

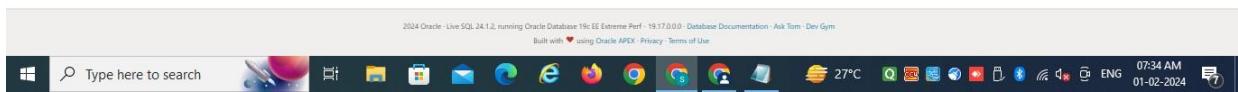
EXPERIMENT-1

CREATEPARTSTABLE

The screenshot shows a web browser window with the URL livesql.oracle.com/apex/f?p=590:1:28485171451885::RP::. The browser title bar says "SQL Worksheet". The main content area contains the following SQL code:

```
1 CREATE TABLE parts(
2     part_id NUMBER PRIMARY KEY,
3     part_name VARCHAR2(50) NOT NULL,
4     unique_code VARCHAR2(20) NOT NULL,
5     manufactured_date DATE NOT NULL,
6     cost NUMBER(10,2) NOT NULL
7 );
```

Below the code, a message says "Table created."



DESC PARTS:

The screenshot shows a web browser window with the same URL as the previous one. The browser title bar says "SQL Worksheet". The main content area contains the following SQL command:

```
1 DESC parts;
```

Below the command, a table titled "TABLE PARTS" displays the structure of the "parts" table:

Column	Null?	Type
PART_ID	NOT NULL	NUMBER
PART_NAME	NOT NULL	VARCHAR2(50)
UNIQUE_CODE	NOT NULL	VARCHAR2(20)
MANUFACTURED_DATE	NOT NULL	DATE
COST	NOT NULL	NUMBER(10,2)

At the bottom left, there is a "Download CSV" button. A note at the bottom says "5 rows selected."



ALTERTABLEPARTSBYADDINGQUANTITY:

```
1 ALTER TABLE parts
2   ADD quantity NUMBER NOT NULL;
```

Table altered.



ALTERTABLEPARTSBYMODIFYINGPART_NAMEVARCHAR2(50)TOVARCHAR2(30):

```
1 ALTER TABLE parts
2   MODIFY manufactured_date DATE;
```

Table altered.



DESCPARTSAFTERMODIFYING:

The screenshot shows a Windows desktop environment. At the top, there is a taskbar with several open application windows: 'SQL Worksheet' (active), '(2) WhatsApp', and a browser window titled 'livesql.oracle.com'. The browser window displays an Oracle SQL worksheet interface. In the main area, the user has run the command 'DESC parts;' which returns the following table structure:

Column	Null?	Type
PART_ID	NOT NULL	NUMBER
PART_NAME	NOT NULL	VARCHAR2(50)
UNIQUE_CODE	NOT NULL	VARCHAR2(20)
MANUFACTURED_DATE	NOT NULL	DATE
COST	NOT NULL	NUMBER(10,2)
QUANTITY	NOT NULL	NUMBER

Below the table, there is a 'Download CSV' button. A status message at the bottom left of the browser window says '6 rows selected.' The taskbar below the browser window contains icons for various applications including File Explorer, Mail, Edge, and others. On the far right of the taskbar, system status indicators show the date '01-02-2024', time '07:36 AM', battery level, signal strength, and volume.

ALTER TABLE PARTS DROP COLUMN MANUFACTURED_DATE;

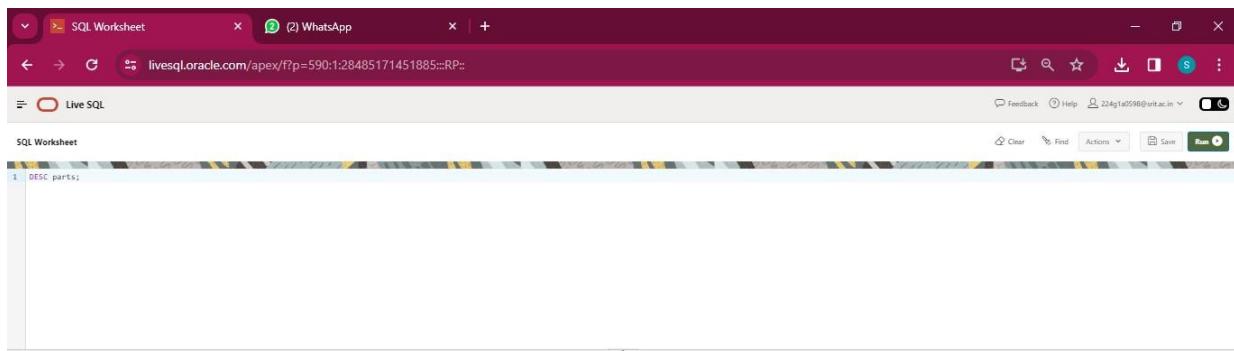
The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The address bar contains the URL "livesql.oracle.com/apex/f?p=590:1:28485171451885::R:P". The main content area is a "SQL Worksheet" tab, which displays the following SQL code:

```
1 | ALTER TABLE parts
2 |   MODIFY manufactured_date DATE;
3 | 
```

Below the code, the message "Table altered." is visible. The browser interface includes standard navigation buttons, a search bar, and a toolbar with various icons.

DESC PARTS AFTER DROPPING MANUFACTURED_DATE;





SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:28485171451885::RP::

Live SQL

SQL Worksheet

```
1 DESC parts;
```

TABLE PARTS		
Column	Null?	Type
PART_ID	NOT NULL	NUMBER
PART_NAME	NOT NULL	VARCHAR2(50)
UNIQUE_CODE	NOT NULL	VARCHAR2(20)
MANUFACTURED_DATE	NOT NULL	DATE
COST	NOT NULL	NUMBER(10,2)
QUANTITY	NOT NULL	NUMBER

[Download CSV](#)

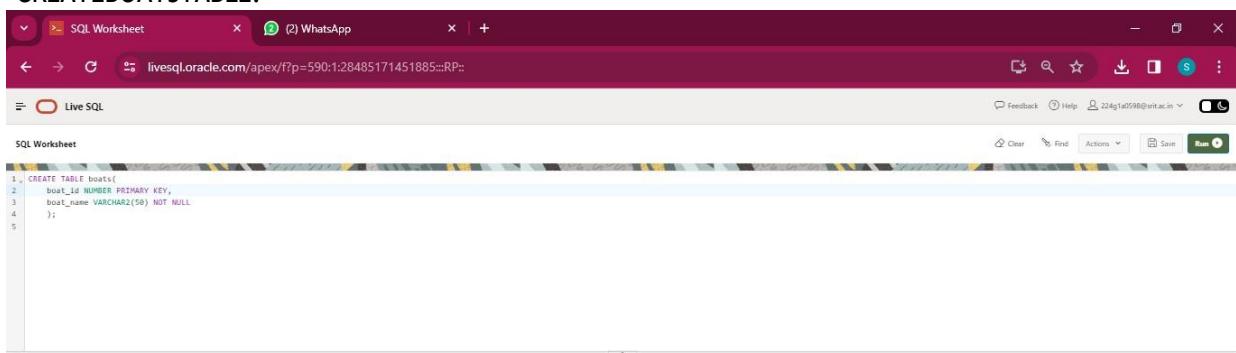
6 rows selected.

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CREATEBOATSTABLE:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:28485171451885::RP::

Live SQL

SQL Worksheet

```
1 CREATE TABLE boats(
2     boat_id NUMBER PRIMARY KEY,
3     boat_name VARCHAR2(50) NOT NULL
4 );
5
```

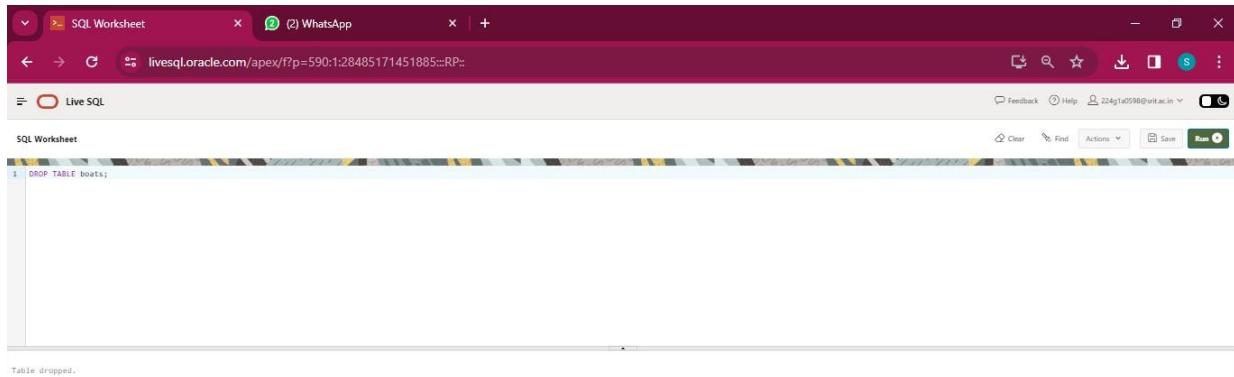
Table created.

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DROPBOATSTABLE:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:28485171451885::RP::

Live SQL

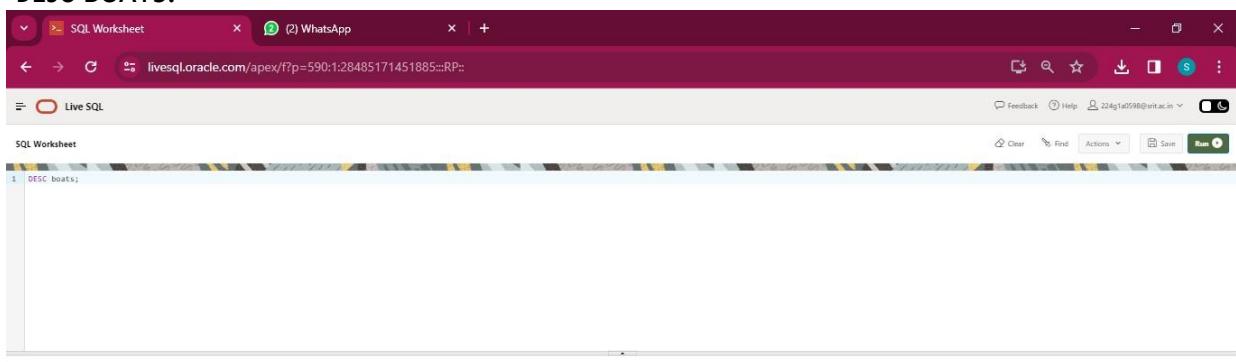
SQL Worksheet

```
1 DROP TABLE boats;
```

Table dropped.



DESC BOATS:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:28485171451885::RP::

Live SQL

SQL Worksheet

```
1 DESC boats;
```

ORA-20001: object BOATS does not exist
More Details: <https://docs.oracle.com/error-help/db/ora-20001>



INSERTINGVALUESINTOPARTS:

```
1 INSERT INTO parts VALUES (101,'XAT','XH345689823K',999.89,98);

ORA-00947: not enough values
```

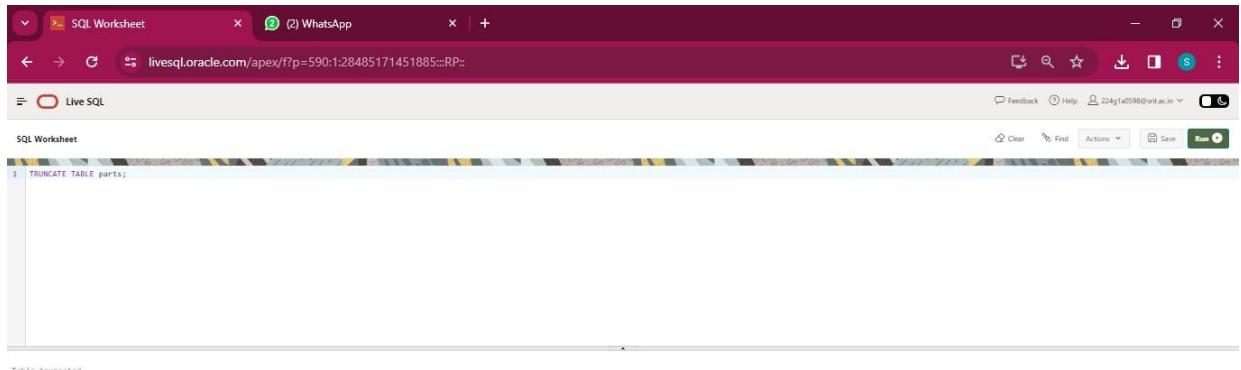


SELECT*FROMTABLEPARTS:

```
1 select * from PARTS;
```



TRUNCATETABLEPARTS:

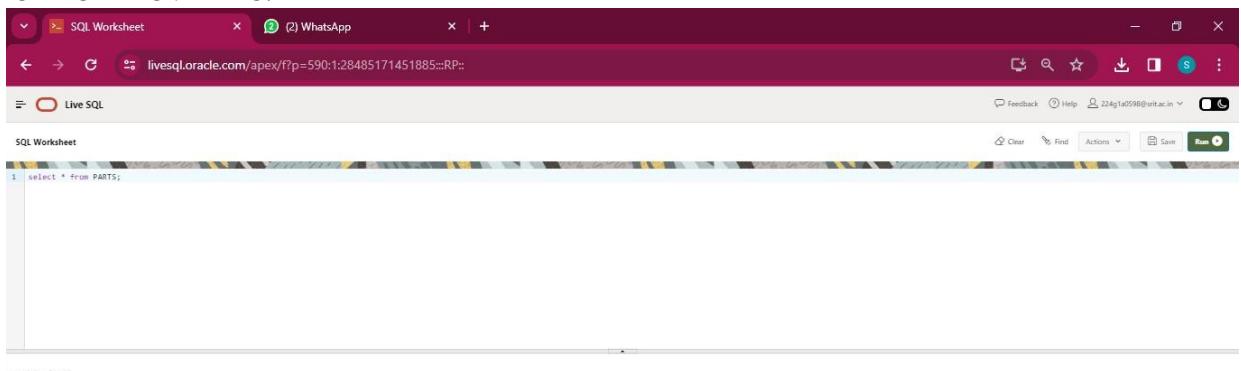


```
1 TRUNCATE TABLE parts;
```

Table truncated.



SELECT*FROMPARTS:



```
1 select * from PARTS;
```

no data found

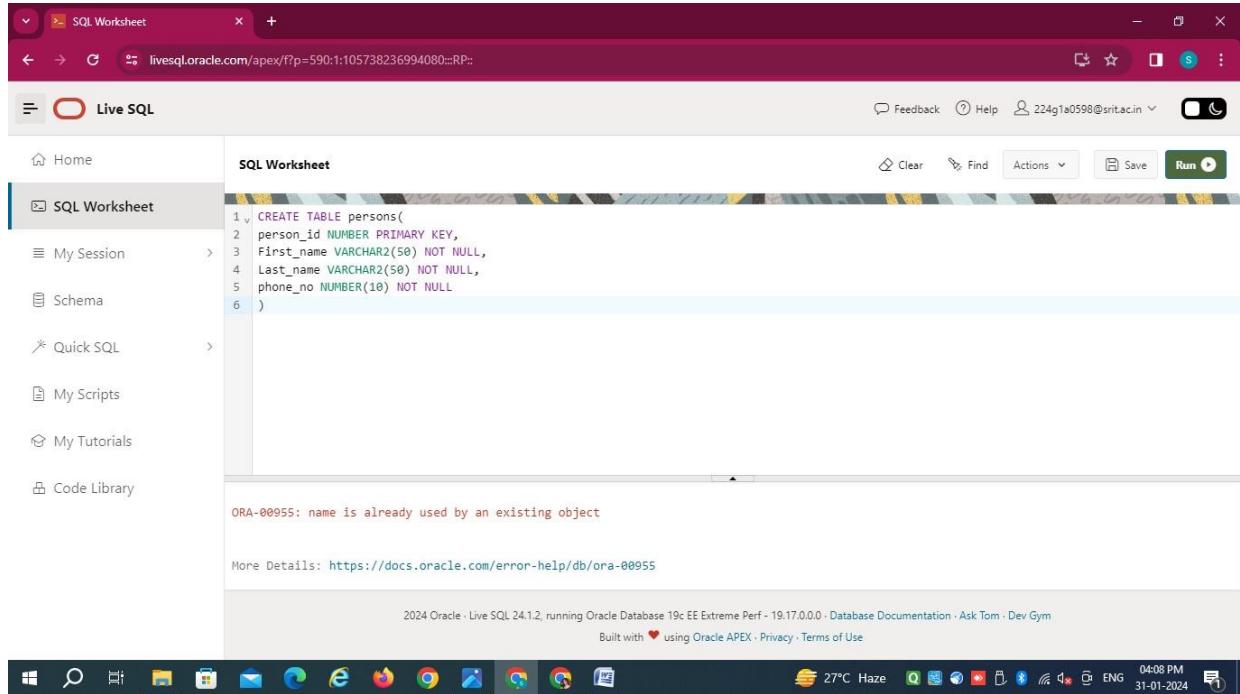


CONCLUSION:

In this lab, we successfully practised and executed SQL Queries to perform DDL Commands

EXPERIMENT-2

CREATETABLEPERSONS:

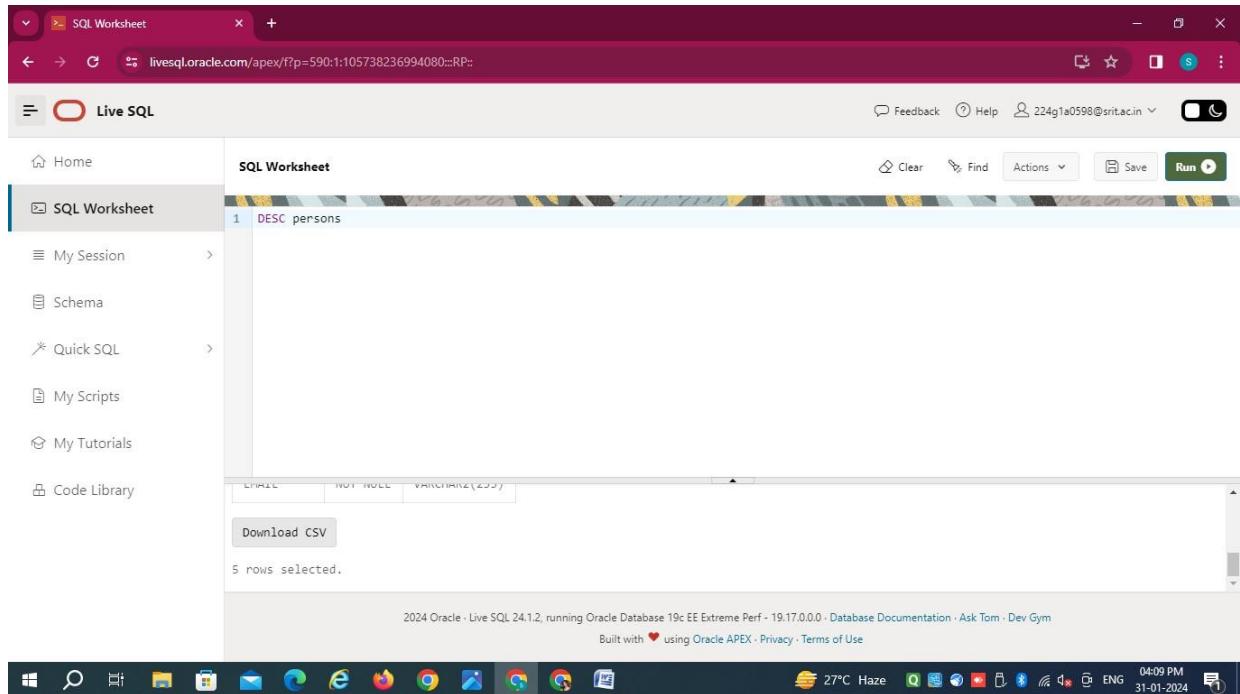


The screenshot shows a Windows desktop environment with a browser window open to the livesql.oracle.com APEX interface. The title bar reads "SQL Worksheet". The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 v CREATE TABLE persons(
2 person_id NUMBER PRIMARY KEY,
3 First_name VARCHAR2(50) NOT NULL,
4 Last_name VARCHAR2(50) NOT NULL,
5 phone_no NUMBER(10) NOT NULL
6 )
```

Below the code, an error message is displayed: "ORA-00955: name is already used by an existing object". There is a link "More Details: https://docs.oracle.com/error-help/db/ora-00955". At the bottom of the worksheet, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

DESCPERSONS:



The screenshot shows a Windows desktop environment with a browser window open to the livesql.oracle.com APEX interface. The title bar reads "SQL Worksheet". The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 DESC persons
```

Below the code, a table structure is displayed:

NAME	TYPE	NOT NULL	VARCHAR2(50)
person_id	NUMBER	YES	
First_name	VARCHAR2(50)	NO	
Last_name	VARCHAR2(50)	NO	
phone_no	NUMBER(10)	NO	

Below the table, there is a "Download CSV" button and a message "5 rows selected.". At the bottom of the worksheet, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

CREATETABLEPERSON:

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

```
1 v CREATE TABLE person(
2 person_id NUMBER PRIMARY KEY,
3 first_name VARCHAR2(50) NOT NULL,
4 last_name VARCHAR2(50) NOT NULL,
5 phone_no NUMBER(10) NOT NULL
6 )
```

The output below the code shows the message "Table created.".

At the bottom of the interface, the status bar displays: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym".

DESCPERSON:

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

```
1 DESC person
```

The output below the code shows the description of the PERSON table:

Column	Null?	Type
PERSON_ID	NOT NULL	NUMBER

At the bottom of the interface, the status bar displays: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym".

INSERTVALUESINTO PERSON:

The screenshot shows the Oracle Live SQL interface. The title bar indicates the session is connected to `livesql.oracle.com`. The main area is titled "SQL Worksheet". A SQL query is being run:

```
1 v INSERT INTO person(person_id,first_name,last_name,phone_no)
2   VALUES(1,'SREENIVAS','MUDIGALLU',9346711108)
```

The output shows the result of the insertion:

```
1 row(s) inserted.
```

At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy - Terms of Use". The system tray at the bottom right shows the date and time as "31-01-2024 04:11 PM".

The screenshot shows the Oracle Live SQL interface. On the left, there's a sidebar with options like Home, SQL Worksheet (which is selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 v INSERT INTO person(person_id,first_name,last_name,phone_no)
2   VALUES(1,'SREENIVAS','MUDIGALLU',9346711108)
```

Below the code, the output is displayed:

```
1 row(s) inserted.
```

At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤️ using Oracle APEX · Privacy · Terms of Use".

SELECT*FROMperson

The screenshot shows the Oracle Live SQL interface. The sidebar is identical to the previous one. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 SELECT * FROM person
```

Below the code, the output is displayed as a table:

PERSON_ID	FIRST_NAME	LAST_NAME	PHONE_NO
1	SREENIVAS	MUDIGALLU	9346711108

At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤️ using Oracle APEX · Privacy · Terms of Use".

CREATETABLEDISCOUNTS:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL query and its result:

```
1 SELECT * FROM person
```

PERSON_ID	FIRST_NAME	LAST_NAME	PHONE_NO
1	SREENIVAS	MUDIGALLU	9346711108

Below the result, a footer message reads: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use".

DESCDISCOUNTS:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL query and its result:

```
1 DESC discounts
```

Column	Null?	Type
DISCOUNT_ID	NOT NULL	NUMBER

Below the result, a footer message reads: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use".

Screenshot of the Live SQL Worksheet interface on livesql.oracle.com.

The interface includes:

- Header:** SQL Worksheet, URL: livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::
- Toolbar:** Feedback, Help, User: 224g1a0598@srit.ac.in, Save, Run
- Left Sidebar:** Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, Code Library.
- Central Area:** SQL Worksheet tab, showing query 1: DESC discounts. The results show the structure of the TABLE DISCOUNTS:

Column	Null?	Type
DISCOUNT_ID	NOT NULL	NUMBER
- Bottom Status Bar:** 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤️ using Oracle APEX - Privacy - Terms of Use.
- Taskbar:** Windows Start button, Search, Task View, File Explorer, Mail, Edge, Firefox, Chrome, File, Taskbar icons (27°C Haze, Battery, Network, Sound, Volume, ENG, 04:15 PM, 31-01-2024).

INSERTVALUESINTODISCOUNTS:

The screenshot shows a Windows desktop environment with a browser window open to the Oracle Live SQL worksheet at livesql.oracle.com/apex/f?p=5901:105738236994080::RP::. The browser title bar says "SQL Worksheet". The main content area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO discounts VALUES (1,'Diwali sales',15.5,DATE'2023-11-10',DATE'2023-11-15')
```

Below the code, the status message "1 row(s) inserted." is displayed. The browser's address bar shows the URL. The bottom right corner of the screen shows the Windows taskbar with various icons and the system tray indicating the date and time as 31-01-2024 at 04:16 PM.

SELECT*FROMdiscounts:

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

```
1 SELECT * FROM discounts
```

The results are displayed in a grid:

DISCOUNT_ID	DISCOUNT_NAME	OFFER	START_DATE	END_DATE
1	Diwali sales	15.5	10-NOV-23	15-NOV-23

Below the results, the footer of the interface shows:

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At the bottom, the Windows taskbar shows various application icons and system status.

CREATETABLEoriginal_bill:

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

```
1 v CREATE TABLE original_bill(2 product_no NUMBER PRIMARY KEY,3 product_name VARCHAR2(110) NOT NULL,4 quantity NUMBER NOT NULL,5 cost NUMBER(10,2) NOT NULL6 )
```

The results show the table was created successfully:

Table created.

Below the results, the footer of the interface shows:

2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym
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At the bottom, the Windows taskbar shows various application icons and system status.

DESCoriginal_bill:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area shows the SQL Worksheet with the following content:

```
1 DESC original_bill
```

Below the SQL area, there is a table definition:

COST	NOT NULL	NUMBER(10,2)
------	----------	--------------

Buttons for "Download CSV" and "Run" are present.

At the bottom, the status bar shows "27°C Haze" and the date "31-01-2024".

INSERTVALUESINTOORIGINAL_BILL:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area shows the SQL Worksheet with the following content:

```
1 v INSERT ALL
2   INTO original_bill(product_no,product_name,quantity,cost) VALUES(1,'ABC',2,29.9)
3   INTO original_bill(product_no,product_name,quantity,cost) VALUES(2,'AB34',5,89)
4   INTO original_bill(product_no,product_name,quantity,cost) VALUES(3,'JK98',1,75)
5   INTO original_bill(product_no,product_name,quantity,cost) VALUES(4,'KL77',2,99)
6   INTO original_bill(product_no,product_name,quantity,cost) VALUES(5,'NMB7',1,50)
7   SELECT * FROM dual
```

Below the SQL area, the message "5 row(s) inserted." is displayed.

At the bottom, the status bar shows "27°C Haze" and the date "31-01-2024".

SELECT*FROMoriginal_bill:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 v CREATE TABLE person(
2   person_id NUMBER PRIMARY KEY,
3   first_name VARCHAR2(50) NOT NULL,
4   last_name VARCHAR2(50) NOT NULL,
5   phone_no NUMBER(10) NOT NULL
6 )
```

Below the code, the message "Table created." is displayed. At the bottom, a footer bar shows "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

CREATETABLEcopy_bill:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 v CREATE TABLE copy_bill(
2   product_no NUMBER PRIMARY KEY,
3   product_name VARCHAR2(50) NOT NULL,
4   quantity NUMBER NOT NULL,
5   cost NUMBER(10,2) NOT NULL
6 )
```

Below the code, the message "Table created." is displayed. At the bottom, a footer bar shows "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

INSERT:

DESCcopy_bill:

The screenshot shows the Oracle Live SQL interface. The top navigation bar includes tabs for 'SQL Worksheet' and a URL 'livesql.oracle.com/apex/f?p=5901:105738236994080::RP::'. The left sidebar has sections for 'Home', 'SQL Worksheet' (selected), 'My Session', 'Schema', 'Quick SQL', 'My Scripts', 'My Tutorials', and 'Code Library'. The main workspace displays a 'SQL Worksheet' with the following content:

```
1 DESC copy_bill
```

Below this, a table named 'TABLE COPY_BILL' is shown with the following structure:

Column	Null?	Type
PRODUCT_NO	NOT NULL	NUMBER
PRODUCT_NAME	NOT NULL	VARCHAR2(50)
QUANTITY	NOT NULL	NUMBER
COST	NOT NULL	NUMBER(10,2)

A 'Download CSV' button is available below the table. A message at the bottom states '4 rows selected.' The bottom right corner shows system status icons and the date/time '04:26 PM 31-01-2024'.

SELECT*FROMcopy_bill:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=5901:105738236994080::RP::". The main area displays the output of the command "DESC copy_bill". The table structure is as follows:

Column	Null?	Type
PRODUCT_NO	NOT NULL	NUMBER
PRODUCT_NAME	NOT NULL	VARCHAR2(50)
QUANTITY	NOT NULL	NUMBER
COST	NOT NULL	NUMBER(10,2)

Below the table, there is a "Download CSV" button and a note "4 rows selected.". The status bar at the bottom right shows "27°C Haze", "ENG", "04:26 PM", and the date "31-01-2024".

UPDATEcopy_bill:

This screenshot is identical to the one above, showing the Oracle Live SQL interface with the "SQL Worksheet" tab active. The title bar and URL are the same. The main area displays the output of the command "DESC copy_bill". The table structure is identical to the one in the previous screenshot.

SELECT*FROMcopy_billWHEREproduct_no=1;

UPDATEmcopy_bill:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet". The URL in the address bar is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area contains the following SQL code:

```
1. UPDATE copy_bill
2.   SET quantity=5,COST=33.99
3. WHERE product_no=1
```

Below the code, it says "0 row(s) updated." The status bar at the bottom right shows "NIFTY +1.67%" and the date "31-01-2024".

SELECT*FROMcopy_billWHEREproduct_no=1:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The main area displays the SQL command: "1 SELECT * FROM copy_bill WHERE product_no=1". Below the command, the message "no data found" is displayed. The bottom status bar shows the date and time as "31-01-2024 04:29 PM".

SELECT*FROMcopy_bill:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The main area displays the SQL command: "1 SELECT * FROM copy_bill". Below the command, the message "no data found" is displayed. The bottom status bar shows the date and time as "31-01-2024 04:29 PM".

UPDATEcopy_billSETcost=cost*1.5;

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The main area displays the following SQL command:

```
1 UPDATEcopy_billSETcost=cost*1.5;
```

Below the command, the status message "no data found" is visible. The browser's address bar shows the URL "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The top right corner of the browser window includes standard controls like "Feedback", "Help", and "Actions". The bottom right corner of the screen shows a taskbar with various icons, the system clock (04:29 PM, 31-01-2024), and a notification badge.

SELECT*FROMcopy_bill:

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The main area displays the following SQL command:

```
1 SELECT * FROMcopy_bill WHERE product_no>1
```

Below the command, the status message "no data found" is visible. The browser's address bar shows the URL "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The top right corner of the browser window includes standard controls like "Feedback", "Help", and "Actions". The bottom right corner of the screen shows a taskbar with various icons, the system clock (04:29 PM, 31-01-2024), and a notification badge.

DELETEFROMcopy_billWHEREcost=50.99;

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The SQL Worksheet pane contains the following code:

```
1 DELETE * FROM copy_bill WHERE product_no=1
```

The results pane below the worksheet shows the message "no data found". The status bar at the bottom right indicates the session ID is 224g1a0598@vrt.ac.in, the date is 31-01-2024, and the time is 04:29 PM.

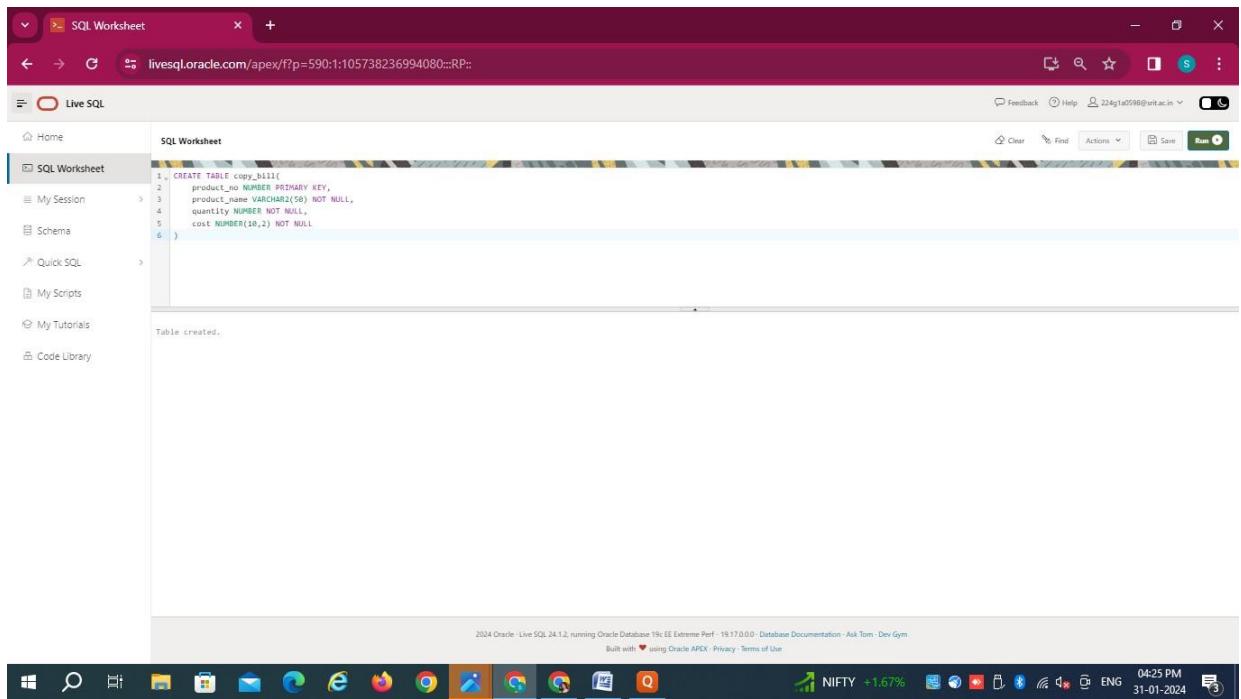
SELECT*FROMcopy_bill;

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The SQL Worksheet pane contains the following code:

```
1 CREATE TABLE copy_bill
2 (
3     product_no NUMBER PRIMARY KEY,
4     product_name VARCHAR2(50) NOT NULL,
5     quantity NUMBER NOT NULL,
6     cost NUMBER(10,2) NOT NULL
7 )
```

The results pane below the worksheet shows the message "Table created.". The status bar at the bottom right indicates the session ID is 224g1a0598@vrt.ac.in, the date is 31-01-2024, and the time is 04:25 PM.

DELETEFROMcopy_billWHEREcost>120:

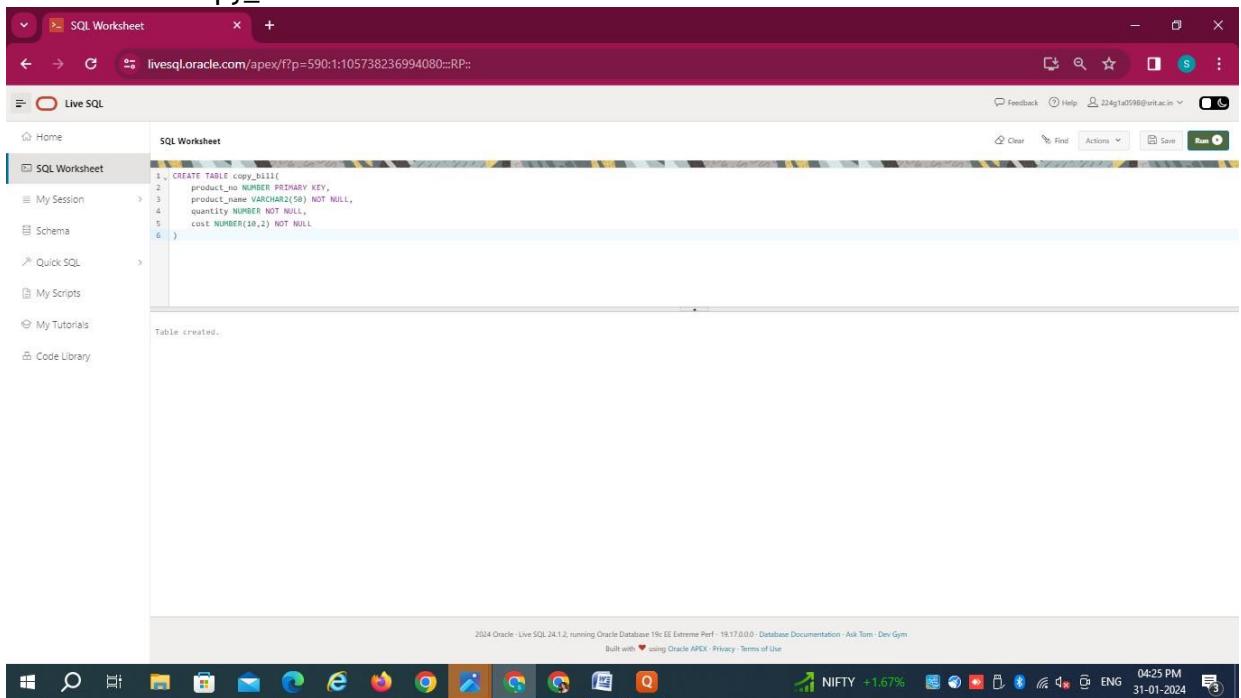


The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1. CREATE TABLE copy_bill(
2.   product_no NUMBER PRIMARY KEY,
3.   product_name VARCHAR2(58) NOT NULL,
4.   quantity NUMBER NOT NULL,
5.   cost NUMBER(10,2) NOT NULL
6. )
```

Below the code, a message says "Table created." The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym".

SELECT*FROMcopy_bill:



The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the same SQL code as the previous screenshot:

```
1. CREATE TABLE copy_bill(
2.   product_no NUMBER PRIMARY KEY,
3.   product_name VARCHAR2(58) NOT NULL,
4.   quantity NUMBER NOT NULL,
5.   cost NUMBER(10,2) NOT NULL
6. )
```

Below the code, a message says "Table created." The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym".

CREATETABLEdept:

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

```
1 CREATE TABLE copy_bill(
2     product_no NUMBER PRIMARY KEY,
3     product_name VARCHAR2(58) NOT NULL,
4     quantity NUMBER NOT NULL,
5     cost NUMBER(18,2) NOT NULL
6 )
```

The message "Table created." is displayed below the code. The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym".

INSERTALLVALUESINTODEPTVALUES:

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

```
1 SELECT * FROM dept
```

A grid-based result set is displayed, showing the following data:

DEP_ID	DEP_NAME	DEP_DESCRIPTION
1	CSE	Computer Science
2	CSM	Machine learning
3	CSD	Data Science
4	ECE	Electronics communication
5	EEE	Electrical
6	CE	Civil
7	ME	Mechanical

The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym".

SELECT*FROMdept:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=5901:105738236994080::RP::`. The main area displays the result of the SQL query `SELECT dep_name from dept`. The results are presented in a table with one column labeled `DEP_NAME`, containing the values CSE, CSM, CSD, ECE, EEE, CE, and ME. A message at the bottom indicates "7 rows selected." The interface includes a sidebar with options like Home, My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The status bar at the bottom shows system information including the date (31-01-2024) and time (04:33 PM).

SELECTdep_namefromdept:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=5901:105738236994080::RP::`. The main area displays the result of the SQL query `SELECT * FROM dept`. The results are presented in a table with three columns: `DEP_ID`, `DEP_NAME`, and `DEP_DESCRIPTION`. The data is as follows:

DEP_ID	DEP_NAME	DEP_DESCRIPTION
1	CSE	Computer Science
2	CSM	Machine Learning
3	CSD	Data Science
4	ECE	Electronics communication
5	EEE	Electrical
6	CE	Civil
7	ME	Mechanical

A message at the bottom indicates "7 rows selected." The interface includes a sidebar with options like Home, My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The status bar at the bottom shows system information including the date (31-01-2024) and time (04:34 PM). A "Nifty bank +1.44%" notification is also visible.

`SELECT dep_name, dep_description FROM dept;`

`SELECT * FROM dept;`

The screenshot shows a Windows desktop environment with a browser window open to the Oracle SQL Worksheet interface at `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The browser title bar says "SQL Worksheet". The main content area displays the results of a SQL query:

```
1  SELECT * FROM dept
```

DEP_ID	DEP_NAME	DEP_DESCRIPTION
1	CSE	Computer Science
2	CSM	Machine Learning
3	CSD	Data Science
4	ECE	Electronics communication
5	EEE	Electrical
6	CE	Civil
7	ME	Mechanical

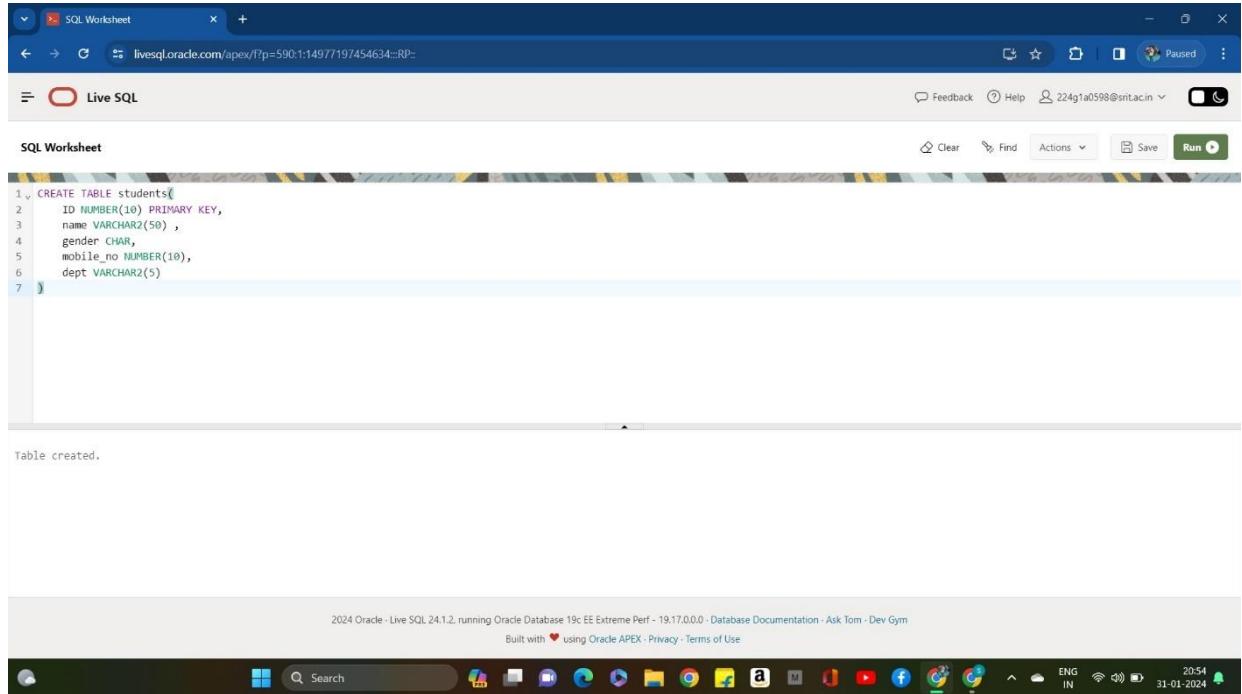
Below the table, there is a "Download CSV" button and a note stating "7 rows selected." The status bar at the bottom of the browser window shows the date and time as "31-01-2024 04:34 PM". The taskbar at the bottom of the screen shows various application icons.

CONCLUSION: In this experiment we successfully executed SQL Queries on DML Commands

EXPERIMENT-3:

Write SQL Queries to create VIEWS for various databases (i.e CREATEVIEW, UPDATEVIEW, ALTER VIEW. And DELETEVIEW)?

CREATE TABLE Students:



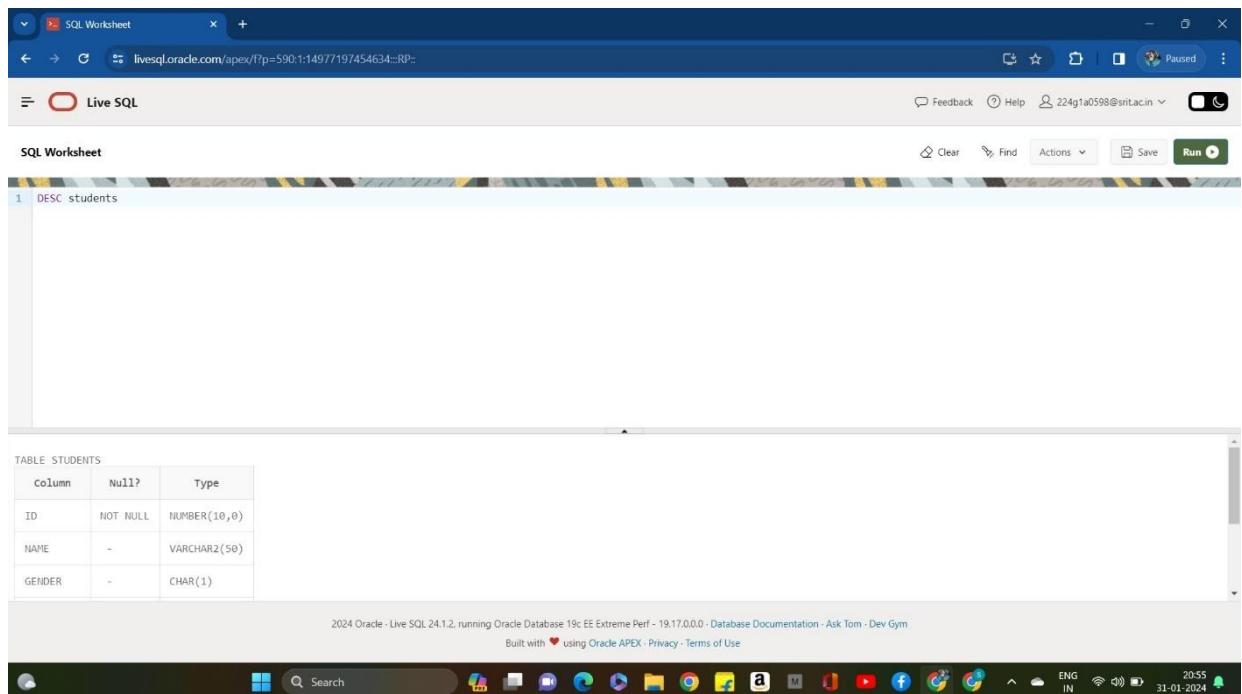
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is executed:

```
1 v CREATE TABLE students(
2   ID NUMBER(10) PRIMARY KEY,
3   name VARCHAR2(50),
4   gender CHAR,
5   mobile_no NUMBER(10),
6   dept VARCHAR2(5)
7 )
```

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

At the bottom of the window, the system tray shows the date as 31-01-2024 and the time as 20:54.

DESC STUDENTS:



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

```
1 DESC students
```

The output displays the structure of the 'STUDENTS' table:

Column	Null?	Type
ID	NOT NULL	NUMBER(10,0)
NAME	-	VARCHAR2(50)
GENDER	+	CHAR(1)

At the bottom of the window, the system tray shows the date as 31-01-2024 and the time as 20:55.

INSERT ALL VALUES INTO STUDENTS VALUES:

```
1 v INSERT ALL
2   INTO students VALUES (510,'Raju','M',7648982567,'CSE')
3   INTO students VALUES (339,'Suresh','M',7839265709,'CSM')
4   INTO students VALUES (289,'Krishna','M',6289106653,'EEE')
5   INTO students VALUES (501,'Alex','M',9286470178,'CSE')
6   INTO students VALUES (145,'Harsha','M',7459026841,'ECE')
7   INTO students VALUES (505,'Aravind','M',8468464937,'CSE')
8 SELECT * FROM DUAL
```

6 row(s) inserted.

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SELECT * FROM students:

```
1 SELECT * FROM students
```

ID	NAME	GENDER	MOBILE_NO	DEPT
510	Raju	M	7648982567	CSE
339	Suresh	M	7839265709	CSM
289	Krishna	M	6289106653	EEE
501	Alex	M	9286470178	CSE

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25°C Haze

CREATEVIEWstdASSELECTid,name,deptFROMstudents:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:14977197454634::RP-`. The title bar says "SQL Worksheet". The main area contains the SQL command: `CREATE VIEW std AS SELECT id,name,dept FROM students`. Below the command, the message "View created." is displayed. At the bottom, there is a status bar with system information: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym", "Built with ❤️ using Oracle APEX - Privacy - Terms of Use", and a taskbar with various application icons.

CREATEVIEWcse_stdASSELECTid,name,gender,deptFROMstudentsWHEREdept='CSE':

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:14977197454634::RP-`. The title bar says "SQL Worksheet". The main area contains the SQL command: `CREATE VIEW cse_std AS SELECT id,name,gender,dept FROM students WHERE dept='CSE'`. Below the command, the message "View created." is displayed. At the bottom, there is a status bar with system information: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym", "Built with ❤️ using Oracle APEX - Privacy - Terms of Use", and a taskbar with various application icons.

SELECT*FROMcse_std:

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `SELECT * FROM cse_std`. The results are displayed in a table:

ID	NAME	GENDER	DEPT
509	Baba	-	CSE
510	Raju	M	CSE
501	Alex	M	CSE
502	Karan	M	CSE

Below the table, the status bar indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤️ using Oracle APEX - Privacy - Terms of Use.

SELECT*FROMstd:

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query: `SELECT * FROM std`. The results are displayed in a table:

ID	NAME	DEPT
510	Raju	CSE
339	Suresh	CSM
289	Krishna	EEE
501	Alex	CSE

Below the table, the status bar indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤️ using Oracle APEX - Privacy - Terms of Use.

INSERTINTOstdVALUES(509,'Baba','CSE');

The screenshot shows a browser window for 'livesql.oracle.com/apex/'. The title bar says 'SQL Worksheet'. The main area contains the following SQL statement:

```
1 INSERT INTO std VALUES (509,'Baba','CSE')
```

Below the statement, an error message is displayed:

ORA-00001: unique constraint (SQL_QBCCMMPV5)QDLHSQQBMKCRN.SYS_C00147246346) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

More Details: <https://docs.oracle.com/error-help/db/ora-00001>

The status bar at the bottom indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

SELECT*FROMcse_std;

The screenshot shows a browser window for 'livesql.oracle.com/apex/'. The title bar says 'SQL Worksheet'. The main area contains the following SQL statement:

```
1 SELECT * FROM cse_std
```

Below the statement, a table is displayed:

ID	NAME	GENDER	DEPT
510	Raju	M	CSE
501	Alex	M	CSE
505	Aravind	M	CSE

The status bar at the bottom indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

UPDATEcse_stdSETname='Balaji'WHEREID=510;

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL is "livesql.oracle.com/apex/f?p=590:1:14977197454634::RP:". The interface includes a toolbar with "Live SQL", "Feedback", "Help", and a user session indicator. Below the toolbar is a "SQL Worksheet" section with a "Run" button. The code "SELECT * FROM cse_std" is run, and the results are displayed in a table:

ID	NAME	GENDER	DEPT
510	Raju	M	CSE
501	Alex	M	CSE
505	Aravind	M	CSE

At the bottom of the worksheet, there is a note: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use". The system tray at the bottom right shows the date as 31-01-2024 and the time as 21:07.

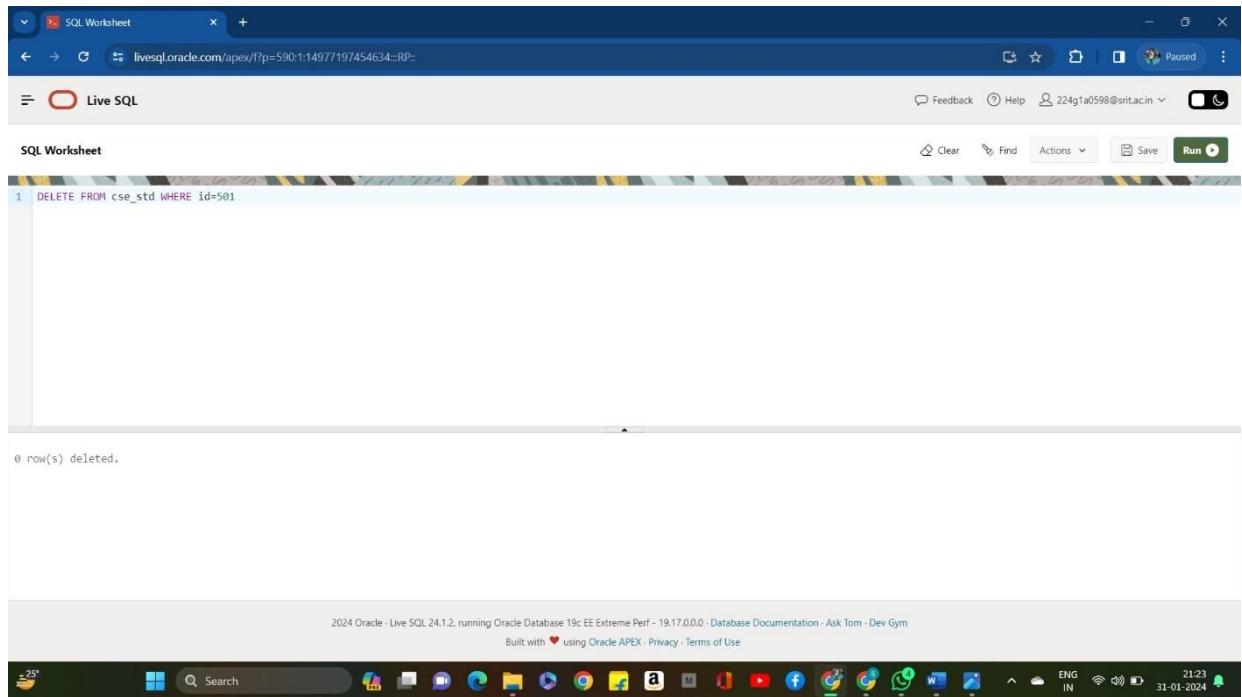
SELECT*FROMcse_std;

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL is "livesql.oracle.com/apex/f?p=590:1:14977197454634::RP:". The interface includes a toolbar with "Live SQL", "Feedback", "Help", and a user session indicator. Below the toolbar is a "SQL Worksheet" section with a "Run" button. The code "SELECT * FROM cse_std;" is run, and the results are displayed in a table:

ID	NAME	GENDER	DEPT
510	Raju	M	CSE
501	Alex	M	CSE
505	Aravind	M	CSE

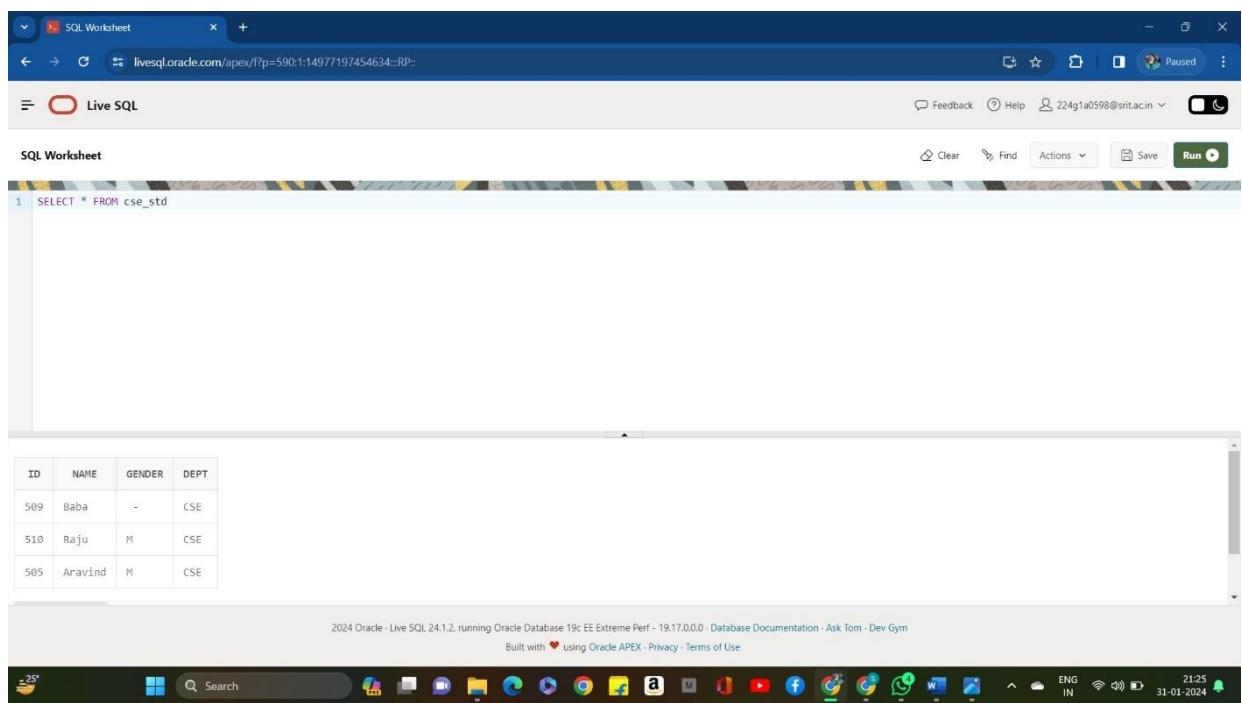
At the bottom of the worksheet, there is a note: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use". The system tray at the bottom right shows the date as 31-01-2024 and the time as 21:22.

DELETEFROMcse_stdWHEREid=501;



```
1 DELETE FROM cse_std WHERE id=501
```

0 row(s) deleted.

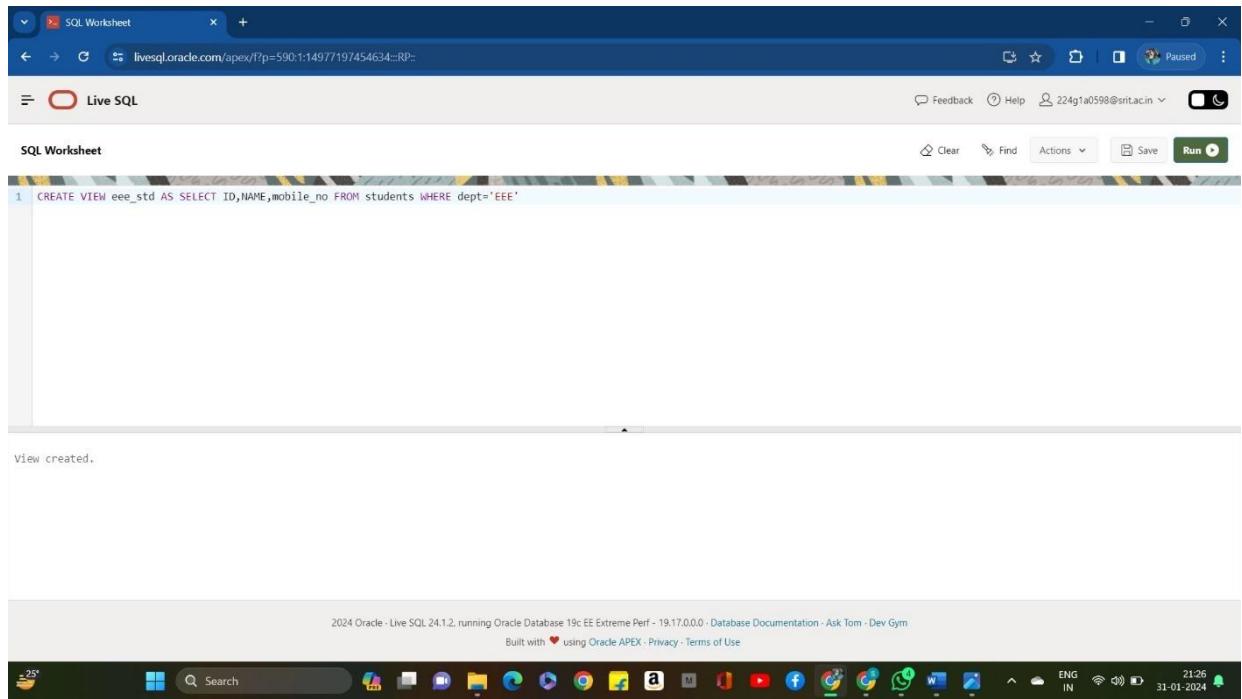


```
1 SELECT * FROM cse_std
```

ID	NAME	GENDER	DEPT
509	Baba	-	CSE
510	Raju	M	CSE
505	Aravind	M	CSE

DELETEFROMcse_stdWHEREid=501;

SELECT*FROMcse_std:

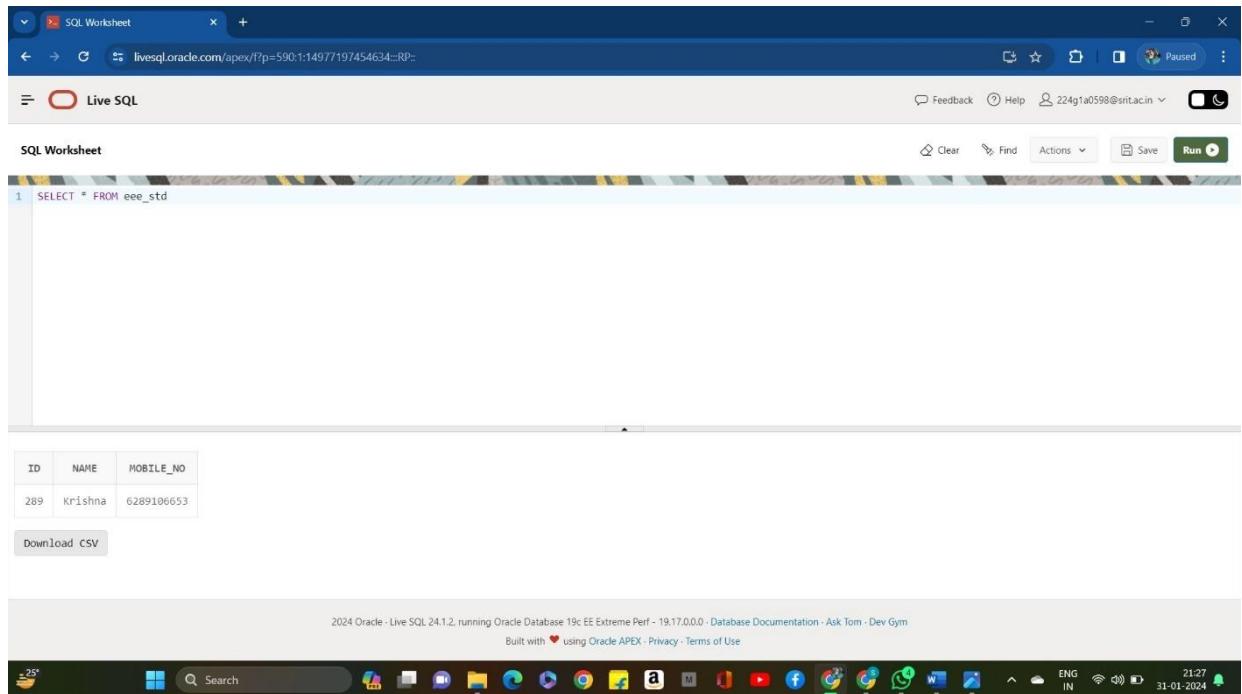


The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL in the address bar is "livesql.oracle.com/apex/f?p=590:1:14977197454634::RP:". The page content is a SQL worksheet with the following code:

```
1 CREATE VIEW eee_std AS SELECT ID,NAME,mobile_no FROM students WHERE dept='EEE'
```

Below the code, a message says "View created." The status bar at the bottom of the browser window displays "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy - Terms of Use".

CREATEVIEWeee_stdASSELECTID,NAME,mobile_noFROMstudentsWHEREdept='EEE':



The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL in the address bar is "livesql.oracle.com/apex/f?p=590:1:14977197454634::RP:". The page content is a SQL worksheet with the following code:

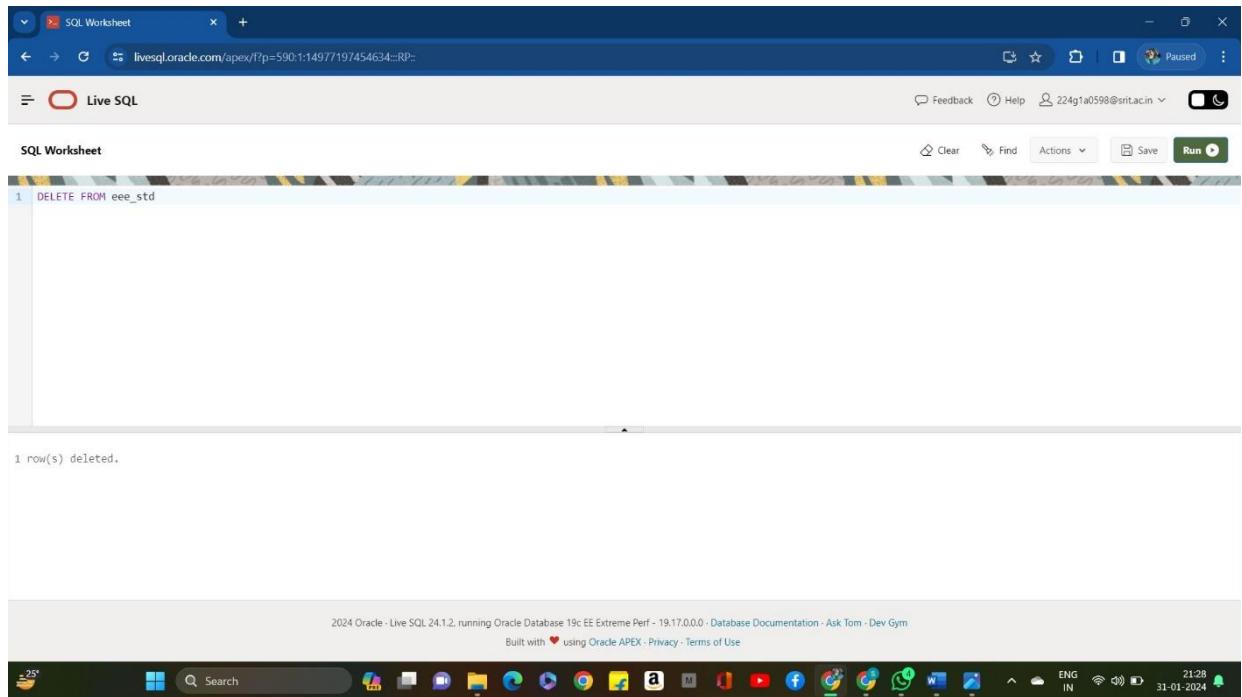
```
1 SELECT * FROM eee_std
```

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

ID	NAME	MOBILE_NO
289	Krishna	6289106653

A "Download CSV" button is visible below the table. The status bar at the bottom of the browser window displays "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy - Terms of Use".

SELECT*FROMeee_std:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:14977197454634::RP-

Live SQL

SQL Worksheet

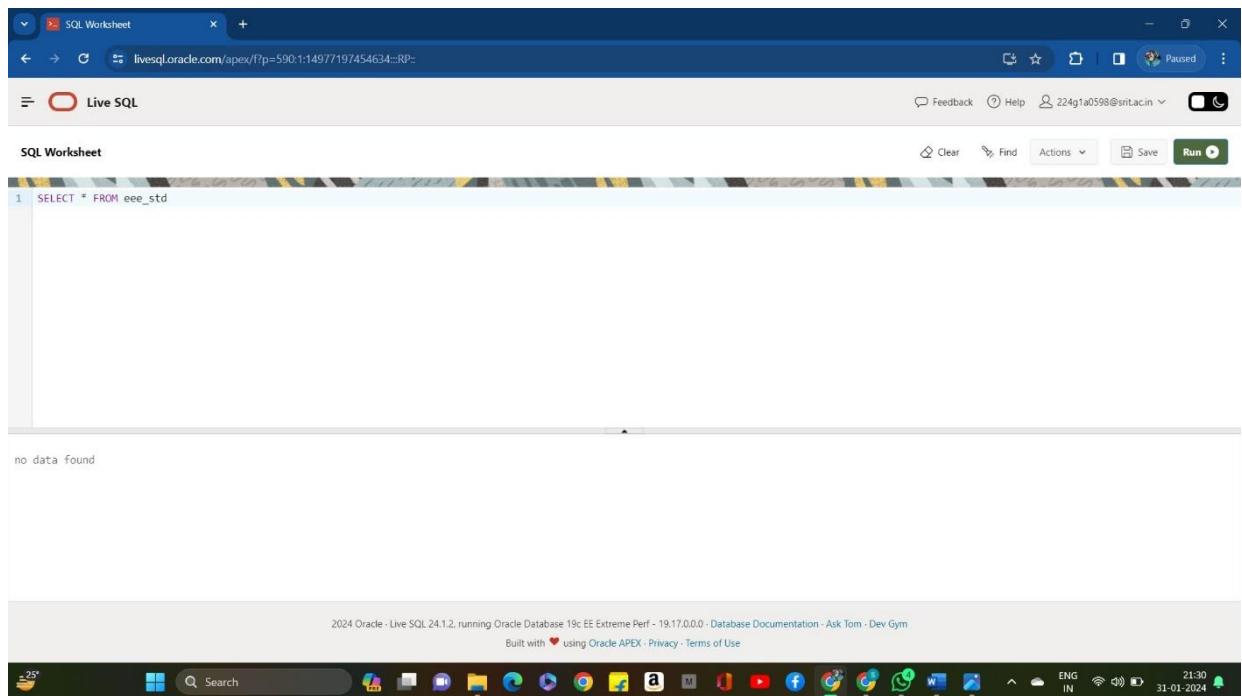
1 DELETE FROM eee_std

1 row(s) deleted.

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25° Search ENG IN 21:28 31-01-2024

DELETEFROMeee_std:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:14977197454634::RP-

Live SQL

SQL Worksheet

1 SELECT * FROM eee_std

no data found

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25° Search ENG IN 21:30 31-01-2024

SELECT*FROMeee_std:

A screenshot of a Windows desktop environment. At the top, there's a taskbar with various icons. In the center, a browser window titled "SQL Worksheet" is open, showing the URL "livesql.oracle.com/apex/f?p=590:1:14977197454634::R...". The main content area of the browser shows a single line of SQL code: "1 DROP VIEW eee_std". Below the browser, a message box titled "Battery saver" is displayed, stating "Battery saver is on Consider plugging in your device." The system tray at the bottom right shows the date as 31-01-2024 and the time as 21:30.

DROPVIEWeee_std:

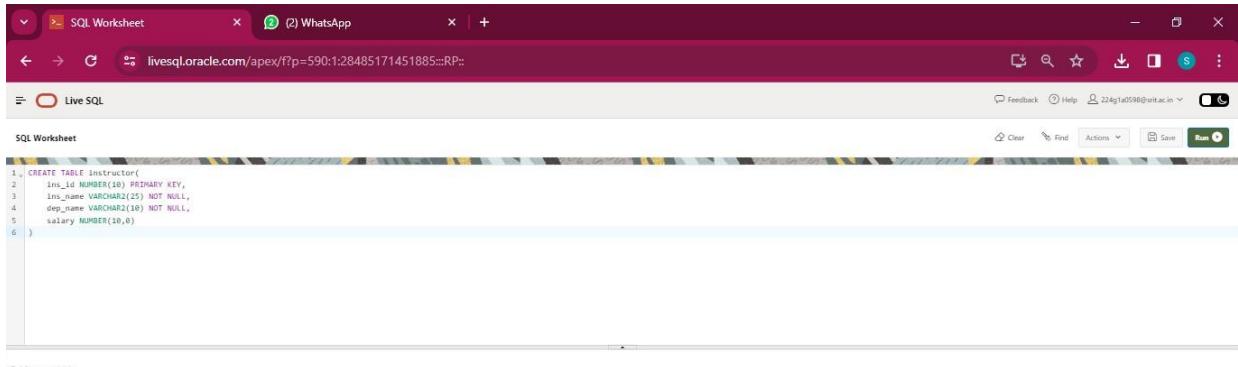
A screenshot of a Windows desktop environment. At the top, there's a taskbar with various icons. In the center, a browser window titled "SQL Worksheet" is open, showing the URL "livesql.oracle.com/apex/f?p=590:1:14977197454634::R...". The main content area of the browser shows a single line of SQL code: "1 SELECT * FROM eee_std". Below the browser, an error message is displayed: "ORA-00942: table or view does not exist" and "More Details: <https://docs.oracle.com/error-help/db/ora-00942>". The system tray at the bottom right shows the date as 31-01-2024 and the time as 21:31.

CONCLUSION=SQLQueriestocreateVIEWSforvariousdatabasesissuccessfully executed.

EXPERIMENT-4:

Write SQL Queries to perform RELATIONAL SET OPERATIONS (i.e. UNION, UNION ALL, INTERSECT, MINUS, CROSS JOIN, NATURAL JOIN)?

CREATE TABLE instructor:

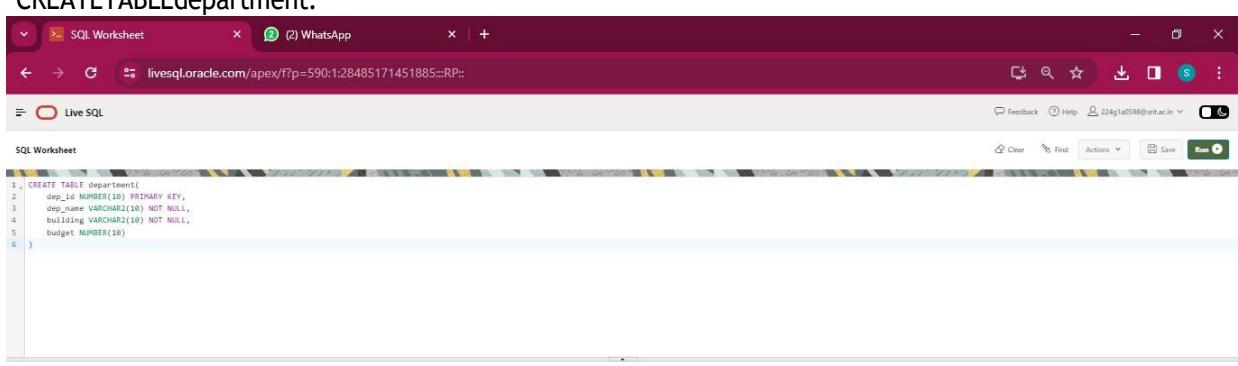


The screenshot shows a browser window titled "SQL Worksheet" with the URL "livesql.oracle.com/apex/f?p=590:1:28485171451885::R:P::". The page displays an SQL code block for creating the "instructor" table:

```
1. CREATE TABLE instructor(
2.   ins_id NUMBER(10) PRIMARY KEY,
3.   ins_name VARCHAR2(25) NOT NULL,
4.   dep_name VARCHAR2(10) NOT NULL,
5.   salary NUMBER(10,0)
6. )
```

Below the code, a message says "Table created."

CREATE TABLE department:



The screenshot shows a browser window titled "SQL Worksheet" with the URL "livesql.oracle.com/apex/f?p=590:1:28485171451885::R:P::". The page displays an SQL code block for creating the "department" table:

```
1. CREATE TABLE department(
2.   dep_id NUMBER(10) PRIMARY KEY,
3.   dep_name VARCHAR2(10) NOT NULL,
4.   building VARCHAR2(10) NOT NULL,
5.   budget NUMBER(10)
6. )
```

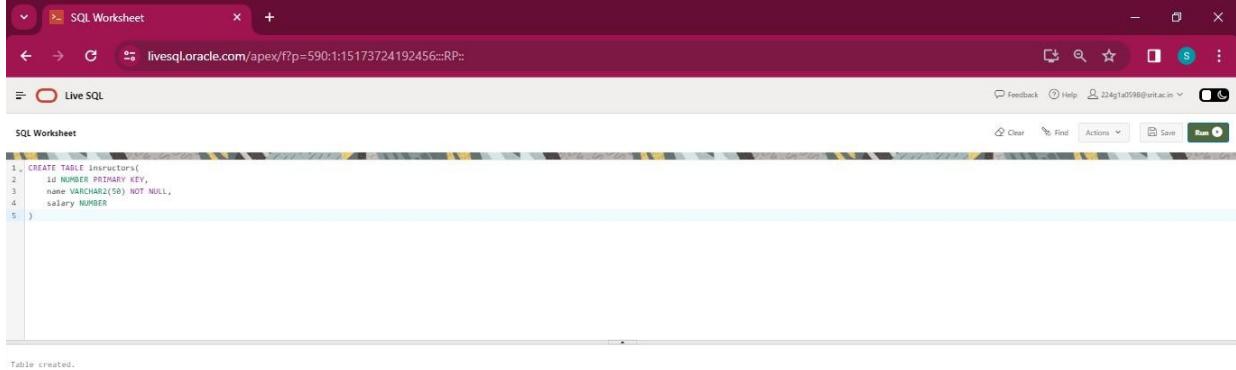
Below the code, a message says "Table created."



EXPERIMENT-5

Write SQL Queries to perform SPECIAL OPERATIONS (i.e. ISNULL, BETWEEN, LIKE, IN, EXISTS)?

CREATE TABLE instructors:

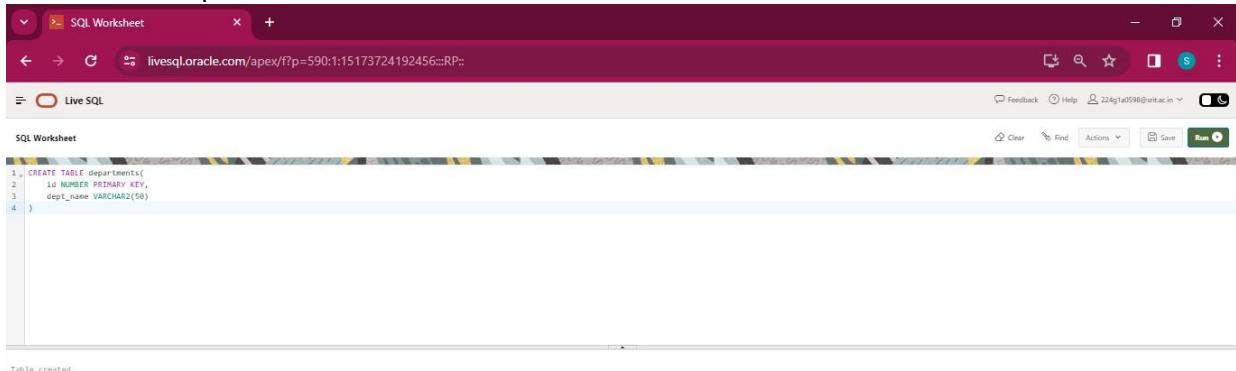


```
CREATE TABLE instructors(
    id NUMBER PRIMARY KEY,
    name VARCHAR2(50) NOT NULL,
    salary NUMBER
)
```

Table created.



CREATE TABLE departments:

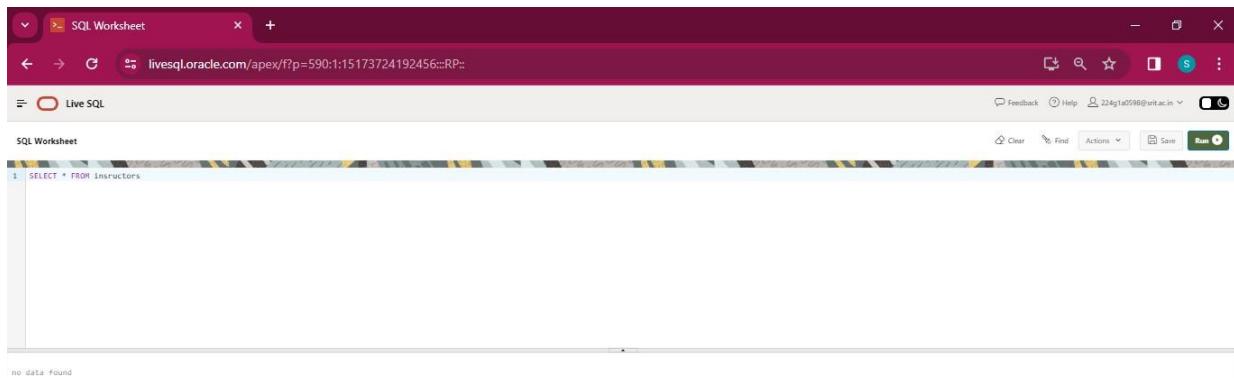


```
CREATE TABLE departments(
    id NUMBER PRIMARY KEY,
    dept_name VARCHAR2(50)
)
```

Table created.



INSERTVALUESINTOINSTRUCTORS:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::

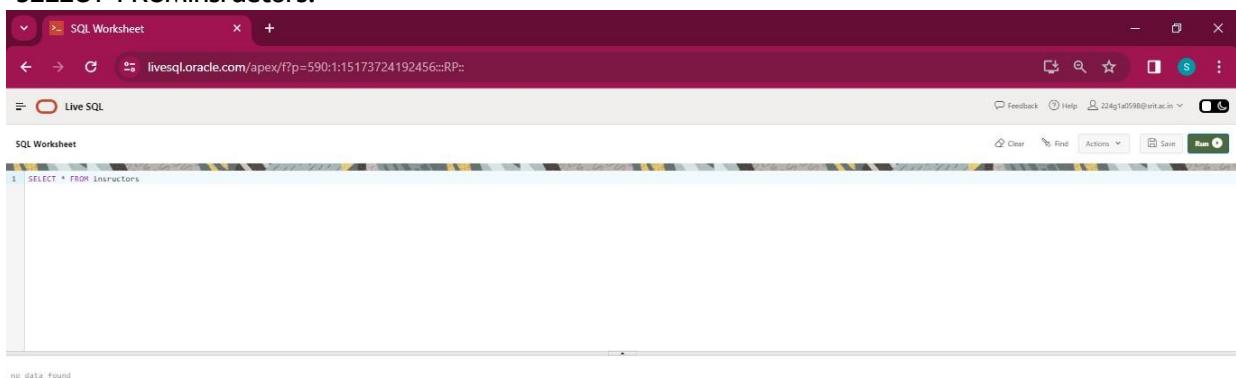
Live SQL

SQL Worksheet

```
1 SELECT * FROM instructors
```

no data found

SELECT*FROMinstructors:



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::

Live SQL

SQL Worksheet

```
1 SELECT * FROM instructors
```

no data found



Type here to search

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27°C Q ENG 06:38 PM 31-01-2024

SELECT*FROMdepartment:

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL is "livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::". The SQL worksheet contains the following code:

```
1 SELECT * FROM instructors
```

The results are displayed in a table:

ID	NAME	SALARY
1	Ram	70000
2	Shan	-
3	Venkat	300000

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

SELECT*FROMinstructorsWHEREsalaryISNULL;

The screenshot shows a browser window titled "SQL Worksheet" from "livesql.oracle.com". The URL is "livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::". The SQL worksheet contains the following code:

```
1 SELECT * FROM instructors
2 WHERE
3   salary IS NULL
```

The results are displayed in a table:

ID	NAME	SALARY
2	Shan	-

Below the table, there is a "Download CSV" button.

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SELECT * FROM instructors WHERE salary BETWEEN 10000 AND 80000;

The screenshot shows the Oracle Live SQL interface. The URL is `livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::`. The SQL Worksheet contains the following code:

```
1. SELECT * FROM instructors
2. WHERE
3. salary BETWEEN 10000 AND 80000
```

The results are displayed in a table:

ID	NAME	SALARY
1	Ram	70000
3	Venkat	30000

Below the table is a "Download CSV" button. The status bar at the bottom indicates "2 rows selected."

SELECT * FROM instructors WHERE name LIKE 'R%';

The screenshot shows the Oracle Live SQL interface. The URL is `livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::`. The SQL Worksheet contains the following code:

```
1. SELECT * FROM instructors
2. WHERE
3. name LIKE 'R%'
```

The results are displayed in a table:

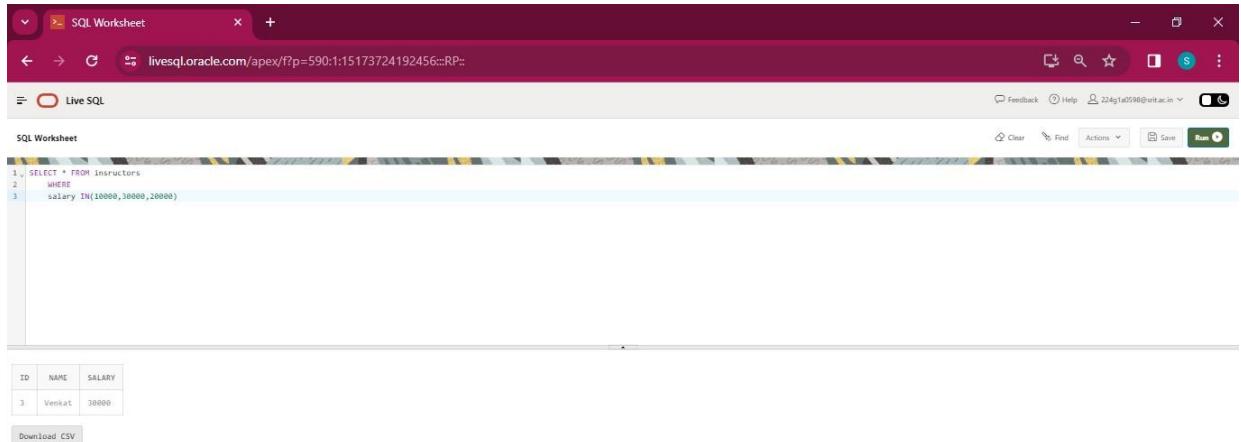
ID	NAME	SALARY
1	Ram	70000

Below the table is a "Download CSV" button.

2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym
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SELECT * FROM instructors WHERE name LIKE '_____':



The screenshot shows the Oracle Live SQL interface. The URL is `livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::`. The SQL Worksheet contains the following code:

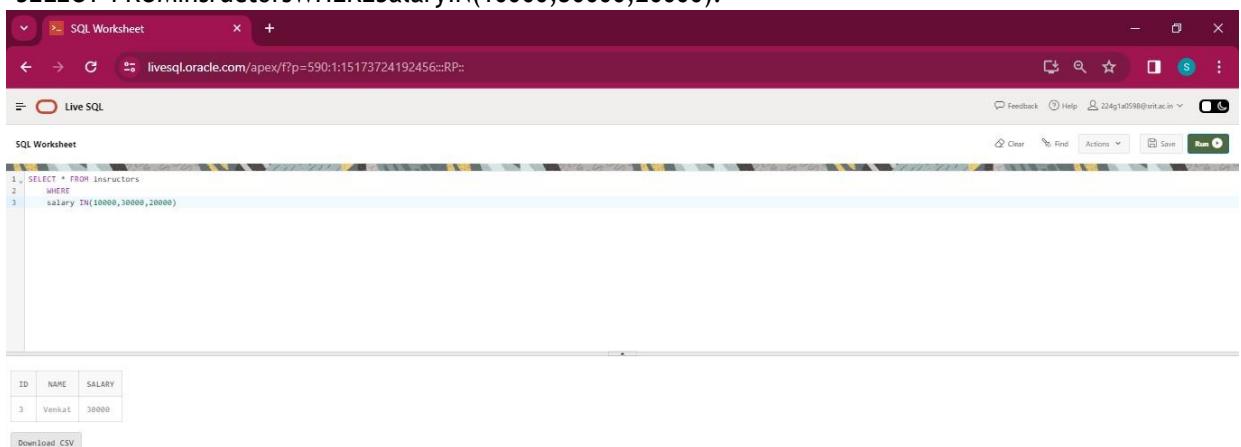
```
1. SELECT * FROM instructors
2. WHERE
3. salary IN(10000,30000,20000)
```

The results show a single row:

ID	NAME	SALARY
3	Venkat	30000

[Download CSV](#)

SELECT * FROM instructors WHERE salary IN(10000,30000,20000):



The screenshot shows the Oracle Live SQL interface. The URL is `livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::`. The SQL Worksheet contains the following code:

```
1. SELECT * FROM instructors
2. WHERE
3. salary IN(10000,30000,20000)
```

The results show a single row:

ID	NAME	SALARY
3	Venkat	30000

[Download CSV](#)



`SELECT * FROM instructors WHERE EXISTS(SELECT * FROM departments WHERE instructors.id=departments.id);`

The screenshot shows a browser window titled "SQL Worksheet" at livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::. The SQL Worksheet tab is selected. The code entered is:

```
1 | SELECT * FROM instructors
2 | WHERE
3 |   EXISTS(SELECT * FROM departments WHERE instructors.id=departments.id)
```

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

ID	NAME	SALARY
1	Ram	70000
2	Shan	-
3	Venkat	30000

A "Download CSV" button is present. A status message at the bottom left says "3 rows selected." At the bottom right, there is a system tray showing the date and time.

CONCLUSION: SQL Queries perform RELATIONAL SET Operations (i.e. ISNULL, BETWEEN, LIKE, IN, EXISTS)

EXPERIMENT-6

Write SQL Queries to perform JOIN OPERATIONS (i.e. CONDITIONAL JOIN, EQUIJOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN, FULL OUTER JOIN)?

CREATE TABLE student:

The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar includes icons for File Explorer, Mail, Edge, and other applications. The system tray shows the date as 31-01-2024 and the time as 06:22 PM. The main window is a browser-based SQL worksheet titled "SQL Worksheet" from "livesql.oracle.com". The URL in the address bar is "livesql.oracle.com/apex/f?p=590:1:15173724192456::R:P::". The worksheet interface has tabs for "SQL Worksheet" and "Live SQL". The SQL code area contains the following:

```
1 CREATE TABLE student(
2   roll_no NUMBER PRIMARY KEY,
3   name VARCHAR2(50) NOT NULL,
4   dept_name VARCHAR2(10) NOT NULL
5 )
```

Below the code, a message says "Table created."

CREATE TABLE blocks:

The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar includes icons for File Explorer, Mail, Edge, and other applications. The system tray shows the date as 31-01-2024 and the time as 06:23 PM. The main window is a browser-based SQL worksheet titled "SQL Worksheet" from "livesql.oracle.com". The URL in the address bar is "livesql.oracle.com/apex/f?p=590:1:15173724192456::R:P::". The worksheet interface has tabs for "SQL Worksheet" and "Live SQL". The SQL code area contains the following:

```
1 CREATE TABLE blocks(
2   dept_name VARCHAR2(10) PRIMARY KEY,
3   block_name VARCHAR2(20) NOT NULL
4 )
```

Below the code, a message says "Table created."



INSERT ALL INTO STUDENT VALUES:

The screenshot shows a browser window titled "SQL Worksheet" on the "livesql.oracle.com" website. The SQL code attempts to insert multiple rows into the "student" table:

```
1: INSERT ALL
2:   INTO student VALUES (505,'Aravind','CSE')
3:   INTO student VALUES (411,'Rani','EEE')
4:   INTO student VALUES (318,'Raju','ECE')
5:   INTO student VALUES (409,'Babu','CSH')
6:   INTO student VALUES ('CSE','C-BLOCK')
7:   INTO blocks VALUES ('ECE','B-BLOCK')
8:   INTO blocks VALUES ('EEE','A-BLOCK')
9: SELECT * FROM dual
```

The execution fails due to unique constraint violations:

- ORA-00001: unique constraint (SQL_VVYRDVVPHEDSONHOAVOCGGCDWX.SYS_C00147232258) violated ORA-06512 at "SYS.DBMS_SQL", line 1721
- ORA-00001: unique constraint (SQL_VVYRDVVPHEDSONHOAVOCGGCDWX.SYS_C00147232258) violated ORA-06512 at "SYS.DBMS_SQL", line 1721

More details are provided for each error.

SELECT * FROM student:

The screenshot shows a browser window titled "SQL Worksheet" on the "livesql.oracle.com" website. The SQL code selects all columns from the "blocks" table:

```
1: SELECT * FROM blocks
```

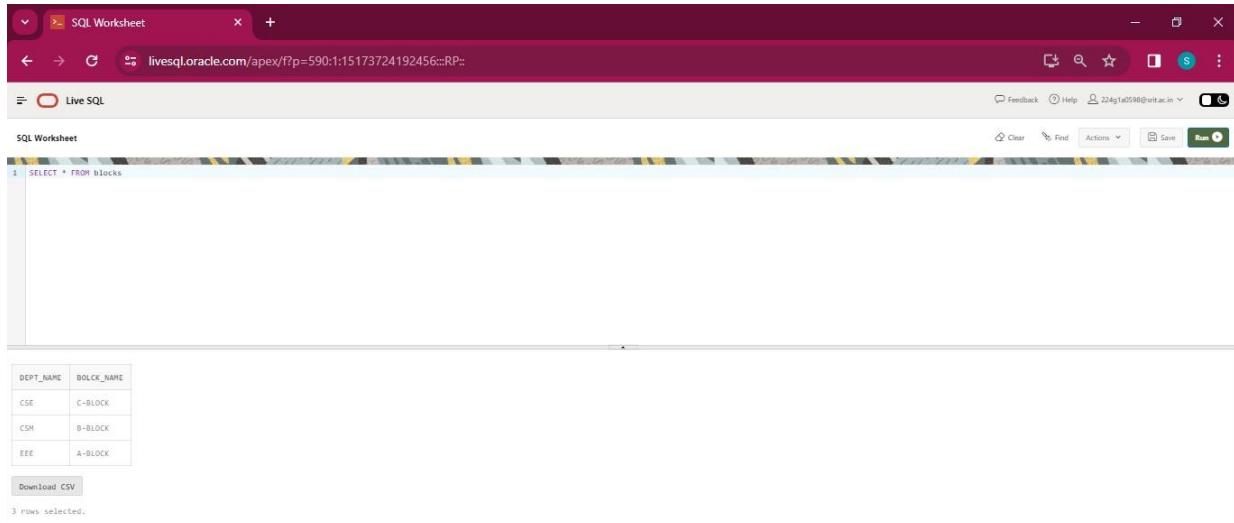
The results are displayed as a table:

DEPT_NAME	BOLCK_NAME
CSE	C-BLOCK
CSH	B-BLOCK
EEE	A-BLOCK

A "Download CSV" button is visible below the table. A note indicates 3 rows selected.

The screenshot shows a Windows taskbar with various icons for system status (Wi-Fi, battery, volume) and time (06:25 PM, 31-01-2024).

SELECT*FROMblocks:



```
1 SELECT * FROM blocks
```

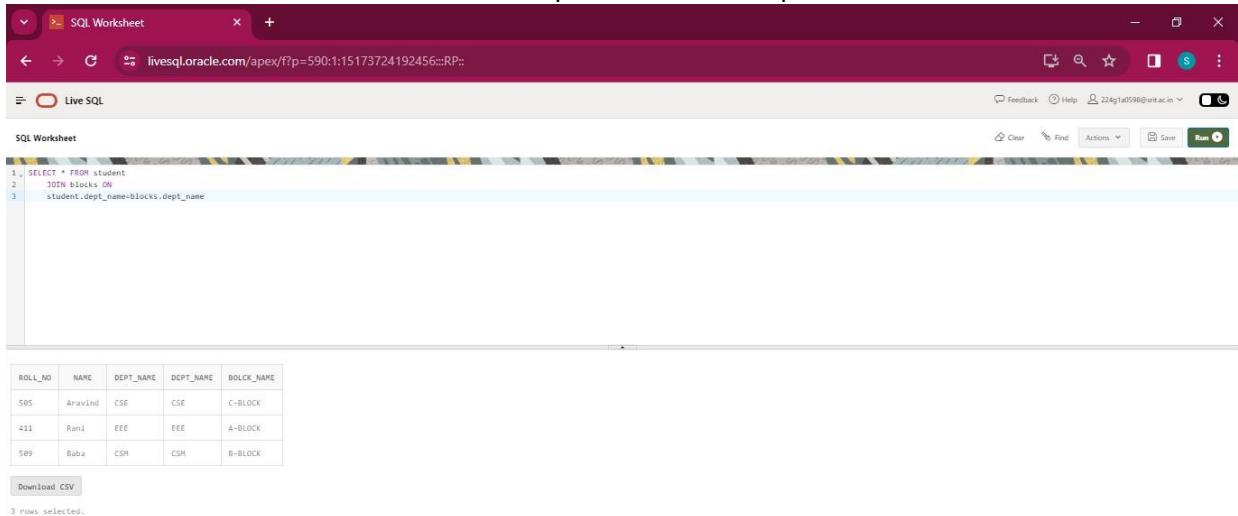
DEPT_NAME	BOLCK_NAME
CSE	C-BLOCK
CSM	B-BLOCK
EEE	A-BLOCK

Download CSV

3 rows selected.



SELECT*FROMstudentJOINblocksONstudent.dept_name=blocks.dept_name:



```
1 SELECT * FROM student
2 JOIN blocks ON
3 student.dept_name=blocks.dept_name
```

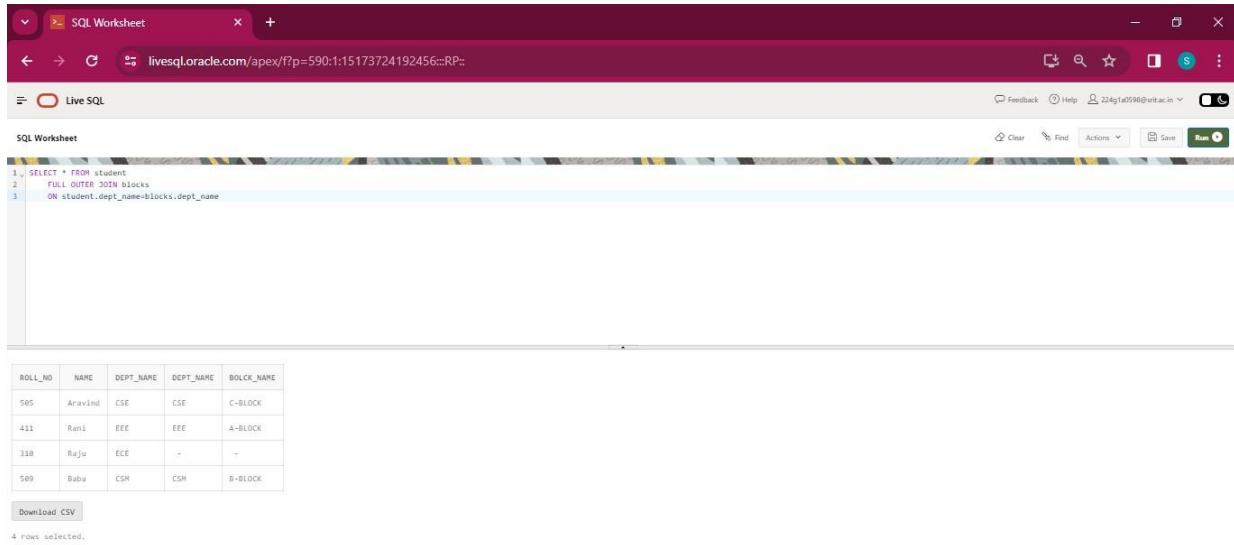
ROLL_NO	NAME	DEPT_NAME	DEPT_NAME	BOLCK_NAME
505	Aravind	CSE	CSE	C-BLOCK
411	Ranil	EEE	EEE	A-BLOCK
500	Babu	CSM	CSM	B-BLOCK

Download CSV

3 rows selected.



```
SELECT*FROMstudentJOINblocksUSING(dept_name);
```



SQL Worksheet

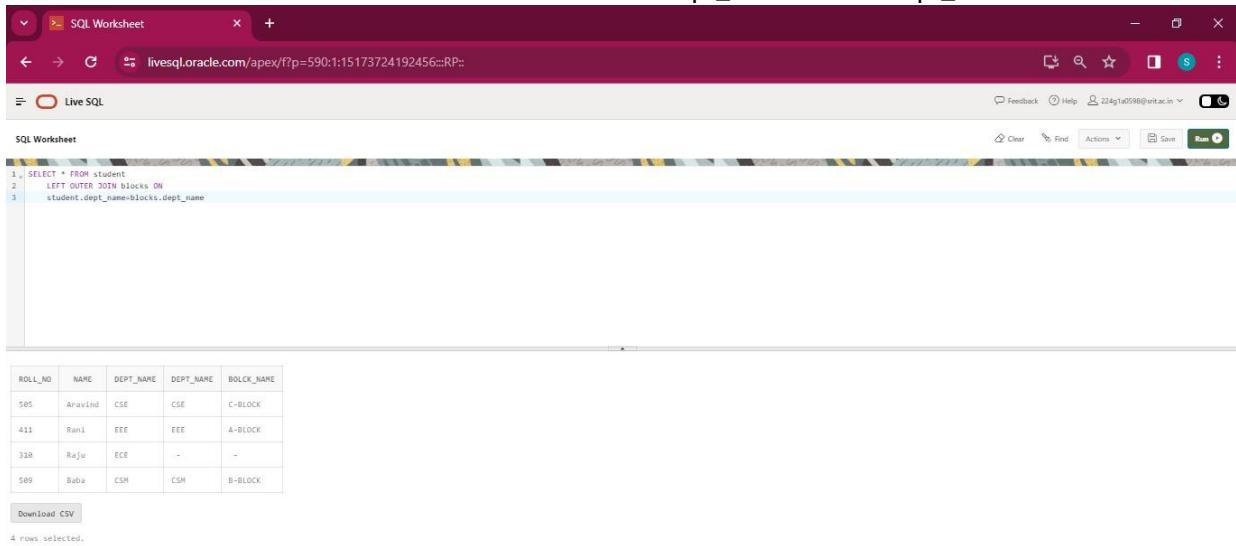
```
1. SELECT * FROM student
2.      FULL OUTER JOIN blocks
3.      ON student.dept_name=blocks.dept_name
```

ROLL_NO	NAME	DEPT_NAME	DEPT_NAME	BLOCK_NAME
505	Aravind	CSE	CSE	C-BLOCK
411	Rani	EEE	EEE	A-BLOCK
318	Raju	ECE	-	-
509	Baba	CSM	CSM	B-BLOCK

Download CSV

4 rows selected.

```
SELECT*FROMstudentLEFTOUTERJOINblocksONstudent.dept_name=blocks.dept_name;
```



SQL Worksheet

```
1. SELECT * FROM student
2.      LEFT OUTER JOIN blocks ON
3.      student.dept_name=blocks.dept_name
```

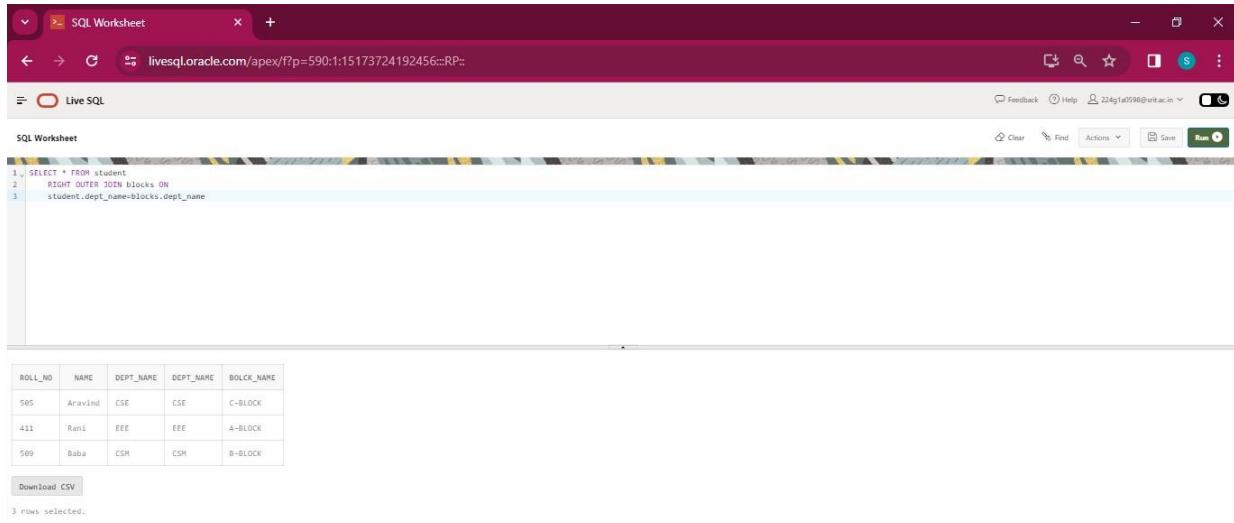
ROLL_NO	NAME	DEPT_NAME	DEPT_NAME	BLOCK_NAME
505	Aravind	CSE	CSE	C-BLOCK
411	Rani	EEE	EEE	A-BLOCK
318	Raju	ECE	-	-
509	Baba	CSM	CSM	B-BLOCK

Download CSV

4 rows selected.



`SELECT * FROM student RIGHT OUTER JOIN blocks ON student.dept_name=blocks.dept_name;`



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::

Live SQL

SQL Worksheet

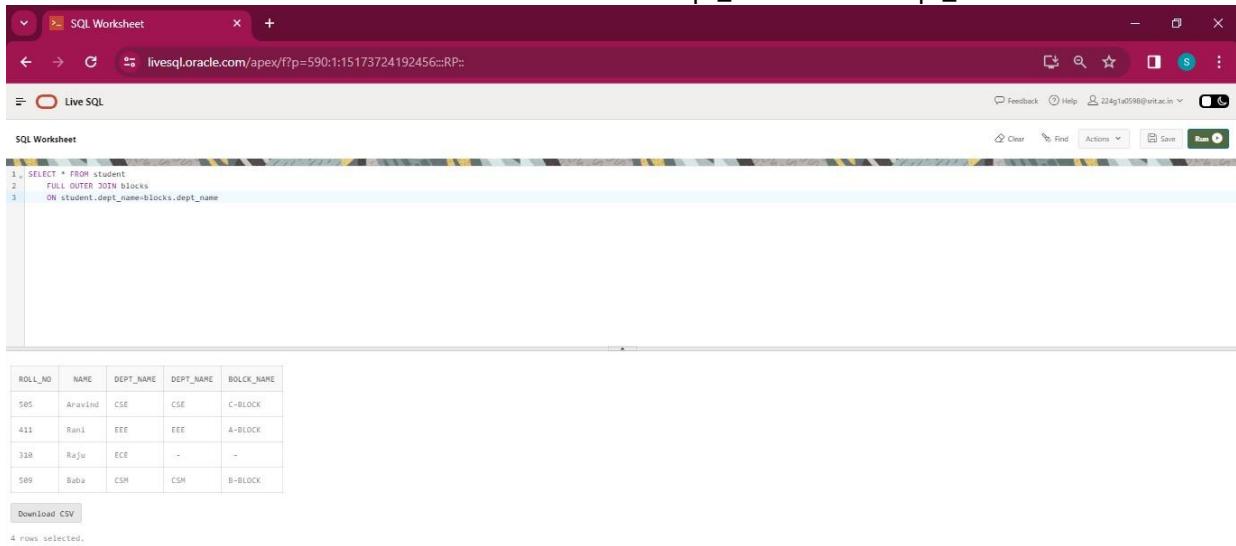
1. SELECT * FROM student
2. RIGHT OUTER JOIN blocks ON
3. student.dept_name=blocks.dept_name

ROLL_NO	NAME	DEPT_NAME	DEPT_NAME	BLOCK_NAME
505	Aravind	CSE	CSE	C-BLOCK
411	Ravi	EEE	EEE	A-BLOCK
509	Baba	CSM	CSM	B-BLOCK

Download CSV

3 rows selected.

`SELECT * FROM student FULL OUTER JOIN blocks ON student.dept_name=blocks.dept_name;`



SQL Worksheet

livesql.oracle.com/apex/f?p=590:1:15173724192456::RP::

Live SQL

SQL Worksheet

1. SELECT * FROM student
2. FULL OUTER JOIN blocks
3. ON student.dept_name=blocks.dept_name

ROLL_NO	NAME	DEPT_NAME	DEPT_NAME	BLOCK_NAME
505	Aravind	CSE	CSE	C-BLOCK
411	Ravi	EEE	EEE	A-BLOCK
318	Raju	EEE	-	-
509	Baba	CSM	CSM	B-BLOCK

Download CSV

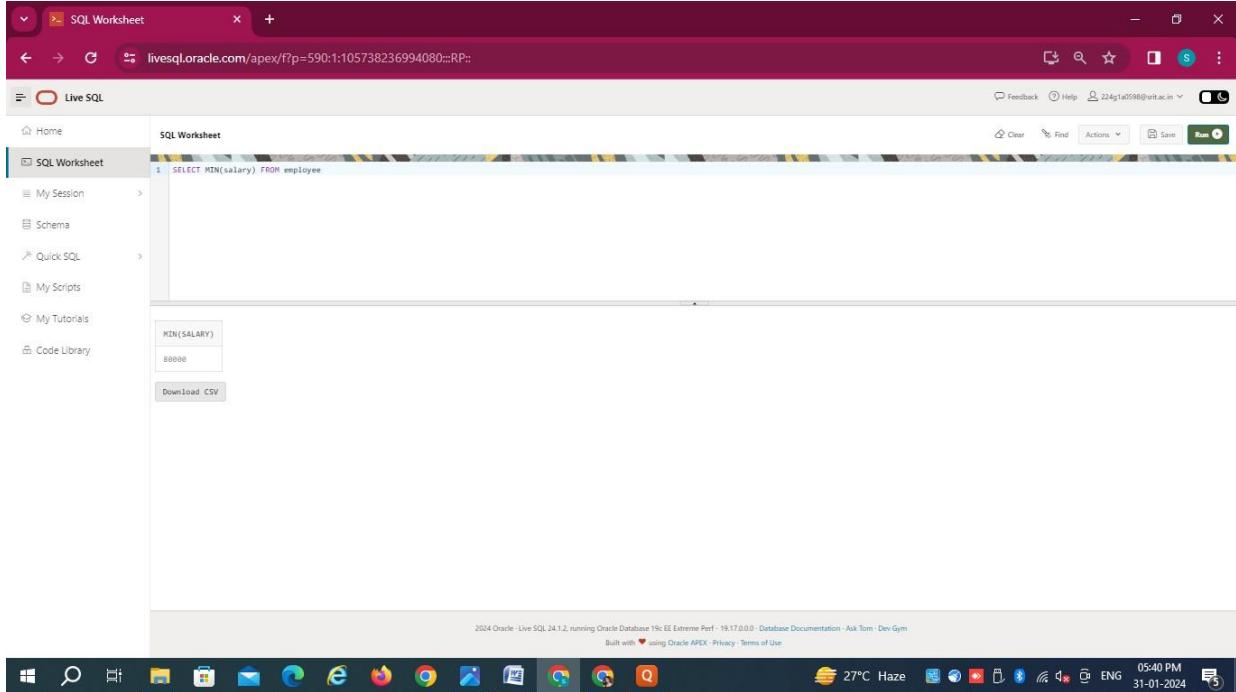
4 rows selected.



CONCLUSION: SQL Queries to perform JOIN OPERATIONS (i.e. CONDITIONAL, EQUI, LEFT OUTER, RIGHT OUTER, FULL OUTER JOIN) is successfully executed in SQLplus.

EXPERIMENT-7

Write SQL Queries to perform AGGREGATE OPERATIONS (i.e. SUM, COUNT, AVG, MIN, MAX)?



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

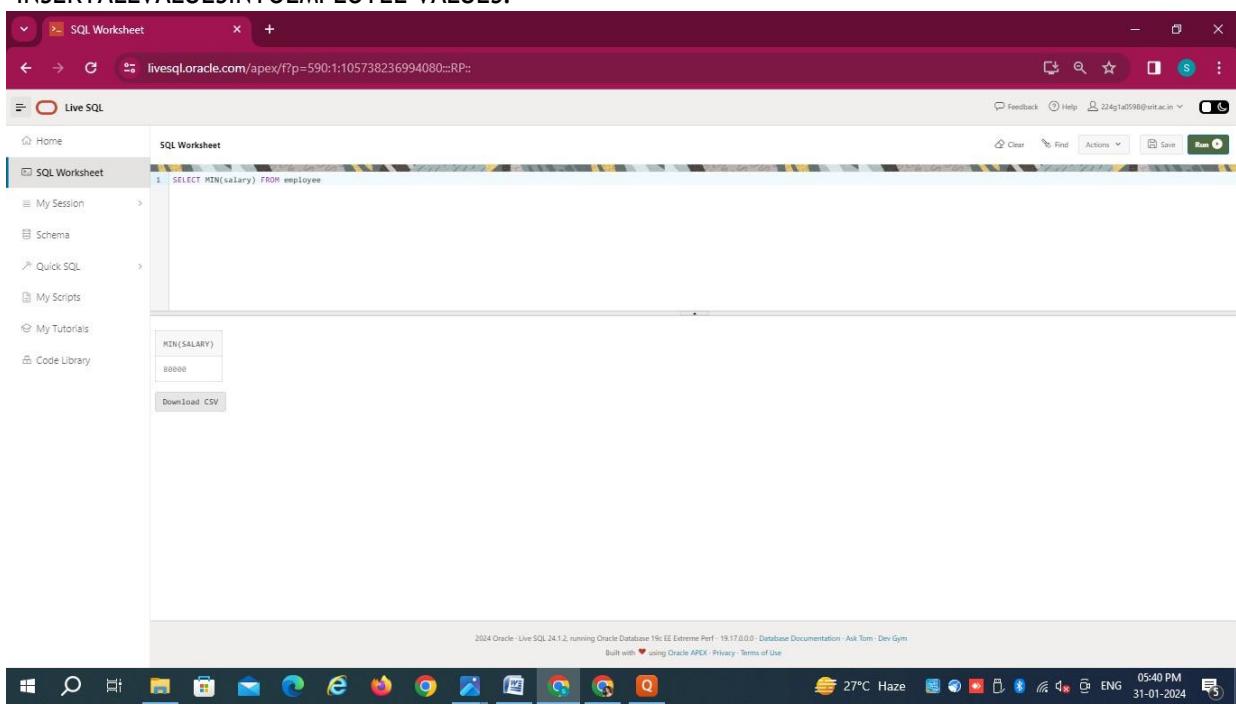
```
1 SELECT MIN(salary) FROM employee
```

The result is displayed in a table:

MIN(SALARY)
8000

Below the table is a "Download CSV" button. The status bar at the bottom indicates the session is running on a 2024 Oracle database.

INSERT ALL VALUES INTO EMPLOYEE VALUES:



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

```
1 SELECT MIN(salary) FROM employee
```

The result is displayed in a table:

MIN(SALARY)
8000

Below the table is a "Download CSV" button. The status bar at the bottom indicates the session is running on a 2024 Oracle database.

SELECT*FROMEmployee:

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1 SELECT MIN(salary) FROM employee
```

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows the date and time as "31-01-2024 05:40 PM".

SELECTSUM(salary)FROMEmployee:

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1 SELECT MIN(salary) FROM employee
```

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows the date and time as "31-01-2024 05:40 PM".

SELECT AVG(salary) FROM Employee:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1. SELECT MIN(salary) FROM employee
```

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with the following information: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym", "Built with ❤ using Oracle APEX - Privacy · Terms of Use", "27°C Haze", "ENG 31-01-2024", and a battery icon.

SELECT COUNT(salary) FROM Employee:

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1. SELECT MIN(salary) FROM employee
```

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with the following information: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym", "Built with ❤ using Oracle APEX - Privacy · Terms of Use", "27°C Haze", "ENG 31-01-2024", and a battery icon.

SELECTMIN(salary)FROMemployee:

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1 SELECT MIN(salary) FROM employee
```

MIN(SALARY)
80000

At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system status bar at the bottom right shows "27°C Haze", "ENG", "05:40 PM", and the date "31-01-2024".

SELECTMAX(salary)FROMemployee:

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the following SQL query and its result:

```
1 SELECT MAX(salary) FROM employee
```

MAX(SALARY)
80000

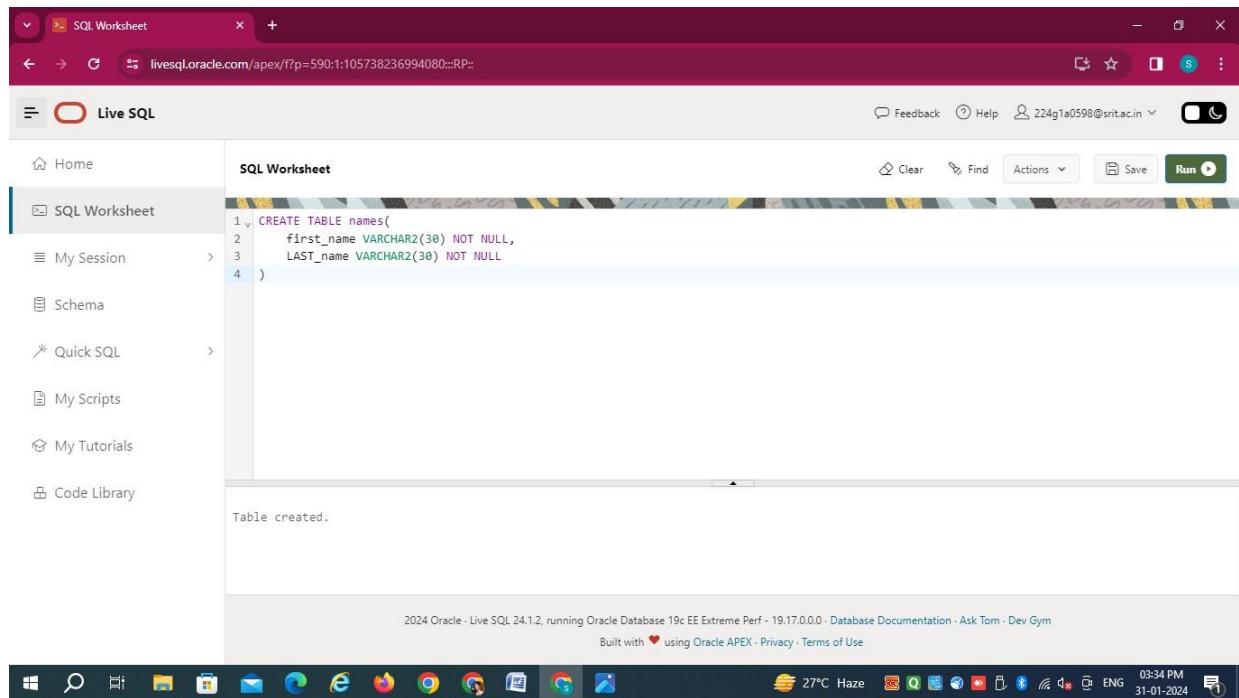
At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system status bar at the bottom right shows "27°C Haze", "ENG", "05:40 PM", and the date "31-01-2024".

CONCLUSION:SQLQueriestoperformAGGREGATEOPERATIONsissuccessfullyexecutedinsqlplus.

EXPERIMENT-8

Write SQL Queries to perform ORACLE BUILT IN FUNCTIONS (i.e. DATE, TIME)?

CREATE NAMES TABLES:

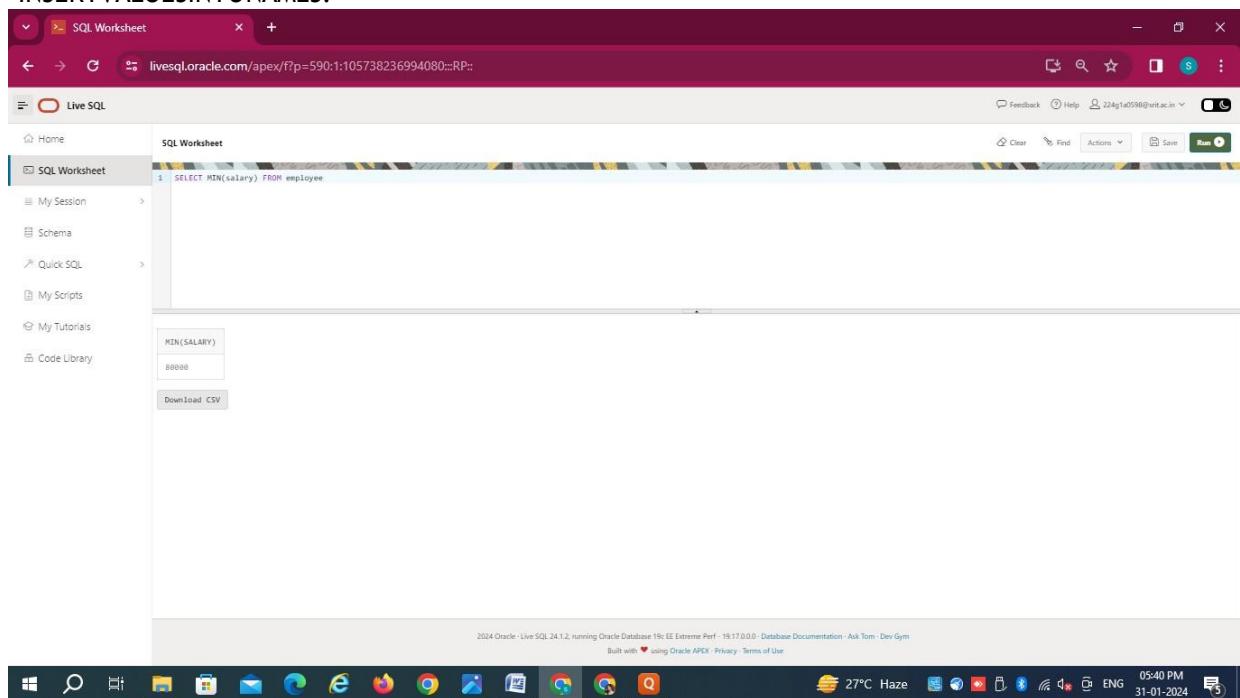


The screenshot shows the Oracle Live SQL interface. In the central workspace, the following SQL code is executed:

```
1 v CREATE TABLE names(
2   first_name VARCHAR2(30) NOT NULL,
3   LAST_name VARCHAR2(30) NOT NULL
4 )
```

Below the code, the message "Table created." is displayed. The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym".

INSERT VALUES INTO NAMES:



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

```
1 SELECT MIN(salary) FROM employee
```

Below the code, a results panel displays the output:

MIN(SALARY)
80000

At the bottom of the results panel, there is a "Download CSV" button. The status bar at the bottom indicates "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym".

SELECT LOWER(first_name) FROM names;

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The SQL Worksheet pane contains the following code:

```
1 SELECT MIN(salary) FROM employee
```

The results pane shows the output:

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with system information: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

SELECT UPPER(first_name) FROM names;

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The SQL Worksheet pane contains the following code:

```
1 SELECT MIN(salary) FROM employee
```

The results pane shows the output:

MIN(SALARY)
80000

At the bottom of the interface, there is a status bar with system information: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

`SELECT INITCAP(first_name) FROM names;`

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the result of the query `SELECT INITCAP(first_name) FROM names;`, which returns a single row: `MIN(SALARY)` with the value `80000`. Below the result, there is a `Download CSV` button. The bottom status bar shows the date and time as `31-01-2024 05:40 PM`.

`SELECT CONCAT(first_name, last_name) FROM names;`

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area displays the result of the query `SELECT CONCAT(first_name, last_name) FROM names;`, which returns a single row: `MIN(SALARY)` with the value `80000`. Below the result, there is a `Download CSV` button. The bottom status bar shows the date and time as `31-01-2024 05:40 PM`.

`SELECT SUBSTR(first_name, 1, 4) FROM names;`

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The main area displays the result of the query `SELECT MIN(salary) FROM employee`, which returns a single value: 80000. The interface includes a sidebar with options like Home, SQL Worksheet, My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The bottom status bar shows the date and time as 31-01-2024 05:40 PM.

`SELECT LENGTH(first_name) FROM names;`

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The main area displays the result of the query `SELECT MIN(salary) FROM employee`, which returns a single value: 80000. The interface includes a sidebar with options like Home, SQL Worksheet, My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The bottom status bar shows the date and time as 31-01-2024 05:40 PM.

`SELECT INSTR(first_name, 'Ma') FROM names;`

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=5901:105738236994080::RP::`. The sidebar on the left has 'SQL Worksheet' selected. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 SELECT CURRENT_TIMESTAMP(3) FROM dual
```

Below the code, the result is displayed in a table:

CURRENT_TIMESTAMP(3)
31-JAN-24 02.07.37,464000 AM US/PACIFIC

At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym". The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:37 PM.

`SELECT TRIM("FROM"first_name) FROM names;`

The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=5901:105738236994080::RP::`. The sidebar on the left has 'SQL Worksheet' selected. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 v CREATE TABLE names(
2   first_name VARCHAR2(30) NOT NULL,
3   LAST_name VARCHAR2(30) NOT NULL
4 )
```

Below the code, the message "Table created." is displayed. At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym". The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:34 PM.

`SELECTROUND(11.111,2)FROMdual;`

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 v CREATE TABLE names(
2     first_name VARCHAR2(30) NOT NULL,
3     LAST_name VARCHAR2(30) NOT NULL
4 )
```

Below the code, the message "Table created." is displayed. At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

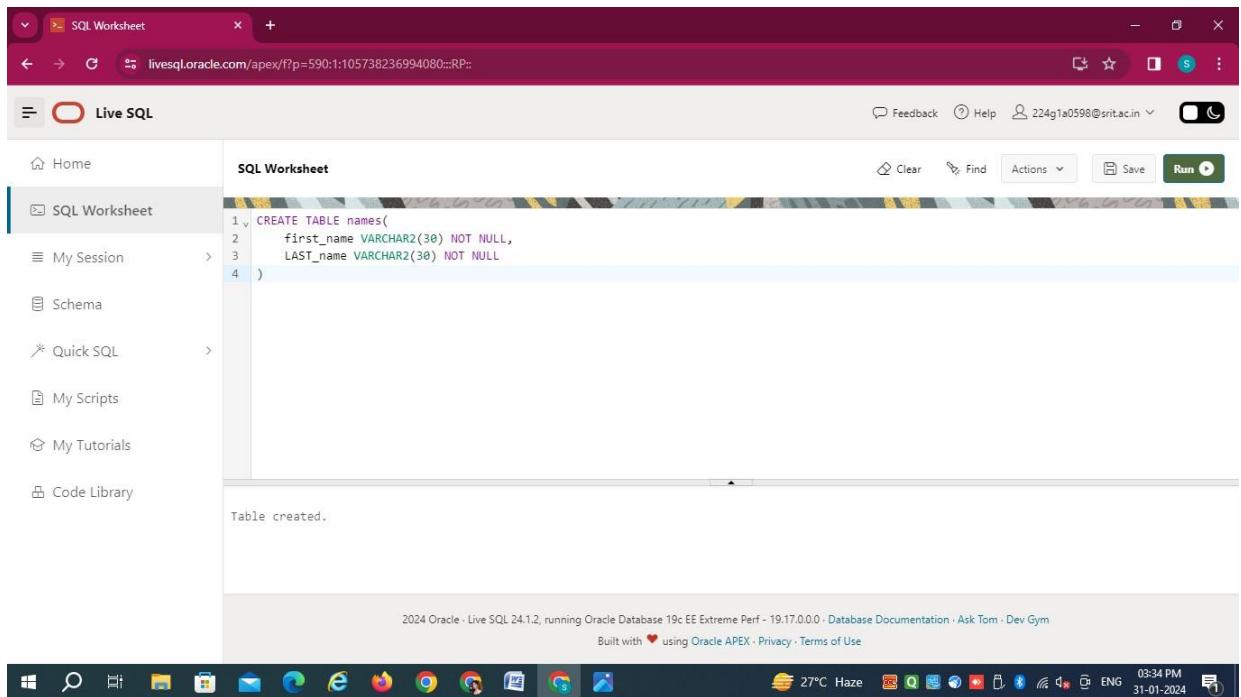
`SELECTMOD(11,2)FROMdual;`

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the same SQL code as the previous screenshot:

```
1 v CREATE TABLE names(
2     first_name VARCHAR2(30) NOT NULL,
3     LAST_name VARCHAR2(30) NOT NULL
4 )
```

Below the code, the message "Table created." is displayed. At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024.

SELECTSYSDATEFROMdual:



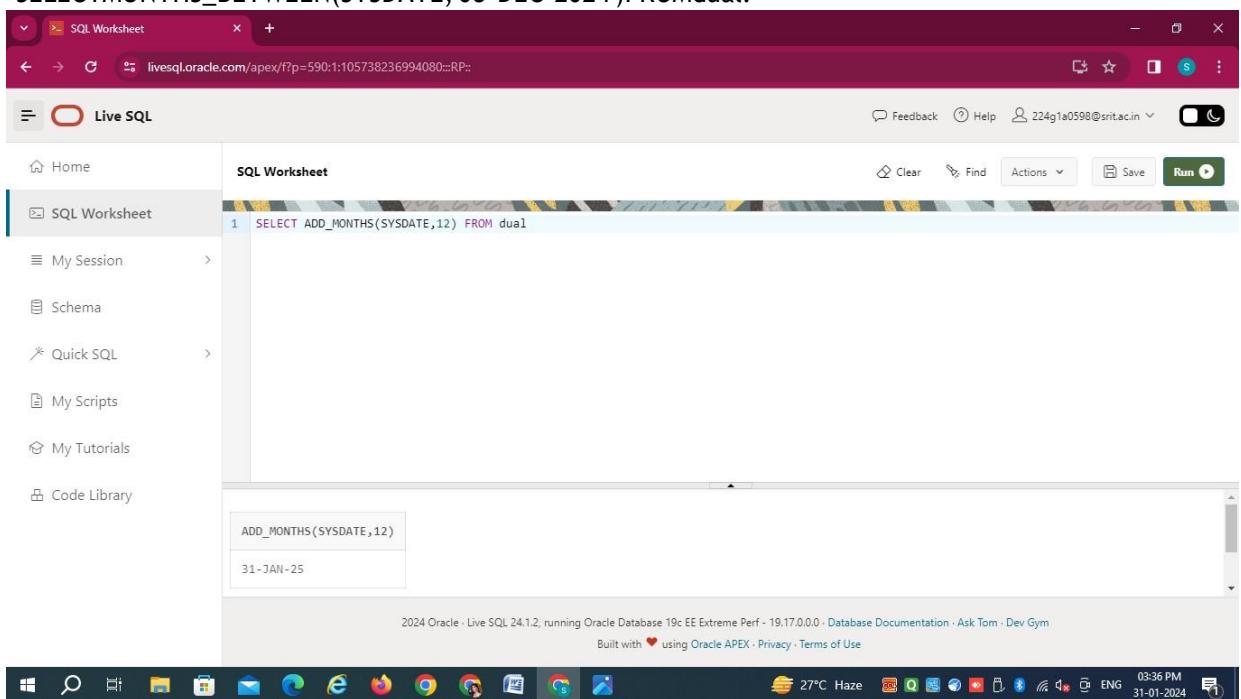
The screenshot shows the Oracle Live SQL interface. In the SQL Worksheet pane, the following SQL code is executed:

```
1 v CREATE TABLE names(
2     first_name VARCHAR2(30) NOT NULL,
3     LAST_name VARCHAR2(30) NOT NULL
4 )
```

The output below the code shows the message "Table created.".

At the bottom of the interface, the status bar displays: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym".

SELECTMONTHS_BETWEEN(SYSDATE,'08-DEC-2024')FROMdual:



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

```
1 SELECT ADD_MONTHS(SYSDATE,12) FROM dual
```

The output below the code shows the result: "31-JAN-25".

At the bottom of the interface, the status bar displays: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym".

`SELECT ADD_MONTHS(SYSDATE,12) FROM dual;`

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area is titled "SQL Worksheet" and contains the query: `1 SELECT ADD_MONTHS(SYSDATE,12) FROM dual`. Below the query, the result is displayed in a table:

ADD_MONTHS(SYSDATE,12)
31-JAN-25

. At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 · Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:36 PM.

`SELECT NEXT_DAY(SYSDATE,'MONDAY') FROM dual;`

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area is titled "SQL Worksheet" and contains the query: `1 SELECT ADD_MONTHS(SYSDATE,12) FROM dual`. Below the query, the result is displayed in a table:

ADD_MONTHS(SYSDATE,12)
31-JAN-25

. At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 · Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:36 PM.

`SELECT LAST_DAY(SYSDATE) FROM dual;`

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query `SELECT LAST_DAY(SYSDATE) FROM dual`. The results pane displays the output: `LAST_DAY(SYSDATE)` and `31-JAN-24`. The status bar at the bottom indicates the session is running on Oracle Database 19c EE Extreme Perf - 19.17.0.0.0.

`SELECT CURRENT_TIMESTAMP(3) FROM dual;`

The screenshot shows the Oracle Live SQL interface. The SQL Worksheet pane contains the query `SELECT CURRENT_TIMESTAMP(3) FROM dual`. The results pane displays the output: `CURRENT_TIMESTAMP(3)` and `31-JAN-24 02.07.37.464000 AM US/PACIFIC`. The status bar at the bottom indicates the session is running on Oracle Database 19c EE Extreme Perf - 19.17.0.0.0.

CONCLUSION: SQL queries to perform Oracle built-in functions are successfully executed.

EXPERIMENT-9

Write SQL queries to perform KEY CONSTRAINTS (i.e. PRIMARY KEY, FOREIGN KEY, UNIQUE OR NULL, CHECK, DEFAULT).

CREATE TABLE Stud:

The screenshot shows a browser window for 'livesql.oracle.com' with the URL 'livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::'. The title bar says 'SQL Worksheet'. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 v CREATE TABLE stud(
2   ID NUMBER PRIMARY KEY,
3   first_name VARCHAR2(25) NOT NULL,
4   last_name VARCHAR2(25) NOT NULL
5 )
```

Below the code, a message says 'Table created.'.

At the bottom of the page, it says '2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym' and 'Built with ❤️ using Oracle APEX - Privacy - Terms of Use'.

The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:23 PM.

INSERT INTO stud VALUES:

The screenshot shows a browser window for 'livesql.oracle.com' with the URL 'livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::'. The title bar says 'SQL Worksheet'. The main area is titled 'SQL Worksheet' and contains the following SQL code:

```
1 INSERT INTO stud VALUES (111, 'ROBERT', 'JUNIOR')
```

Below the code, a message says '1 row(s) inserted.'

At the bottom of the page, it says '2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym' and 'Built with ❤️ using Oracle APEX - Privacy - Terms of Use'.

The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:24 PM.

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

```
1 INSERT INTO stud VALUES (111,'HARRY','HARRY')
```

An error message is displayed below the worksheet:

ORA-00001: unique constraint (SQL_JUJZYNQRJBQVGGZWRJNWEYBVZ.SYS_C00147220788) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

More Details: <https://docs.oracle.com/error-help/db/ora-00001>

At the bottom of the interface, the status bar shows system information: 27°C Haze, Built with ❤️ using Oracle APEX - Privacy - Terms of Use, and the date/time: 31-01-2024 03:25 PM.

CREATETABLEOrders:

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

```
1 v CREATE TABLE orders(2 id NUMBER PRIMARY KEY,3 order_num NUMBER NOT NULL,4 stud_id NUMBER REFERENCES stud(id)5 )
```

A confirmation message is displayed below the worksheet:

Table created.

At the bottom of the interface, the status bar shows system information: 27°C Haze, Built with ❤️ using Oracle APEX - Privacy - Terms of Use, and the date/time: 31-01-2024 03:25 PM.

INSERTINTOordersVALUES:

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

```
1 INSERT INTO stud VALUES (111,'HARRY','HARRY')
```

An error message is displayed below the code:

ORA-00001: unique constraint (SQL_JUJZYNQRJBQVGGZWRJNWYBVZ.SYS_C00147220788) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

More Details: <https://docs.oracle.com/error-help/db/ora-00001>

At the bottom of the interface, it says: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym. Built with ❤️ using Oracle APEX · Privacy · Terms of Use.

CREATETABLEEmployees:

The screenshot shows the Oracle Live SQL interface. On the left, a sidebar menu includes Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 v CREATE TABLE employees(
2   id NUMBER PRIMARY KEY,
3   name VARCHAR2(50) NOT NULL,
4   e_email VARCHAR2(50) UNIQUE
5 )
```

Below the code, the message "Table created." is displayed. At the bottom of the interface, a footer bar shows the copyright notice "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use". The system tray at the bottom of the screen shows the date and time as 31-01-2024, 03:26 PM, and the temperature as 27°C Haze.

INSERTINTOemployeesVALUES:

The screenshot shows the Oracle Live SQL interface. The sidebar menu is identical to the previous screenshot. The SQL Worksheet contains the following SQL code:

```
1 INSERT INTO stud VALUES (111,'HARRY','HARRY')
```

Below the code, an error message is displayed: "ORA-00001: unique constraint (SQL_JUJZYNQRJBQVGGZWJNWEYBVZ.SYS_C00147220788) violated ORA-06512: at "SYS.DBMS_SQL", line 1721". A link "More Details: <https://docs.oracle.com/error-help/db/ora-00001>" is provided. The footer bar and system tray are identical to the first screenshot.

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

```
1 INSERT INTO stud VALUES (111,'HARRY','HARRY')
```

An error message is displayed below the worksheet:

ORA-00001: unique constraint (SQL_JUJZYNQRJBQVGGZWRJNWEYBVZ.SYS_C00147220788) violated ORA-06512: at "SYS.DBMS_SQL", line 1721
More Details: <https://docs.oracle.com/error-help/db/ora-00001>

At the bottom of the interface, the status bar shows: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

CREATETABLEorder1:

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

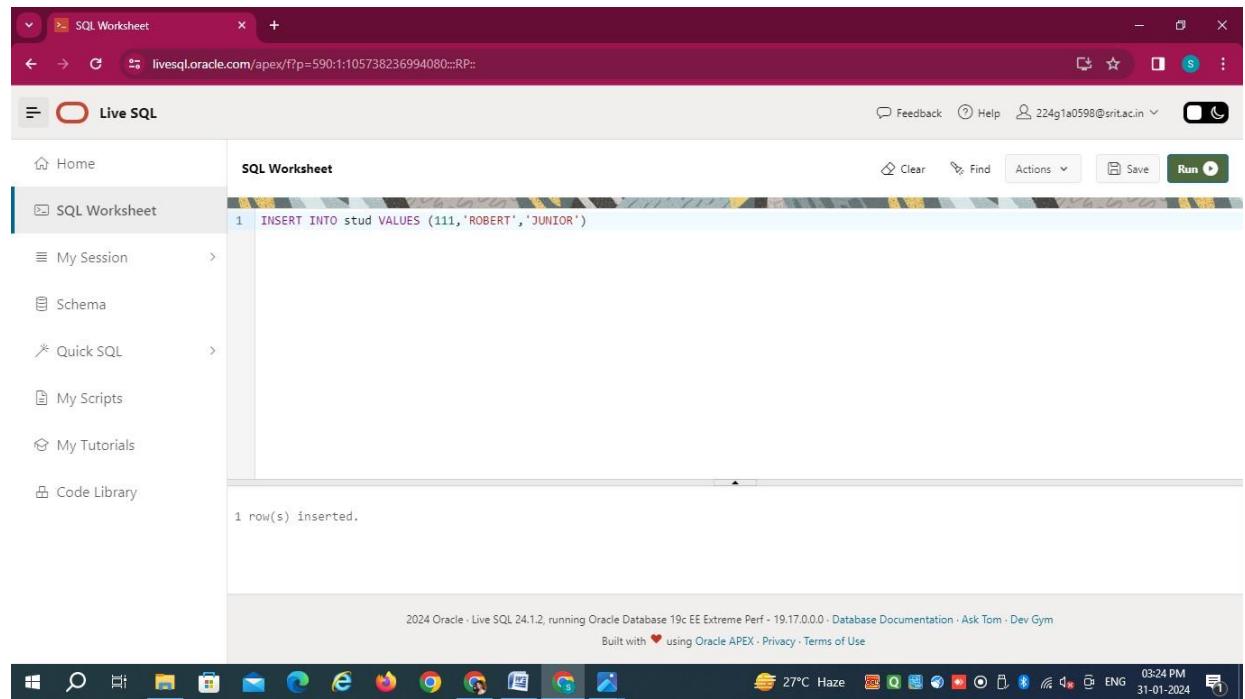
```
1 v CREATE TABLE order1(2 id NUMBER PRIMARY KEY,3 product_name VARCHAR2(50) NOT NULL,4 quantity NUMBER5 )
```

A confirmation message is displayed below the worksheet:

Table created.

At the bottom of the interface, the status bar shows: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

INSERTINTOorder1VALUES:



The screenshot shows the Oracle Live SQL interface. The URL in the address bar is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO stud VALUES (111,'ROBERT','JUNIOR')
```

Below the code, the output shows:

```
1 row(s) inserted.
```

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

2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 · Database Documentation · Ask Tom · Dev Gym
Built with ❤ using Oracle APEX · Privacy · Terms of Use

System status icons include: battery level (75%), 27°C Haze, signal strength, battery level, ENG, 03:24 PM, and a date/time stamp (31-01-2024).

CREATETABLEparts1:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 v CREATE TABLE parts1(
2     part_id NUMBER PRIMARY KEY,
3     part_name VARCHAR2(50) NOT NULL,
4     buy_price NUMBER(9,2) CHECK(buy_price>0)
5 )
```

Below the code, the message "Table created." is displayed. At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤️ using Oracle APEX · Privacy · Terms of Use".

INSERTINTOparts1VALUES:

The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 INSERT INTO parts1 VALUES (1,'ABCD',788)
```

Below the code, the message "1 row(s) inserted." is displayed. At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤️ using Oracle APEX · Privacy · Terms of Use".

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO parts1 VALUES (1,'ABCD',788)
```

Below the code, the output shows:

1 row(s) inserted.

At the bottom, a footer bar displays "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use".

CREATETABLEcustomers1:

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::". The left sidebar has "SQL Worksheet" selected. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO parts1 VALUES (1,'ABCD',788)
```

Below the code, the output shows:

1 row(s) inserted.

At the bottom, a footer bar displays "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use".

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO parts1 VALUES (1,'ABCD',788)
```

Below the code, the output shows:

```
1 row(s) inserted.
```

In the bottom status bar, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym".

SELECT*FROMcustomers1:

The screenshot shows the Oracle Live SQL interface. In the top navigation bar, the URL is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 SELECT * FROM customers1
```

Below the code, the output shows:

```
ORA-00942: table or view does not exist
More Details: https://docs.oracle.com/error-help/db/ora-00942
```

In the bottom status bar, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0 · Database Documentation · Ask Tom · Dev Gym".

CONCLUSION: Write SQL Queries to perform Key Constraints successfully executed.

EXPERIMENT-10

Write PL/SQL for calculating the factorial of a given number?

The screenshot shows the Oracle Live SQL Worksheet interface. The left sidebar has a tree view with 'SQL Worksheet' selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v DECLARE
2   fac NUMBER :=1;
3   n NUMBER :=4;
4   v BEGIN
5   WHILE n>0 LOOP
6     fac:=n*fac;
7     n:=n-1;
8   END LOOP;
9   DBMS_OUTPUT.PUT_LINE(FAC);
10  END;
```

Below the code, a message says 'Statement processed.' followed by the number '24'. At the bottom of the interface, there is a footer with copyright information and system status icons.

CONCLUSION: PL/SQL program for calculating the factorial of a given number is successfully executed in online live SQL plus.

EXPERIMENT-11

Write a PL/SQL program for finding the given number is prime number or not?

The screenshot shows the Oracle Live SQL interface. The left sidebar has a tree view with 'SQL Worksheet' selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v DECLARE
2 n NUMBER;
3 i NUMBER;
4 temp NUMBER;
5 v BEGIN
6 n := 13;
7 i := 2;
8 temp := 1;
9 v FOR i IN 2..n/2
10 LOOP
11 IF MOD(n, i) = 0
12 THEN
13 temp := 0;
14 EXIT;
15 END IF;
```

Below the code, the message 'Statement processed.' is displayed, followed by '13 is a prime number'. At the bottom, there is footer information: '2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym' and 'Built with ❤ using Oracle APEX - Privacy - Terms of Use'. The system tray at the bottom shows various icons and the date/time '31-01-2024 03:19 PM'.

The screenshot shows the Oracle Live SQL interface. The title bar reads "SQL Worksheet" and the URL is "livesql.oracle.com/apex/f?p=590:1:105738236994080:::RP::". The main area is titled "SQL Worksheet" and contains the following PL/SQL code:

```
9 v FOR i IN 2..n/2
10 LOOP
11 IF MOD(n, i) = 0
12 THEN
13 temp := 0;
14 EXIT;
15 END IF;
16 END LOOP;
17 v IF temp = 1
18 THEN
19 DBMS_OUTPUT.PUT_LINE(n||' is a prime number');
20 v ELSE
21 DBMS_OUTPUT.PUT_LINE(n||' is not a prime number');
22 END IF;
23 END;
```

Below the code, the message "Statement processed." is displayed, followed by "13 is a prime number". At the bottom of the interface, there is a footer with the text "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use".

CONCLUSION: APL/SQL Program for finding the given number is factorial number or not is successfully executed in liveSQLplus.

EXPERIMENT-12

Write PL/SQL program for displaying the Fibonacci Series upto an integer.

The screenshot shows the Oracle Live SQL Worksheet interface. The left sidebar contains navigation links: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and displays the following PL/SQL code:

```
4 TEMP NUMBER;
5 N NUMBER := 5;
6 I NUMBER;
7 v BEGIN
8 DBMS_OUTPUT.PUT_LINE('SERIES:');
9 DBMS_OUTPUT.PUT_LINE(FIRST);
10 DBMS_OUTPUT.PUT_LINE(SECOND);
11 v FOR I IN 2..N
12 LOOP
13 TEMP:=FIRST+SECOND;
14 FIRST := SECOND;
15 SECOND := TEMP;
16 DBMS_OUTPUT.PUT_LINE(TEMP);
17 END LOOP;
18 END;
```

Below the code, the output window shows the generated series:

```
Statement processed.
SERIES:
0
1
1
2
```

At the bottom of the interface, there is footer text: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows the date and time as "31-01-2024 03:16 PM".

The screenshot shows the Oracle Live SQL interface. The left sidebar has a 'SQL Worksheet' tab selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
4 TEMP NUMBER;
5 N NUMBER := 5;
6 I NUMBER;
7 v
8 DBMS_OUTPUT.PUT_LINE('SERIES:');
9 DBMS_OUTPUT.PUT_LINE(FIRST);
10 DBMS_OUTPUT.PUT_LINE(SECOND);
11 v
12 FOR I IN 2..N
13 LOOP
14 TEMP:=FIRST+SECOND;
15 FIRST := SECOND;
16 SECOND := TEMP;
17 DBMS_OUTPUT.PUT_LINE(TEMP);
18 END LOOP;
19 END;
```

The output pane below the code shows the results of the execution:

```
0
1
2
3
5
```

At the bottom of the interface, there is a footer with the text: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use".

CONCLUSION: PL/SQL program for displaying the Fibonacci Series upto an integer is successfully executed in live SQL plus.

EXPERIMENT-13

Write a PL/SQL program to implement Stored Procedure on table.

The screenshot shows the Oracle Live SQL interface. The left sidebar has a 'SQL Worksheet' tab selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v CREATE OR REPLACE PROCEDURE INSERTUSER
2 (ID IN NUMBER,
3 NAME IN VARCHAR2)
4 IS
5 BEGIN
6 INSERT INTO SAILOR VALUES(ID,NAME);
7 DBMS_OUTPUT.PUT_LINE('RECORD INSERTED SUCCESSFULLY');
8 END;
```

Below the code, the message 'Procedure created.' is displayed. At the bottom of the interface, it says '2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym'. The system tray at the bottom right shows the date as 31-01-2024 and the time as 03:14 PM.

The screenshot shows the Oracle Live SQL interface. The left sidebar has a 'SQL Worksheet' tab selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v DECLARE
2   CNT NUMBER;
3 v BEGIN
4   INSERTUSER(101,'NARASIMHA');
5   SELECT COUNT(*) INTO CNT FROM SAILOR;
6   DBMS_OUTPUT.PUT_LINE(CNT|| ' RECORD IS INSERTED SUCCESSFULLY');
7 END;
```

Below the code, the output shows:

```
Statement processed.
RECORD INSERTED SUCCESSFULLY
1 RECORD IS INSERTED SUCCESSFULLY
```

The status bar at the bottom indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

CONCLUSION:PL/SQL program to implement Stored Procedure on table is successfully executed in liveSQLplus.

EXPERIMENT-14

Write PL/SQL program to implement Stored Function on table.

The screenshot shows the Oracle Live SQL interface. The left sidebar has a tree view with nodes: Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet". It contains the following PL/SQL code:

```
1 v CREATE FUNCTION fact(x number)
2 RETURN number
3 IS
4 f number;
5 v BEGIN
6 IF x=0 THEN
7 f := 1;
8 ELSE
9 f := x * fact(x-1);
10 END IF;
11 RETURN f;
12 END;
```

Below the code, a message says "Function created." At the bottom of the interface, there is footer text: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy - Terms of Use". The system tray at the bottom of the screen shows various icons and the date/time: "03:12 PM 31-01-2024".

The screenshot shows the Oracle Live SQL interface. The left sidebar has a 'SQL Worksheet' tab selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v DECLARE
2 num number;
3 factorial number;
4 v BEGIN
5 num:= 6;
6 factorial := fact(num);
7 dbms_output.put_line(' Factorial '|| num || ' is ' || factorial);
8 END;
```

Below the code, the output window shows:

Statement processed.
Factorial 6 is 720

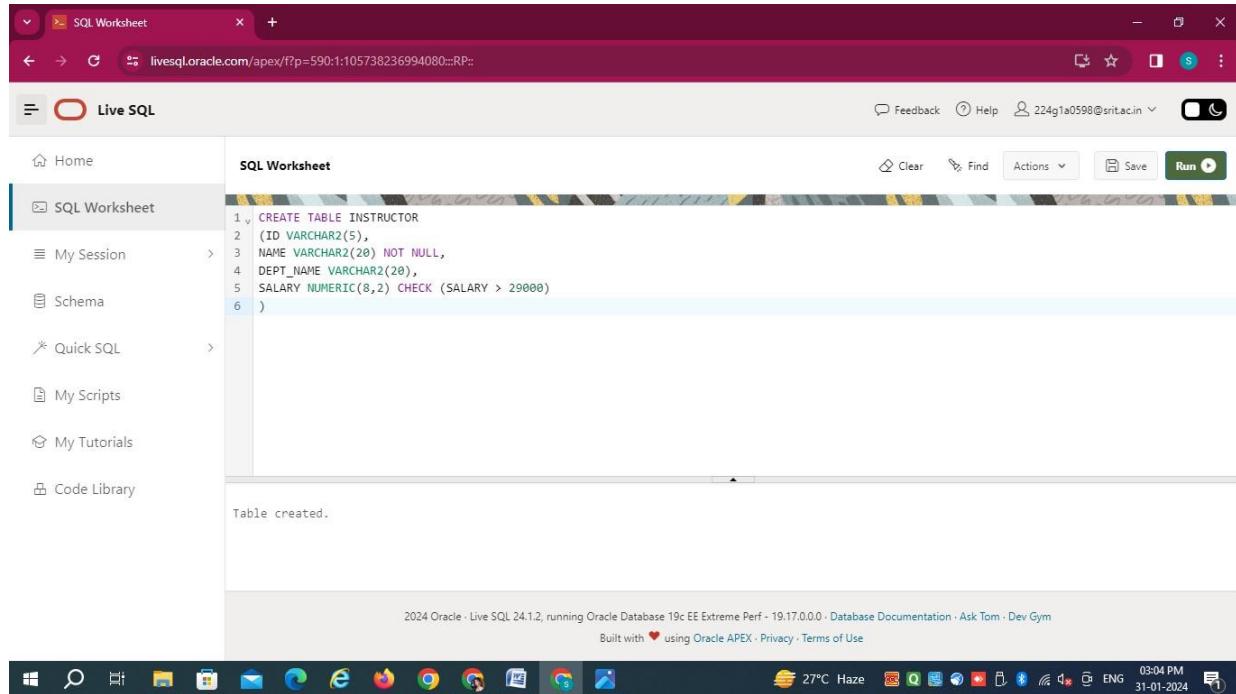
At the bottom, the status bar indicates: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. Built with ❤ using Oracle APEX - Privacy - Terms of Use.

CONCLUSION:PL/SQL program to implement Stored Function on table is successfully executed in live SQLplus.

EXPERIMENT-15

Write PL/SQL program to implement Trigger on table.

Create table instructor:

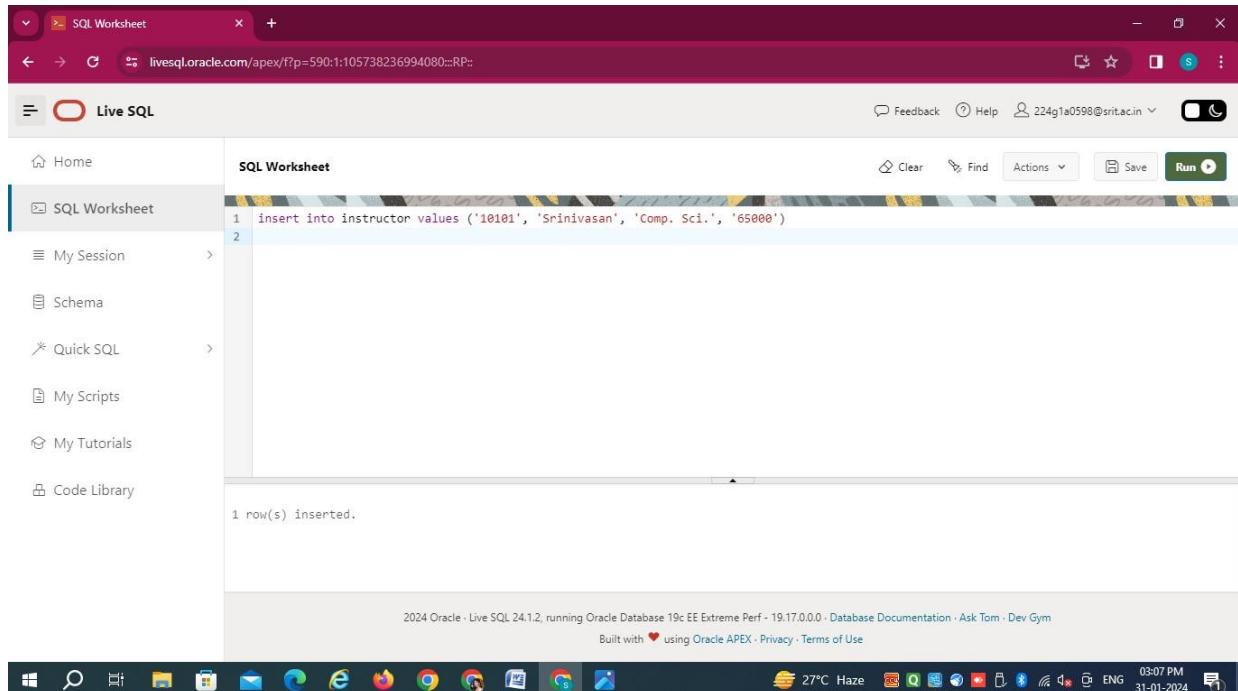


The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 v CREATE TABLE INSTRUCTOR
2   (ID VARCHAR2(5),
3    NAME VARCHAR2(20) NOT NULL,
4    DEPT_NAME VARCHAR2(20),
5    SALARY NUMERIC(8,2) CHECK (SALARY > 29000)
6  )
```

Below the code, the message "Table created." is displayed. The status bar at the bottom shows "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym".

INSERT VALUES INTO TABLE INSTRUCTOR:



The screenshot shows the Oracle Live SQL interface. The left sidebar has 'SQL Worksheet' selected. The main area displays the following SQL code:

```
1 insert into instructor values ('10101', 'Srinivasan', 'Comp. Sci.', '65000')
```

Below the code, the message "1 row(s) inserted." is displayed. The status bar at the bottom shows "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym".

Replacetrigger:

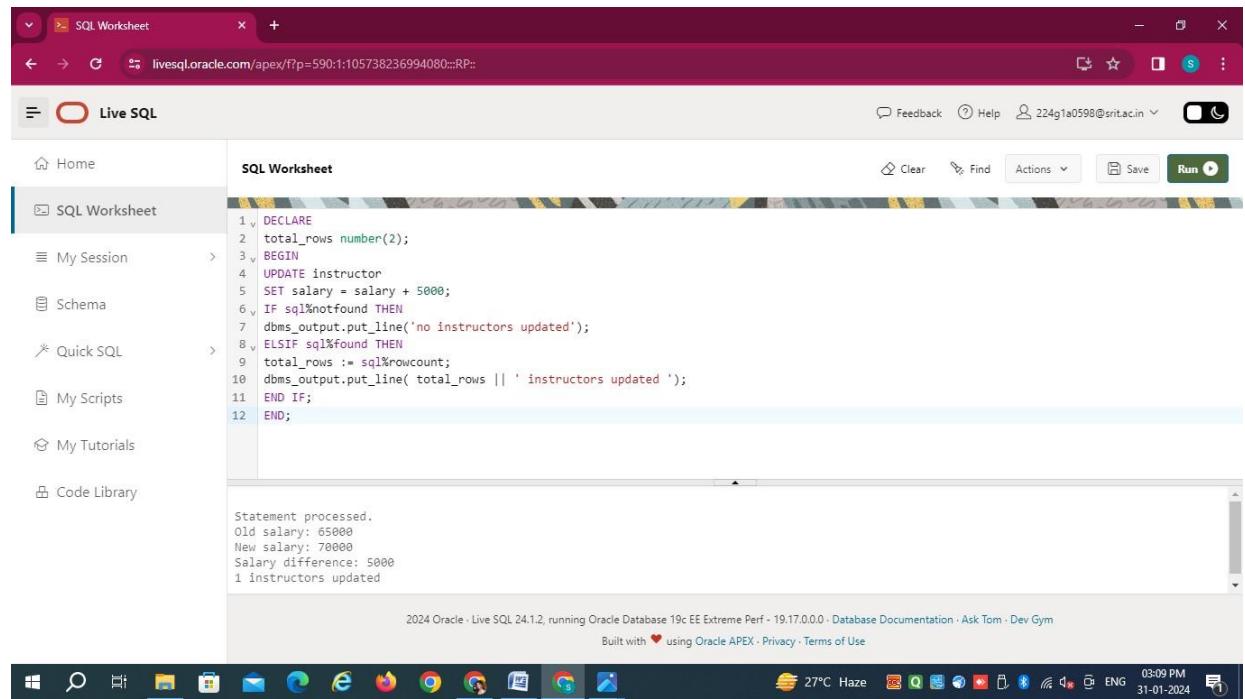
The screenshot shows the Oracle Live SQL interface. The left sidebar has a 'SQL Worksheet' tab selected. The main area is titled 'SQL Worksheet' and contains the following PL/SQL code:

```
1 v CREATE OR REPLACE TRIGGER display_salary_changes
2 BEFORE UPDATE ON instructor
3 FOR EACH ROW
4 WHEN (NEW.ID = OLD.ID)
5 DECLARE
6   sal_diff number;
7 BEGIN
8   sal_diff := :NEW.salary - :OLD.salary;
9   dbms_output.put_line('Old salary: ' || :OLD.salary);
10  dbms_output.put_line('New salary: ' || :NEW.salary);
11  dbms_output.put_line('Salary difference: ' || sal_diff);
12 END;
```

Below the code, a message says 'Trigger created.'.

At the bottom of the interface, there is a status bar with various icons and system information: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym, Built with ❤️ using Oracle APEX - Privacy - Terms of Use, 27°C Haze, ENG, 31-01-2024, 03:08 PM.

Declaretriggerable:



The screenshot shows the Oracle Live SQL interface. The left sidebar has sections for Home, SQL Worksheet (selected), My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains the following PL/SQL code:

```
1 v DECLARE
2   total_rows number(2);
3 v BEGIN
4   UPDATE instructor
5     SET salary = salary + 5000;
6 v IF sql%notfound THEN
7   dbms_output.put_line('no instructors updated');
8 v ELSIF sql%found THEN
9   total_rows := sql%rowcount;
10  dbms_output.put_line( total_rows || ' instructors updated ');
11 END IF;
12 END;
```

Below the code, the output window shows the results of the execution:

```
Statement processed.
Old salary: 65000
New salary: 70000
Salary difference: 5000
1 instructors updated
```

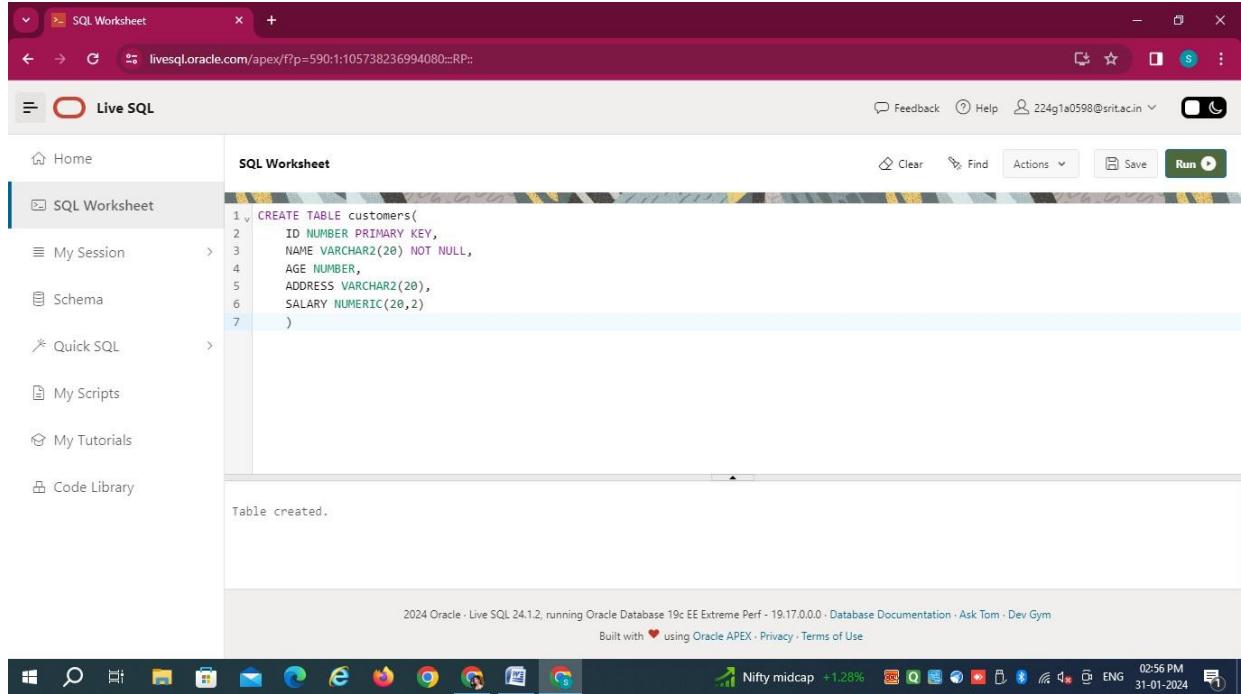
The bottom status bar shows system information: 27°C Haze, Built with ❤️ using Oracle APEX - Privacy - Terms of Use, ENG, 03:09 PM, 31-01-2024.

Conclusion:PL/SQL program to implement Trigger on table is successfully executed.

EXPERIMENT-16

Write PL/SQL program to implement Cursor on table.

Create table customer:

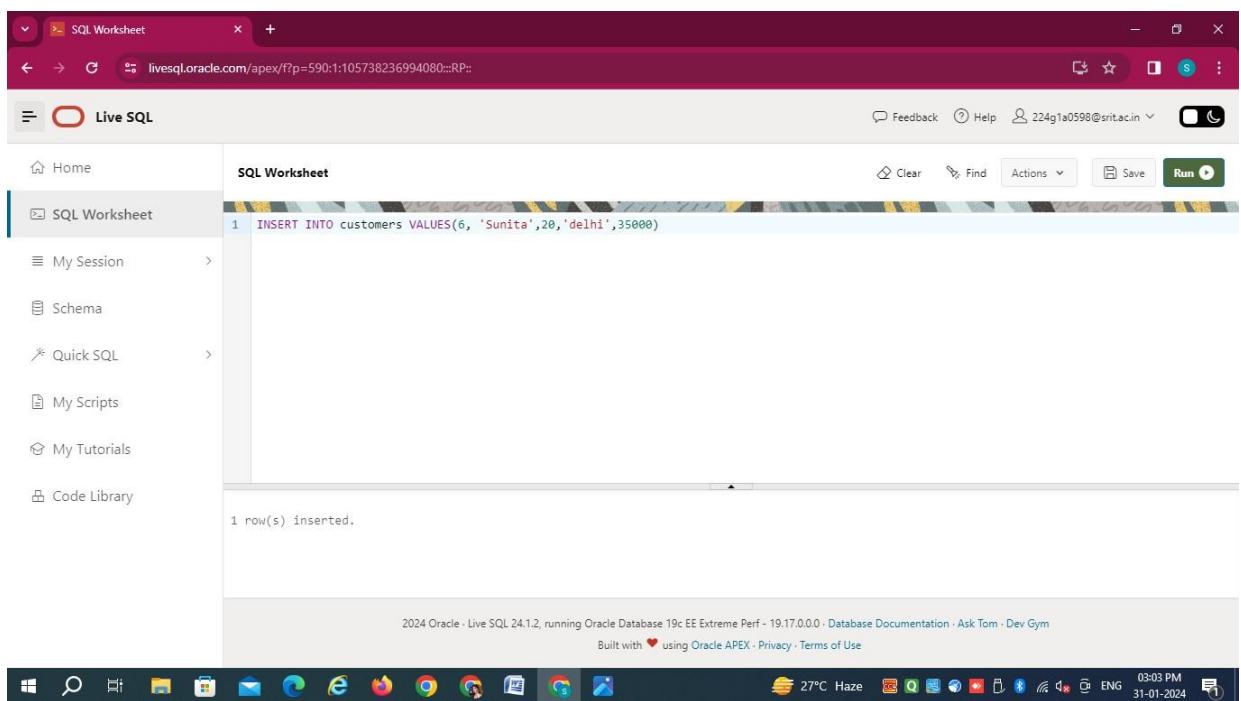


The screenshot shows the Oracle Live SQL interface. On the left, there's a sidebar with options like Home, SQL Worksheet, My Session, Schema, Quick SQL, My Scripts, My Tutorials, and Code Library. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
CREATE TABLE customers(
    ID NUMBER PRIMARY KEY,
    NAME VARCHAR2(20) NOT NULL,
    AGE NUMBER,
    ADDRESS VARCHAR2(20),
    SALARY NUMERIC(20,2)
)
```

Below the code, a message says "Table created." At the bottom of the interface, it says "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym" and "Built with ❤️ using Oracle APEX - Privacy · Terms of Use". The system tray at the bottom right shows various icons and the date/time "31-01-2024 02:56 PM".

Insert values into customer:



The screenshot shows the Oracle Live SQL interface. The URL in the browser is `livesql.oracle.com/apex/f?p=590:1:105738236994080::RP::`. The main area is titled "SQL Worksheet" and contains the following SQL code:

```
1 INSERT INTO customers VALUES(6, 'Sunita', 20, 'delhi', 35000)
```

Below the code, the output shows:

```
1 row(s) inserted.
```

At the bottom of the interface, there is footer text: "2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 · Database Documentation · Ask Tom · Dev Gym" and "Built with ❤ using Oracle APEX · Privacy · Terms of Use". The system tray at the bottom of the screen displays various icons and information, including the date "31-01-2024" and time "03:03 PM".

DeclareCursor:

The screenshot shows the Oracle Live SQL Worksheet interface. The main area displays a PL/SQL block:

```
1 v DECLARE
2   c_id customers.id%type;
3   c_name customers.name%type;
4   c_addr customers.address%type;
5 v CURSOR c_customers is
6   SELECT id, name, address FROM customers;
7 v BEGIN
8   OPEN c_customers;
9   LOOP
10    FETCH c_customers into c_id, c_name, c_addr;
11    EXIT WHEN c_customers%notfound;
12    dbms_output.put_line(c_id || ' ' || c_name || ' ' || c_addr);
13  END LOOP;
14  CLOSE c_customers;
15 END;
```

The output pane shows the results of the executed query:

```
Statement processed.
1 Ramesh Allabad
3 Mahesh Ghaziabad
4 chandhan Noida
2 Suresh Kanpur
```

The status bar at the bottom indicates the environment: 2024 Oracle - Live SQL 24.1.2, running Oracle Database 19c EE Extreme Perf - 19.17.0.0.0 - Database Documentation - Ask Tom - Dev Gym. It also shows system information like temperature (27°C), battery level (Haze), and date/time (31-01-2024 03:01 PM).

CONCLUSION:PL/SQL program to implement Cursor on table is successfully executed.