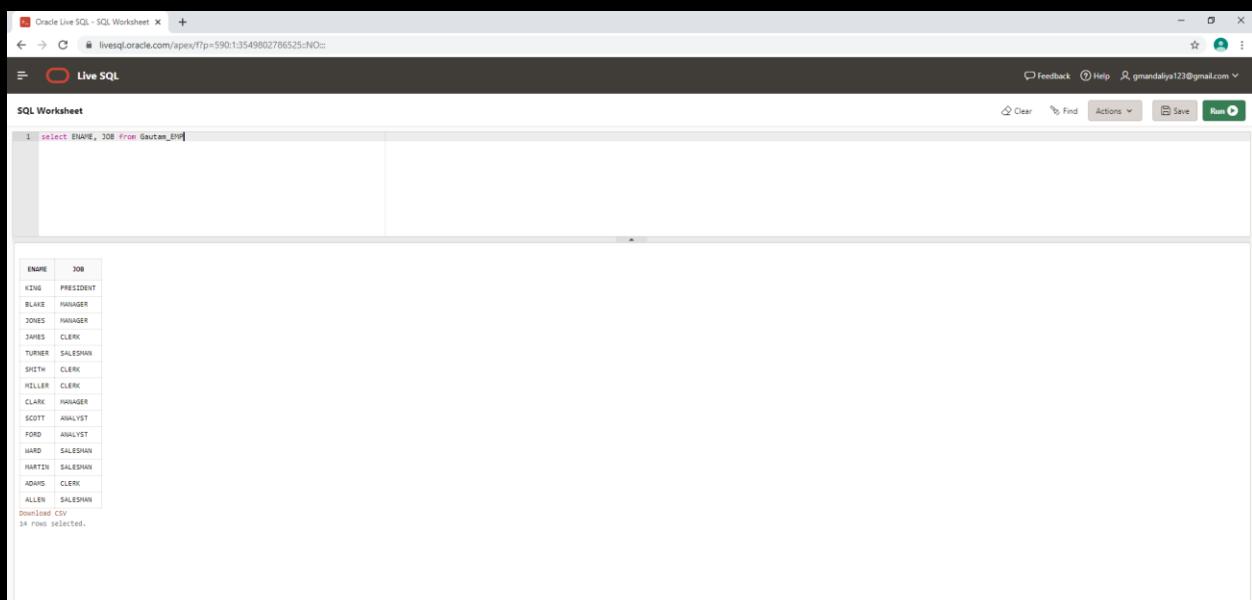
1. Display the details of all employees.



The screenshot shows the Oracle Live SQL interface with a SQL Worksheet tab. The query `select * from Gautam_Emp` is run, resulting in 14 rows of data. The columns are EMP\_ID, ENAME, JOB, MGR, HIREDATE, SAL, COMM, and DEPT\_NO. The data includes rows for KING, BLAKE, JONES, and others. A download CSV button is visible at the bottom left.

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7908	JAMES	CLERK	7839	03-DEC-81	950	-	30
7844	TURNER	SALESMAN	7808	06-SEP-81	1500	0	30
7369	SINTH	CLERK	7902	17-DEC-80	800	-	20
7934	MILLER	CLERK	7839	09-JUN-81	2450	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7788	SCOTT	ANALYST	7866	19-APR-87	3000	-	20
7892	FORD	ANALYST	7866	03-DEC-81	3000	-	20
7521	WARD	SALESMAN	7808	22-FEB-81	1250	500	30
7654	MARTIN	SALESMAN	7808	28-SEP-81	1250	1400	30
7876	ADAMS	CLERK	7788	23-JULY-87	1100	-	20
7489	ALLEN	SALESMAN	7808	20-FEB-81	1600	300	30

2. Display the name and job for all employees.



The screenshot shows the Oracle Live SQL interface with a SQL Worksheet tab. The query `select ENAME, JOB from Gautam_Emp` is run, resulting in 14 rows of data. The columns are ENAME and JOB. The data includes rows for KING, BLAKE, JONES, and others. A download CSV button is visible at the bottom left.

ENAME	JOB
KING	PRESIDENT
BLAKE	MANAGER
JONES	MANAGER
JAMES	CLERK
TURNER	SALESMAN
SINTH	CLERK
MILLER	CLERK
CLARK	MANAGER
SCOTT	ANALYST
FORD	ANALYST
WARD	SALESMAN
MARTIN	SALESMAN
ADAMS	CLERK
ALLEN	SALESMAN

### 3. Display name and salary for all employees.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select ENAME, SAL From Gautam_EMP
```

The results are displayed in a table:

ENAME	SAL
KING	5000
BLAKE	2850
JONES	2975
JAMES	950
TURNER	1500
SMITH	800
HILLER	1300
CLARK	2450
SCOTT	3000
FORD	3000
MARD	1250
HARTIN	1250
ADAMS	1100
ALLEN	1600

Below the table, it says "Download CSV" and "14 rows selected."

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### 4. Display the details of all employees who are earning salary greater than 2000.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP
2 where SAL > 2000;
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	INGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7898	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20
7862	FORD	ANALYST	7566	03-DEC-81	3000	-	20

Below the table, it says "Download CSV" and "6 rows selected."

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5. Display the details of all employees who are working as Manager.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following code:

```
1 select * from Gautam_EMP
2 where JOB = 'MANAGER'
```

The results pane displays a table with three rows of data:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7898	BLAKE	MANAGER	7839	05-MAY-81	2850	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10

Below the table, it says "Download CSV" and "3 rows selected.".

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6. Display the names of all employees who are working in department number 10.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following code:

```
1 select * from Gautam_EMP
2 where DEPT_NO = 10
```

The results pane displays a table with three rows of data:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7934	HELLER	CLERK	7782	23-JAN-82	1300	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10

Below the table, it says "Download CSV" and "3 rows selected.".

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7. Display the names of all employees working as clerk and drawing a salary more than 3000.

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:13549802786525:N::](https://livesql.oracle.com/apex/f?p=590:13549802786525:N::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 select * from Gautam_EMP
2 where JOB = 'CLERK' and SAL > 3000
```

Below the code, it says "no data found". The status bar at the bottom right shows "11:06 ENG 20-02-2021".

8. Display employee number and names for employees who earn commission.

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:13549802786525:N::](https://livesql.oracle.com/apex/f?p=590:13549802786525:N::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 select EMP_ID, ENAME, COMM from Gautam_EMP
2 where COMM > 0
```

Below the code, a table is displayed with the following data:

EMP_ID	ENAME	COMM
7521	MARTIN	500
7654	HARDY	1400
7499	ALLEN	300

At the bottom of the table, it says "Download CSV" and "3 rows selected.". The status bar at the bottom right shows "11:06 ENG 20-02-2021".

9. Display names of employees who do not earn any commission.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select EMP_ID, ENAME, COMM from Gautam_EMP
2 where COMM is null
```

The results show a table with columns EMP\_ID, ENAME, and COMM. The data is as follows:

EMP_ID	ENAME	COMM
7839	KING	-
7698	BLAKE	-
7566	JONES	-
7908	DAWES	-
7869	SITH	-
7934	KILLER	-
7782	CLARK	-
7868	SCOTT	-
7902	FORD	-
7876	ADAMS	-

Below the table, it says "Download CSV" and "29 rows selected."

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10. Display the names of employees who are working as clerk, salesman or analyst and drawing a salary more than 2000.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select ENAME from Gautam_EMP
2 where 200 IN('CLERK', 'SALESMAN', 'ANALYST') and SAL > 2000
```

The results show a table with column ENAME. The data is as follows:

ENAME
SCOTT
FORD

Below the table, it says "Download CSV" and "3 rows selected."

At the bottom of the page, there is footer information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter", "Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine".

11. Display the names of employees who are working as clerk, salesman or analyst.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select ENAME from SAUTAN_EMP
2 where JOB IN('CLERK', 'SALESMAN', 'ANALYST')
```

The results pane displays a table with the following data:

ENAME
JAMES
TURNER
SNITH
HILLER
SCOTT
FORD
MARD
HARTIN
ADAMS
ALLEN

Below the table, there is a link to "Download CSV" and a note stating "14 rows selected."

At the bottom of the interface, the Oracle logo and "Integrated Cloud Applications & Platform Services" are visible, along with copyright information and a footer bar.

12. Display the names of employees working in department number 10 or 20 or 30.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select ENAME from SAUTAN_EMP
2 where DEPT_ID IN (10, 20, 30)
```

The results pane displays a table with the following data:

ENAME
KING
BLAKE
JONES
JAMES
TURNER
SNITH
HILLER
CLARK
SCOTT
FORD
MARD
HARTIN
ADAMS
ALLEN

Below the table, there is a link to "Download CSV" and a note stating "14 rows selected."

At the bottom of the interface, the Oracle logo and "Integrated Cloud Applications & Platform Services" are visible, along with copyright information and a footer bar.

13. Display the details of employees whose salary lies in the range of 1000 and 2000.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP
2 where SAL between 1000 and 2000;
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7934	KILLER	CLERK	7782	23-JAN-82	1300	-	10
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7876	ADAMS	CLERK	7782	23-MAY-87	1100	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30

Download CSV  
8 rows selected.

At the bottom, the status bar shows: © 2021 Oracle Corporation - Privacy - Terms of Use. Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter. Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0. Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine. 11:11 20-02-2021.

14. List the employees in the ascending order of their salaries.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP
2 order by SAL ASC;
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7369	SHITH	CLERK	7902	17-DEC-80	800	-	20
7908	JAHEE	CLERK	7698	03-DEC-81	900	-	30
7876	ADAMS	CLERK	7782	23-MAY-87	1100	-	20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7934	KILLER	CLERK	7782	23-JAN-82	1300	-	10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7762	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7898	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7782	SCOTT	ANALYST	7866	19-APR-87	3000	-	20
7892	FORD	ANALYST	7866	03-DEC-81	3000	-	20
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10

Download CSV  
34 rows selected.

At the bottom, the status bar shows: © 2021 Oracle Corporation - Privacy - Terms of Use. Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter. Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0. Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine. 11:11 20-02-2021.

15. List the Empno, Ename, Sal of all emp working for Mgr 7369.

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::](https://livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select EMP_NO, ENAME, SAL from Gautam_EMP
2 where MGR = 7369;
```

Below the code, it says "no data found". The bottom status bar shows the date as 20-02-2021 and the time as 11:12.

16. List the employees who are either 'CLERK' or 'ANALYST' in the Desc order.

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::](https://livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select * from Gautam_EMP
2 where JOB='CLERK' or JOB='ANALYST'
3 order by JOB desc;
```

Below the code, a table is displayed with the following data:

EMP_NO	ENAME	JOB	FGR	HIREDATE	SAL	COMM	DEPT_NO
7898	JAMES	CLERK	7898	01-DEC-81	950	-	20
7369	SHEATH	CLERK	7902	17-DEC-80	800	-	20
7876	ADAMS	CLERK	7788	23-MAY-87	1180	-	20
7934	KELLER	CLERK	7912	23-JAN-82	1380	-	10
7892	FORD	ANALYST	7666	03-DEC-81	3000	-	20
7788	SCOTT	ANALYST	7666	19-APR-87	3800	-	20

Below the table, it says "Download CSV" and "6 rows selected". The bottom status bar shows the date as 20-02-2021 and the time as 11:16.

17. List the employees who are working in Deptno 10 or 20.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP  
2 where DEPT_NO In(10, 20)
```

The results are displayed in a grid:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7846	JONES	MANAGER	7839	02-APR-81	2975	-	20
7869	SMITH	CLERK	7892	17-DEC-80	800	-	20
7934	KOLLER	CLERK	7782	23-JAN-82	1300	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7888	SCOTT	ANALYST	7966	19-APR-87	3000	-	20
7902	FORD	ANALYST	7966	03-DEC-81	3000	-	20
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20

Below the grid, it says "Download CSV" and "8 rows selected."

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18. List the employees whose name have a character set 'll' together.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP  
2 where ENAME like '%ll%'
```

The results are displayed in a grid:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7934	KOLLER	CLERK	7782	23-JAN-82	1300	-	10
7499	ALLEN	SALESPERSON	7898	20-FEB-81	1600	300	30

Below the grid, it says "Download CSV" and "2 rows selected."

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19. List the employees in ascending order of their names.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP  
2 order by ENAME ASC
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_ID
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7698	BLAKE	MANAGER	7839	01-JUN-81	2550	-	30
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7902	FORD	ANALYST	7866	03-DEC-81	3000	-	20
7908	JAMES	CLERK	7898	03-DEC-81	950	-	30
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7834	KILLER	CLERK	7782	23-JAN-82	1300	-	10
7788	SCOTT	ANALYST	7866	19-APR-87	3000	-	20
7369	SMITH	CLERK	7892	17-DEC-80	800	-	20
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30

Download CSV  
34 rows selected.

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Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

20. List the employees in descending order of their names.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP  
2 order by ENAME DESC
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_ID
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7369	SMITH	CLERK	7892	17-DEC-80	800	-	20
7788	SCOTT	ANALYST	7866	19-APR-87	3000	-	20
7834	KILLER	CLERK	7782	23-JAN-82	1300	-	10
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7908	JAMES	CLERK	7898	03-DEC-81	950	-	30
7902	FORD	ANALYST	7866	03-DEC-81	3000	-	20
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7698	BLAKE	MANAGER	7839	01-JUN-81	2550	-	30
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20

Download CSV  
34 rows selected.

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Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0  
Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

21. List the employees who do not belong to Deptno 20.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP
2 where DEPT_NO Not in 20
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7848	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7904	JAMES	CLERK	7898	03-DEC-81	950	-	30
7844	TURNER	SALESPERSON	7898	08-SEP-81	1500	0	30
7934	KELLER	CLERK	7782	23-JAN-82	1300	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7521	WARD	SALESPERSON	7898	22-FEB-81	1250	500	30
7654	MARTIN	SALESPERSON	7898	28-SEP-81	1250	1400	30
7499	ALLEN	SALESPERSON	7898	20-FEB-81	1600	300	30

Download CSV  
3 rows selected.

Below the table, the Oracle Live SQL footer information is visible:

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Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0  
Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

Windows taskbar at the bottom: Type here to search, File, Start, Task View, Taskbar settings, Taskbar icons, Taskbar preview, Taskbar notifications, Taskbar pinned items, Taskbar status bar.

22. List all the employees except PRESIDENT and MANAGER.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following query:

```
1 select * from Gautam_EMP
2 where JOB not in ('PRESIDENT','MANAGER')
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7898	JAMES	CLERK	7898	03-DEC-81	950	-	30
7844	TURNER	SALESPERSON	7898	08-SEP-81	1500	0	30
7369	SMITH	CLERK	7892	17-DEC-00	800	-	20
7934	KELLER	CLERK	7782	23-JAN-82	1300	-	10
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10
7783	SCOTT	ANALYST	7866	19-APR-87	3000	-	20
7892	FORD	ANALYST	7566	03-DEC-81	3000	-	20
7521	WARD	SALESPERSON	7898	22-FEB-81	1250	500	30
7654	MARTIN	SALESPERSON	7898	28-SEP-81	1250	1400	30
7876	ADAMS	CLERK	7788	23-MAY-87	1300	-	20
7499	ALLEN	SALESPERSON	7898	20-FEB-81	1600	300	30

Download CSV  
39 rows selected.

Below the table, the Oracle Live SQL footer information is visible:

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Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

Windows taskbar at the bottom: Type here to search, File, Start, Task View, Taskbar settings, Taskbar icons, Taskbar preview, Taskbar pinned items, Taskbar status bar.

23. List the employees whose name starts with A.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select * from Gautam_EMP
2 where ENAME like 'AN'
```

The results table shows two rows:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7876	ADAMS	CLERK	7782	23-MAY-87	1100	-	20
7499	ALLEN	SALESMAN	7898	20-FEB-81	1600	300	30

Below the table, it says "Download CSV" and "2 rows selected."

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24. List all the Clerks of Deptno 20.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select * from Gautam_EMP
2 where JOB = 'CLERK' and DEPT_NO = 20
```

The results table shows two rows:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7369	SMITH	CLERK	7982	17-DEC-80	800	-	20
7876	ADAMS	CLERK	7782	23-MAY-87	1100	-	20

Below the table, it says "Download CSV" and "2 rows selected."

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25. List the employees whose names ends with S.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following code:

```
1 select * from Gautam_EMP
2 where ENAME like '%S'
```

The results table shows three rows of employee data:

EMP_ID	ENAME	JOB	HGR	HIREDATE	SAL	COMM	DEPT_NO
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7908	SMITH	CLERK	7698	01-DEC-81	3950	-	30
7876	ADAMS	CLERK	7788	23-MAY-81	1180	-	20

Below the table, there is a note: "Download CSV" and "3 rows selected."

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26. List the employees who has name of exactly 4 characters.

The screenshot shows the Oracle Live SQL interface. A SQL Worksheet window is open with the following code:

```
1 select * from Gautam_EMP
2 where ENAME like '____'
```

The results table shows three rows of employee data:

EMP_ID	ENAME	JOB	HGR	HIREDATE	SAL	COMM	DEPT_NO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7902	FORD	ANALYST	7846	03-DEC-81	3000	-	20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30

Below the table, there is a note: "Download CSV" and "3 rows selected."

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27. List the names of the employees who are working as MANAGER in department 10.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select * from Gautam_EMP
2 where JOB = 'MANAGER' and DEPT_NO = 10;
```

The results are displayed in a table:

EMP_ID	ENAME	JOB	HGR	HIREDATE	SAL	CMP	DEPT_NO
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10

Below the table, there is a "Download CSV" link. The status bar at the bottom right shows the date as 20-02-2021 and the time as 11:23.

28. List the total salary of employees working as ANALYST.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select sum(SAL) from Gautam_EMP
2 where JOB = 'ANALYST';
```

The results are displayed in a table:

SUM(SAL)
6888

Below the table, there is a "Download CSV" link. The status bar at the bottom right shows the date as 20-02-2021 and the time as 11:23.



## B) Answer the following queries:

- Display the total salary of employees department wise.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 select DEPT_NO, sum(SAL) from Gautam_EMP
2 group by DEPT_NO
```

The results are displayed in a table:

DEPT_NO	SUM(SAL)
30	9480
10	8750
20	10875

Below the table, there are links for "Download CSV" and "3 rows selected."

At the bottom of the interface, it says "© 2021 Oracle Corporation - Privacy - Terms of Use" and "Integrated Cloud Applications & Platform Services". The status bar at the bottom right shows "11:26 20-02-2021".

- Display the total salary of employees job wise in ascending order of job.

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 select JOB, sum(SAL) from Gautam_EMP
2 group by JOB
3 order by JOB Asc
```

The results are displayed in a table:

JOB	SUM(SAL)
ANALYST	6000
CLERK	4150
HANDLER	8275
PRESIDENT	5000
SALESPERSON	5000

Below the table, there are links for "Download CSV" and "6 rows selected."

At the bottom of the interface, it says "© 2021 Oracle Corporation - Privacy - Terms of Use" and "Integrated Cloud Applications & Platform Services". The status bar at the bottom right shows "11:27 20-02-2021".

3. Display the total number of employees with specific job.

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::](https://livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select JOB, count(*) from Gautam_EMP
2 group by JOB
```

Below the code, the results are displayed in a table:

JOB	COUNT(*)
CLERK	4
SALESMAN	4
ANALYST	2
MANAGER	3
PRESIDENT	1

Below the table, it says "Download CSV" and "5 rows selected."

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4. Display the total number of employees working in each department.

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::](https://livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select DEPT_NO, count(*) from Gautam_EMP
2 group by DEPT_NO
```

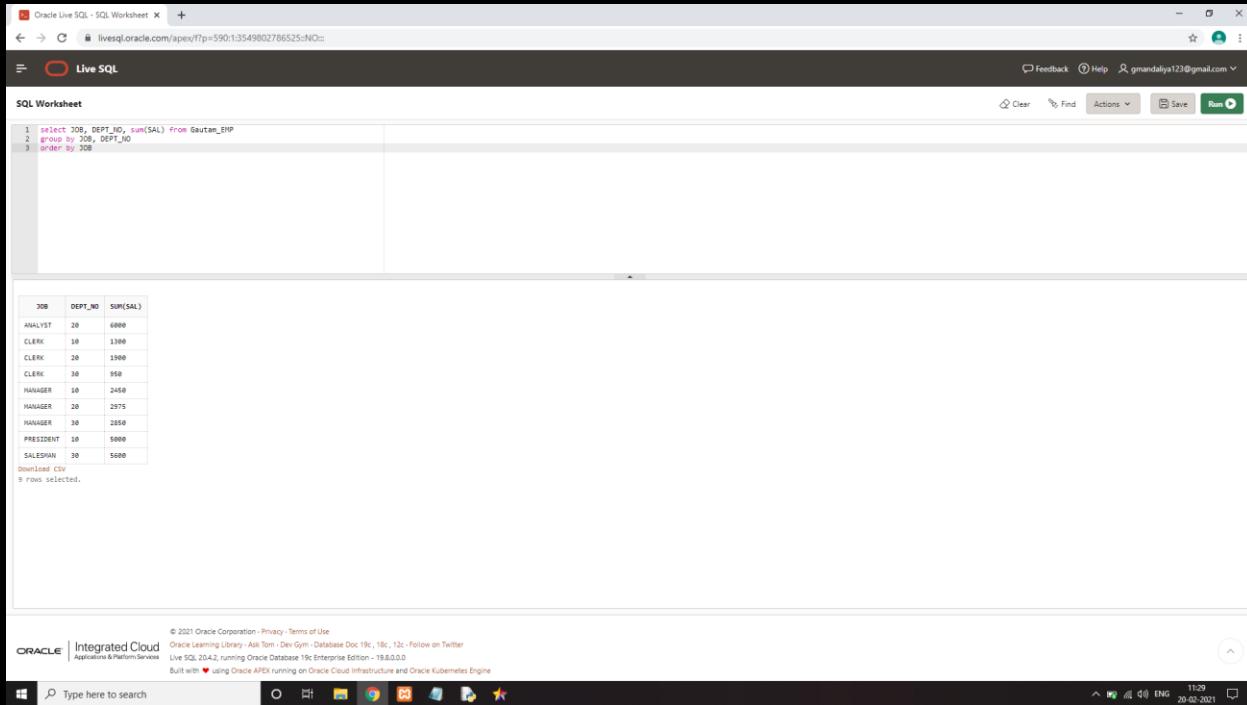
Below the code, the results are displayed in a table:

DEPT_NO	COUNT(*)
30	6
10	3
20	5

Below the table, it says "Download CSV" and "3 rows selected."

At the bottom of the page, there is footer information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter", "Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine". The system tray at the bottom right shows the date as 20-02-2021 and time as 11:28.

5. Display the total salary of employees specific to job and department in ascending order of job.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 select JOB, DEPT_NO, sum(SAL) from Gautam_EMP
2 group by JOB, DEPT_NO
3 order by JOB
```

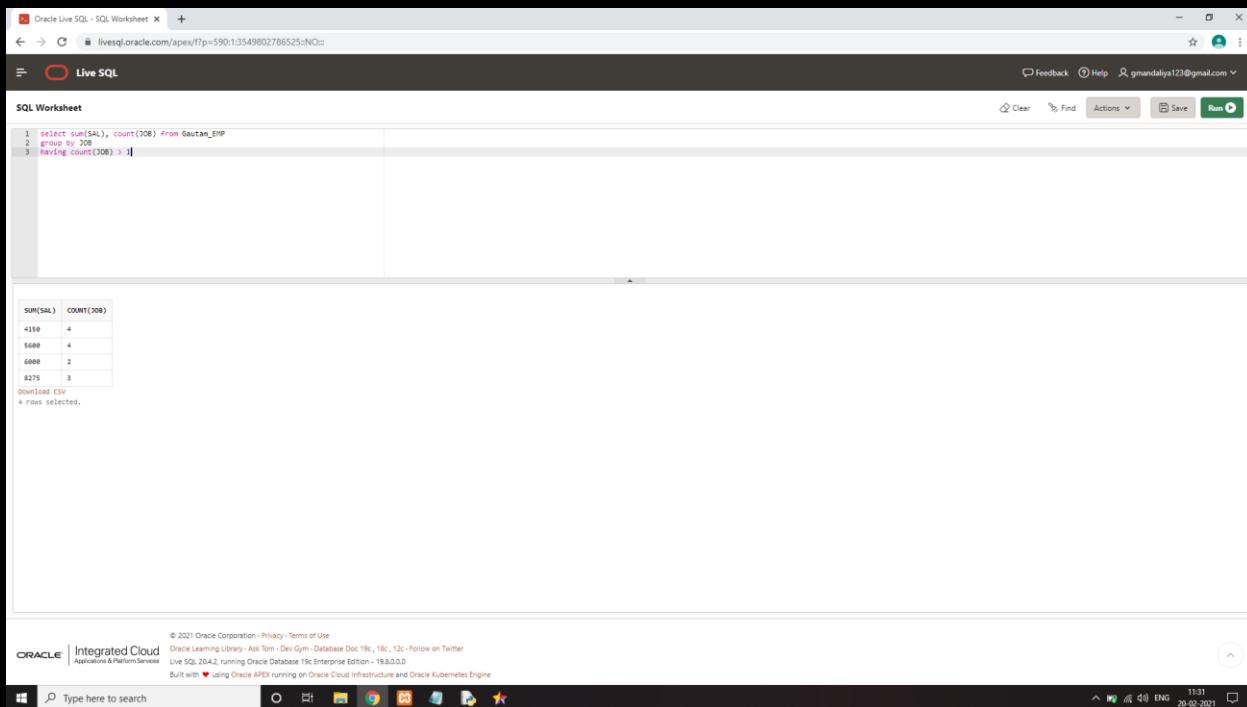
The results are displayed in a table:

JOB	DEPT_NO	SUM(SAL)
ANALYST	20	6000
CLERK	10	1300
CLERK	20	1900
CLERK	30	950
MANAGER	10	2450
MANAGER	20	2975
MANAGER	30	2850
PRESIDENT	10	5000
SALESMAN	30	5000

Below the table, it says "Download CSV" and "9 rows selected".

The status bar at the bottom right shows "11:29 ENG 20-02-2021".

6. Display the total salary of the employees specific to job when employee count is greater than 1.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 select sum(SAL), count(JOB) from Gautam_EMP
2 group by JOB
3 having count(JOB) > 1
```

The results are displayed in a table:

SUM(SAL)	COUNT(JOB)
4150	4
5600	4
6000	2
8275	3

Below the table, it says "Download CSV" and "4 rows selected".

The status bar at the bottom right shows "11:31 ENG 20-02-2021".

## 7. Display unique jobs of employees.

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::](https://livesql.oracle.com/apex/f?p=590:1:3549802786525::NO::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains a SQL Worksheet with the following content:

```
1 | select distinct JOB from Gautan_EMP;
```

Below the worksheet, the results are displayed in a table:

JOB
CLERK
SALESMAN
ANALYST
MANAGER
PRESIDENT

There is a "Download CSV" link and a note saying "5 rows selected." The bottom of the page includes standard Oracle footer information and a Windows taskbar at the bottom.

-----X-----

Name:- Gautam Chandrakant Mandaliya

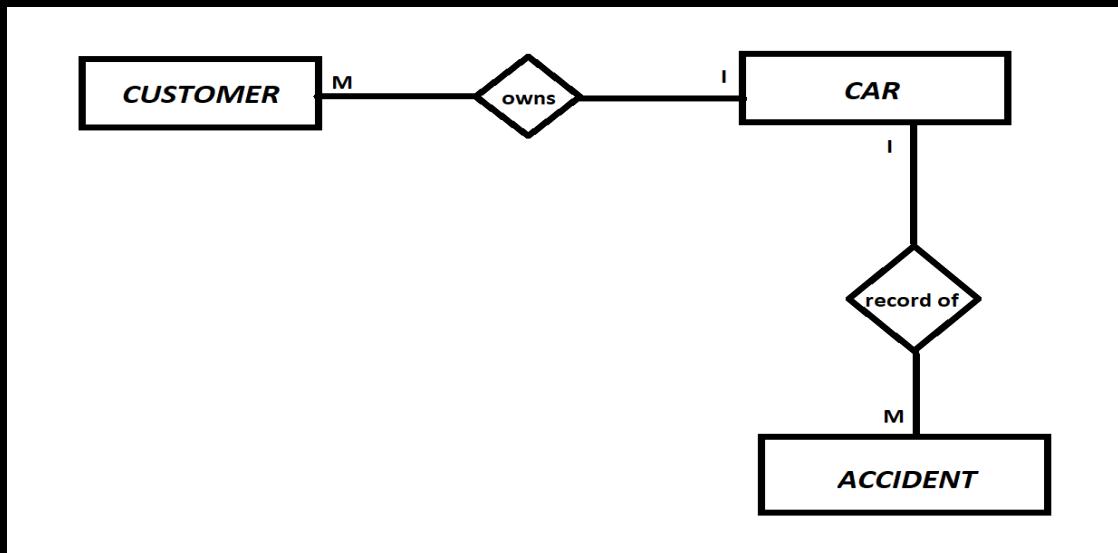
Roll No:- 27

Class:-FYCS

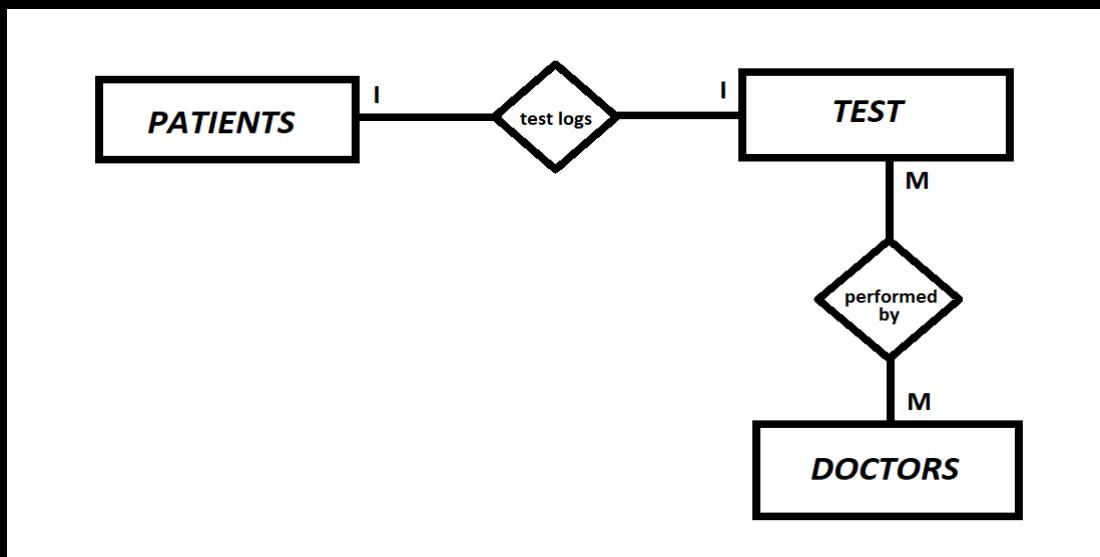
Subject:- Data Base Management system

### PRACTICAL 4:- Questions on ER Diagram.

1. Construct an ER diagram for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents.



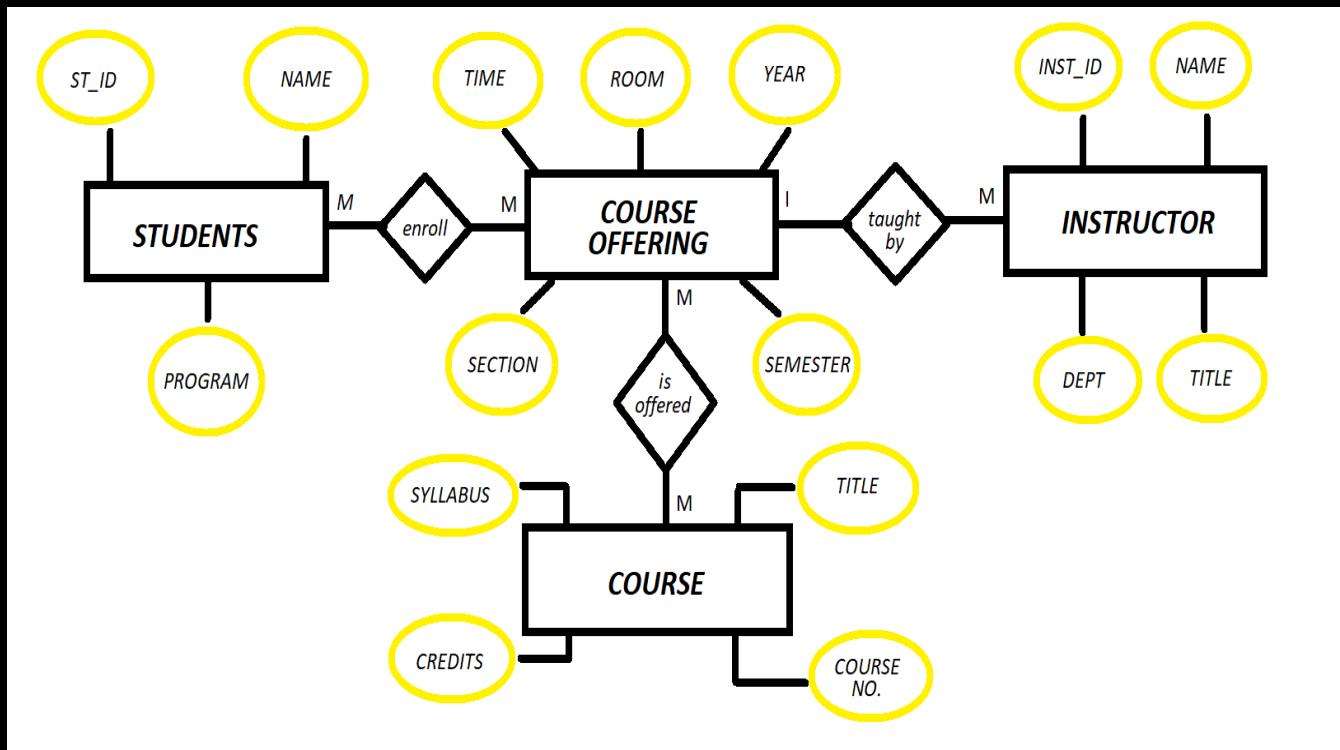
2. Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.



3. A university registrar.s of \_ce maintains data about the following entities: (a)courses, including number, title, credits, syllabus, and prerequisites; (b) course offerings, including course number, year, semester, section number, instructor(s), timings, and classroom; (c) students, including student-id, name, and program; and (d) instructors, including identification number, name, department, and title.

Further, the enrollment of students in courses and grades awarded to students in each course they are enrolled for must be appropriately modeled.

Construct an E-R diagram for the registrar.s of \_ce.Document all assumptions that you make about the mapping constraints.



4. Draw the ER diagram for the given scenario

In an educational institute, there are several departments and students belong to one of them. Each department has a unique department number, a unique name, a location, a phone number and is headed by a professor.

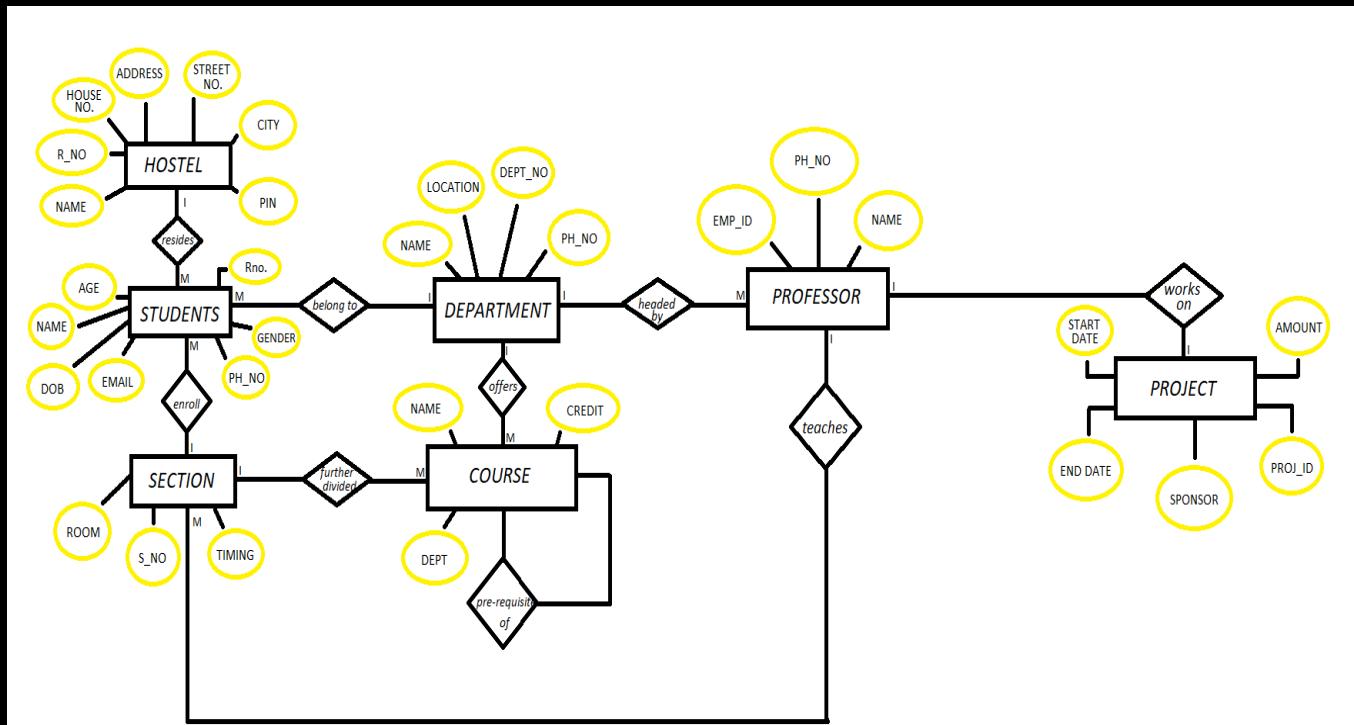
Professors have a unique employee id, name, phoneno. We like to keep track of the following details regarding students: name, unique roll no, gender, phone number, date of birth, age and one or more email addresses.

Students have a local address consisting of the hostel name and the room number. They also have home address consisting of house number, street, city and pin. It is assumed that all students reside in the hostels.

A course taught in a semester of the year is called a section. There can be several sections of the same course in a semester; these are identified by the section number. Each section is taught by a different professor and has its own timings and a room to meet.

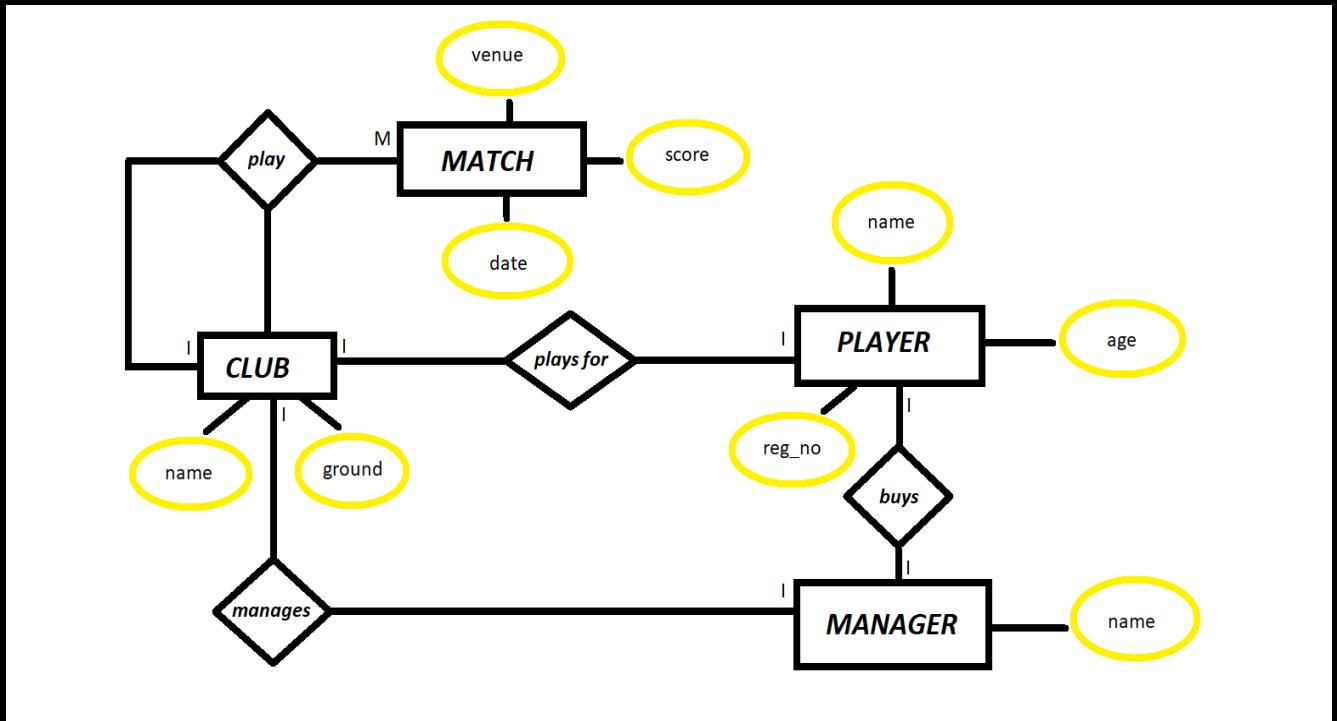
Students enroll for several sections in a semester. Each course has a name, number of credits and the department that offers it. A course may have other courses as pre-requisites i.e courses to be completed before it can be enrolled in.

Professors also undertake research projects. These are sponsored by funding agencies and have a specific start date, end date and amount of money given. More than one professor can be involved in a project. Also a professor may be simultaneously working on several projects. A project has a unique projectid.



##### 5. Draw the ER diagram for the given scenario

"A football club has a name and a ground and is made up of players. A player can play for only one club and a manager, represented by his name manages a club. A footballer has a registration number, name and age. A club manager also buys players. Each club plays against each other club in the league and matches have a date, venue and score."



-----X-----

Name:- Gautam Chandrakant Mandaliya

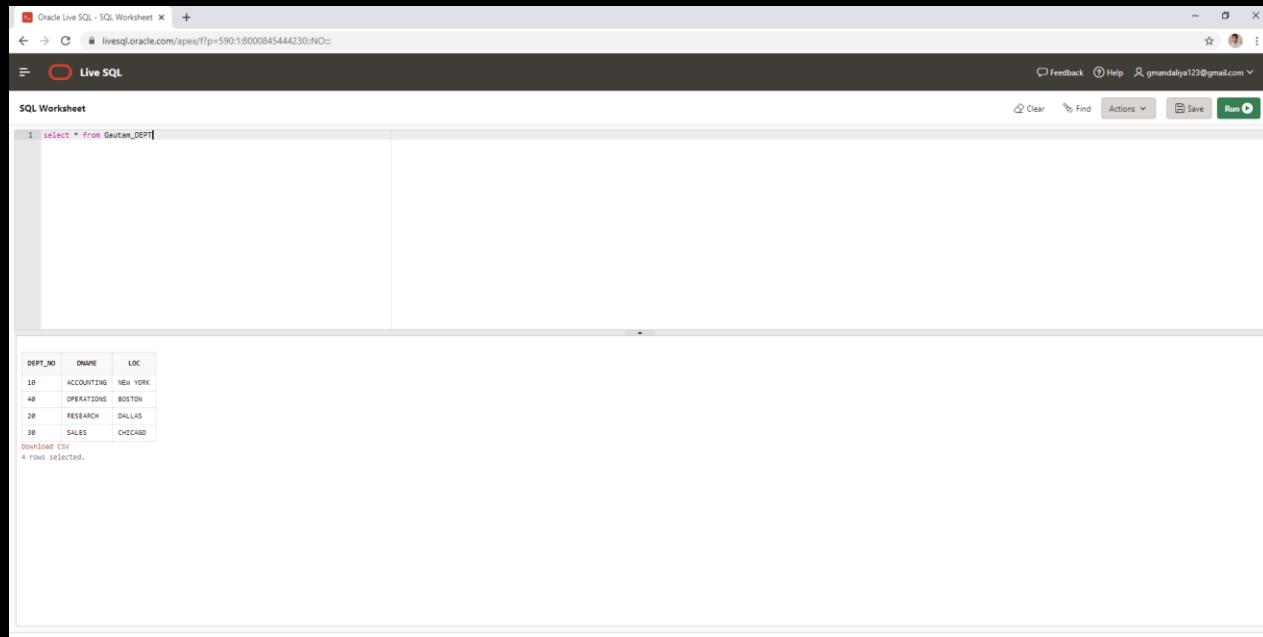
Roll No:- 27

Class:-FYCS

Subject:- Data Base Management system

## PRACTICAL 5:-

### Study of Various Types of JOINS



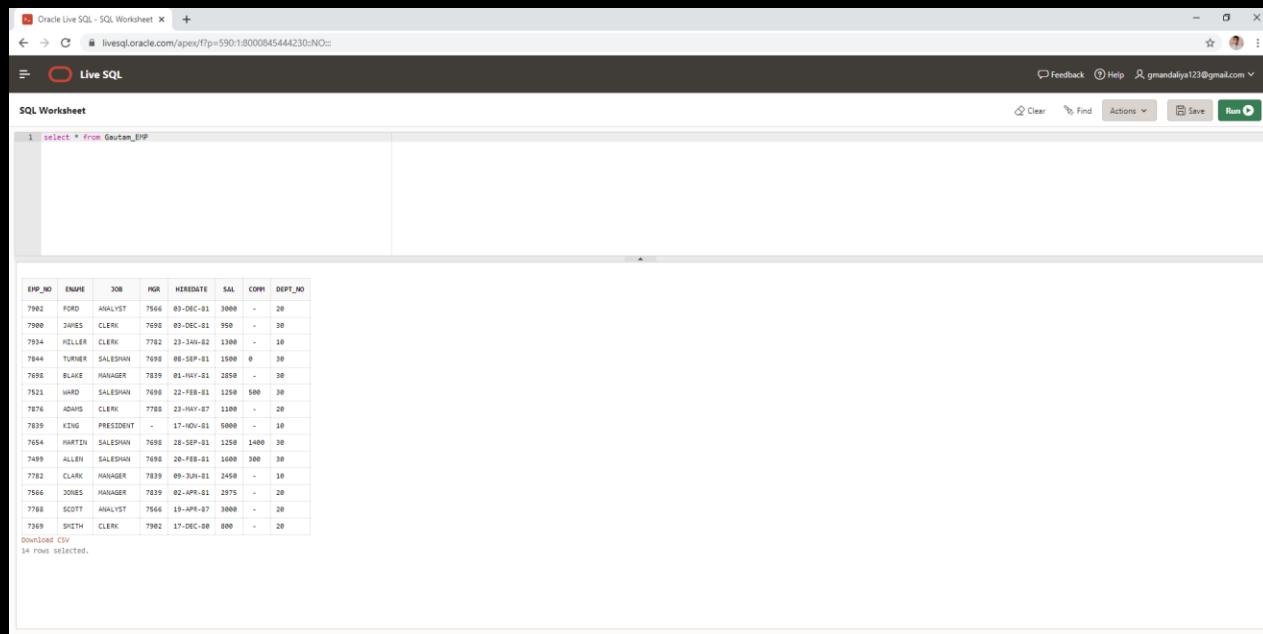
Oracle Live SQL - SQL Worksheet

```
1 | select * from Gautam_DEPT|
```

SQL Worksheet

DEPT_NO	DNAME	LOC
10	ACCOUNTING	NEW YORK
40	OPERATIONS	BOSTON
20	RESEARCH	DALLAS
30	SALES	CHICAGO

Download CSV  
4 rows selected.



Oracle Live SQL - SQL Worksheet

```
1 | select * from Gautam_EMP|
```

SQL Worksheet

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	CPOW	DEPT_NO
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20
7908	JAMES	CLERK	7598	03-DEC-81	350	-	30
7914	KELLER	CLERK	7782	23-JAN-82	1300	-	10
7944	TURNER	SALESPERSON	7598	08-SEP-81	1500	0	30
7690	BLAKE	MANAGER	7839	01-JUN-81	2850	-	30
7521	MARD	SALESPERSON	7698	22-FEB-81	1250	500	30
7876	ADAMS	CLERK	7788	23-JUN-87	1100	-	20
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
7654	MARTIN	SALESPERSON	7698	25-SEP-81	1250	1400	20
7499	ALLLEN	SALESPERSON	7698	20-FEB-81	1600	300	30
7782	CLARK	MANAGER	7839	09-JUL-81	2450	-	10
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20
7399	SWEENEY	CLERK	7902	17-DEC-88	800	-	20

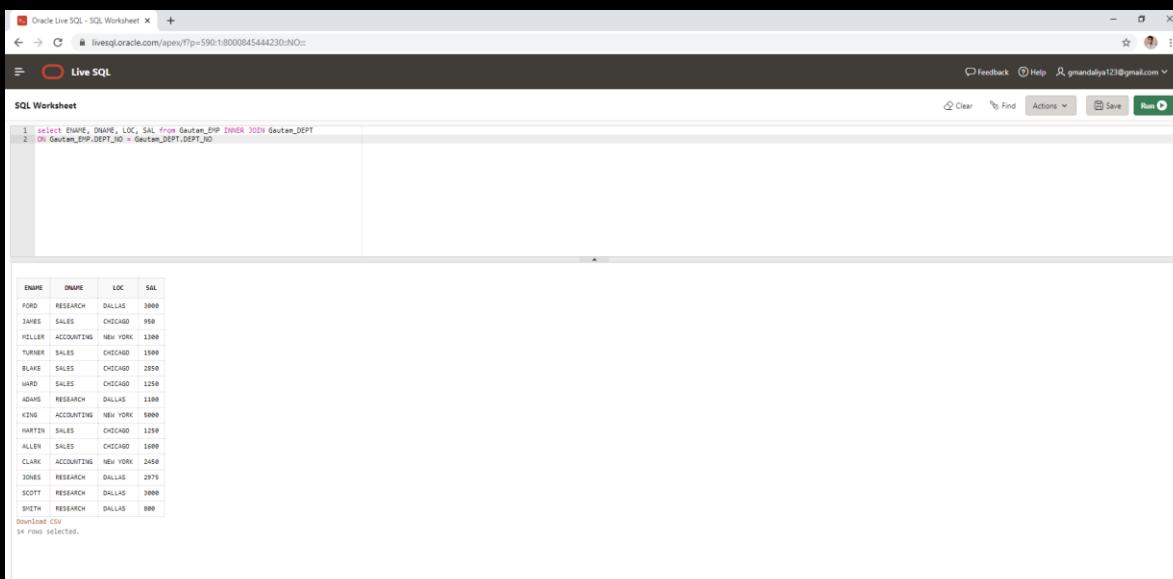
Download CSV  
14 rows selected.

1. **INNER JOIN**:- The INNER JOIN keyword selects all rows from both the tables as long as the condition satisfies.

### **SYNTAX:-**

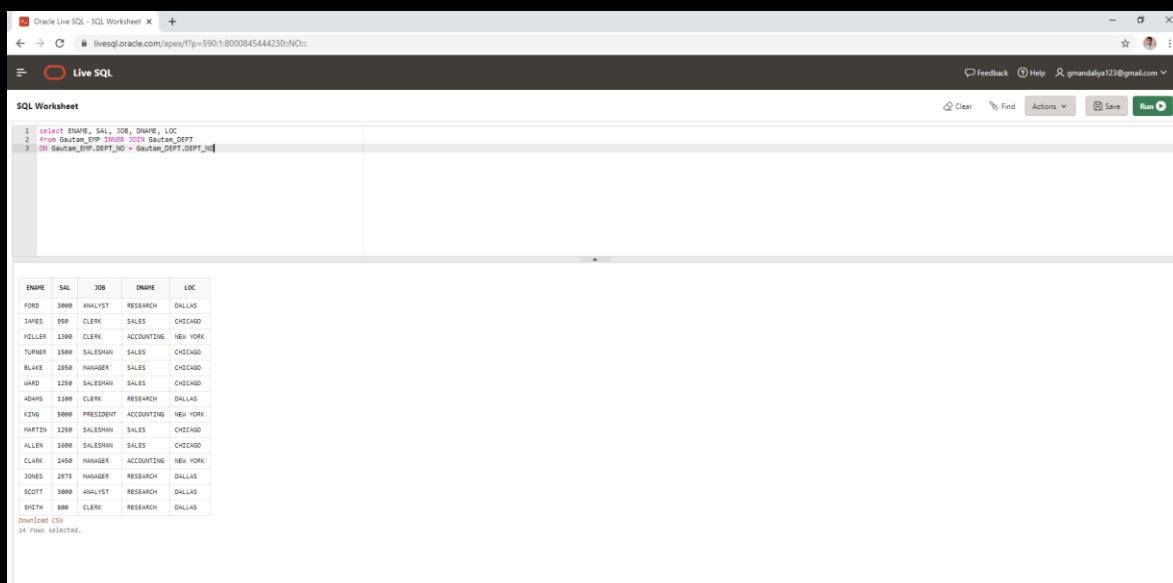
```
SELECT table1.column1,table1.column2,table2.column1,....  
FROM table1 INNER JOIN table2  
ON table1.matching_column = table2.matching_column;
```

### **OUTPUT:-**



```
1 select ENAME, DNAME, LOC, SAL from Gautam_EMP INNER JOIN Gautam_DEPT
2 ON Gautam_EMP.DEPT_ID = Gautam_DEPT.DEPT_ID
```

ENAME	DNAME	LOC	SAL
FORD	RESEARCH	DALLAS	3000
JAMES	SALES	CHICAGO	950
HILLER	ACCOUNTING	NEW YORK	1100
TURNER	SALES	CHICAGO	1500
BLAKE	SALES	CHICAGO	2500
MARD	SALES	CHICAGO	1200
ADAMS	RESEARCH	DALLAS	1100
KING	ACCOUNTING	NEW YORK	5000
HARTIN	SALES	CHICAGO	1200
ALLEN	SALES	CHICAGO	1600
CLARK	ACCOUNTING	NEW YORK	2400
JONES	RESEARCH	DALLAS	2975
SCOTT	RESEARCH	DALLAS	3000
SMITH	RESEARCH	DALLAS	800



```
1 select ENAME, SAL, DNAME, LOC
2 from Gautam_EMP INNER JOIN Gautam_DEPT
3 ON Gautam_EMP.DEPT_ID = Gautam_DEPT.DEPT_ID
```

ENAME	SAL	DNAME	LOC
FORD	3000	ANALYST	RESEARCH
JAMES	950	CLERK	SALES
HILLER	1100	CLERK	ACCOUNTING
TURNER	1500	SALESMAN	SALES
BLAKE	2500	MANAGER	SALES
MARD	1200	SALESMAN	SALES
ADAMS	1100	CLERK	RESEARCH
KING	5000	PRESIDENT	ACCOUNTING
HARTIN	1200	SALESMAN	CHICAGO
ALLEN	1600	SALESMAN	CHICAGO
CLARK	2400	MANAGER	ACCOUNTING
JONES	2975	MANAGER	RESEARCH
SCOTT	3000	ANALYST	RESEARCH
SMITH	800	CLERK	DALLAS

Oracle Live SQL - SQL Worksheet

```
1 select Gautam.EMP.DEPT_NO,ENAME, SAL, JOB, DNAME, LOC
2 from Gautam.EMP INNER JOIN Gautam.DEPT
3 ON Gautam.EMP.DEPT_NO = Gautam.DEPT.DEPT_NO;
```

DEPT_NO	ENAME	SAL	JOB	DNAME	LOC
20	FORD	3000	ANALYST	RESEARCH	DALLAS
30	JAMES	950	CLERK	SALES	CHICAGO
10	HILLER	1300	CLERK	ACCOUNTING	NEW YORK
30	TURNER	1500	SALESMAN	SALES	CHICAGO
30	BLAKE	2500	MANAGER	SALES	CHICAGO
30	HARDY	1250	SALESMAN	SALES	CHICAGO
20	ADAMS	1100	CLERK	RESEARCH	DALLAS
10	KING	5000	PRESIDENT	ACCOUNTING	NEW YORK
30	HARTZLER	1250	SALESMAN	SALES	CHICAGO
30	ALLEN	1600	SALESMAN	SALES	CHICAGO
10	CLARK	2450	MANAGER	ACCOUNTING	NEW YORK
20	JONES	2975	MANAGER	RESEARCH	DALLAS
20	SCOTT	3000	ANALYST	RESEARCH	DALLAS
20	SMITH	800	CLERK	RESEARCH	DALLAS

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Oracle Live SQL - SQL Worksheet

```
1 select ENAME, JOB, SAL, MGR, DNAME
2 from Gautam.EMP INNER JOIN Gautam.DEPT
3 ON Gautam.EMP.DEPT_NO = Gautam.DEPT.DEPT_NO;
```

ENAME	JOB	SAL	MGR	DNAME
FORD	ANALYST	3000	7566	RESEARCH
JAMES	CLERK	950	7098	SALES
HILLER	CLERK	1300	7782	ACCOUNTING
TURNER	SALESMAN	1500	7098	SALES
BLAKE	MANAGER	2500	7039	SALES
HARDY	SALESMAN	1250	7098	SALES
ADAMS	CLERK	1100	7788	RESEARCH
KING	PRESIDENT	5000	-	ACCOUNTING
HARTZLER	SALESMAN	1250	7098	SALES
ALLEN	SALESMAN	1600	7098	SALES
CLARK	MANAGER	2450	7039	ACCOUNTING
JONES	MANAGER	2975	7039	RESEARCH
SCOTT	ANALYST	3000	7566	RESEARCH
SMITH	CLERK	800	7092	RESEARCH

Download CSV  
14 rows selected.

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Oracle Live SQL - SQL Worksheet

```
1 Select ENAME, JOB, SAL, MGR, DNAME
2 From GE inner join Gautam_DEPT
3 On GE.DEPT_ID = Gautam_DEPT.DEPT_ID;
```

SQL Worksheet

Clear Find Actions Save Run

ENAME	JOB	SAL	MGR	DNAME
JAMES	CLERK	950	7698	SALES
HILLER	CLERK	1300	7782	ACCOUNTING
TURNER	SALESMAN	1500	7698	SALES
BLAKE	MANAGER	2850	7839	SALES
MARTIN	SALESMAN	1250	7698	SALES
KING	PRESIDENT	5000	-	ACCOUNTING
HARTM	SALESMAN	1250	7698	SALES
ALLEN	SALESMAN	1600	7698	SALES
CLARK	MANAGER	2450	7839	ACCOUNTING

Download CSV  
9 rows selected.

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Type here to search

08:32 04-03-2021

Oracle Live SQL - SQL Worksheet

```
1 Select GE.DEPT_ID, ENAME, JOB, SAL, MGR, DNAME, Gautam_DEPT.DEPT_ID
2 From GE inner join Gautam_DEPT
3 On GE.DEPT_ID = Gautam_DEPT.DEPT_ID;
```

SQL Worksheet

Clear Find Actions Save Run

ENAME	JOB	SAL	MGR	DNAME	DEPT_ID
30	CLERK	950	7698	SALES	30
10	CLERK	1300	7782	ACCOUNTING	10
30	SALESMAN	1500	7698	SALES	30
30	MANAGER	2850	7839	SALES	30
30	SALESMAN	1250	7698	SALES	30
10	PRESIDENT	5000	-	ACCOUNTING	10
30	SALESMAN	1250	7698	SALES	30
30	SALESMAN	1600	7698	SALES	30
10	MANAGER	2450	7839	ACCOUNTING	10

Download CSV  
9 rows selected.

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Type here to search

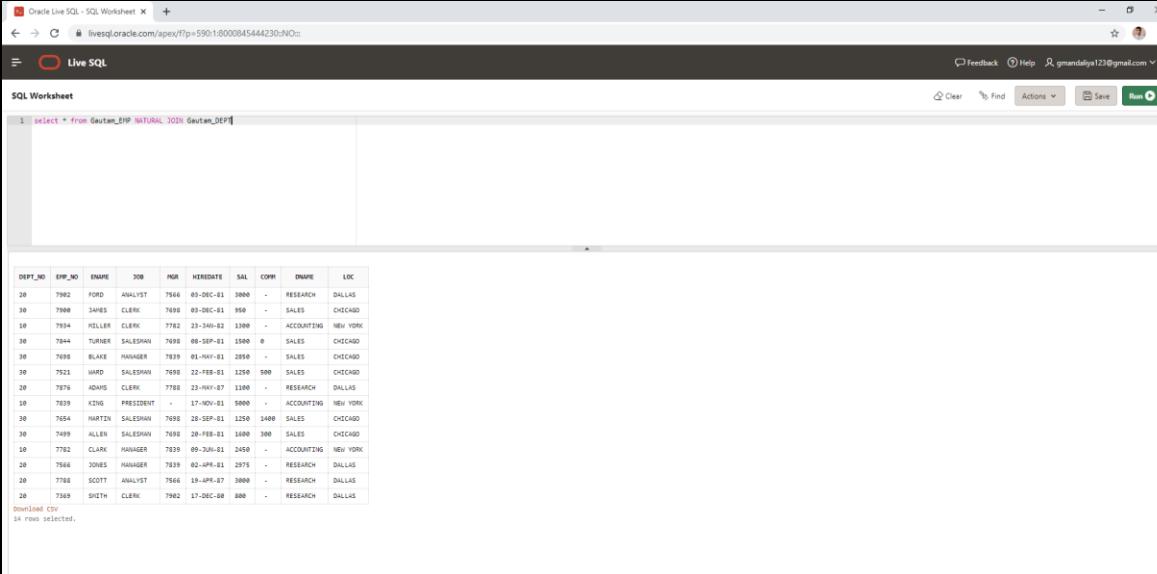
09:33 04-03-2021

**2. NATURAL JOIN:-** A natural join is a type of equi join which occurs implicitly by comparing all the same names columns in both tables. The join result has only one column for each pair of equally named columns.

### **SYNTAX:-**

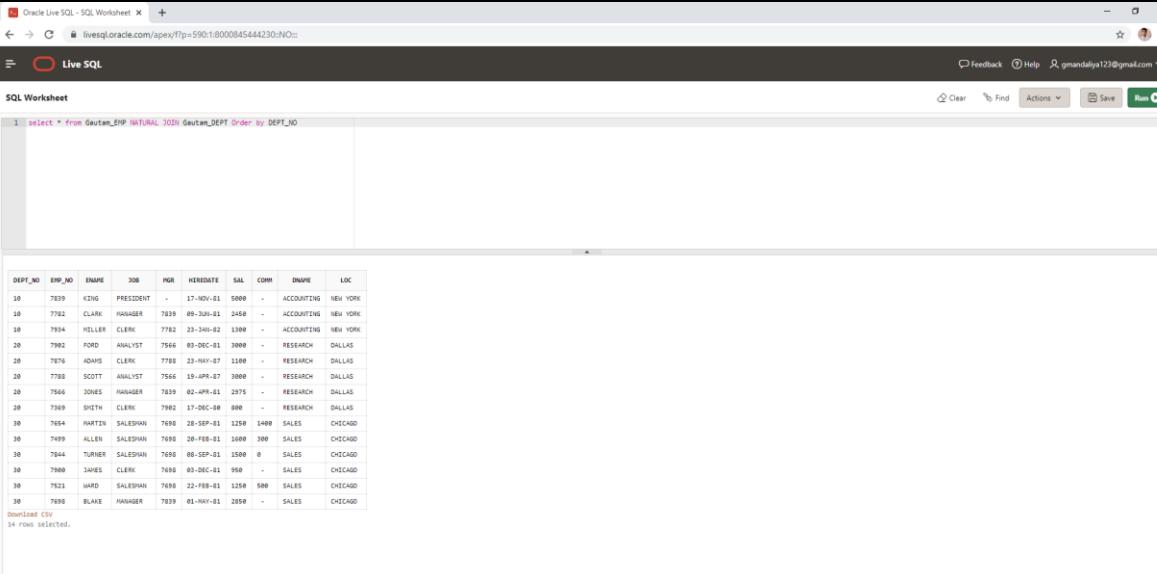
Select \* from table1 natural join table2

### **OUTPUT:-**



```
select * from Gautam_EMP NATURAL JOIN Gautam_DEPT;
```

DEPT_NO	EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DNAME	LOC
20	7902	FORD	ANALYST	7566	03-DEC-81	3000	-	RESEARCH	DALLAS
20	7908	JAMES	CLERK	7698	03-DEC-81	950	-	SALES	CHICAGO
10	7934	KELLER	CLERK	7782	23-JAN-81	1300	-	ACCOUNTING	NEW YORK
30	7844	TURNER	SALESMAN	7699	08-SEP-81	1500	0	SALES	CHICAGO
30	7898	BLAKE	MANAGER	7839	01-JUN-81	2850	-	SALES	CHICAGO
30	7921	WARD	SALESMAN	7699	22-FEB-81	1250	500	SALES	CHICAGO
20	7877	ADAMS	CLERK	7783	23-MAY-81	1100	-	RESEARCH	DALLAS
10	7837	KING	PRESIDENT	-	17-NOV-81	5000	-	ACCOUNTING	NEW YORK
30	7695	HARTZEN	SALESMAN	7698	20-SEP-81	1500	1400	SALES	CHICAGO
30	7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	SALES	CHICAGO
10	7786	CLARK	MANAGER	7839	09-JUL-81	2450	-	ACCOUNTING	NEW YORK
20	7566	JONES	MANAGER	7839	02-APR-81	2975	-	RESEARCH	DALLAS
20	7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	RESEARCH	DALLAS
20	7869	SHERI	CLERK	7902	17-DEC-88	800	-	RESEARCH	DALLAS



```
select * from Gautam_EMP NATURAL JOIN Gautam_DEPT Order by DEPT_NO;
```

DEPT_NO	EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DNAME	LOC
10	7837	KING	PRESIDENT	-	17-NOV-81	5000	-	ACCOUNTING	NEW YORK
10	7782	CLARK	MANAGER	7839	09-JUL-81	2450	-	ACCOUNTING	NEW YORK
10	7934	KELLER	CLERK	7782	23-JAN-81	1300	-	ACCOUNTING	NEW YORK
20	7982	FORD	ANALYST	7566	03-DEC-81	3000	-	RESEARCH	DALLAS
20	7876	ADAMS	CLERK	7783	23-MAY-81	1100	-	RESEARCH	DALLAS
20	7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	RESEARCH	DALLAS
20	7566	JONES	MANAGER	7839	02-APR-81	2975	-	RESEARCH	DALLAS
20	7869	SHERI	CLERK	7902	17-DEC-88	800	-	RESEARCH	DALLAS
30	7695	HARTZEN	SALESMAN	7698	20-SEP-81	1500	1400	SALES	CHICAGO
30	7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	SALES	CHICAGO
30	7844	TURNER	SALESMAN	7699	08-SEP-81	1500	0	SALES	CHICAGO
30	7908	JAMES	CLERK	7698	03-DEC-81	950	-	SALES	CHICAGO
30	7921	WARD	SALESMAN	7699	22-FEB-81	1250	500	SALES	CHICAGO

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:8000845444230::NO::

Live SQL

SQL Worksheet

```
1 | Select * from GE natural join Gautam_DEPT;
```

DEPT_NO	EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DNAME	LOC
30	7898	JAMES	CLERK	7698	03-OCT-81	950	-	SALES	CHICAGO
10	7934	KILLER	CLERK	7782	23-JAN-82	1300	-	ACCOUNTING	NEW YORK
30	7844	TURNER	SALESPER	7698	08-SEP-81	1500	0	SALES	CHICAGO
30	7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	SALES	CHICAGO
30	7521	HARD	SALESPER	7698	22-FEB-81	1250	500	SALES	CHICAGO
10	7839	KING	PRESIDENT	-	17-NOV-81	5000	-	ACCOUNTING	NEW YORK
30	7654	MARTIN	SALESPER	7698	28-SEP-81	1250	1400	SALES	CHICAGO
30	7499	ALLEN	SALESPER	7698	20-FEB-81	1600	300	SALES	CHICAGO
10	7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	ACCOUNTING	NEW YORK

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Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:8000845444230::NO::

Live SQL

SQL Worksheet

```
1 | Select * from GE natural join Gautam_DEPT order by DNAME;
```

DEPT_NO	EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DNAME	LOC
10	7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	ACCOUNTING	NEW YORK
10	7934	KILLER	CLERK	7782	23-JAN-82	1300	-	ACCOUNTING	NEW YORK
10	7839	KING	PRESIDENT	-	17-NOV-81	5000	-	ACCOUNTING	NEW YORK
30	7654	MARTIN	SALESPER	7698	28-SEP-81	1250	1400	SALES	CHICAGO
30	7499	ALLEN	SALESPER	7698	20-FEB-81	1600	300	SALES	CHICAGO
30	7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	SALES	CHICAGO
30	7844	TURNER	SALESPER	7698	08-SEP-81	1500	0	SALES	CHICAGO
30	7900	JAMES	CLERK	7698	03-DEC-81	950	-	SALES	CHICAGO
30	7521	HARD	SALESPER	7698	22-FEB-81	1250	500	SALES	CHICAGO

Download CSV  
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**3. OUTER JOIN:-** In an outer join, unmatched rows in one or both tables can be returned.

a. **LEFT OUTER JOIN**:- LEFT JOIN returns only unmatched rows from the left table.

This join returns all the rows of the table on the left side of the join and matching rows for the table on the right side of join.

The rows for which there is no matching row on right side, the result set will contain null.

### **SYNTAX:-**

```
SELECT table1.column1,table1.column2, table2.column1,....  
      FROM table1 LEFT [OUTER] JOIN table2  
      ON table1.matching_column = table2.matching_column;
```

### **OUTPUT:-**

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the following code:

```
1 select EMP_NO, ENAME, SAL, DEPT_NO, DEPT_NO, DNAME  
2   from EMP  
3  left outer join DEPT  
4    on DEPT_NO = DEPT_NO
```

The results pane displays the output of the query:

EMP_NO	ENAME	SAL	DEPT_NO	DEPT_NO	DNAME
7900	JAMES	950	30	30	SALES
7934	MILLER	1300	10	10	ACCOUNTING
7844	TURNER	1500	30	30	SALES
7688	BLAKE	2500	30	30	SALES
7511	WARD	1250	30	30	SALES
7839	KING	5000	10	10	ACCOUNTING
7654	MARTIN	1250	30	30	SALES
7499	ALLEN	1600	30	30	SALES
7782	CLARK	2450	10	10	ACCOUNTING
-	-	-	-	40	OPERATIONS
-	-	-	-	20	RESEARCH

Below the table, it says "Download CSV" and "11 rows selected".

At the bottom of the interface, there is a footer with copyright information and system status indicators.

The screenshot shows a SQL worksheet interface with the following code:

```

1 SELECT * FROM GE_SITE OUTER JOIN GOUTLN_DEPT
2 ON GE_DEPT_NO = GOUTLN_DEPT.DEPT_NO;

```

The results of the query are displayed in a table:

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO	DNAME	LOC
7834	HILLER	CLERK	7782	23-JAN-82	1200	-	10	ACCOUNTING	NEW YORK
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	ACCOUNTING	NEW YORK
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	ACCOUNTING	NEW YORK
7880	JAMES	CLERK	7698	03-DEC-81	350	-	30	SALES	CHICAGO
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	SALES	CHICAGO
7868	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	SALES	CHICAGO
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	SALES	CHICAGO
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	SALES	CHICAGO
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	SALES	CHICAGO

Download CSV  
9 rows selected.

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- b. **RIGHT OUTER JOIN:-** This join returns all the rows of the table on the right side of the join and matching rows for the table on the left side of join.

The rows for which there is no matching row on left side, the result-set will contain null.

## SYNTAX:-

SELECT table1.column1,table1.column2, table2.column1,....

FROM table1 RIGHT [OUTER] JOIN table2

ON table1.matching\_column = table2.matching\_column;

## OUTPUT:-

The screenshot shows the Oracle Live SQL interface. At the top, there's a navigation bar with links like 'Feedback', 'Help', and 'Actions'. Below it is a toolbar with buttons for 'Clear', 'Find', 'Save', and 'Run'. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 select EMP_ID, ENAME, SAL, GE.DEPT_NO, Gautam_DEPT.DEPT_NO, DNAME
2   from GE right outer join Gautam_DEPT
3  on GE.DEPT_NO = Gautam_DEPT.DEPT_NO
```

Below the code, the results of the query are displayed in a table:

EMP_ID	ENAME	SAL	DEPT_NO	DEPT_NO	DNAME
7900	JAMES	950	30	30	SALES
7934	HILLER	1300	10	10	ACCOUNTING
7844	TURNER	1500	30	30	SALES
7898	BLAKE	2850	30	30	SALES
7521	MARD	1250	30	30	SALES
7829	KING	5000	10	10	ACCOUNTING
7654	MARTIN	1250	30	30	SALES
7499	ALLEN	1600	30	30	SALES
7782	CLARK	2450	10	10	ACCOUNTING
-	-	-	-	40	OPERATIONS
-	-	-	-	20	RESEARCH

At the bottom left, there's a link to 'Download CSV'. The status bar at the bottom right shows the date as 04-03-2021 and the time as 09:44.

This screenshot is identical to the one above, showing the same SQL code and results table. The table data is the same, showing employees from the SALES and ACCOUNTING departments. The interface and status bar are also identical.

The screenshot shows the Oracle Live SQL interface with a SQL Worksheet tab open. The code entered is:

```

1 select * from GE_right_outer_join.Gautam_DEPT
2 inner join DEPT on DEPT.DEPT_ID = Gautam_DEPT.DEPT_ID

```

The results of the query are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	CMPN	DEPT_ID	DEPT_NO	DNAME	LOC
7890	JAMES	CLERK	7690	03-DEC-01	950	-	30	30	SALES	CHICAGO
7934	KELLER	CLERK	7782	23-JAN-02	1300	-	10	10	ACCOUNTING	NEW YORK
7844	TURNER	SALESMAN	7690	06-SEP-01	1500	0	30	30	SALES	CHICAGO
7892	BLAKE	MANAGER	7639	01-MAY-01	2850	-	30	30	SALES	CHICAGO
7521	WARD	SALESMAN	7690	22-FEB-01	1250	000	30	30	SALES	CHICAGO
7839	KING	PRESIDENT	-	17-NOV-01	5000	-	10	10	ACCOUNTING	NEW YORK
7654	MARTIN	SALESMAN	7690	28-SEP-01	1250	1400	30	30	SALES	CHICAGO
7499	ALLEN	SALESMAN	7690	20-JUL-01	1600	200	30	30	SALES	CHICAGO
7782	CLARK	MANAGER	7639	09-JUN-01	2450	-	10	10	ACCOUNTING	NEW YORK
-	-	-	-	-	-	-	-	-	OPERATIONS	BOSTON
-	-	-	-	-	-	-	-	-	RESEARCH	DALLAS

Download CSV  
11 rows selected.

- c. **FULL OUTER JOIN:-** FULL JOIN creates the result-set by combining result of both LEFT JOIN and RIGHT JOIN. The result-set will contain all the rows from both the tables. The rows for which there is no matching, the result-set will contain NULL values.

### SYNTAX:-

```

SELECT table1.column1,table1.column2, table2.column1,....
FROM table1 FULL [OUTER] JOIN table2
ON table1.matching_column = table2.matching_column;

```

### OUTPUT:-

The screenshot shows the Oracle Live SQL interface with a SQL Worksheet tab open. The code entered is:

```

1 select EMP_ID, ENAME, SAL, DEPT_ID, Gautam_DEPT.DEPT_ID, DNAME
2 from Gautam_DEPT full outer join GE
3 on GE.DEPT_ID = Gautam_DEPT.DEPT_ID

```

The results of the query are displayed in a table:

EMP_ID	ENAME	SAL	DEPT_ID	DEPT_NO	DNAME
7890	JAMES	950	30	30	SALES
7934	KELLER	1300	10	10	ACCOUNTING
7844	TURNER	1500	30	30	SALES
7892	BLAKE	2850	30	30	SALES
7521	WARD	1250	30	30	SALES
7839	KING	5000	10	10	ACCOUNTING
7654	MARTIN	1250	30	30	SALES
7499	ALLEN	1600	30	30	SALES
7782	CLARK	2450	10	10	ACCOUNTING
-	-	-	-	40	OPERATIONS
-	-	-	-	20	RESEARCH

Download CSV  
11 rows selected.

The screenshot shows the Oracle Live SQL interface with the following details:

- Title Bar:** Oracle Live SQL - SQL Worksheet
- URL:** livesql.oracle.com/apex/F?p=590:1:800084544230::NO::
- Toolbar:** Feedback, Help, Actions, Save, Run
- Section Bar:** Live SQL
- SQL Worksheet:**

```
1 select * from GE full outer join Gautam_DEPT
2 on GE.DEPT_ID = Gautam_DEPT.DEPT_ID
```
- Result Grid:** Displays the result of the query, showing 11 rows of employee data.
- Bottom Status:** © 2021 Oracle Corporation - Privacy - Terms of Use, Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter, Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0, Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine.

#### 4. CROSS JOIN:- The CARTESIAN JOIN is also known as CROSS JOIN.

In a CARTESIAN JOIN there is a join for each row of one table to every row of another table. This usually happens when the matching column or WHERE condition is not specified.

#### SYNTAX:-

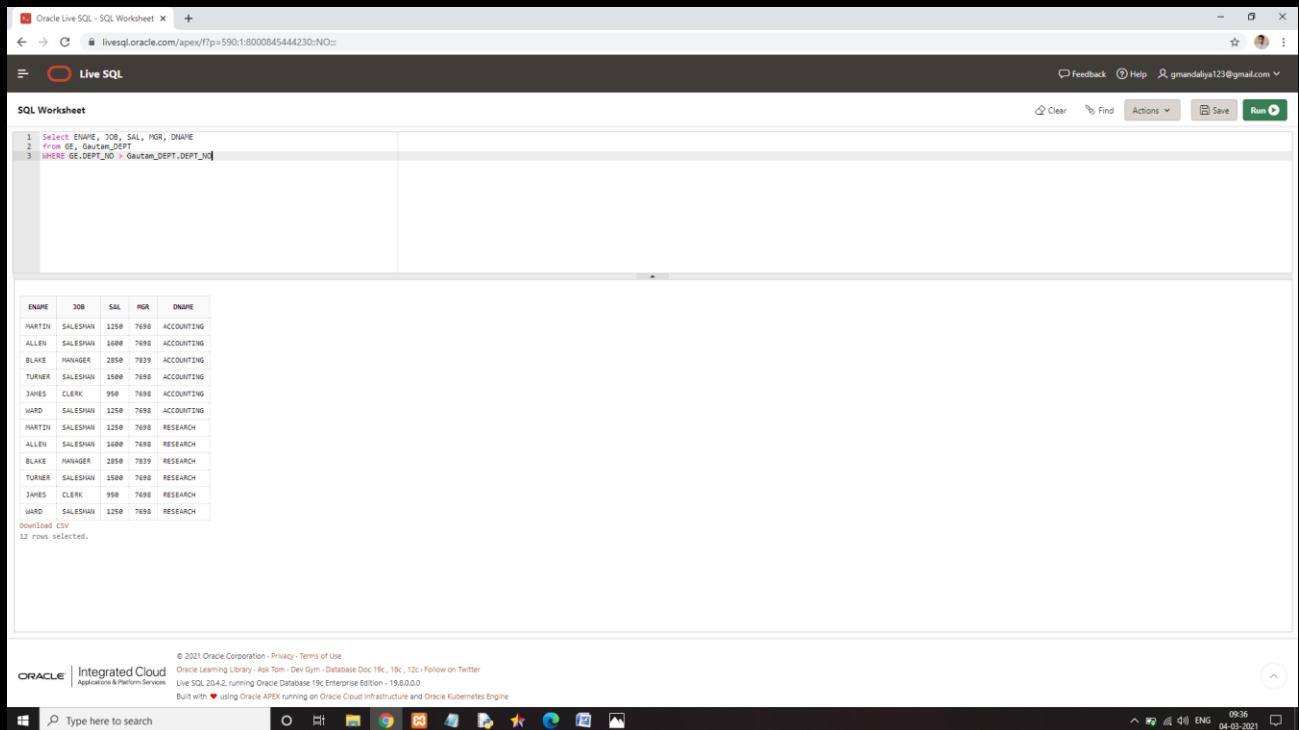
SELECT \* FROM TABLE1, TABLE2;

OR

SELECT \* FROM TABLE1 CROSS JOIN TABLE2;

EXAMPLE: SELECT \* FROM EMP CROSS JOIN DEPT;

## OUTPUT:-



Oracle Live SQL - SQL Worksheet

SQL Worksheet

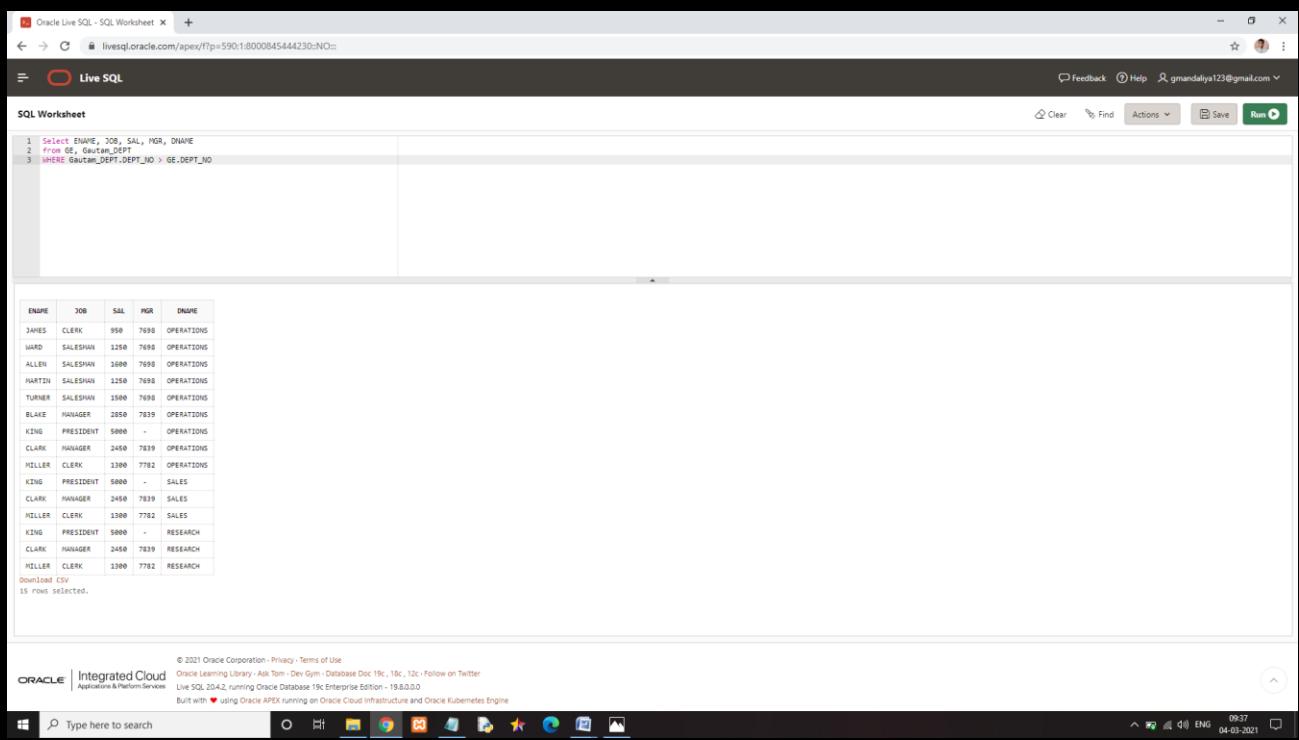
```
1 Select ENAME, JOB, SAL, MGR, DNAME
2 From DE, Gautam_DEPT
3 WHERE GE.DEPT_ID = Gautam_DEPT.DEPT_ID
```

ENAME	JOB	SAL	MGR	DNAME
HARTZIN	SALESMAN	1250	7698	ACCOUNTING
ALLEN	SALESMAN	1600	7698	ACCOUNTING
BLAKE	MANAGER	2850	7839	ACCOUNTING
TURNER	SALESMAN	1500	7698	ACCOUNTING
JAMES	CLERK	950	7698	ACCOUNTING
MARD	SALESMAN	1250	7698	ACCOUNTING
HARTZIN	SALESMAN	1250	7698	RESEARCH
ALLEN	SALESMAN	1600	7698	RESEARCH
BLAKE	MANAGER	2850	7839	RESEARCH
TURNER	SALESMAN	1500	7698	RESEARCH
JAMES	CLERK	950	7698	RESEARCH
MARD	SALESMAN	1250	7698	RESEARCH

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Oracle Live SQL - SQL Worksheet

SQL Worksheet

```
1 Select ENAME, JOB, SAL, MGR, DNAME
2 From DE, Gautam_DEPT
3 WHERE Gautam_DEPT.DEPT_ID > GE.DEPT_ID
```

ENAME	JOB	SAL	MGR	DNAME
JAMES	CLERK	950	7698	OPERATIONS
MARD	SALESMAN	1250	7698	OPERATIONS
ALLEN	SALESMAN	1600	7698	OPERATIONS
HARTZIN	SALESMAN	1250	7698	OPERATIONS
TURNER	SALESMAN	1500	7698	OPERATIONS
BLAKE	MANAGER	2850	7839	OPERATIONS
KING	PRESIDENT	5000	-	OPERATIONS
CLARK	MANAGER	2450	7839	OPERATIONS
MILLER	CLERK	1300	7702	OPERATIONS
KING	PRESIDENT	5000	-	SALES
CLARK	MANAGER	2450	7839	SALES
MILLER	CLERK	1300	7702	SALES
KING	PRESIDENT	5000	-	RESEARCH
CLARK	MANAGER	2450	7839	RESEARCH
MILLER	CLERK	1300	7702	RESEARCH

Download CSV  
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Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:800084544230::NO::

Live SQL

SQL Worksheet

```
1 | Select * from GE_Gautam_DEPT;
```

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO	DEPT_NAME	LOC
7808	JAMES	CLERK	7698	03-DEC-01	950	-	30	10	ACCOUNTING NEW YORK
7834	KILLER	CLERK	7782	23-JANU-02	1300	-	10	10	ACCOUNTING NEW YORK
7844	TURNER	SALESMAN	7698	08-SEP-01	1500	0	30	10	ACCOUNTING NEW YORK
7898	BLAKE	MANAGER	7839	01-MAY-01	2850	-	30	10	ACCOUNTING NEW YORK
7521	WARD	SALESMAN	7698	22-FEB-01	1250	500	30	10	ACCOUNTING NEW YORK
7839	KING	PRESIDENT	-	17-NOV-01	5000	-	10	10	ACCOUNTING NEW YORK
7654	MARTIN	SALESMAN	7698	28-SEP-01	1250	1400	30	10	ACCOUNTING NEW YORK
7499	ALLEN	SALESMAN	7698	20-FEB-01	1600	300	30	10	ACCOUNTING NEW YORK
7782	CLARK	MANAGER	7839	09-JUL-01	2450	-	10	10	ACCOUNTING NEW YORK
7908	JAMES	CLERK	7698	03-DEC-01	950	-	30	40	OPERATIONS BOSTON
7834	KILLER	CLERK	7782	23-JANU-02	1300	-	10	40	OPERATIONS BOSTON
7844	TURNER	SALESMAN	7698	08-SEP-01	1500	0	30	40	OPERATIONS BOSTON
7908	BLAKE	MANAGER	7839	01-MAY-01	2850	-	30	40	OPERATIONS BOSTON
7521	WARD	SALESMAN	7698	22-FEB-01	1250	500	30	40	OPERATIONS BOSTON
7839	KING	PRESIDENT	-	17-NOV-01	5000	-	10	40	OPERATIONS BOSTON
7654	MARTIN	SALESMAN	7698	28-SEP-01	1250	1400	30	40	OPERATIONS BOSTON
7499	ALLEN	SALESMAN	7698	20-FEB-01	1600	300	30	40	OPERATIONS BOSTON
7782	CLARK	MANAGER	7839	09-JUL-01	2450	-	10	40	OPERATIONS BOSTON
7908	JAMES	CLERK	7698	03-DEC-01	950	-	30	20	RESEARCH DALLAS
7834	KILLER	CLERK	7782	23-JANU-02	1300	-	10	20	RESEARCH DALLAS
7844	TURNER	SALESMAN	7698	08-SEP-01	1500	0	30	20	RESEARCH DALLAS
7908	BLAKE	MANAGER	7839	01-MAY-01	2850	-	10	20	RESEARCH DALLAS
7521	WARD	SALESMAN	7698	22-FEB-01	1250	500	30	20	RESEARCH DALLAS

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Type here to search

09:39 04-03-2021

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:800084544230::NO::

Live SQL

SQL Worksheet

```
1 | Select * from GE_Gautam_DEPT;
```

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO	DEPT_NAME	LOC
7521	WARD	SALESMAN	7698	22-FEB-01	1250	500	30	20	RESEARCH DALLAS
7839	KING	PRESIDENT	-	17-NOV-01	5000	-	10	20	RESEARCH DALLAS
7654	MARTIN	SALESMAN	7698	28-SEP-01	1250	1400	30	20	RESEARCH DALLAS
7499	ALLEN	SALESMAN	7698	20-FEB-01	1600	300	30	20	RESEARCH DALLAS
7782	CLARK	MANAGER	7839	09-JUL-01	2450	-	10	20	RESEARCH DALLAS
7908	JAMES	CLERK	7698	03-DEC-01	950	-	30	30	SALES CHICAGO
7908	MILLER	CLERK	7782	23-JANU-02	1300	-	10	30	SALES CHICAGO
7844	TURNER	SALESMAN	7698	08-SEP-01	1500	0	30	30	SALES CHICAGO
7908	BLAKE	MANAGER	7839	01-MAY-01	2850	-	30	30	SALES CHICAGO
7521	WARD	SALESMAN	7698	22-FEB-01	1250	500	30	30	SALES CHICAGO
7839	KING	PRESIDENT	-	17-NOV-01	5000	-	10	30	SALES CHICAGO
7654	MARTIN	SALESMAN	7698	28-SEP-01	1250	1400	30	30	SALES CHICAGO
7499	ALLEN	SALESMAN	7698	20-FEB-01	1600	300	30	30	SALES CHICAGO
7782	CLARK	MANAGER	7839	09-JUL-01	2450	-	10	30	SALES CHICAGO

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Type here to search

09:39 04-03-2021

5. **SELF JOIN:-** As the name signifies, in SELF JOIN a table is joined to itself. That is, each row of the table is joined with itself and all other rows depending on some conditions. In other words we can say that it is a join between two copies of the same table.

### **SYNTAX:-**

```
SELECT a.column1 , b.column2  
FROM table_name a, table_name b  
WHERE some_condition;
```

### **OUTPUT:-**

The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=5901:0:0:0::NO::](https://livesql.oracle.com/apex/f?p=5901:0:0:0::NO::). The page title is "Live SQL". The SQL Worksheet pane contains the following code:

```
1 select e2.ename EMPLOYEE, e1.ename MANAGER  
2 from Gautes_EMP e1, Gautes_EMP e2  
3 where e1.EMP_ID = e2.MGR
```

Below the code, the results are displayed in a table:

EMPLOYEE	MANAGER
FORD	JONES
JAMES	BLAKE
MILLER	CLARK
TURNER	BLAKE
BLAKE	KING
HARD	BLAKE
ADAMS	SCOTT
HARTZIN	BLAKE
ALLEN	BLAKE
CLARK	KING
JONES	KING
SCOTT	JONES
SNITH	FORD

At the bottom of the results pane, there are links for "Download CSV" and "13 rows selected.". The footer of the browser window includes copyright information and a note about using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine.

-----X-----

**Name:- Gautam Chandrakant Mandaliya**

**Roll No:- 27**

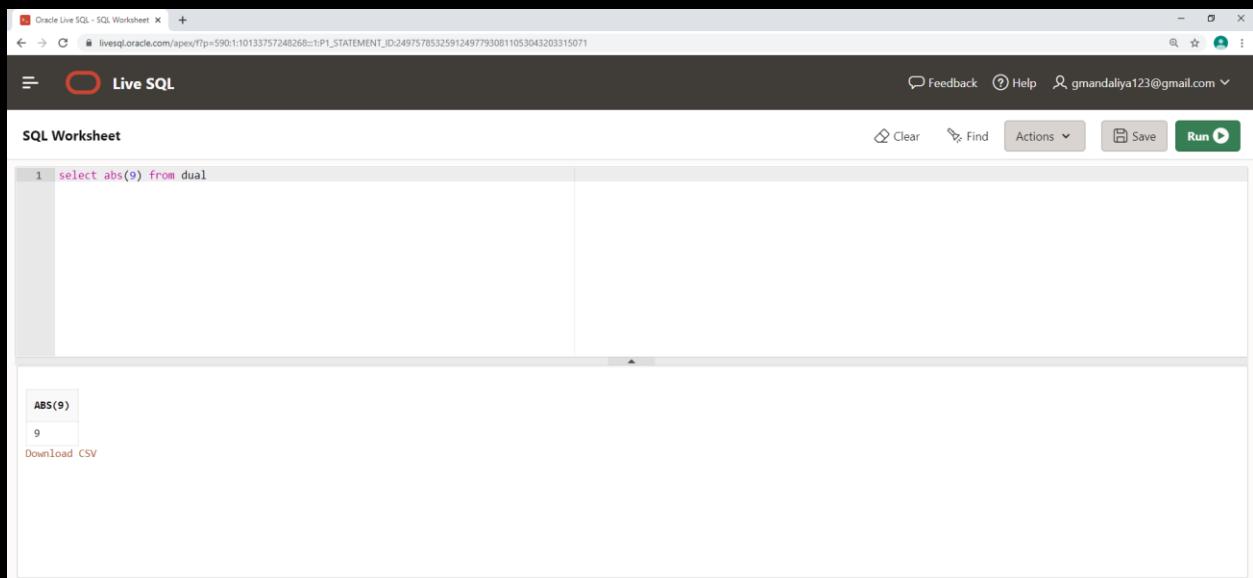
**Class:-FYCS**

**Subject:- Data Base Management system**

## **PRACTICAL 6:- Functions**

### **A) NUMERIC FUNCTION:-**

**1. Absolute (abs):- ABS returns the absolute value of n.**



Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select abs(9) from dual
```

ABS(9)

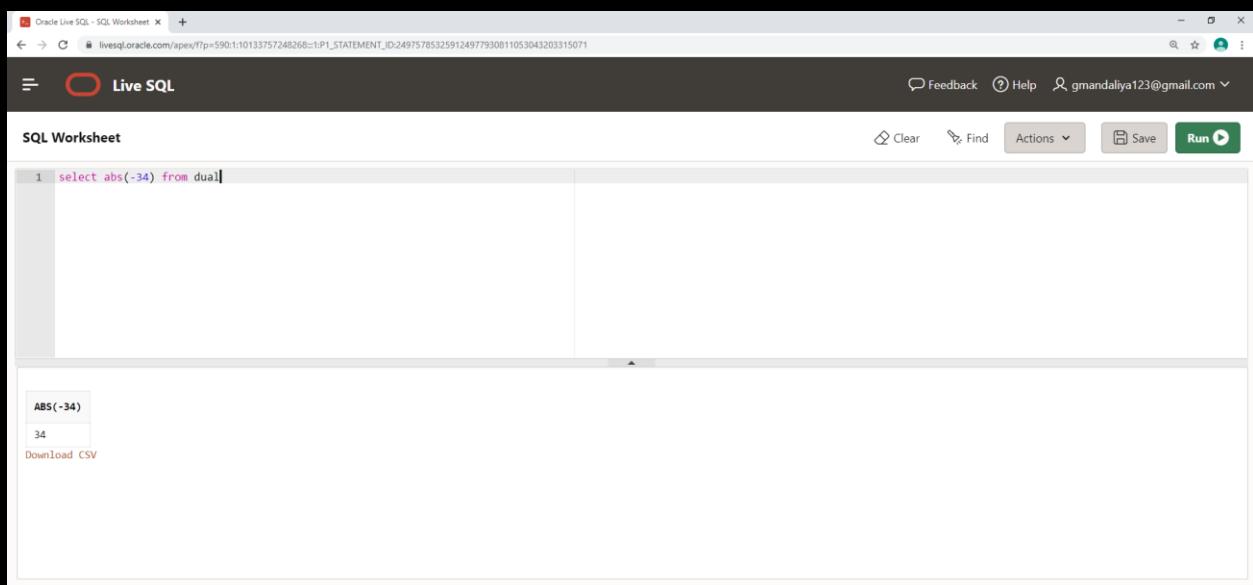
9

Download CSV

Feedback Help gmandaliya123@gmail.com

Clear Find Actions Save Run

This screenshot shows the Oracle Live SQL interface. A SQL worksheet window is open with the query `select abs(9) from dual`. The results pane displays the output `ABS(9)` followed by the value `9`. Below the results, there is a link to `Download CSV`. The top bar includes standard browser controls, a URL bar (`livesql.oracle.com/apes/`), and user information (`gmandaliya123@gmail.com`). The bottom navigation bar contains buttons for `Clear`, `Find`, `Actions`, `Save`, and `Run`.



Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select abs(-34) from dual
```

ABS(-34)

34

Download CSV

Feedback Help gmandaliya123@gmail.com

Clear Find Actions Save Run

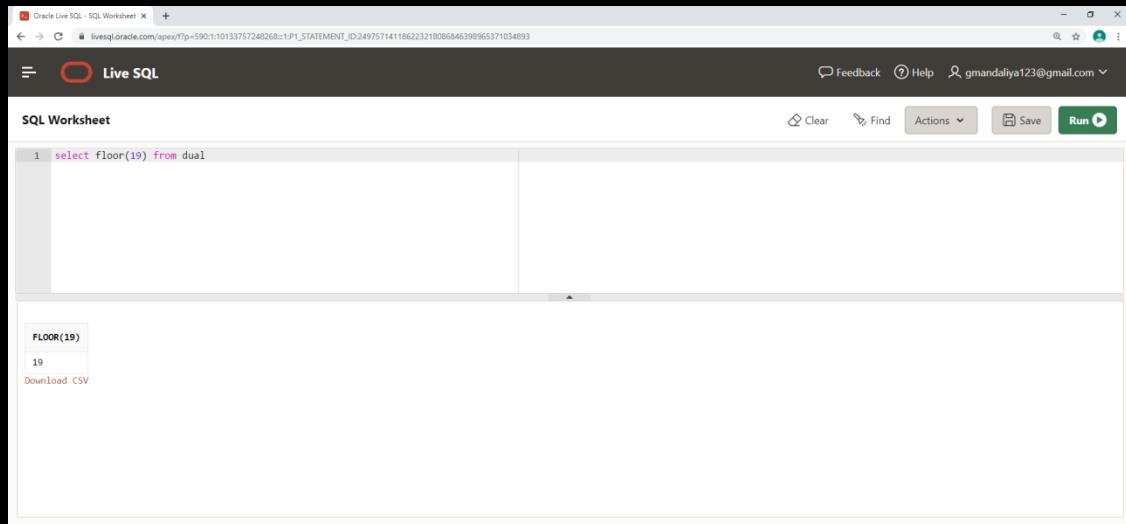
This screenshot shows the Oracle Live SQL interface. A SQL worksheet window is open with the query `select abs(-34) from dual`. The results pane displays the output `ABS(-34)` followed by the value `34`. Below the results, there is a link to `Download CSV`. The top bar includes standard browser controls, a URL bar (`livesql.oracle.com/apes/`), and user information (`gmandaliya123@gmail.com`). The bottom navigation bar contains buttons for `Clear`, `Find`, `Actions`, `Save`, and `Run`.

## 2. Ceiling (ceil):- CEIL returns smallest integer greater than or equal to n.

The image consists of three vertically stacked screenshots of the Oracle Live SQL interface. Each screenshot shows a SQL Worksheet window with a single query and its results.

- Screenshot 1:** Shows the query `select ceil(345) from dual;`. The result is displayed in a modal box: `CEIL(345)`, `345`. There is also a link to `Download CSV`.
- Screenshot 2:** Shows the query `select ceil(345.09) from dual;`. The result is displayed in a modal box: `CEIL(345.09)`, `346`. There is also a link to `Download CSV`.
- Screenshot 3:** Shows the query `select ceil(345.79) from dual;`. The result is displayed in a modal box: `CEIL(345.79)`, `346`. There is also a link to `Download CSV`.

### 3. Floor:- FLOOR returns largest integer equal to or less than n.



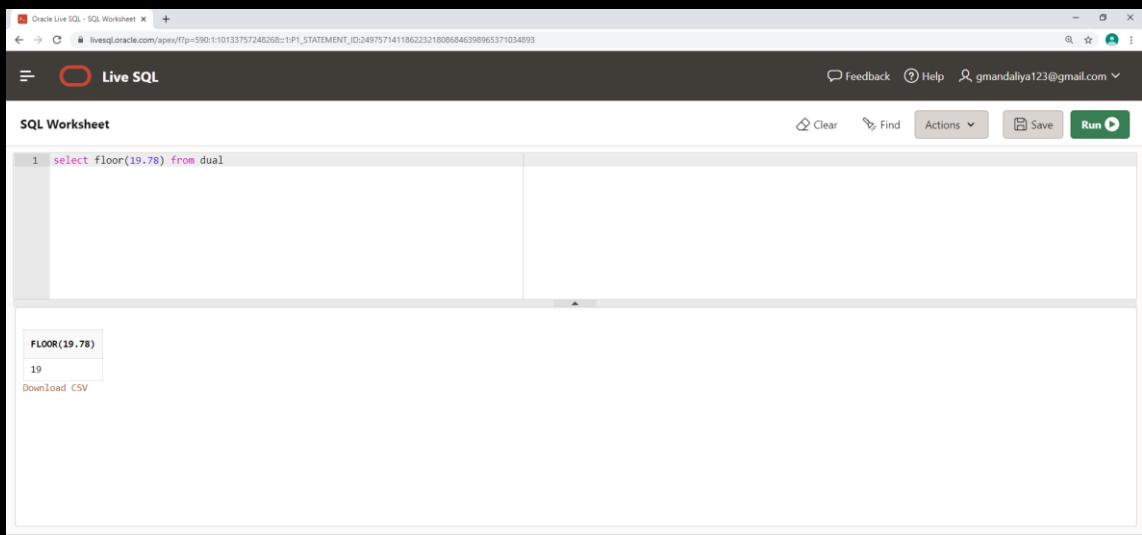
Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select floor(19) from dual
```

FLOOR(19)  
19  
Download CSV



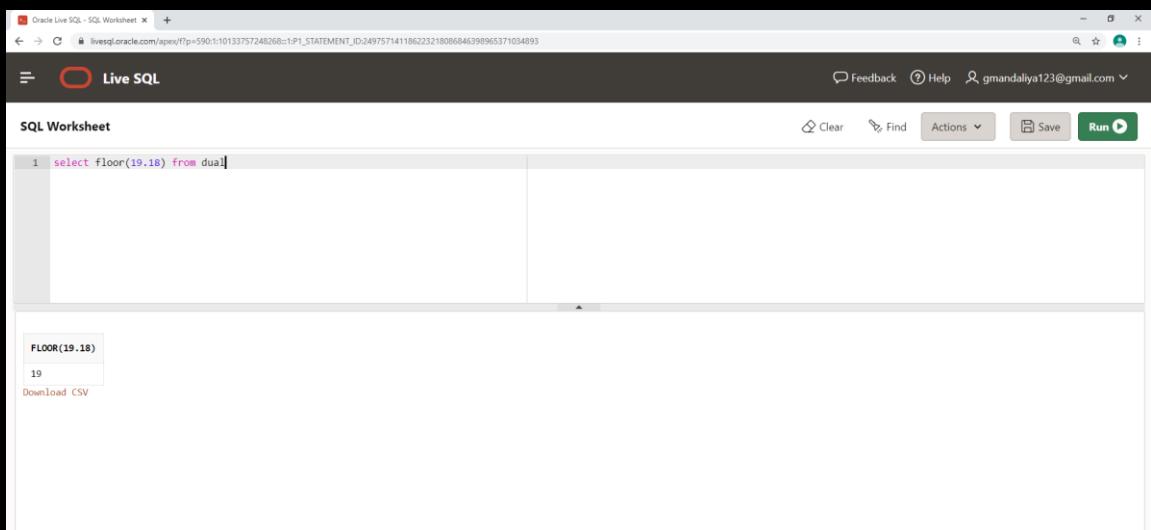
Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select floor(19.78) from dual
```

FLOOR(19.78)  
19  
Download CSV



Oracle Live SQL - SQL Worksheet

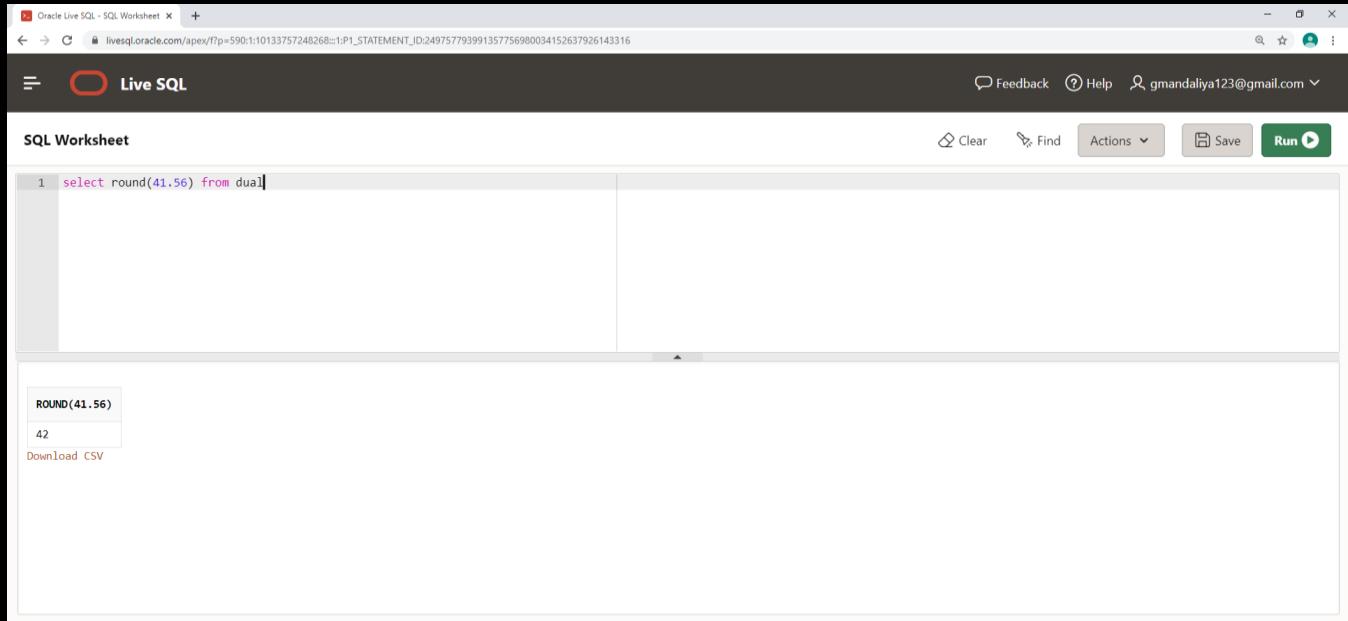
Live SQL

SQL Worksheet

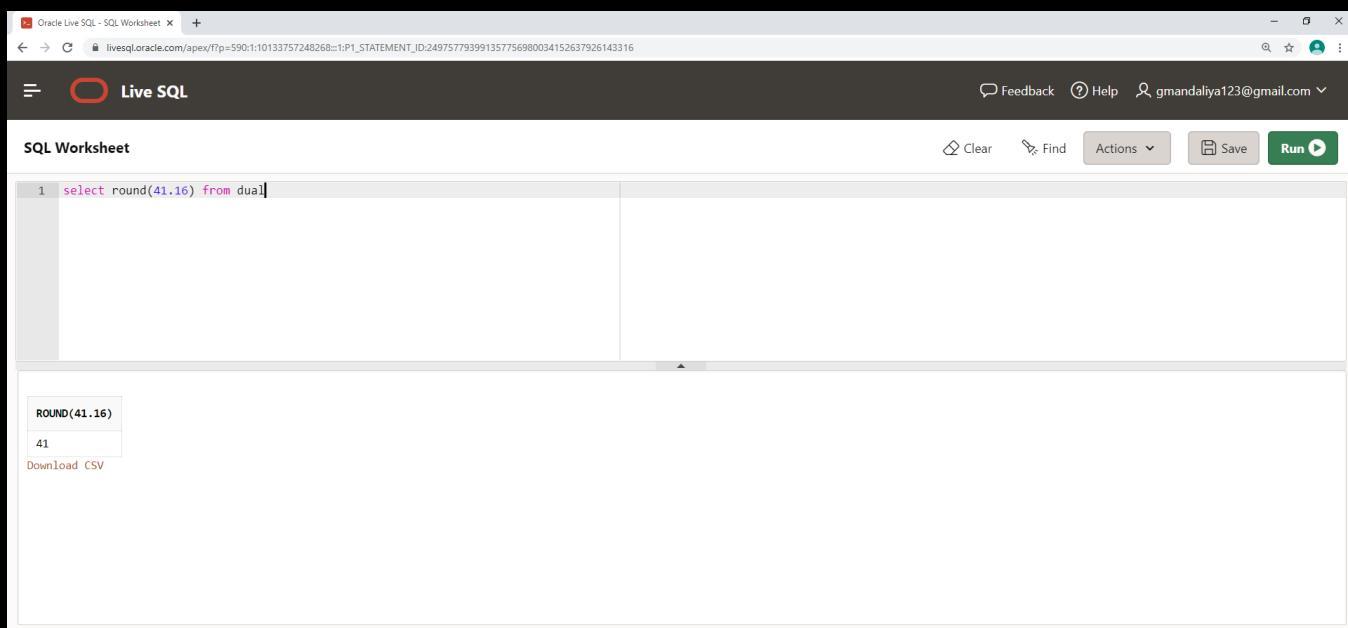
```
1 select floor(19.18) from dual
```

FLOOR(19.18)  
19  
Download CSV

**4. Round:-** ROUND returns n rounded to integer places to the right of the decimal point. If you omit integer, then n is rounded to 0 places. The argument integer can be negative to round off digits left of the decimal point.

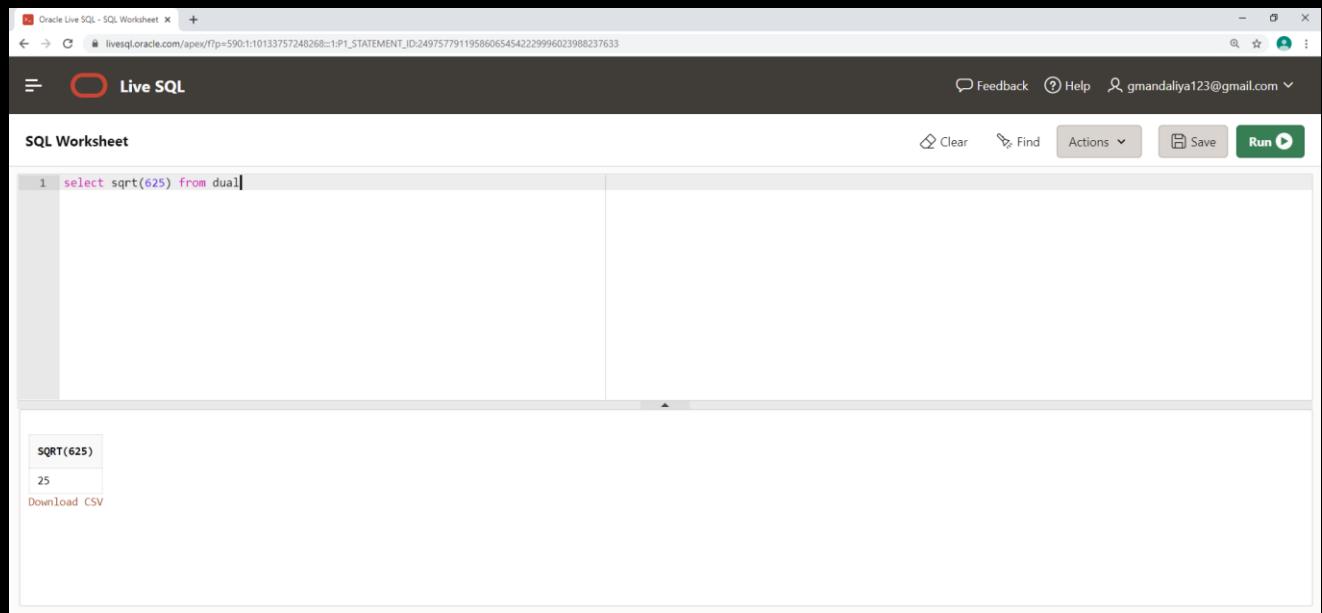


The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `select round(41.56) from dual;`. The results pane displays the output: `ROUND(41.56)` followed by the value `42`. There is also a link to `Download CSV`.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `select round(41.16) from dual;`. The results pane displays the output: `ROUND(41.16)` followed by the value `41`. There is also a link to `Download CSV`.

**5. Square Root (sqrt):-** SQRT returns the square root of n.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

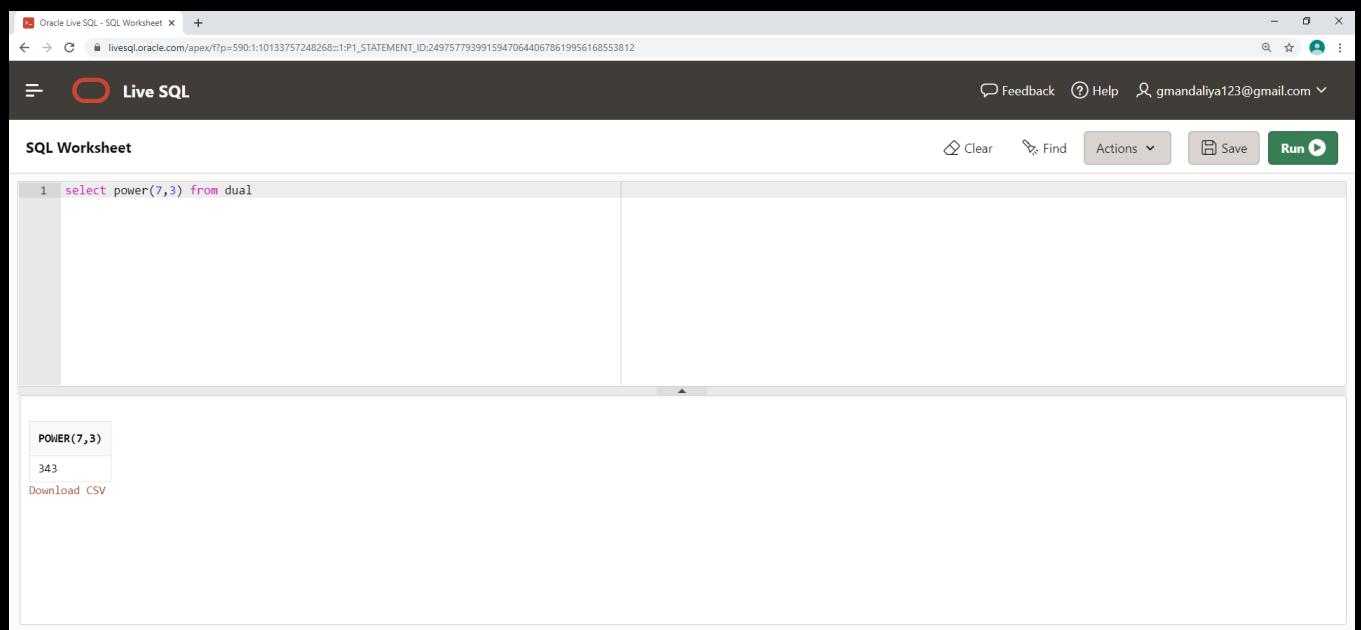
```
1 select sqrt(625) from dual;
```

The results pane displays the output:

SQRT(625)
25

Below the results, there is a "Download CSV" link.

**6. Power:-** POWER returns  $n_2$  raised to the  $n_1$  power. The base  $n_2$  and the exponent  $n_1$  can be any numbers, but if  $n_2$  is negative, then  $n_1$  must be an integer.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select power(7,3) from dual;
```

The results pane displays the output:

POWER(7,3)
343

Below the results, there is a "Download CSV" link.

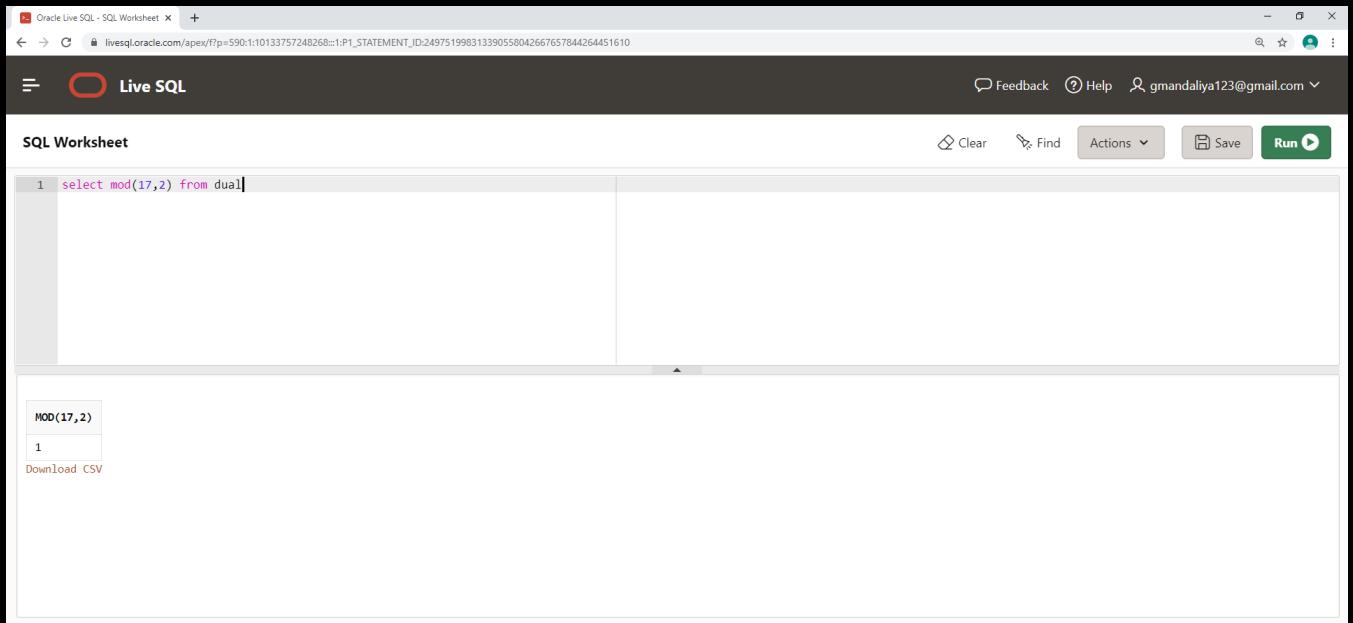
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select power(5,4) from dual;` is run. The result is displayed in a modal window titled "POWER(5,4)" which shows the value 625. There is also a "Download CSV" link.

7. **Remainder:-** REMAINDER returns the remainder of n2 divided by n1.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select remainder(564,20) from dual;` is run. The result is displayed in a modal window titled "REMAINDER(564,20)" which shows the value 4. There is also a "Download CSV" link.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select remainder(578,70) from dual;` is run. The result is displayed in a modal window titled "REMAINDER(578,70)" which shows the value 18. There is also a "Download CSV" link.

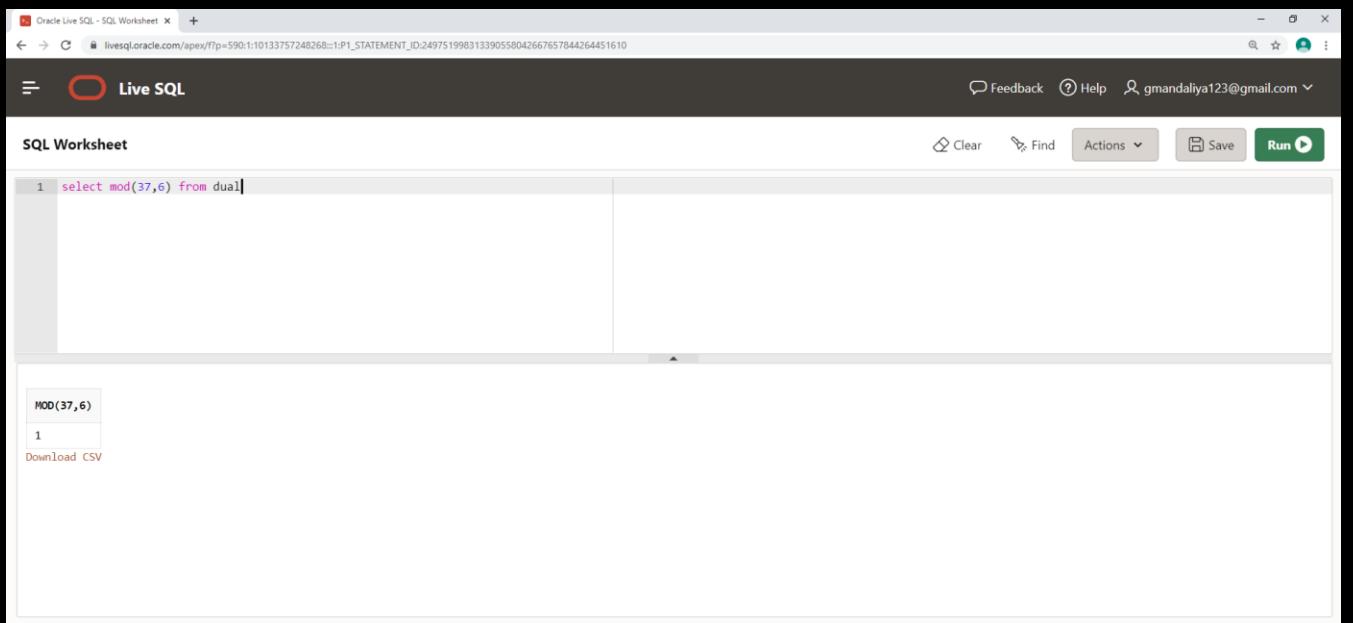
8. **Modulus:-** MOD returns the remainder of n2 divided by n1. Returns n2 if n1 is 0.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the query `select mod(17,2) from dual` is entered. The results pane displays the output:

MOD(17,2)
1

Below the table is a link "Download CSV".



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the query `select mod(37,6) from dual` is entered. The results pane displays the output:

MOD(37,6)
1

Below the table is a link "Download CSV".

9. **Trunc:-** The TRUNC (number) function returns n1 truncated to n2 decimal places. If n2 is omitted, then n1 is truncated to 0 places. n2 can be negative to truncate (make zero) n2 digits left of the decimal point.

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select trunc(12.678,1) from dual;
```

TRUNC(12.678,1)  
12.6  
Download CSV

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select trunc(12.678,0) from dual;
```

TRUNC(12.678,0)  
12  
Download CSV

Oracle Live SQL - SQL Worksheet

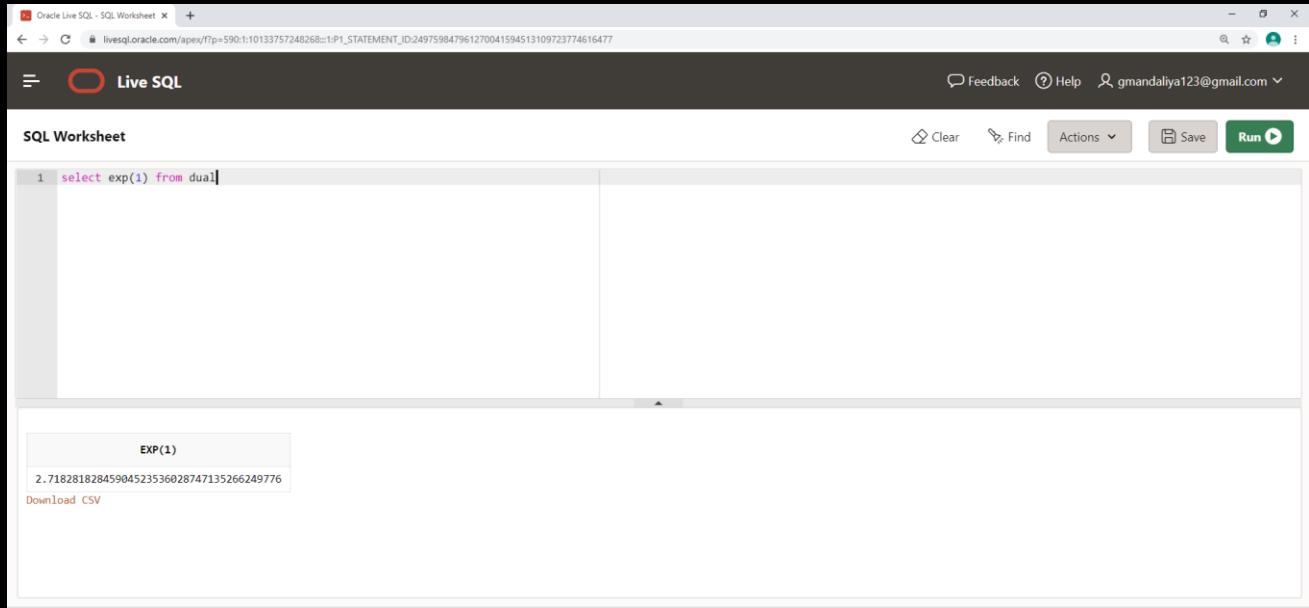
Live SQL

SQL Worksheet

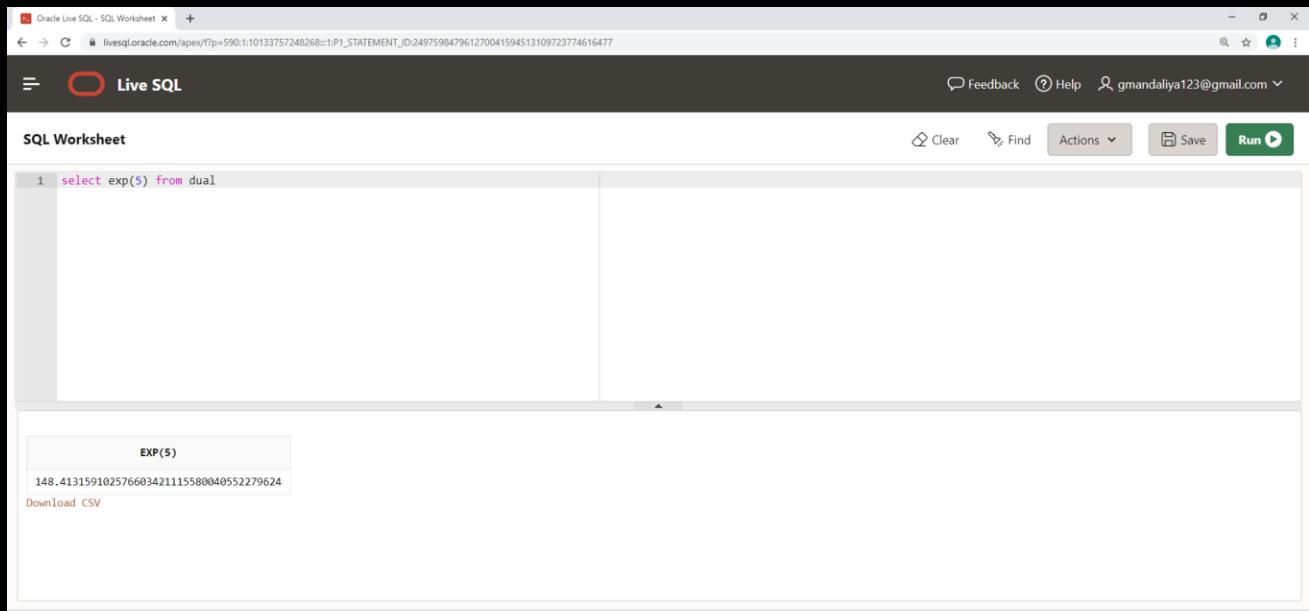
```
1 select trunc(12.678,5) from dual;
```

TRUNC(12.678,5)  
12.678  
Download CSV

**10. Exponential (Exp):-** EXP returns e raised to the nth power, where e = 2.71828183 ... The function returns a value of the same type as the argument.



A screenshot of the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `select exp(1) from dual;`. Below the results table, a modal window displays the output of the EXP(1) function: `2.71828182845904523536028747135266249776`. There is also a "Download CSV" link.



A screenshot of the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `select exp(5) from dual;`. Below the results table, a modal window displays the output of the EXP(5) function: `148.413159102576603421115580040552279624`. There is also a "Download CSV" link.

**11. Logarithm (log):-** The base by which to compute the logarithm. When you do not specify a value, the function computes the natural logarithm of the expression by using e for the base where e is equal to 2.718281828459. A numeric expression which is greater than zero. When the value is equal to or less than zero, LOG returns an NA value.

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select log(2.73,10) from dual;
```

LOG(2.73,10)  
2.2972269595923859220956535674067831522  
Download CSV

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select log(100000,10) from dual;
```

LOG(100000,10)  
.2  
Download CSV

**12. Ln:-** LN returns the natural logarithm of n, where n is greater than 0.

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select ln(3) from dual;
```

LN(3)  
1.09861228866810969139524523692252570465  
Download CSV

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select ln(9) from dual` is run. The result is displayed in a table with one row, showing the value `LN(9)` and `2.1972245773362193827904904738450514093`. Below the table, there is a link to "Download CSV". The interface includes standard navigation and search tools.

```
1 select ln(9) from dual
```

	LN(9)
	2.1972245773362193827904904738450514093

Download CSV

.....

## B) CHARACTER FUNCTION:-

### 1. Lower:- LOWER returns char, with all letters lowercase.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select lower('WELCOME, MY NAME IS GAUTAM') from dual` is run. The result is displayed in a table with one row, showing the value `LOWER('WELCOME, MY NAME IS GAUTAM')` and `welcome, my name is gautam`. Below the table, there is a link to "Download CSV". The interface includes standard navigation and search tools.

```
1 select lower('WELCOME, MY NAME IS GAUTAM') from dual
```

	LOWER('WELCOME, MY NAME IS GAUTAM')
	welcome, my name is gautam

Download CSV

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The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select lower('WeLCOmE, My NaMe Is GaUTAM') from dual;
```

The output window displays the result of the query:

```
LOWER('WELCOME,MYNAMEISGAUTAM')
welcome, my name is gautam
```

Below the output, there are download options for CSV and other formats.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, and system status indicators.

2. **Upper:-** UPPER returns char, with all letters uppercase.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select upper('WeLCOmE, My NaMe Is GaUTAM') from dual;
```

The output window displays the result of the query:

```
UPPER('WELCOME,MYNAMEISGAUTAM')
WELCOME, MY NAME IS GAUTAM
```

Below the output, there are download options for CSV and other formats.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, and system status indicators.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select upper('welcome, my name is gautam') from dual;` is run. The output window displays the result: `UPPER('WELCOME,MYNAMEISGAUTAM')` and `WELCOME, MY NAME IS GAUTAM`. Below the result, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

```
1 select upper('welcome, my name is gautam') from dual;
```

UPPER('WELCOME,MYNAMEISGAUTAM')  
WELCOME, MY NAME IS GAUTAM  
Download CSV

3. **Initcap:-** INITCAP returns char, with the first letter of each word in uppercase, all other letters in lowercase. Words are delimited by white space or characters that are not alphanumeric.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the query `select initcap('welCOMe, my name is Gautam') from dual;` is run. The output window displays the result: `INITCAP('WELCOME,MYNAMEISGAUTAM')` and `Welcome, My Name Is Gautam`. Below the result, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

```
1 select initcap('welCOMe, my name is Gautam') from dual;
```

INITCAP('WELCOME,MYNAMEISGAUTAM')  
Welcome, My Name Is Gautam  
Download CSV

**4. Length:-** The LENGTH functions return the length of char. LENGTH calculates length using characters as defined by the input character set.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select length('wELC0ME, My name is Gautam') from dual;
```

The result is displayed in a table:

LENGTH('WELCOME, MYNAMEISGAUTAM')
26

Below the table, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray indicating the date and time as 23-02-2021.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

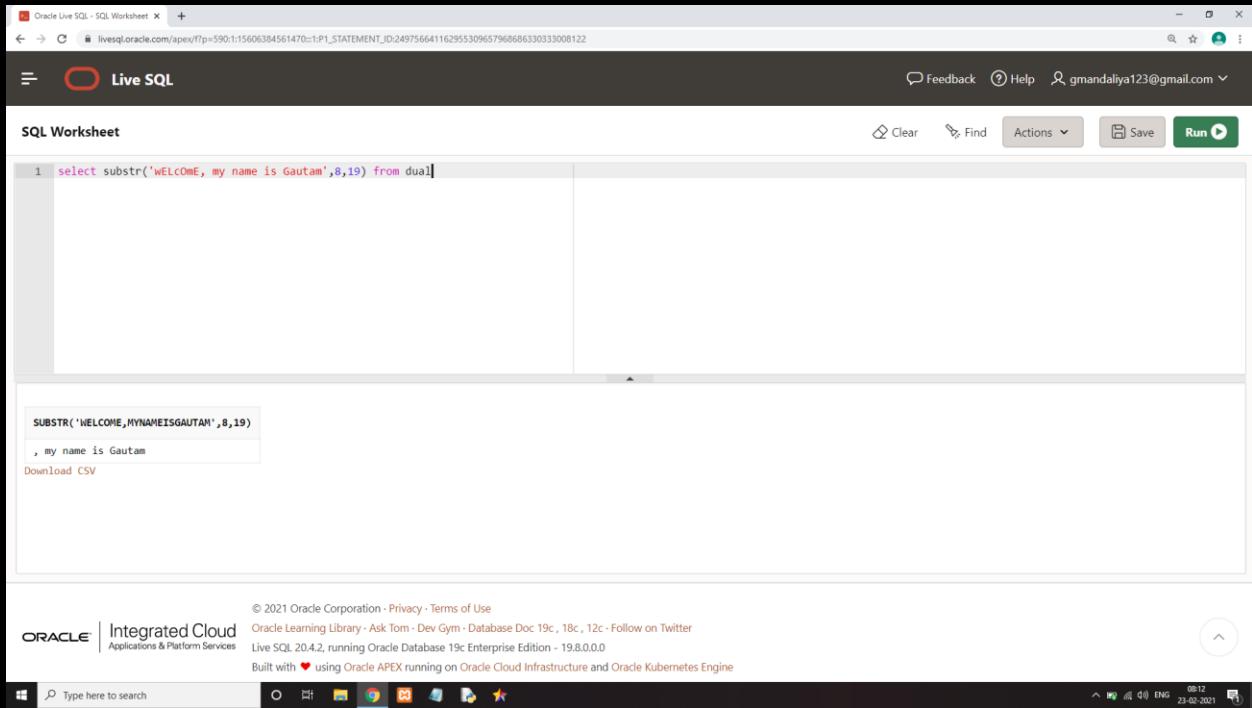
```
1 select length('wELC0ME!!! My name is Gautam mandaliya') from dual;
```

The result is displayed in a table:

LENGTH('WELCOME!!! MYNAMEISGAUTAMMANDALIYA')
38

Below the table, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray indicating the date and time as 23-02-2021.

**5. Substring (substr):-** The SUBSTR functions return a portion of char, beginning at character position, substring\_length characters long. SUBSTR calculates lengths using characters as defined by the input character set.



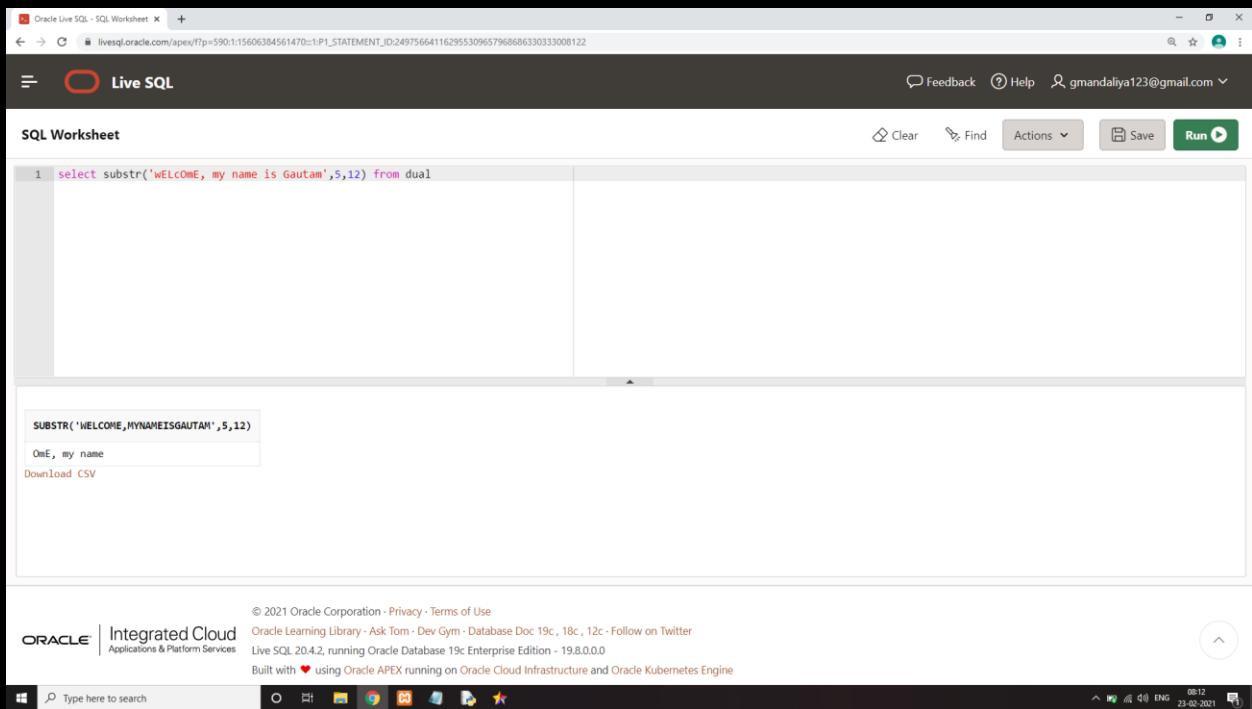
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL statement is executed:

```
1 select substr('WELCOME, my name is Gautam',8,19) from dual;
```

The result is displayed in the output pane:

```
SUBSTR('WELCOME, my name is Gautam',8,19)
, my name is Gautam
```

Below the result, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL statement is executed:

```
1 select substr('WELCOME, my name is Gautam',5,12) from dual;
```

The result is displayed in the output pane:

```
SUBSTR('WELCOME, my name is Gautam',5,12)
, my name is Gau
```

Below the result, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

## 6. Concatenate (concat):- CONCAT returns char1 concatenated with char2.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL statement is run:

```
1 select concat('wELCOME','Gautam') from dual;
```

The result is displayed in the Results pane:

CONCAT('WELCOME','GAUTAM')
wELCOMEGautam

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL statement is run:

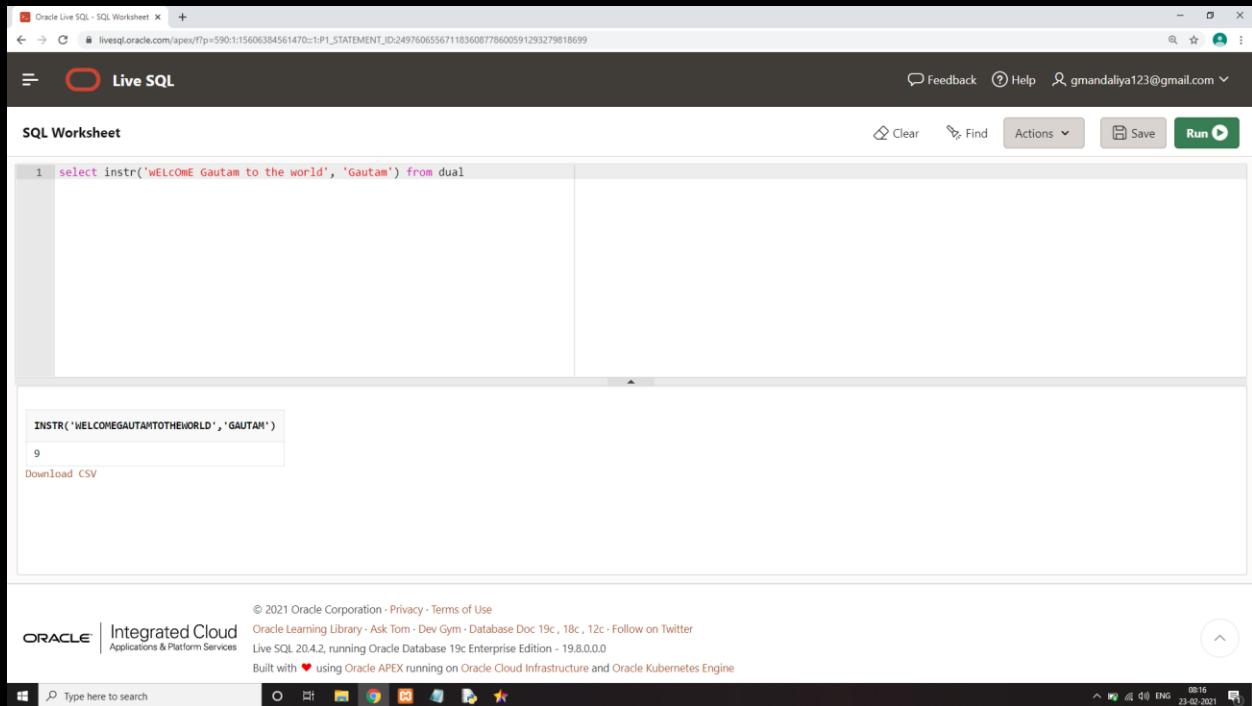
```
1 select concat('Hello!!!','Gautam') from dual;
```

The result is displayed in the Results pane:

CONCAT('HELLO!!!','GAUTAM')
Hello!!!Gautam

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

**7. Instr (instr):-** The INSTR functions search string for substring. The function returns an integer indicating the position of the character in string that is the first character of this occurrence. INSTR calculates strings using characters as defined by the input character set.



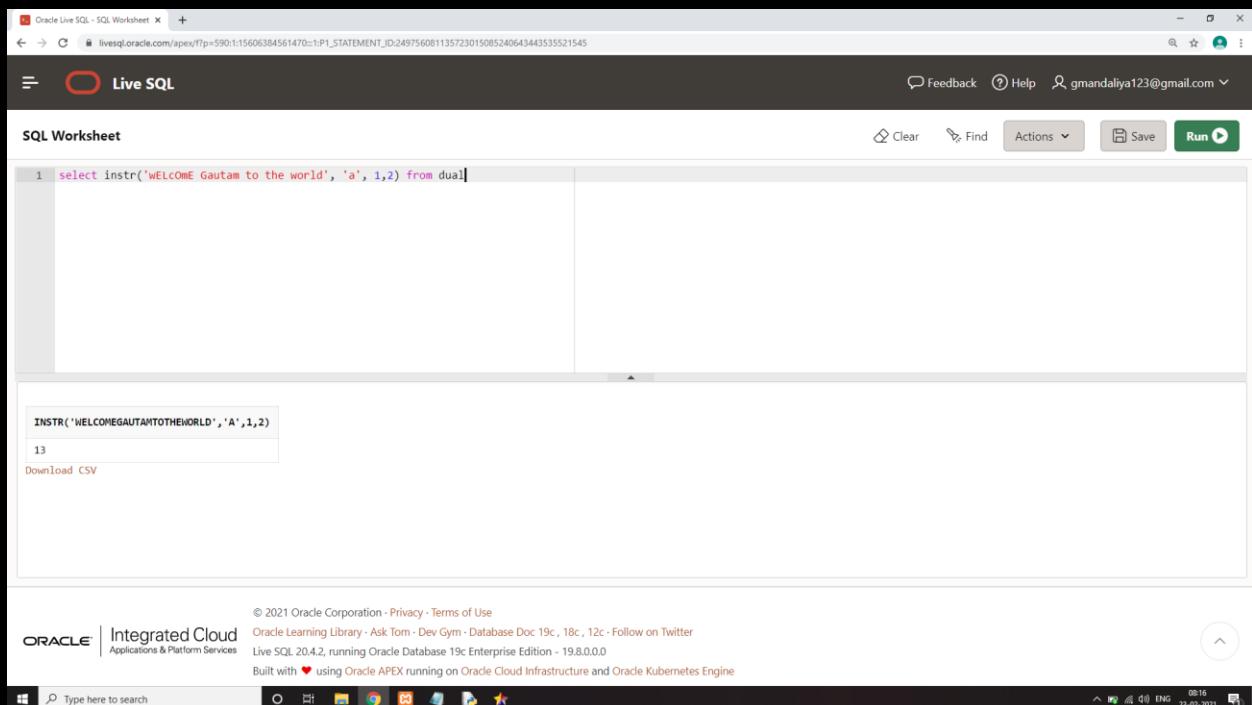
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select instr('WELCOME Gautam to the world', 'Gautam') from dual
```

The result is displayed in the Results pane:

```
INSTR('WELCOME GAUTAM TO THE WORLD', 'GAUTAM')
9
```

Below the results, there are download options for CSV and JSON, and a watermark for Oracle Integrated Cloud.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select instr('WELCOME Gautam to the world', 'a', 1,2) from dual;
```

The result is displayed in the Results pane:

```
INSTR('WELCOME GAUTAM TO THE WORLD', 'A',1,2)
13
```

Below the results, there are download options for CSV and JSON, and a watermark for Oracle Integrated Cloud.

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select instr('wELCOMe Gautam to the world of programming', 'm', 1,3) from dual
```

INSTR('WELCOME GAUTAM TO THE WORLD OF PROGRAMMING', 'M', 1,3)

38

Download CSV

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 select instr('wELC0ME Gautam to the world a a a a a a', 'a', -1) from dual
```

INSTR('WELCOME GAUTAM TO THE WORLD A A A A A A', 'A', -1)

43

Download CSV

Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

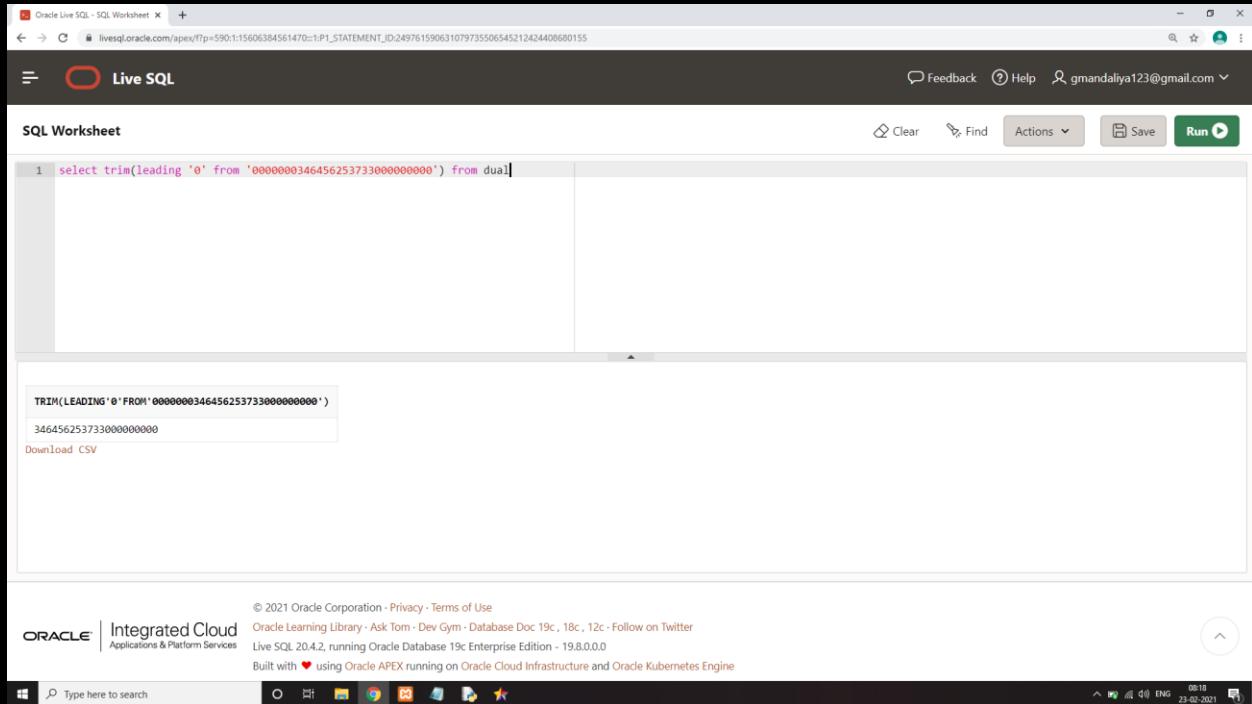
```
1 select instr('wELC0ME Gautam to the world a a a a a a', 'z') from dual
```

INSTR('WELCOME GAUTAM TO THE WORLD A A A A A A', 'Z')

0

Download CSV

**8. Trim:-** The INSTR functions search string for substring. The function returns an integer indicating the position of the character in string that is the first character of this occurrence. INSTR calculates strings using characters as defined by the input character set.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select trim(leading '0' from '0000000346456253733000000000') from dual;
```

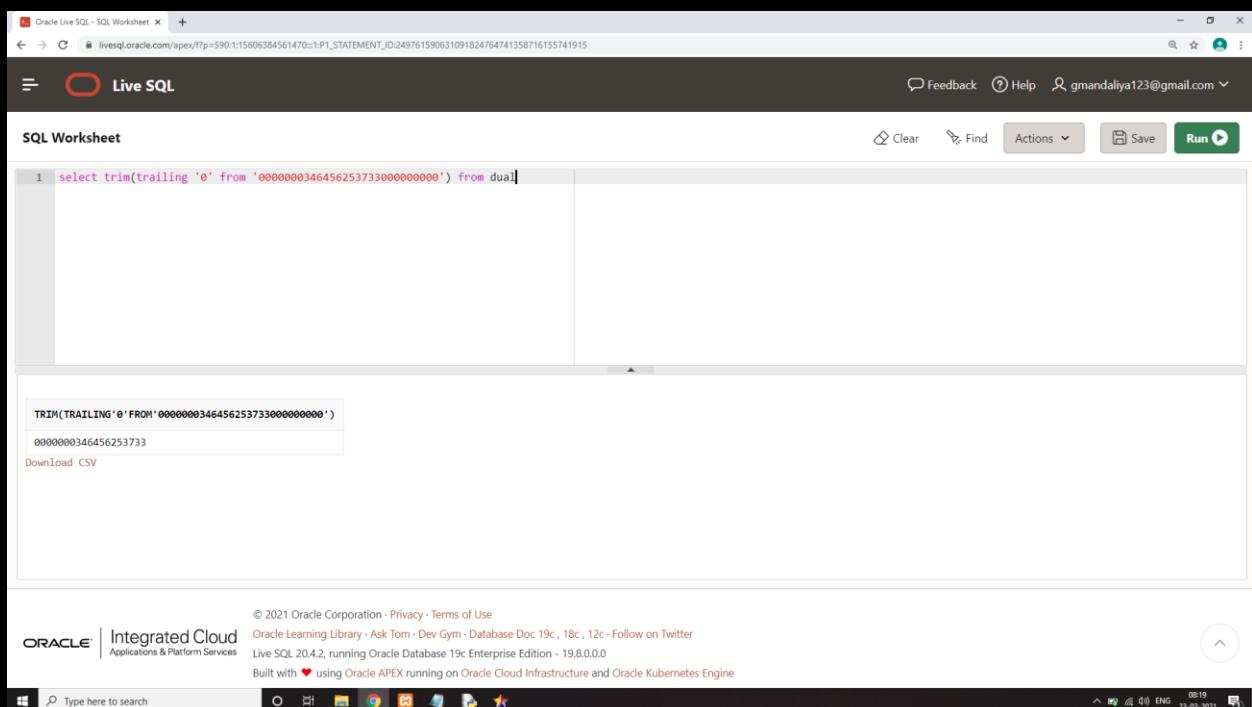
The result is displayed in the results pane:

```
TRIM.LEADING'0'FROM'0000000346456253733000000000'
```

346456253733000000000

Download CSV

At the bottom of the interface, there is a watermark for "Integrated Cloud Applications & Platform Services".



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select trim(trailing '0' from '0000000346456253733000000000') from dual;
```

The result is displayed in the results pane:

```
TRIM.TRAILING'0'FROM'0000000346456253733000000000'
```

0000000346456253733

Download CSV

At the bottom of the interface, there is a watermark for "Integrated Cloud Applications & Platform Services".

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select trim(both '0' from '000000034645625373300000000') from dual
```

The result is displayed in the results pane:

```
TRIM(BOTH'0'FROM'000000034645625373300000000')
346456253733
```

Below the results, there is a "Download CSV" link.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, and a note about the database version and engine.

**9. Rtrim:-** RTRIM removes from the right end of char all of the characters that appear in set. This function is useful for formatting the output of a query.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select rtrim('000000034645625373300000000', '0') from dual;
```

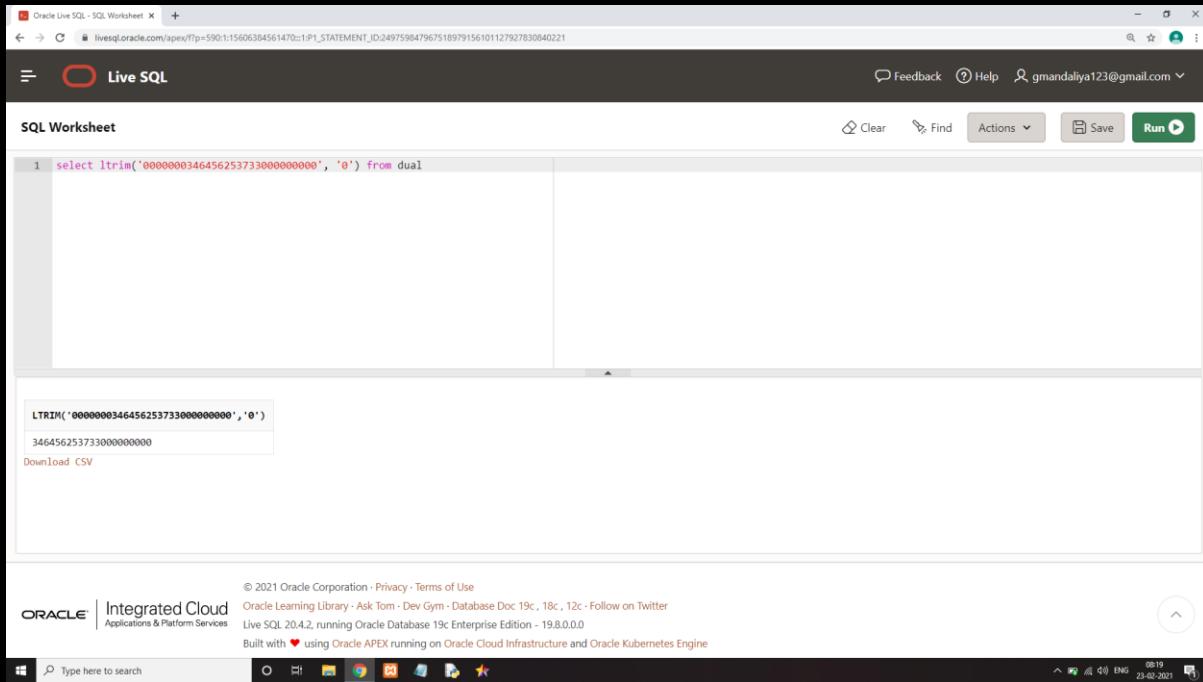
The result is displayed in the results pane:

```
RTRIM('000000034645625373300000000', '0')
0000000346456253733
```

Below the results, there is a "Download CSV" link.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, and a note about the database version and engine.

**10. Ltrim:-** LTRIM removes from the left end of char all of the characters contained in set. If you do not specify set, it defaults to a single blank. If char is a character literal, then you must enclose it in single quotes.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

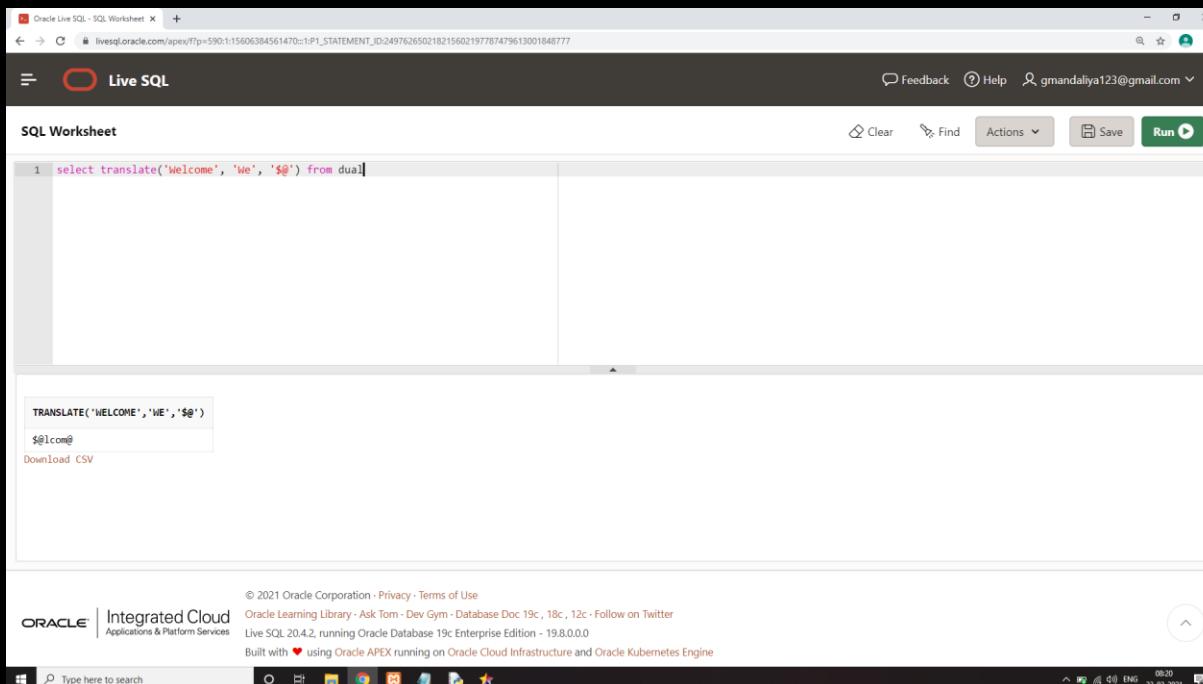
```
1 select ltrim('00000034645625373300000000', '0') from dual
```

The result is displayed in the Results section:

```
LTRIM('00000034645625373300000000', '0')
34645625373300000000
```

Below the results, there is a "Download CSV" link. The bottom of the window shows the Oracle Integrated Cloud Applications & Platform Services footer and the Windows taskbar.

**11. Translate:-** TRANSLATE returns expr with all occurrences of each character in from\_string replaced by its corresponding character in to\_string. Characters in expr that are not in from\_string are not replaced.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select translate('Welcome', 'We', '$@') from dual;
```

The result is displayed in the Results section:

```
TRANSLATE('WELCOME','WE','$@')
$@lcom@
```

Below the results, there is a "Download CSV" link. The bottom of the window shows the Oracle Integrated Cloud Applications & Platform Services footer and the Windows taskbar.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is run:

```
1 select translate('Welcome564', 'We64', '$@#^') from dual
```

The result is displayed in the output pane:

```
TRANSLATE('WELCOME564','WE64','$@#^')
$@com@5#^
```

Below the result, there are buttons for 'Clear', 'Find', 'Actions', 'Save', and 'Run'. At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, Ask Tom, Dev Gym, Database Doc 19c, 18c, 12c, and social media links. The system status bar at the bottom right shows the date and time.

**12. Replace:-** REPLACE returns char with every occurrence of search\_string replaced with replacement\_string. If replacement\_string is omitted or null, then all occurrences of search\_string are removed. If search\_string is null, then char is returned.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is run:

```
1 select replace('Welcome564', '64', '#^') from dual;
```

The result is displayed in the output pane:

```
REPLACE('WELCOME564','64','#^')
Welcome5#^
```

Below the result, there are buttons for 'Clear', 'Find', 'Actions', 'Save', and 'Run'. At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, Ask Tom, Dev Gym, Database Doc 19c, 18c, 12c, and social media links. The system status bar at the bottom right shows the date and time.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is run:

```
1 select replace('Welcome5604', '64', '#^') from dual
```

The result is displayed in the Results pane:

REPLACE('WELCOME5604', '64', '#^')
Welcome5#04

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is run:

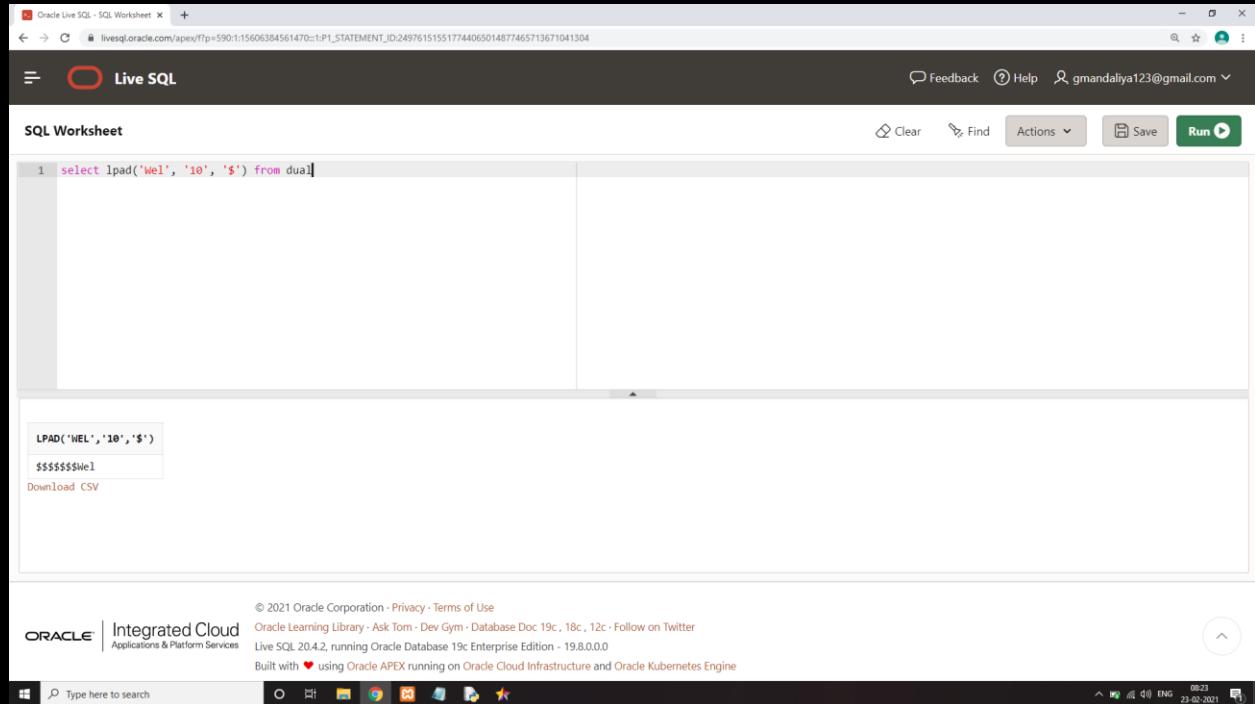
```
1 select replace('Welcome5604', '5604', '#') from dual;
```

The result is displayed in the Results pane:

REPLACE('WELCOME5604', '5604', '#')
Welcome#

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Windows taskbar with various pinned icons.

**13. Lpad:-** The LPAD function returns an expression, left-padded to a specified length with the specified characters; or, when the expression to be padded is longer than the length specified after padding, only that portion of the expression that fits into the specified length.



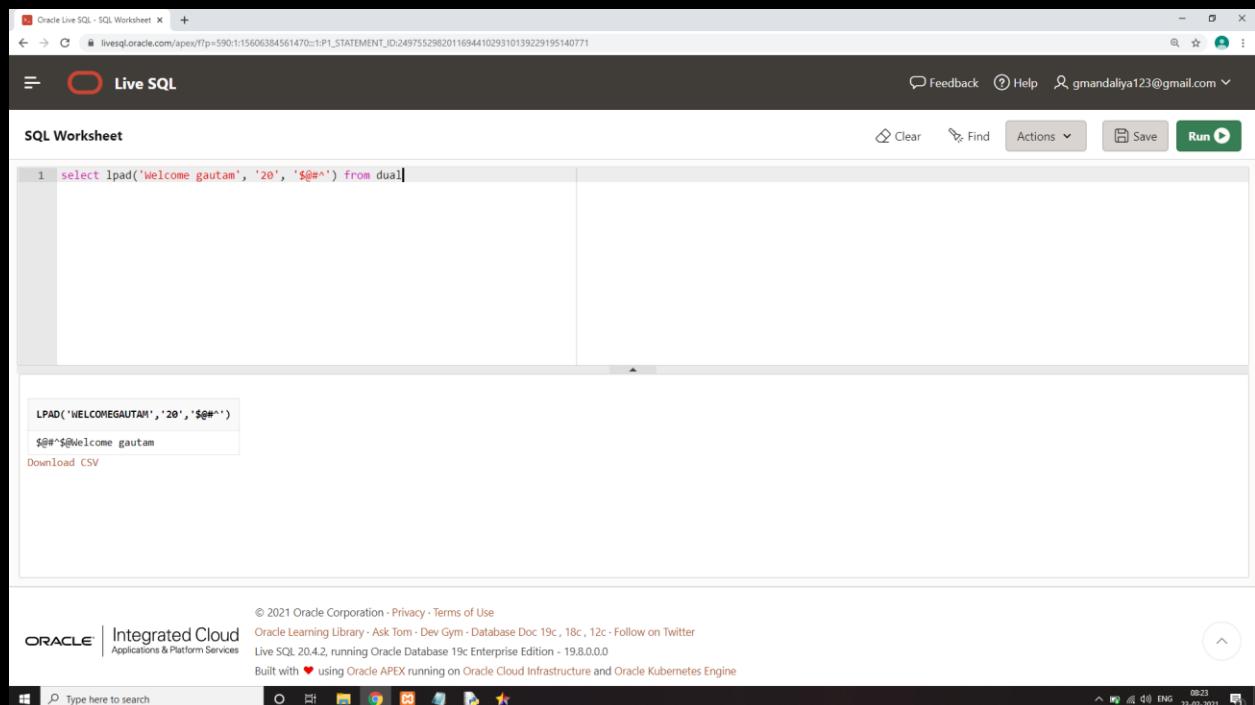
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select lpad('We1', '10', '$') from dual;
```

The output in the results pane is:

```
LPAD('We1','10','$')
$$$$$We1
```

Below the results, there is a "Download CSV" button. At the bottom of the interface, there is footer information including the Oracle logo, Integrated Cloud Applications & Platform Services, and various links and icons.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

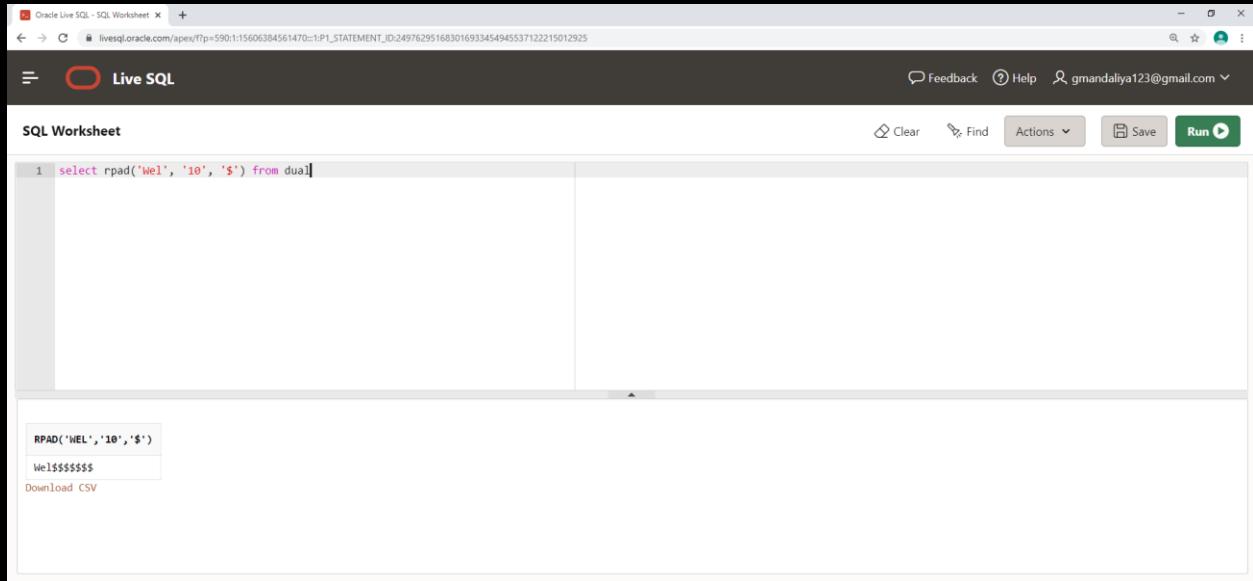
```
1 select lpad('Welcome gautam', '20', '$@#^') from dual;
```

The output in the results pane is:

```
LPAD('WELCOMEAUTAM','20','$@#^')
$@#^$@Welcome gautam
```

Below the results, there is a "Download CSV" button. At the bottom of the interface, there is footer information including the Oracle logo, Integrated Cloud Applications & Platform Services, and various links and icons.

**14. Rpad:-** The RPAD function returns an expression, right-padded to a specified length with the specified characters; or, when the expression to be padded is longer than the length specified after padding, only that portion of the expression that fits into the specified length.



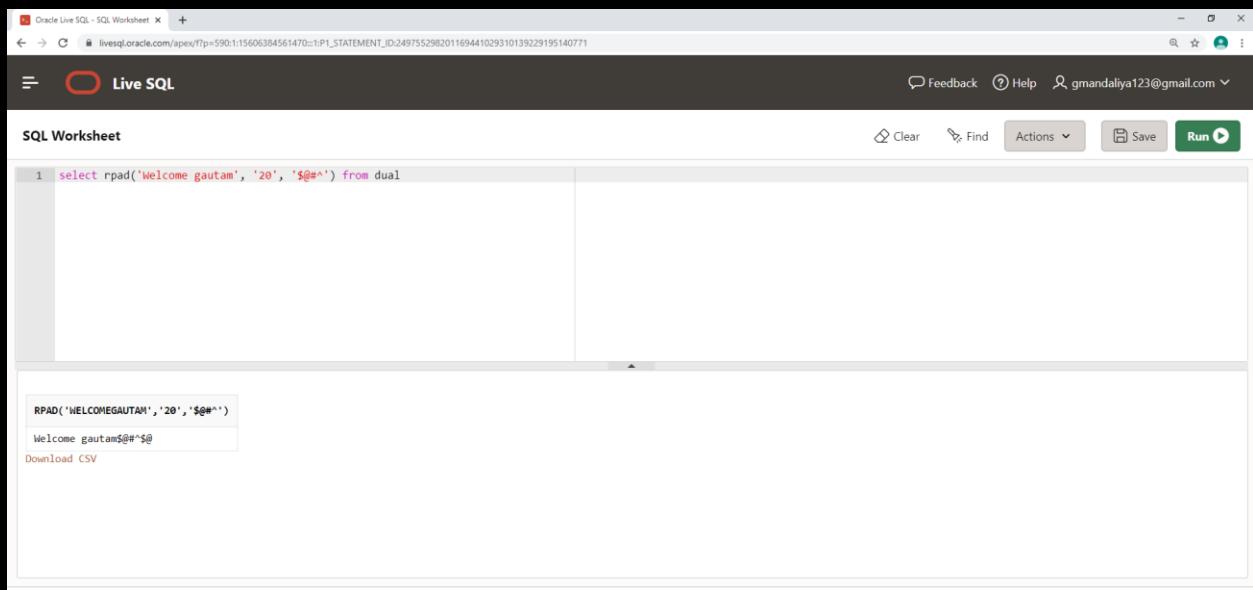
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select rpad('We1', '10', '$') from dual;
```

The result is displayed in a modal window:

RPAD('We1','10','\$')  
We1\$\$\$\$\$\$

[Download CSV](#)



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select rpad('Welcome gautam', '20', '$@#^') from dual;
```

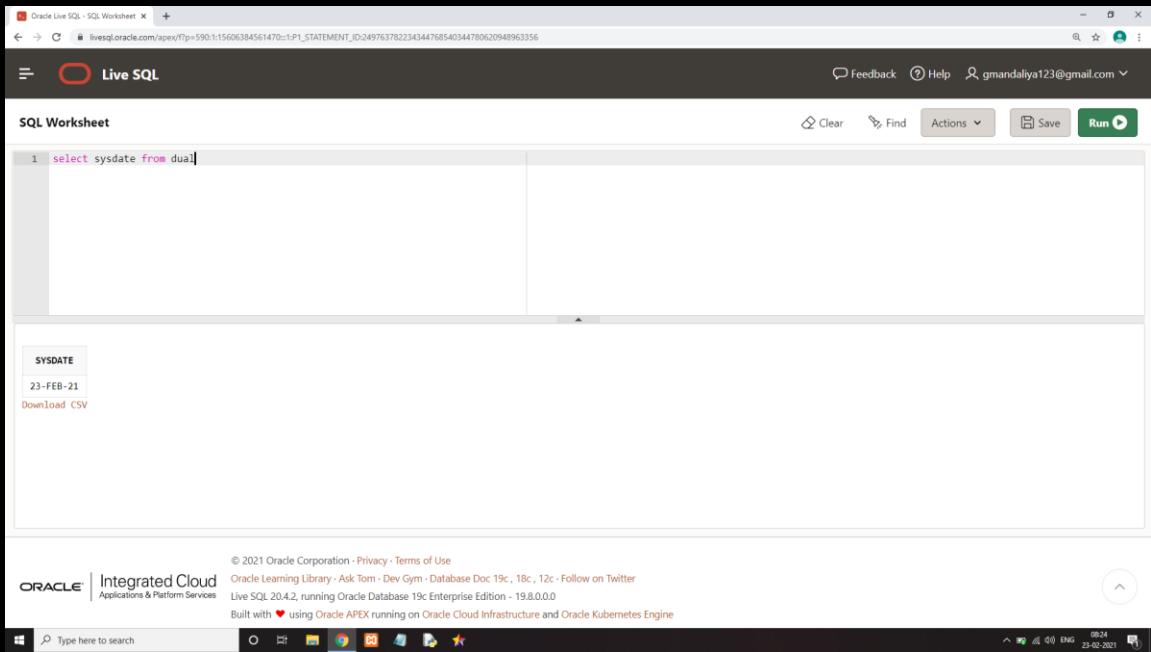
The result is displayed in a modal window:

RPAD('WELCOMEGAUTAM','20','\$@#^')  
Welcome gautam\$@#^\$@

[Download CSV](#)

### C) DATE FUNCTION:-

1. **Sysdate**:- SYSDATE returns the current date and time set for the operating system on which the database resides. The datatype of the returned value is DATE, and the format returned depends on the value of the NLS\_DATE\_FORMAT initialization parameter. The function requires no arguments.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

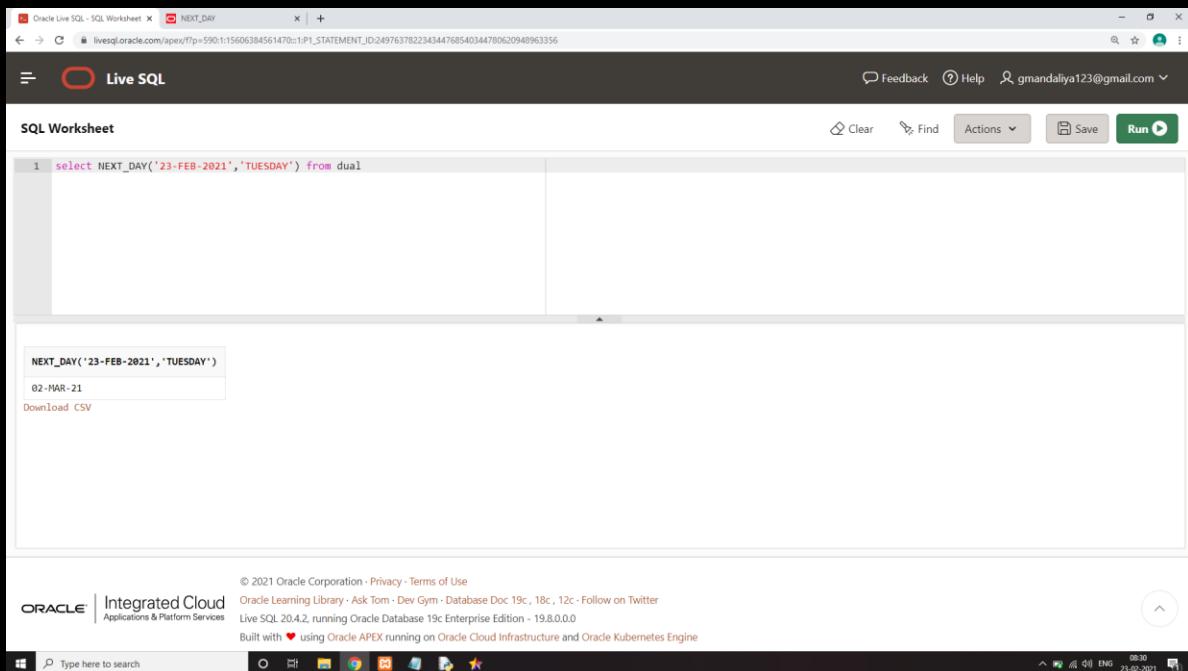
```
1 select sysdate from dual
```

The result is displayed in a table:

SYSDATE
23-FEB-21

Below the result, there is a note: "Download CSV". At the bottom of the interface, the Oracle logo and "Integrated Cloud Applications & Platform Services" are visible, along with copyright information and a status bar showing "08:24 23-02-2021".

2. **Next\_Day**:- NEXT\_DAY returns the date of the first weekday named by char that is later than the date date. The return type is always DATE, regardless of the datatype of date.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select NEXT_DAY('23-FEB-2021', 'TUESDAY') from dual
```

The result is displayed in a table:

NEXT_DAY('23-FEB-2021', 'TUESDAY')
02-MAR-21

Below the result, there is a note: "Download CSV". At the bottom of the interface, the Oracle logo and "Integrated Cloud Applications & Platform Services" are visible, along with copyright information and a status bar showing "08:30 23-02-2021".

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is executed:

```
1 select NEXT_DAY('02-APR-2011','TUESDAY') from dual
```

The result is displayed in a table:

NEXT_DAY('02-APR-2011', 'TUESDAY')
05-APR-11

Below the result, there is a "Download CSV" link.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, Ask Tom, Dev Gym, Database Doc 19c, 18c, 12c, and social media links. The status bar at the bottom right shows the date as 23-02-2021 and time as 08:39.

**3. Last\_Day:-** LAST\_DAY returns the date of the last day of the month that contains date.  
The return type is always DATE, regardless of the datatype of date.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following SQL query is executed:

```
1 SELECT SYSDATE, LAST_DAY(SYSDATE), LAST_DAY(SYSDATE) - SYSDATE FROM DUAL
```

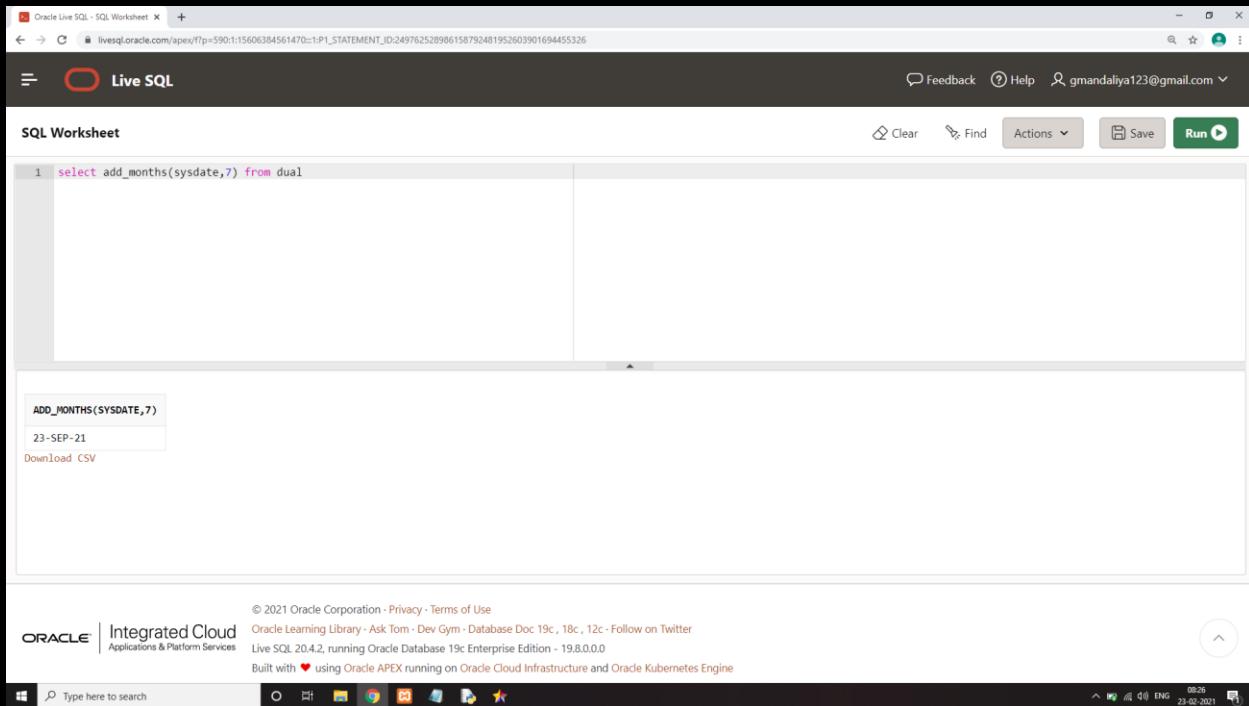
The result is displayed in a table:

SYSDATE	LAST_DAY(SYSDATE)	LAST_DAY(SYSDATE)-SYSDATE
23-FEB-21	28-FEB-21	5

Below the result, there is a "Download CSV" link.

At the bottom of the page, there is footer information including copyright, links to Oracle Learning Library, Ask Tom, Dev Gym, Database Doc 19c, 18c, 12c, and social media links. The status bar at the bottom right shows the date as 23-02-2021 and time as 08:43.

#### 4. Add\_Months:- ADD\_MONTHS returns the date date plus integer months.



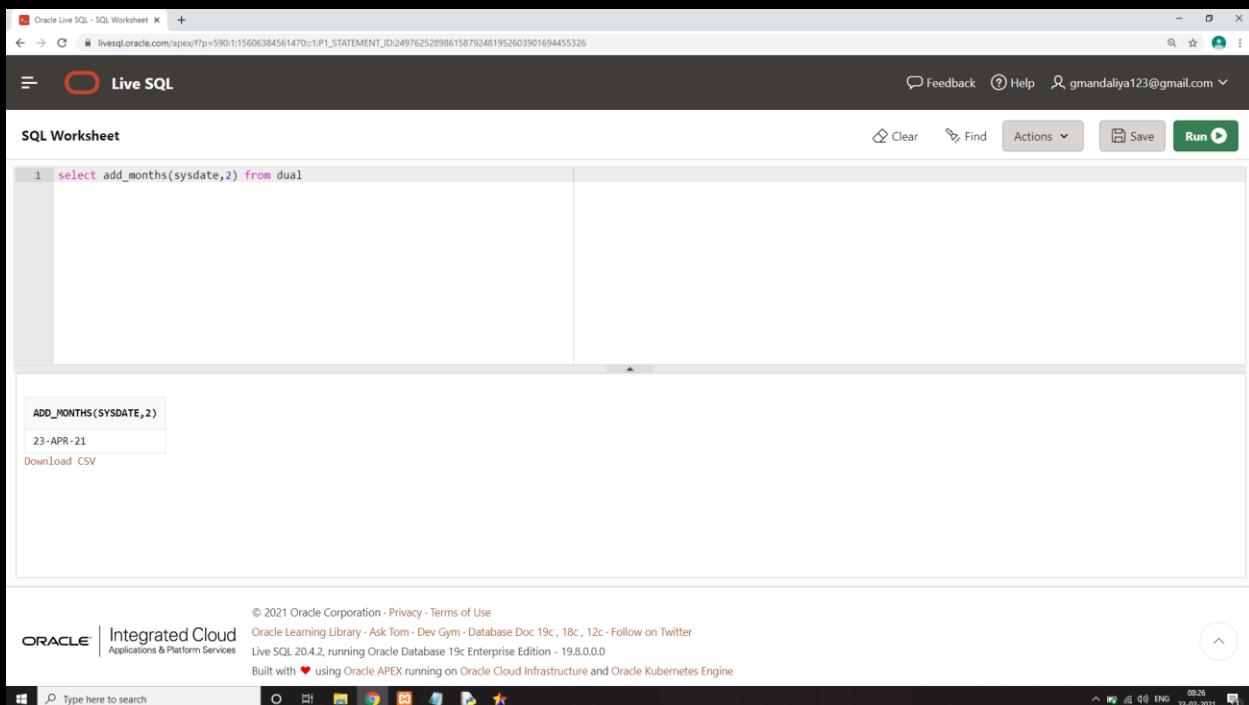
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

```
1 select add_months(sysdate,7) from dual
```

The result is displayed in a modal window:

ADD_MONTHS(SYSDATE,7)
23-SEP-21

Below the result, there is a "Download CSV" link. The interface includes standard navigation and search bars at the top and bottom, and the Oracle logo with "Integrated Cloud" branding.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is run:

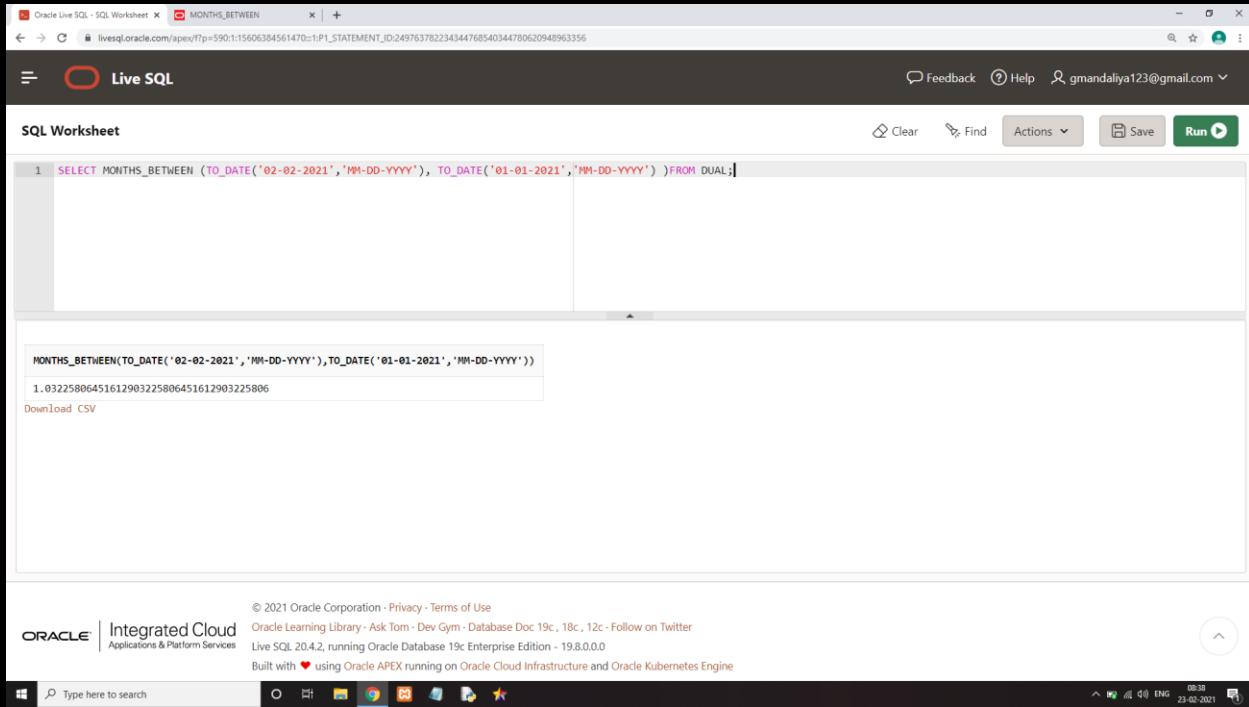
```
1 select add_months(sysdate,2) from dual
```

The result is displayed in a modal window:

ADD_MONTHS(SYSDATE,2)
23-APR-21

Below the result, there is a "Download CSV" link. The interface includes standard navigation and search bars at the top and bottom, and the Oracle logo with "Integrated Cloud" branding.

**5. Months\_Between:-** MONTHS\_BETWEEN returns number of months between dates date1 and date2.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

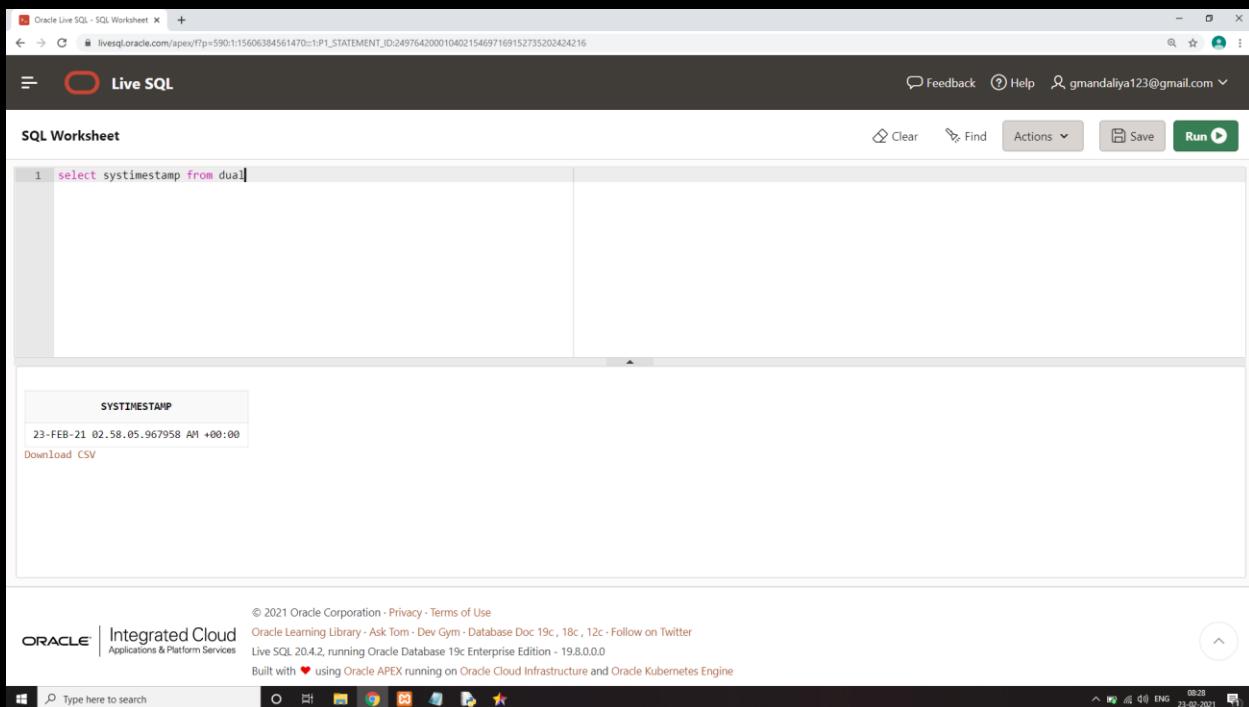
```
1 SELECT MONTHS_BETWEEN (TO_DATE('02-02-2021','MM-DD-YYYY'), TO_DATE('01-01-2021','MM-DD-YYYY')) FROM DUAL;
```

The results pane displays the output of the query:

MONTHS_BETWEEN(TO_DATE('02-02-2021','MM-DD-YYYY'),TO_DATE('01-01-2021','MM-DD-YYYY'))
1.03225806451612903225806451612903225806

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Oracle Cloud Integrated Cloud logo and various system status indicators.

**6. Systimestamp:-** SYSTIMESTAMP returns the system date, including fractional seconds and time zone, of the system on which the database resides. The return type is TIMESTAMP WITH TIME ZONE.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following query:

```
1 select systimestamp from dual;
```

The results pane displays the output of the query:

SYSTIMESTAMP
23-FEB-21 02.58.05.967958 AM +00:00

Below the results, there is a "Download CSV" link. The bottom of the screen shows the Oracle Cloud Integrated Cloud logo and various system status indicators.

**7. Current\_Date:-** CURRENT\_DATE returns the current date in the session time zone, in a value in the Gregorian calendar of datatype DATE.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet, the following query is executed:

```
1 select current_date from dual
```

The result is displayed in a table:

CURRENT_DATE
22-FEB-21

Below the result, there is a "Download CSV" link. The bottom of the screen shows the Oracle Cloud Integrated Cloud logo and various system status indicators.

-----X-----

Name:- Gautam Chandrakant Mandaliya

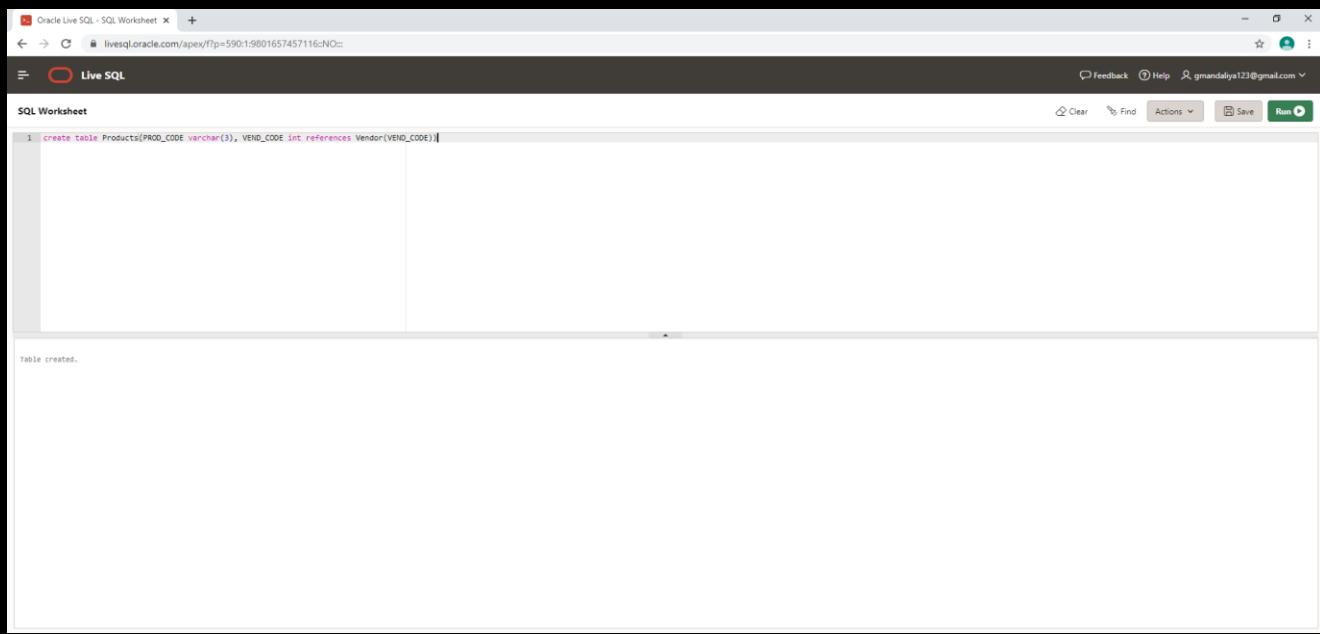
Roll No:- 27

Class:-FYCS

Subject:- Data Base Management system

## PRACTICAL 7:-

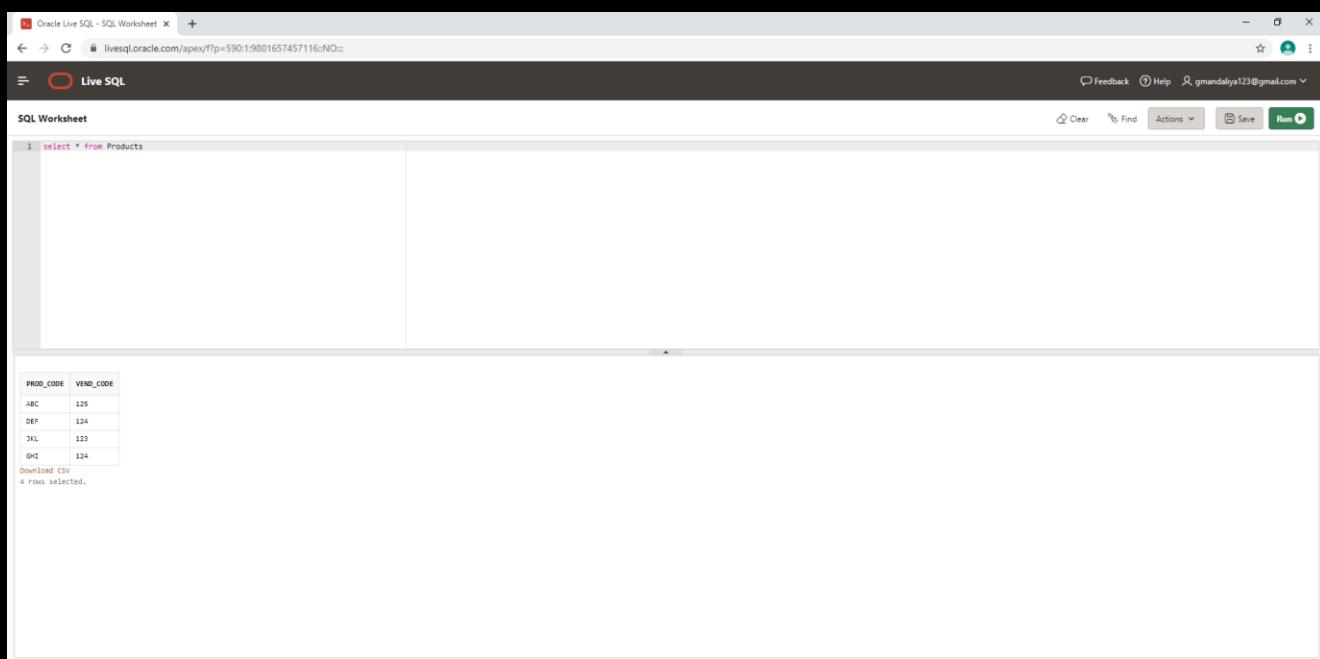
### Product Table:-



A screenshot of the Oracle Live SQL interface. The title bar says "Oracle Live SQL - SQL Worksheet". The URL is "livesql.oracle.com/apex/f?p=590:1:9801657457116::NO::". The main area shows the following SQL code:

```
1 create table Products(PROD_CODE varchar(3), VEND_CODE int references Vendor(VEND_CODE))
```

The status bar at the bottom of the worksheet window displays the message "Table created."



A screenshot of the Oracle Live SQL interface. The title bar says "Oracle Live SQL - SQL Worksheet". The URL is "livesql.oracle.com/apex/f?p=590:1:9801657457116::NO::". The main area shows the following SQL code:

```
1 select * from Products
```

Below the code, the results of the query are displayed in a table:

PROD_CODE	VEND_CODE
ABC	125
DEF	124
JKL	123
GHI	124

The status bar at the bottom of the worksheet window displays the message "Download CSV" and "4 rows selected."

## Vendor Table:-

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is executed:

```
1 create table Vendor(VEND_CODE int primary key);
```

The output message "Table created." is displayed below the worksheet.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is executed:

```
1 select * from Vendor;
```

The results pane displays the data from the Vendor table:

VEND_CODE
123
124
125
126

Below the table, the message "Download CSV" is visible, along with the note "4 rows selected."

## A) A UNION query based on these two tables

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 select VEND_CODE from Vendor
2 UNION
3 select VEND_CODE from Products;
```

The results pane displays the VEND\_CODE values from both tables:

VEND_CODE
123
124
125
126

Below the results table, it says "Download CSV" and "4 rows selected."

At the bottom of the interface, there is footer information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Aut.Tom - Dev.Gym - Database Doc.19c, 18c, 12c - Follow on Twitter", "Live SQL 204.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine".

## B) A UNION ALL query based on these two tables

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 select VEND_CODE from Vendor
2 UNION ALL
3 select VEND_CODE from Products;
```

The results pane displays the VEND\_CODE values from both tables, including duplicates:

VEND_CODE
123
124
125
126
125
124
123
124

Below the results table, it says "Download CSV" and "8 rows selected."

At the bottom of the interface, there is footer information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Aut.Tom - Dev.Gym - Database Doc.19c, 18c, 12c - Follow on Twitter", "Live SQL 204.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine".

### C) An INTERSECT query based on these two tables

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:9801657457116:N::](https://livesql.oracle.com/apex/f?p=590:1:9801657457116:N::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select VEND_CODE from Vendor
2 INTERSECT
3 select VEND_CODE from Products;
```

Below the code, the results are displayed in a table:

VEND_CODE
123
124
125

There is a "Download CSV" link and a note stating "3 rows selected."

The bottom of the screen shows the Windows taskbar with various pinned icons like File Explorer, Edge, and File Manager.

### D) A MINUS query based on these two tables

The screenshot shows a browser window for Oracle Live SQL. The URL is [livesql.oracle.com/apex/f?p=590:1:9801657457116:N::](https://livesql.oracle.com/apex/f?p=590:1:9801657457116:N::). The title bar says "Oracle Live SQL - SQL Worksheet". The main area contains the following SQL code:

```
1 select VEND_CODE from Vendor
2 MINUS
3 select VEND_CODE from Products;
```

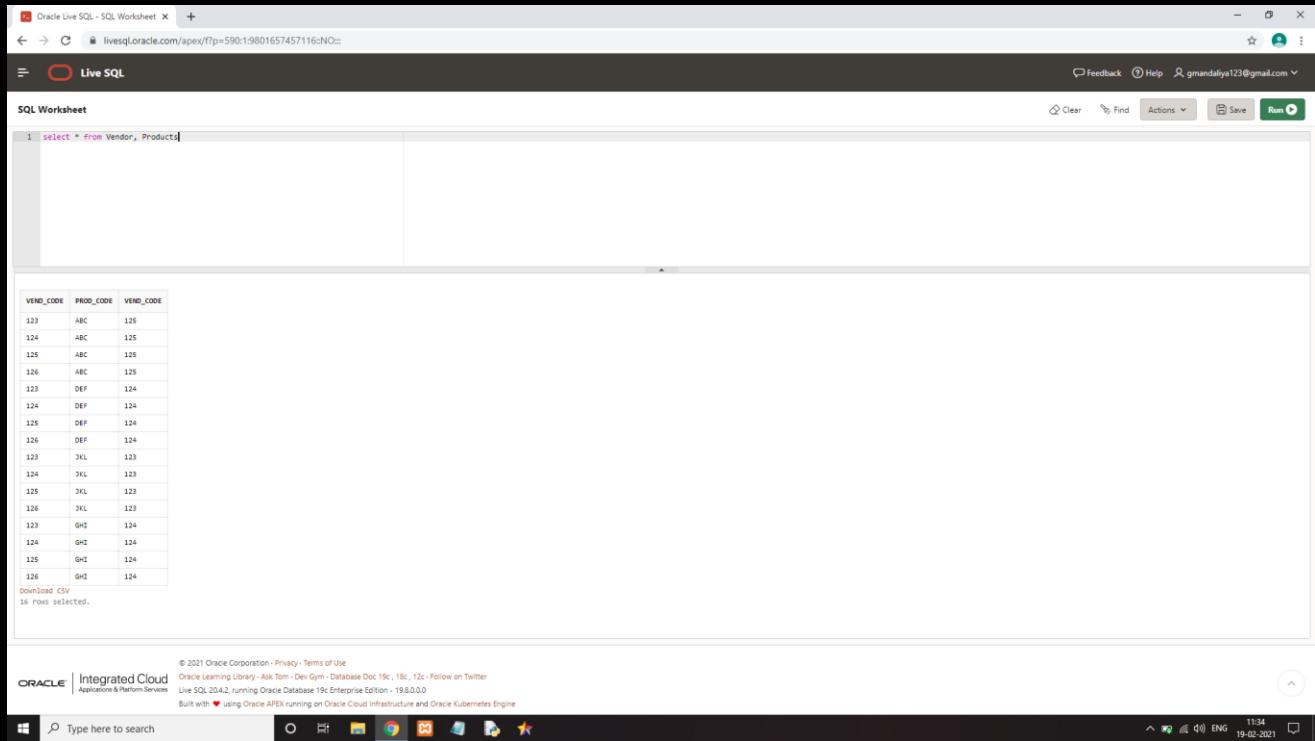
Below the code, the results are displayed in a table:

VEND_CODE
126

There is a "Download CSV" link and a note stating "1 row selected."

The bottom of the screen shows the Windows taskbar with various pinned icons like File Explorer, Edge, and File Manager.

## E) A CROSS query based on these two tables



The screenshot shows a browser window for Oracle Live SQL - SQL Worksheet. The URL is [livesql.oracle.com/apex/f?p=590:1:9801657457116::NO::](https://livesql.oracle.com/apex/f?p=590:1:9801657457116::NO::). The page title is "Live SQL". The SQL Worksheet contains the following code:

```
1 select * from Vendor,Products;
```

Below the code, the results are displayed in a table:

VENO_CODE	PROD_CODE	VENO_CODE
123	ABC	125
124	ABC	126
125	ABC	125
126	ABC	126
123	DEF	124
124	DEF	124
125	DEF	124
126	DEF	124
123	JKL	123
124	JKL	123
125	JKL	123
126	JKL	123
123	GHI	124
124	GHI	124
125	GHI	124
126	GHI	124

Below the table, it says "Download CSV" and "16 rows selected.".

At the bottom of the page, there is footer information:

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Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter  
Live SQL 2042, running Oracle Database 19c Enterprise Edition - 19.8.0.0  
Built with ❤ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

The browser taskbar shows the Windows Start button, a search bar with "Type here to search", and various pinned icons like File Explorer, Google Chrome, and others. The system tray shows the date and time as 19-02-2021 11:34, along with battery and signal status.

----- X -----

**Name:- Gautam Chandrakant Mandaliya**

**Roll No:- 27**

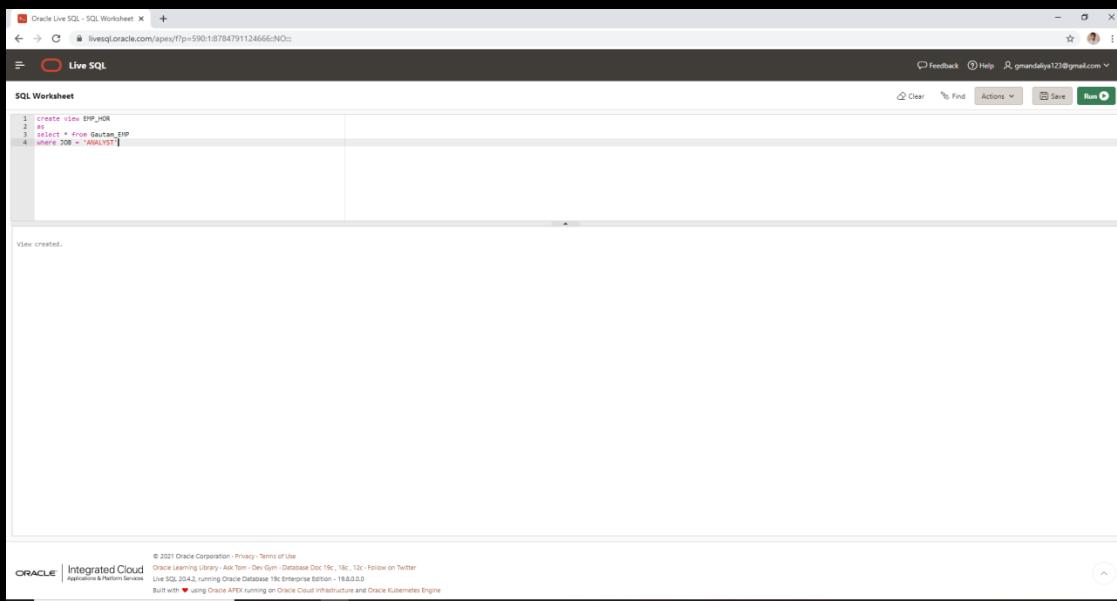
**Class:-FYCS**

**Subject:- Data Base Management system**

## **PRACTICAL 8:- Study of Various types of views.**

Considering EMP and DEPT tables, perform the following:-

1. Create a view named emp\_hor with the job titled as 'ANALYST'.

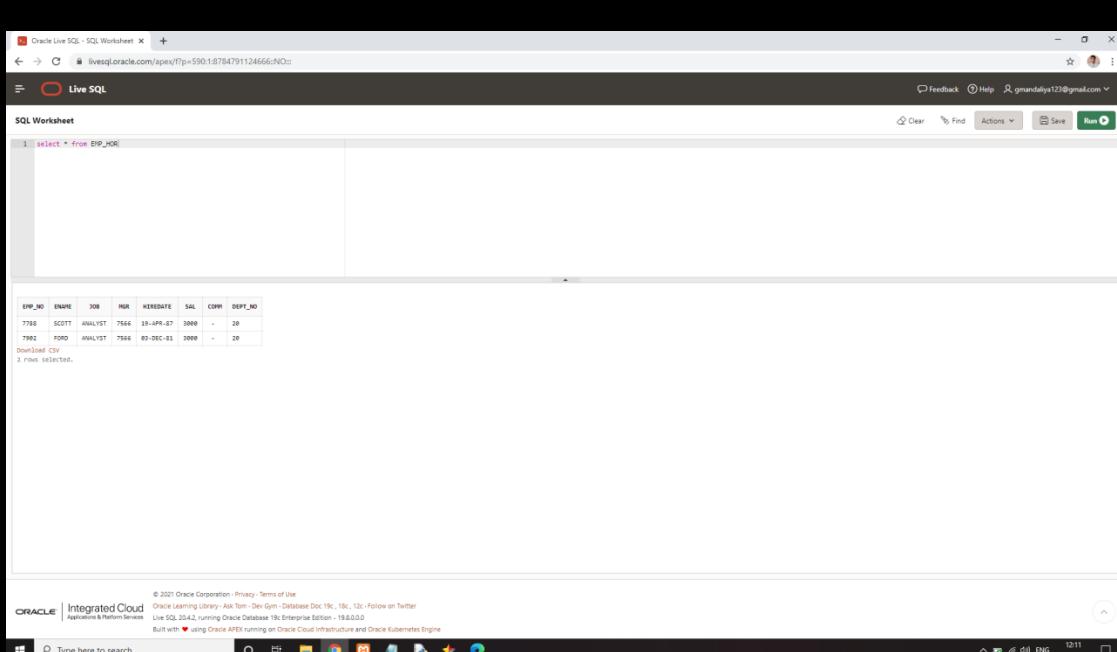


SQL Worksheet

```
1 create view EMP_HOR
2 as
3 select * from Gautam.EMP
4 where JOB = 'ANALYST';
```

View created.

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Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter  
Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0  
Built with using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine



SQL Worksheet

```
1 select * from EMP_HOR;
```

EMP_NO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7788	SCOTT	ANALYST	7666	19-APR-87	3000	-	20
7892	FORD	ANALYST	7666	09-DEC-81	3000	-	20

Download CSV  
2 rows selected.

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## 2. Create a view vwemp specifying name of employees, job and their salary.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create view VWEMP(ENAME, JOB, SAL)
2 as
3 select ENAME, JOB, SAL from Gautam_EMP
```

Below the code, a message indicates "View created." The status bar at the bottom shows the copyright notice: "© 2021 Oracle Corporation - Privacy - Terms of Use".

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 select * from VWEMP
```

Below the code, the results are displayed in a table:

ENAME	JOB	SAL
KING	PRESIDENT	5000
TURNER	SALESMAN	1500
ADAMS	CLERK	1100
JAMES	CLERK	950
BLAKE	MANAGER	2850
CLARK	MANAGER	2450
MARD	SALESMAN	1150
HILLER	CLERK	1300
JONES	MANAGER	2975
SCOTT	ANALYST	3000
FORD	ANALYST	3000
Smith	CLERK	800
HARTZ	SALESMAN	1250
ALLEN	SALESMAN	1600

At the bottom of the results, it says "Download CSV" and "14 rows selected." The status bar at the bottom shows the copyright notice: "© 2021 Oracle Corporation - Privacy - Terms of Use".

### 3. Create a view displaying total salary on the basis of the jobs.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create view TOTAL_SAL(TOT_SAL, JOB)
2 as
3 select sum(SAL), JOB from Gautem_EMP
4 group by JOB
```

Below the code, a message indicates "View created." The interface includes standard browser navigation buttons and a toolbar with options like Feedback, Help, Actions, Save, and Run.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

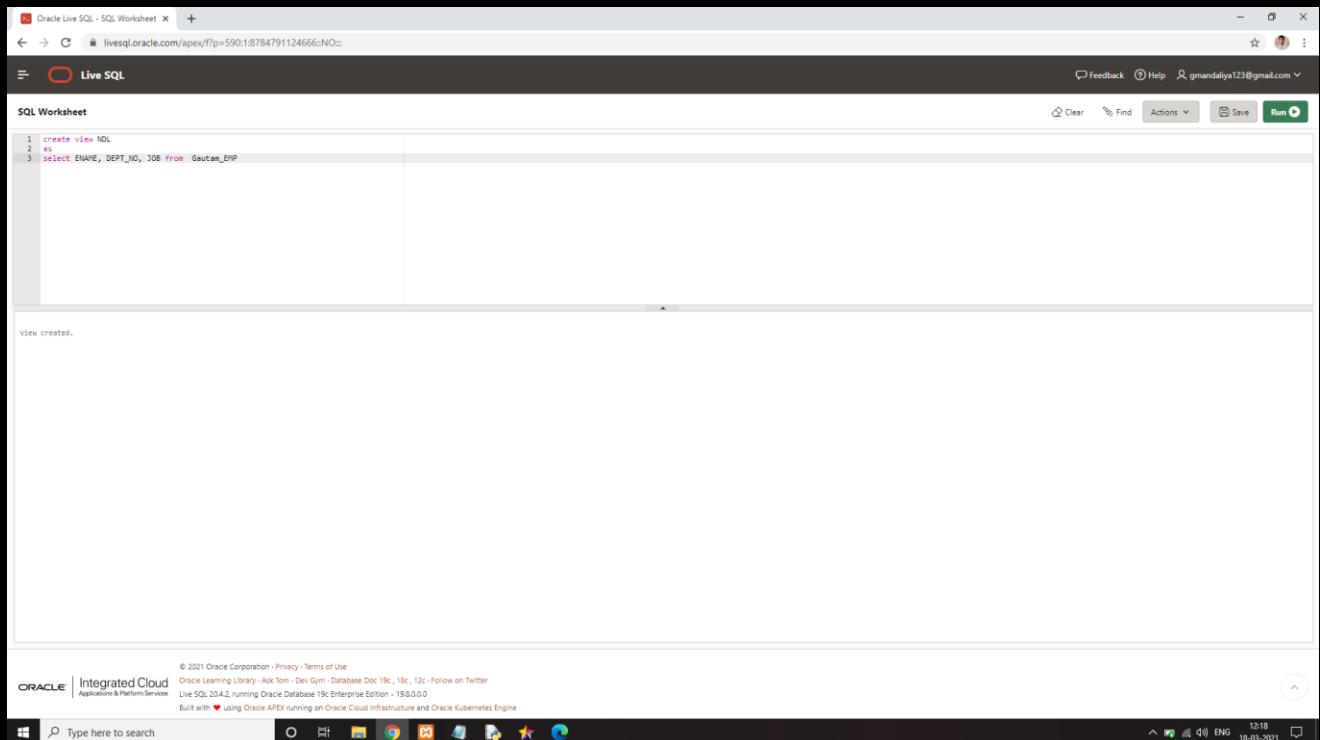
```
1 select * from TOTAL_SAL
```

Below the code, the results are displayed in a table:

TOT_SAL	JOB
5600	SALESMAN
4150	CLERK
6000	ANALYST
8275	MANAGER
5000	PRESIDENT

Below the table, there is a "Download CSV" link and a note stating "5 rows selected." The interface includes standard browser navigation buttons and a toolbar with options like Feedback, Help, Actions, Save, and Run.

4. Create a view with contains name of employee, dept and the location of the employee.

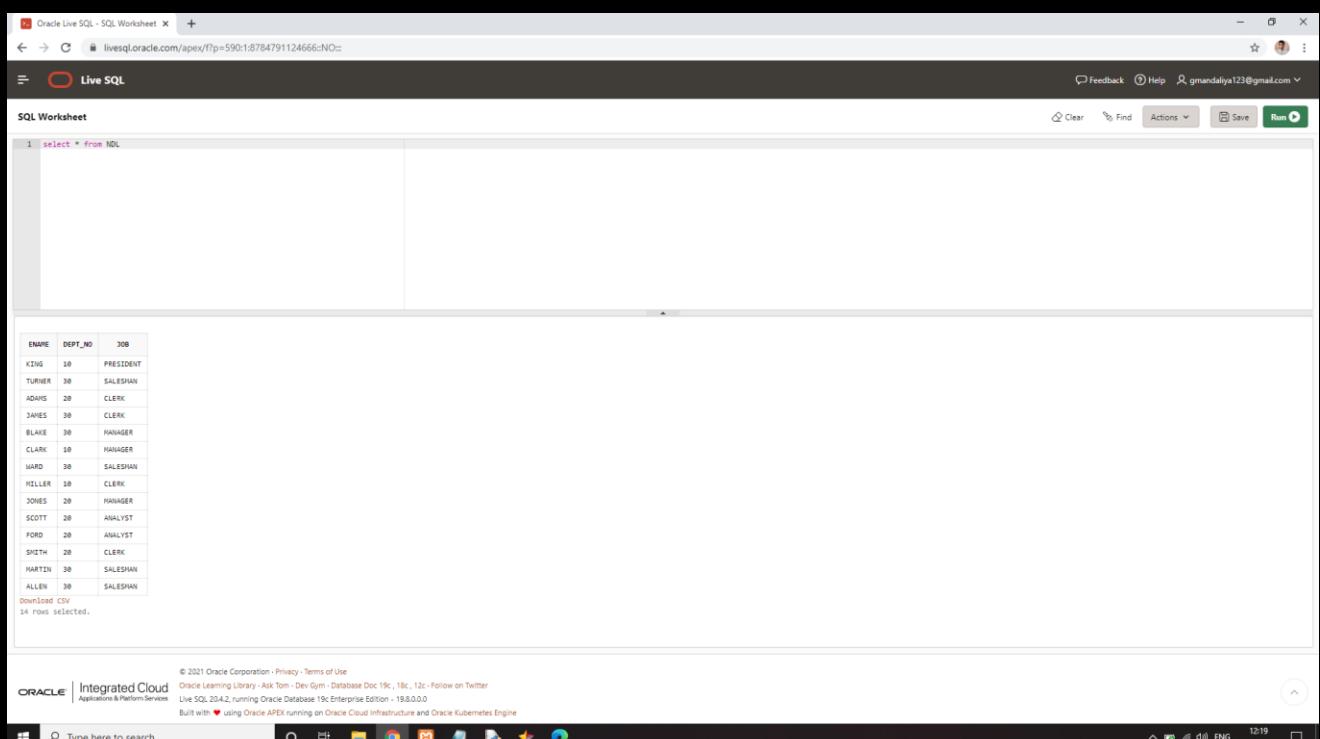


The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create view NOL
2 as
3 select ENAME, DEPT_NO, 208 from Gautam_EMP
```

After running the code, a message "View created." is displayed below the worksheet.

At the bottom of the window, the Oracle Integrated Cloud logo is visible, along with copyright information and system status indicators.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 select * from NOL
```

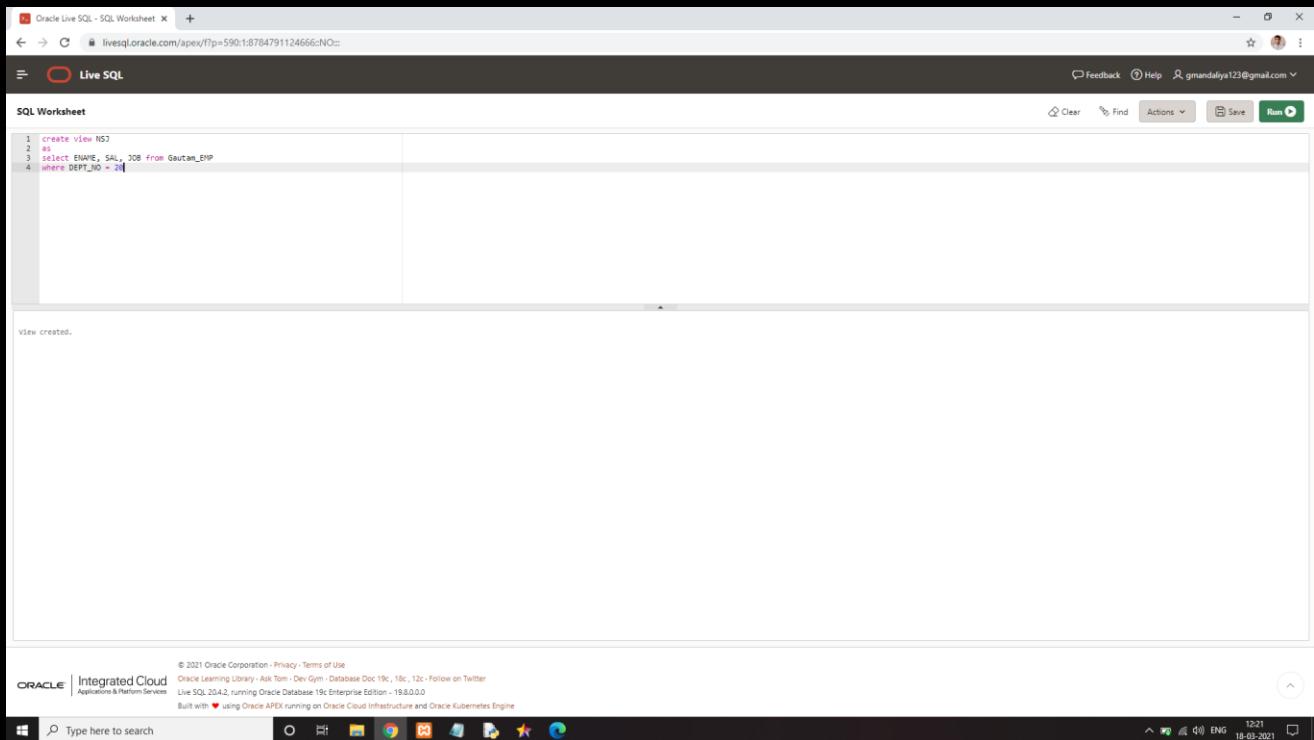
After running the code, the results are displayed in a table:

ENAME	DEPT_NO	JOB
KING	10	PRESIDENT
TURNER	30	SALESMAN
ADAMS	20	CLERK
JAMES	30	CLERK
BLAKE	30	MANAGER
CLARK	10	MANAGER
HARSH	30	SALESMAN
MILLER	10	CLERK
JONES	20	MANAGER
SCOTT	20	ANALYST
FORD	20	ANALYST
S国王	20	CLERK
HARTZ	30	SALESMAN
ALLEN	30	SALESMAN

Below the table, it says "Download CSV" and "14 rows selected."

At the bottom of the window, the Oracle Integrated Cloud logo is visible, along with copyright information and system status indicators.

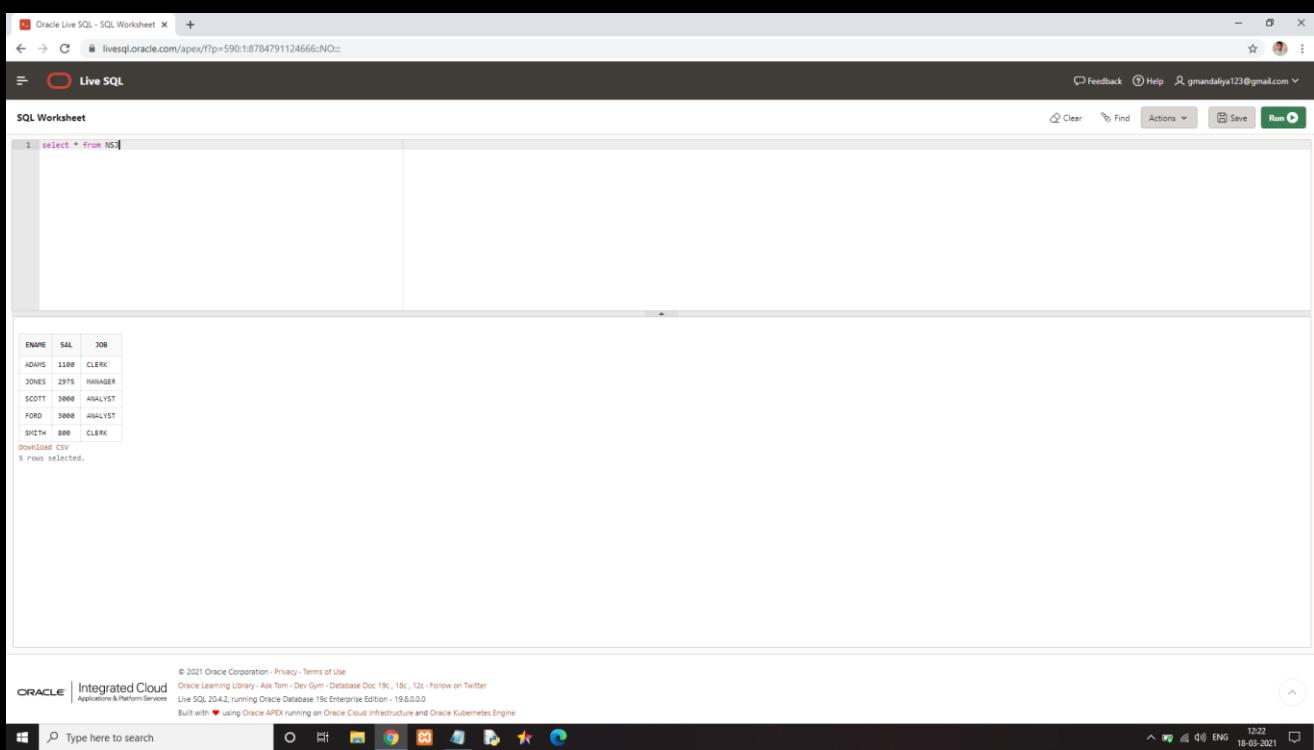
5. Create a view to display the name of the employees with their salary and job who belong to department 20.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 create view NSJ
2 select ENAME, SAL, JOB from Gautam_EMP
3
4 where DEPT_NO = 20;
```

The status bar at the bottom indicates "View created." The interface includes standard browser controls, a navigation bar with "livesql.oracle.com", and a toolbar with "Feedback", "Help", "Actions", "Save", and "Run". The bottom of the screen shows the Windows taskbar with various pinned icons and the system clock showing 12:21 on 18-03-2021.



The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is entered:

```
1 select * from NSJ;
```

The results pane displays a table with the following data:

ENAME	SAL	JOB
ADAMS	1100	CLERK
JONES	2975	MANAGER
SCOTT	3000	ANALYST
FORD	3000	ANALYST
SIMTH	800	CLERK

The status bar at the bottom indicates "5 rows selected." The interface includes standard browser controls, a navigation bar with "livesql.oracle.com", and a toolbar with "Feedback", "Help", "Actions", "Save", and "Run". The bottom of the screen shows the Windows taskbar with various pinned icons and the system clock showing 12:22 on 18-03-2021.

## 6. Delete all the views created above.

The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL command is entered:

```
1 drop view EMP_HR;
```

After running the command, the output is displayed below the worksheet:

View dropped.

The browser status bar at the bottom indicates the session details: © 2021 Oracle Corporation - Privacy - Terms of Use, Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c , 18c , 12c - Follow on Twitter, Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0, Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine, https://www.oracle.com/cloud/, Type here to search, and the system status: ENG 12:24 18-03-2021.

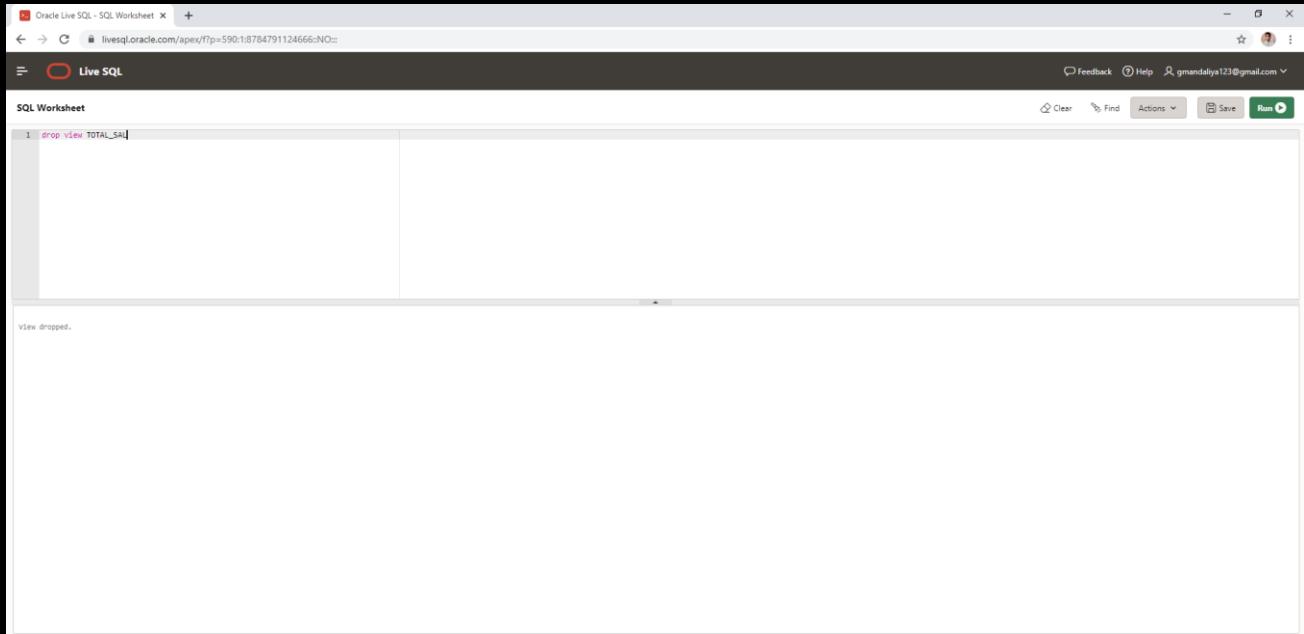
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL command is entered:

```
1 drop view VwEMP;
```

After running the command, the output is displayed below the worksheet:

View dropped.

The browser status bar at the bottom indicates the session details: © 2021 Oracle Corporation - Privacy - Terms of Use, Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c , 18c , 12c - Follow on Twitter, Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0, Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine, https://www.oracle.com/cloud/, Type here to search, and the system status: ENG 12:24 18-03-2021.



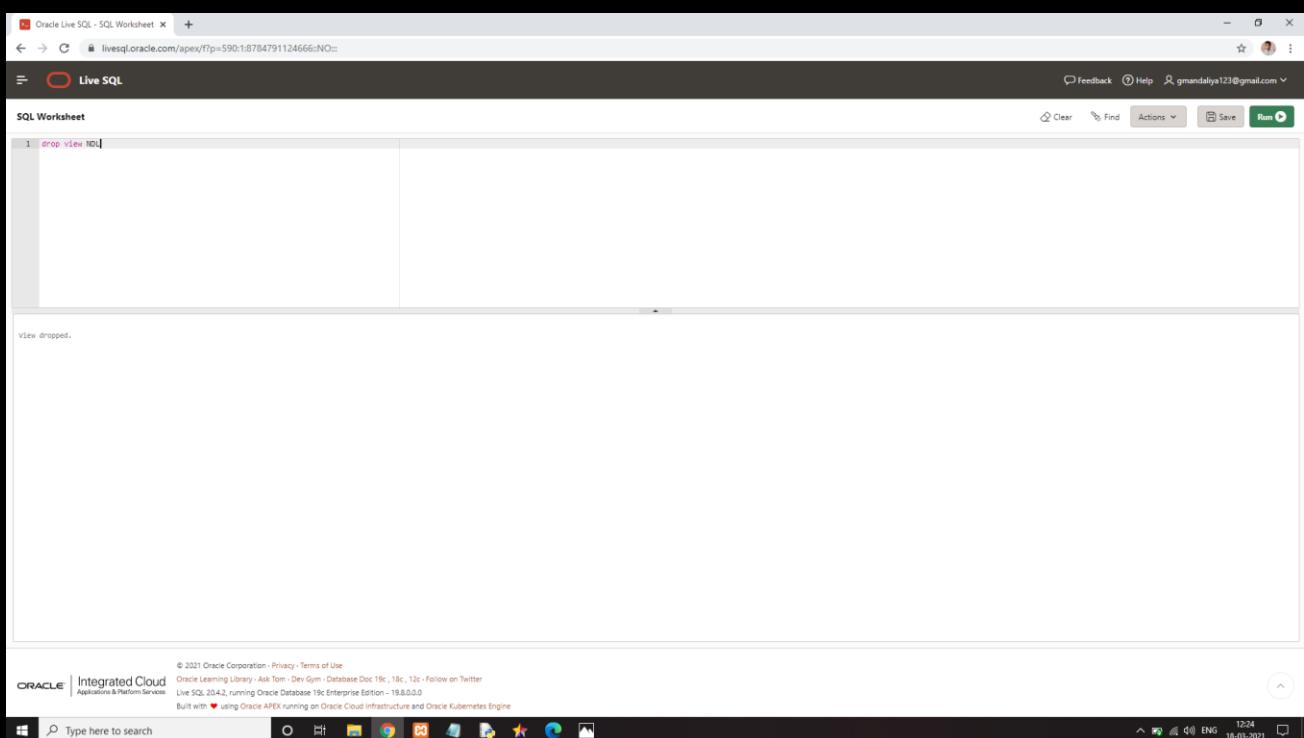
Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 drop view TOTAL_SAL;
```

View dropped.



Oracle Live SQL - SQL Worksheet

Live SQL

SQL Worksheet

```
1 drop view TD;
```

View dropped.

-----X-----

Name:- Gautam Chandrakant Mandaliya

Roll No:- 27

Class:-FYCS

Subject:- Data Base Management system

## PRACTICAL 9:- Study of Subqueries with all its clauses.

1. Display the employee name whose salary is greater than the salary of employee 7566.

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=5901:15035111137486::NO::`. The SQL Worksheet pane contains the following code:

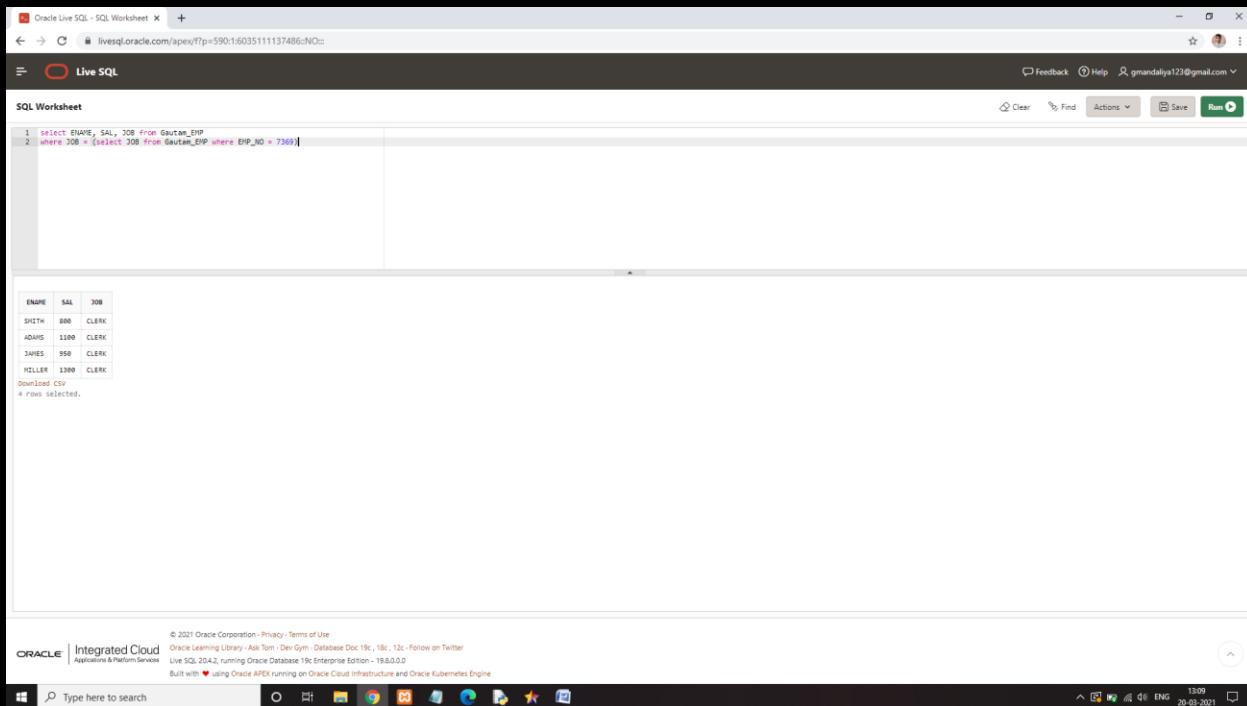
```
1 select ENAME From Gautan_EIP
2 where SAL > (select SAL From Gautan_EIP where EMP_ID = 7566)
```

The results pane shows a single row of data:

ENAME
KING

Below the results, it says "Download CSV" and "3 rows selected." The bottom status bar indicates the session is running on Oracle Database 18c Enterprise Edition - 18.0.0.0, using Oracle APEX, and is connected to Integrated Cloud Application & Platform Services.

2. Display the employee name, sal, job of the employee whose job is similar to the employee 7369.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select ENAME, SAL, JOB from Gautam_EMP
2 where JOB > (select JOB from Gautam_EMP where EMP_ID = 7369);
```

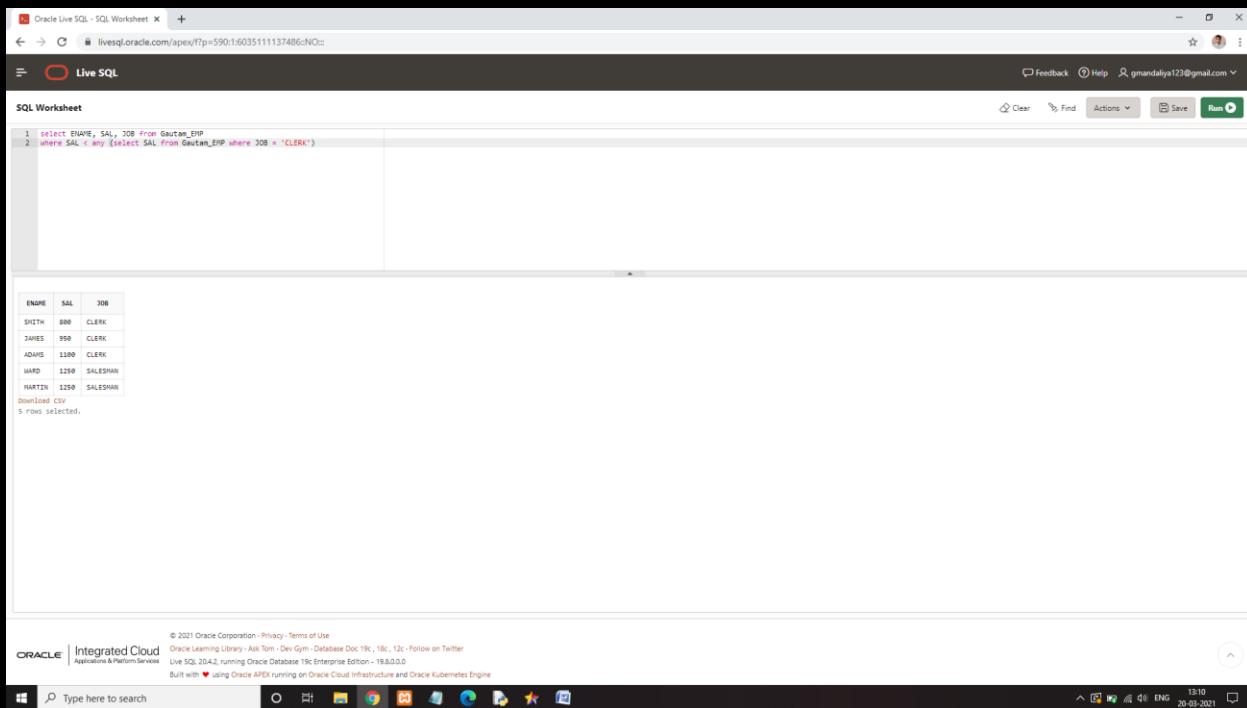
The results table shows the following data:

ENAME	SAL	JOB
SHEATH	800	CLERK
ADAMS	1100	CLERK
JAMES	950	CLERK
MILLER	1300	CLERK

Below the table, it says "Download CSV" and "4 rows selected."

At the bottom of the interface, there is copyright information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter", "Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine".

3. Display the employee name with the salary less than any salary of job type CLERK.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select ENAME, SAL, JOB from Gautam_EMP
2 where SAL < any (select SAL from Gautam_EMP where JOB = 'CLERK');
```

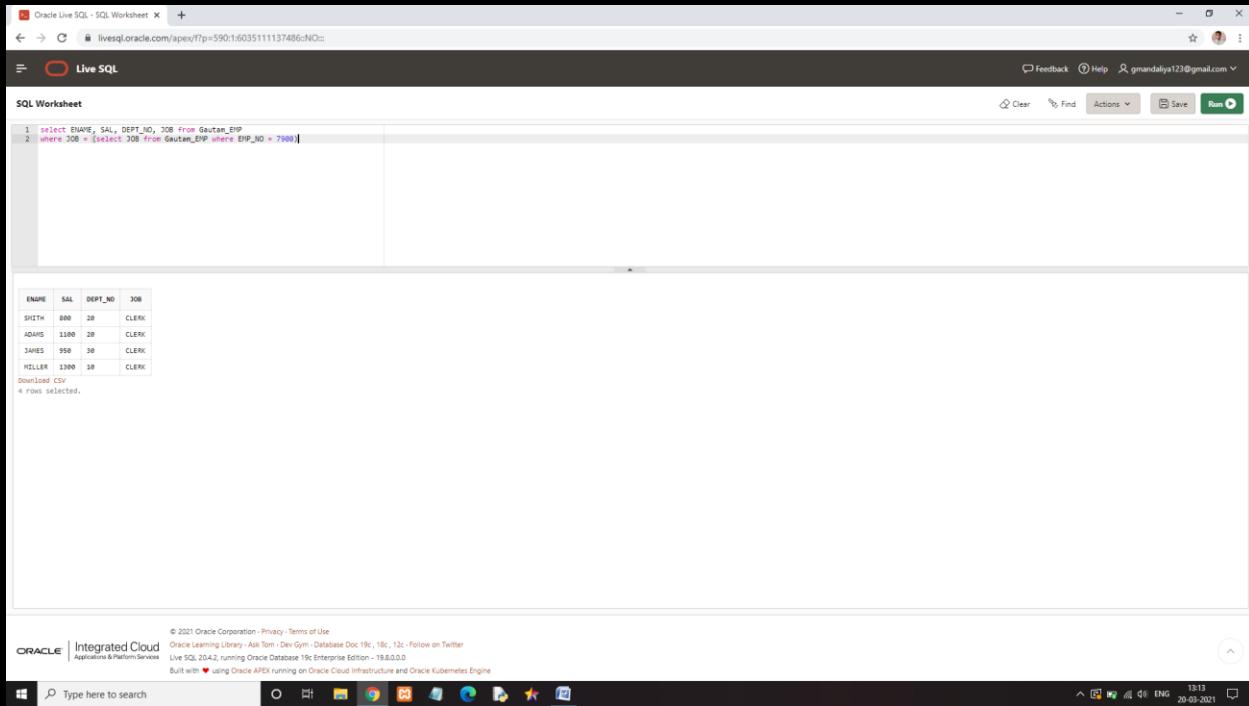
The results table shows the following data:

ENAME	SAL	JOB
SHEATH	800	CLERK
JAMES	950	CLERK
ADAMS	1100	CLERK
MARD	1250	SALESMAN
MARTIN	1250	SALESMAN

Below the table, it says "Download CSV" and "5 rows selected."

At the bottom of the interface, there is copyright information: "© 2021 Oracle Corporation - Privacy - Terms of Use", "Oracle Learning Library - Ask Tom - Dev Gym - Database Doc 19c, 18c, 12c - Follow on Twitter", "Live SQL 20.4.2, running Oracle Database 19c Enterprise Edition - 19.8.0.0", and "Built with ❤️ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine".

4. Display the employee name, salary, department id, job id for those employees who works in the same designation as the employee works whose id is 7900.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select ENAME, SAL, DEPT_NO, JOB from Gautam_EMP
2 where JOB = (select JOB from Gautam_EMP where EMP_ID = 7900)
```

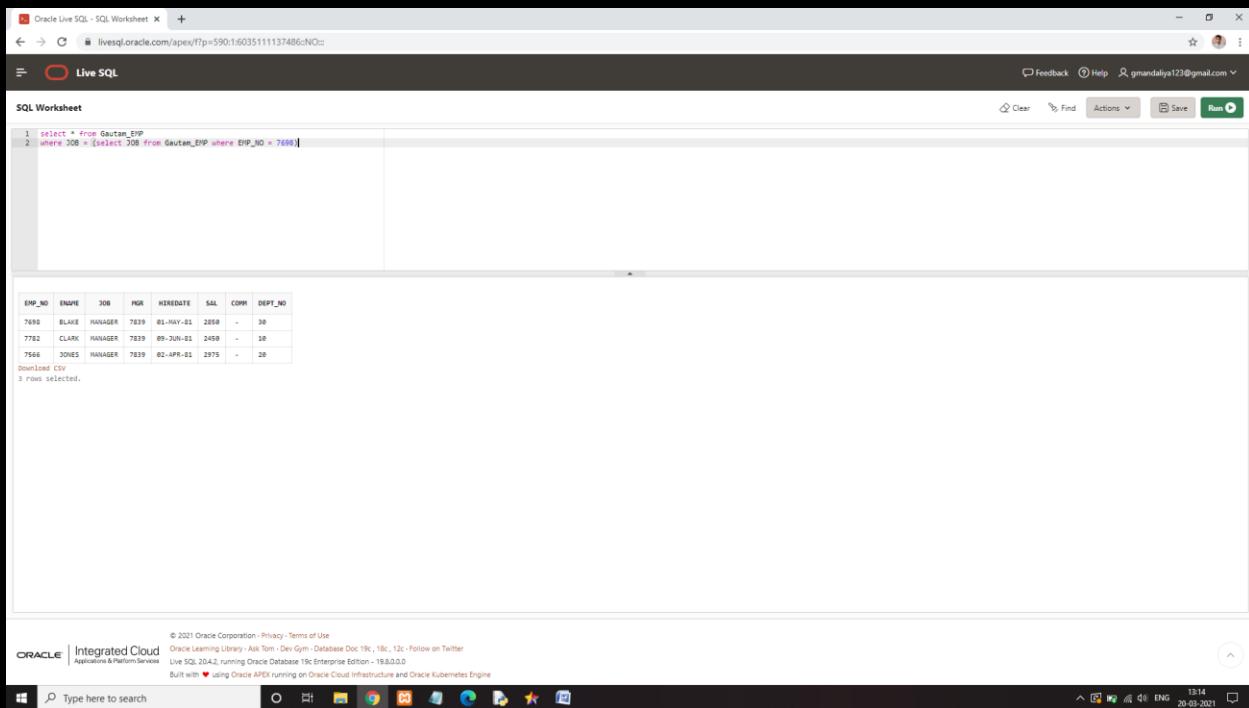
The results are displayed in a table:

ENAME	SAL	DEPT_NO	JOB
SUTHI	800	20	CLERK
ADAMS	1100	20	CLERK
JAMES	950	30	CLERK
HILLER	1300	20	CLERK

Download CSV  
4 rows selected.

Below the results, the Oracle Integrated Cloud logo and various links are visible. The system status bar at the bottom right shows "13:13 ENG 20-03-2021".

5. Display the detail of department whose manager Ecode='7698'.



The screenshot shows the Oracle Live SQL interface. The SQL Worksheet contains the following code:

```
1 select * from Gautam_EMP
2 where JOB = (select JOB from Gautam_EMP where EMP_ID = 7698)
```

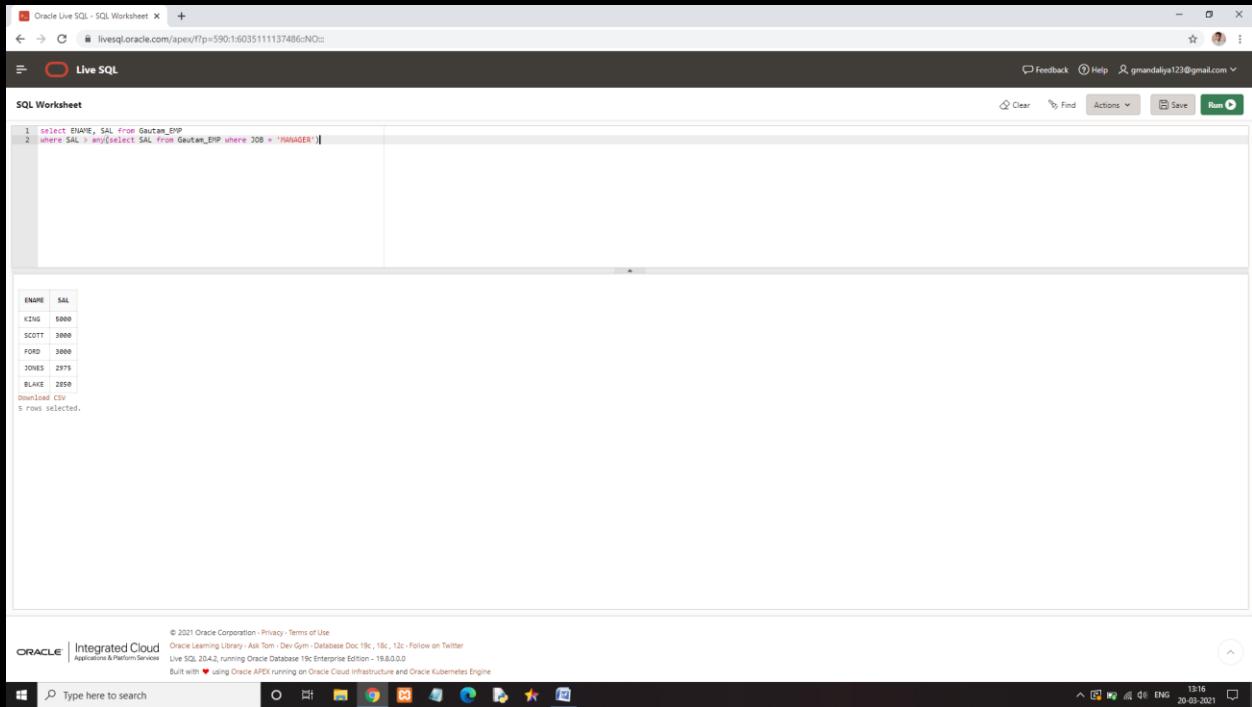
The results are displayed in a table:

EMP_ID	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPT_NO
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30
7782	CLARK	MANAGER	7839	09-JUN-81	2400	-	10
7866	ZONES	MANAGER	7839	02-APR-81	2975	-	20

Download CSV  
3 rows selected.

Below the results, the Oracle Integrated Cloud logo and various links are visible. The system status bar at the bottom right shows "13:14 ENG 20-03-2021".

## 6. Display the employees whose salary is greater than any MANAGER.



The screenshot shows a Windows desktop environment with a Oracle Live SQL - SQL Worksheet window open in a browser. The window displays a SQL query and its results. The query is:

```
1 select ENAME, SAL from Gautan_EMP  
2 where SAL > (select SAL from Gautan_EMP where JOB = 'MANAGER');
```

The results table shows the following data:

ENAME	SAL
KING	5000
SCOTT	3000
FORD	3000
JONES	2975
BLAKE	2850
DEAN	1500

Below the table, it says "5 rows selected." The browser status bar indicates the URL is [livesql.oracle.com/apex/f?p=590:16035111137486::NO::](https://livesql.oracle.com/apex/f?p=590:16035111137486::NO::).

X

**Name:- Gautam Chandrakant Mandaliya**

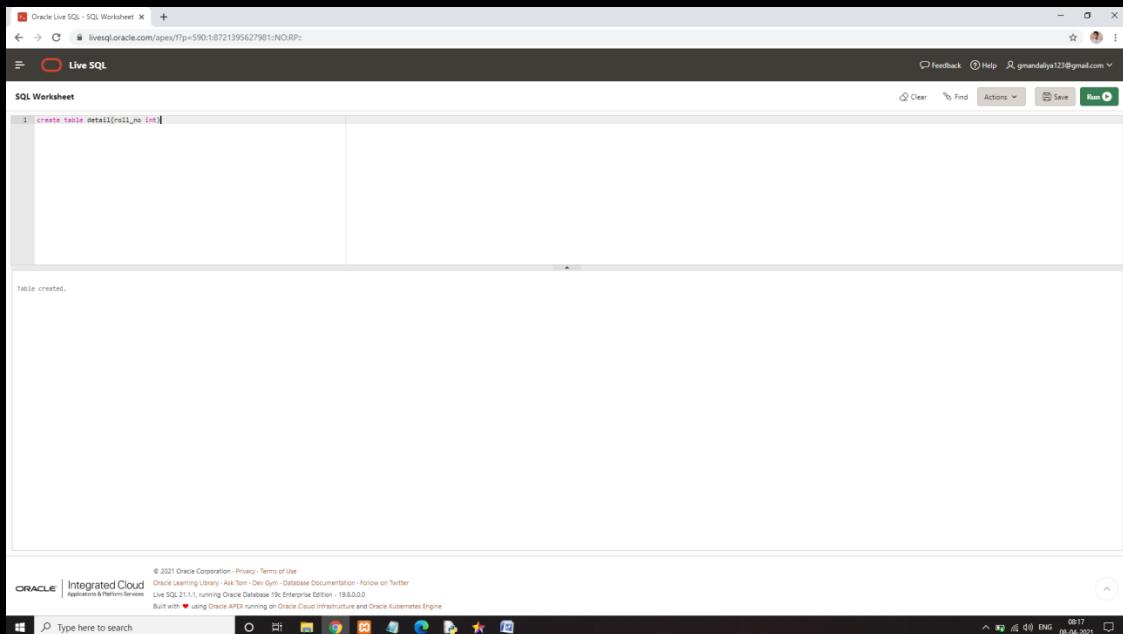
**Roll No:- 27**

**Class:-FYCS**

**Subject:- Data Base Management system**

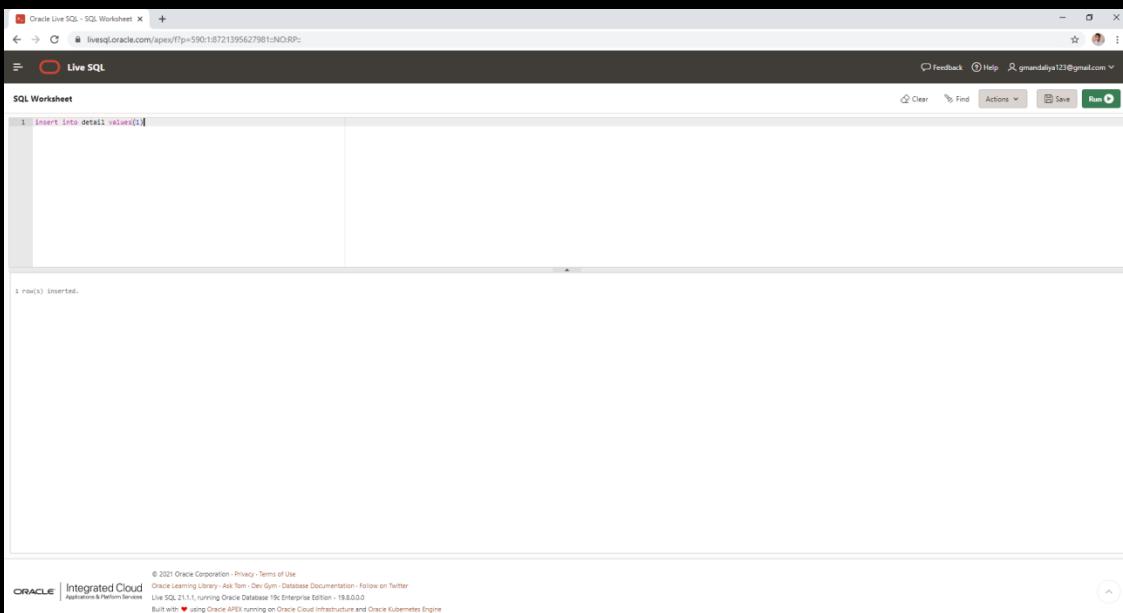
## **PRACTICAL 9:- Study of Transaction (Commit/Rollback), Locks.**

### **1. Perform Commit and Rollback on a table.**



```
create table detail(roll_no int);
```

Table created.



```
insert into detail values(1);
```

1 row(s) inserted.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | insert into detail values(2)
```

1 row(s) inserted.

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Type here to search

Feedback Help Actions Save Run

08:17 08-04-2021

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | insert into detail values(2)
```

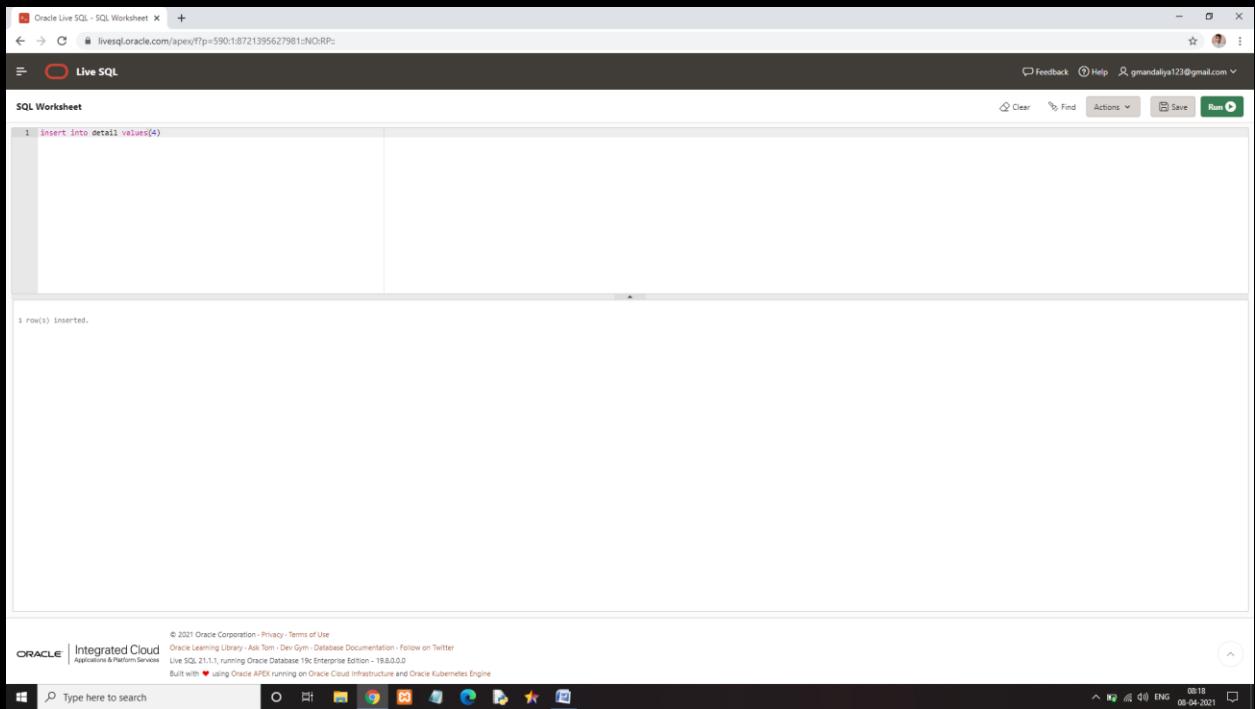
1 row(s) inserted.

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Type here to search

Feedback Help Actions Save Run

08:18 08-04-2021



Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | insert into detail values(4)
```

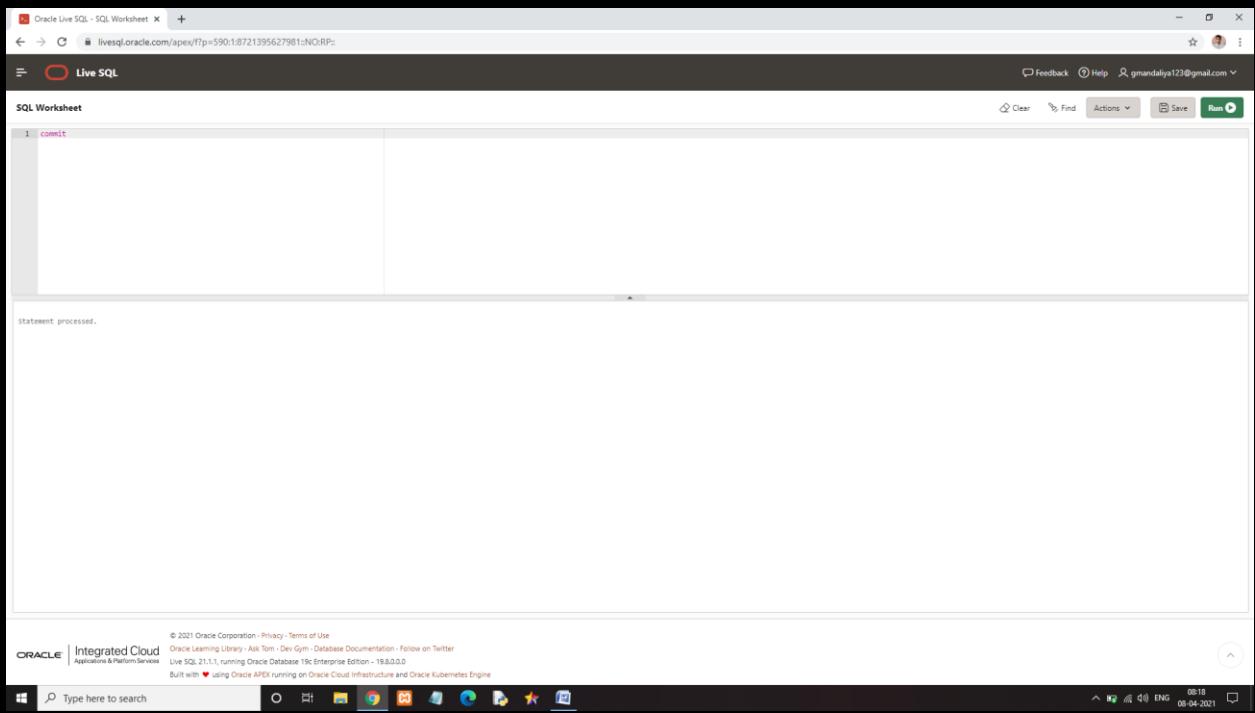
1 row(s) inserted.

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Type here to search

08:18 08-04-2021

This screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the command `insert into detail values(4)` is run, resulting in 1 row(s) inserted. The status bar at the bottom indicates the session was active from 08:18 on 08-04-2021.



Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | commit
```

statement processed.

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Type here to search

08:18 08-04-2021

This screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the command `commit` is run, resulting in the statement being processed. The status bar at the bottom indicates the session was active from 08:18 on 08-04-2021.

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 select * from detail
```

ROLL\_NO

1
2
3
4

Download CSV  
4 rows selected.

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Type here to search

08:19 08-04-2021

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 delete from detail where roll_no = 3
```

1 row(s) deleted.

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Type here to search

08:19 08-04-2021

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 delete from detail where roll_no = 4;
```

1 row(s) deleted.

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Type here to search

08:19 08-04-2021

Oracle Live SQL - SQL Worksheet

livesql.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 select * from detail;
```

ROLL_NO
1
2

Download CSV  
2 rows selected.

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Type here to search

08:20 08-04-2021

Oracle Live SQL - SQL Worksheet

LiveSQL.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | rollback;
```

Statement processed.

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Type here to search

Windows Taskbar

Oracle Live SQL - SQL Worksheet

LiveSQL.oracle.com/apex/f?p=5901:8721395627981:NO:RP:

Live SQL

SQL Worksheet

```
1 | select * from details;
```

ROLL_ID
1
2

Download CSV  
2 rows selected.

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Type here to search

Windows Taskbar

-----X-----