Ex.No.10 .04.2025	DATA AND TIME FUNCTION

AIM

To perform SQL date and time functions.

CREATE TABLE

CREATE TABLE stack (staff_id NUMBER(4), staff_name VARCHAR2(20), salary NUMBER(5), joining_date DATE);

Table created.

SQL> CREATE TABLE staff(schedule_id NUMBER(4),event_name VARCHAR2(30),event_start TIMESTAMP);

Table created.

INSERT VALUES

SQL> INSERT INTO stack VALUES(100,'PRAVEEN',10000,TO_DATE('12-MAR-2022','DD- MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(101,'SHANGAV',12000,TO_DATE('25-JUL-2023','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(102,'MANI',19000,TO_DATE('03-SEP-2022','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(103,'KAVIN',99000,TO_DATE('14-OCT-2024','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(104,'SANJAY',92000,TO_DATE('30-JUN-2023','DD- MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(105,'MOUNISH',21000,TO_DATE('17-JAN-2025','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(106,'AJITH',21800,TO_DATE('08-NOV-2022','DD- MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(107,'BABU',27100,TO_DATE('19-MAY-2024','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(108,'RAJU',27180,TO_DATE('21-AUG-2023','DD-MON-YYYY'));
1 row created.

SQL> INSERT INTO stack VALUES(109,'ANAND',29280,TO_DATE('04-DEC-2022','DD-MON-YYYY'));
1 row created.

ADDING EVENT:

SQL> INSERT INTO staff VALUES(100, 'Iot', TO_TIMESTAMP('08:15:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(101, 'Tech Talk, TO_TIMESTAMP('09:45:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(102, 'Web', TO_TIMESTAMP('10:20:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(103, 'Project-Presentation', TO_TIMESTAMP('11:50:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(104, 'Coding-Hunt', TO_TIMESTAMP('12:40:00', 'HH24:MI:SS'));

1 row created.

SQL> INSERT INTO staff VALUES(105, 'FAREWELL', TO_TIMESTAMP('13:25:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(106, 'CULTURAL', TO_TIMESTAMP('14:10:00', 'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(107, 'Circuit Craze, TO_TIMESTAMP('15:00:00', 'HH24:MI:SS'));
1 row created.

```
SQL> INSERT INTO staff VALUES(108, 'Hack Blitz', TO_TIMESTAMP('15:45:00',
'HH24:MI:SS'));
1 row created.

SQL> INSERT INTO staff VALUES(109, 'APP MANIA', TO_TIMESTAMP('16:30:00',
'HH24:MI:SS'));
1 row created.
```

CURRENT DATE:

```
SQL> SELECT
        schedule_id,
        event_name,
        TO_CHAR(event_start, 'HH24:MI:SS') AS start_time,
        TO_CHAR(event_start + INTERVAL '1' HOUR, 'HH24:MI:SS') AS end_time,
        (INTERVAL '1' HOUR) AS duration
        FROM staff;
```

SCHEDULE_ID	EVENT_NAME	START_TI	END_TIME	DURATION
100	Iot	08:15:00	09:15:00	+0001:00:00
101	Drama Fest	09:45:00	10:45:00	+00 01:00:00
102	Web	10:20:00	11:20:00	+00 01:00:00

SCHEDULE_ID	EVENT_NAME	START_TI	END_TIME	DURATION
103	Project-Presentation	11:50:00	12:50:00	+00 01:00:00
104	Coding-Hunt	12:40:00	13:40:00	+00 01:00:00
105	FAREWELL	13:25:00	14:25:00	+00 01:00:00

SCHEDULE_ID	EVENT_NAME	START_TI	END_TIME	DURATION
106	CULTURAL	14:10:00	15:10:00	+00 01:00:00
107	Award-ceremony	15:00:00	16:00:00	+00 01:00:00
108	Hack Blitz	15:45:00	16:45:00	+00 01:00:00

SCHEDULE_ID	EVENT_NAME	START_TI	END_TIME	DURATION
109	APP MANIA	16:30:00	17:30:00	+00 01:00:00

10 rows selected.

```
SQL> SELECT
        schedule_id,
        event_name,
        TO_CHAR(event_start, 'HH24:MI:SS') AS start_time
        FROM staff
        WHERE EXTRACT(HOUR FROM event_start) < 12;
```

SCHEDULE_ID	EVENT_NAME	START_TI
100	Iot	08:15:00
101	Drama Fest	09:45:00
102	Web	10:20:00
103	Project-Presentation	11:50:00

ADDING DATE:

```
SQL> SELECT
       s1.schedule_id,
      s1.event_name,
      s1.event_start,
      s2.schedule_id AS duplicate_schedule_id,
      s2.event_name AS duplicate_event_name,
      s2.event_start AS duplicate_time
     FROM staff s1
     JOIN staff s2 ON s1.event_start = s2.event_start
     WHERE s1.schedule_id < s2.schedule_id;
```

no rows selected

EMPLOYEES HIRED ON ALTERNATE DAYS:

```
SQL> SELECT
       Schedule_id,
       event_name,
      TO_CHAR(event_start, 'HH24:MI:SS') AS start_time
      FROM staff
      ORDER BY event_start DESC;
```

SCHEDULE_ID	EVENT_NAME	START_TI
109	APP MANIA	16:30:00
108	Hack Blitz	15:45:00
107	Award-ceremony	15:00:00
106	CULTURAL	14:10:00
105	FAREWELL	13:25:00
104	Coding-Hunt	12:40:00
103	Project-Presentation	11:50:00
102	Web	10:20:00
101	Drama Fest	09:45:00
100	Iot	08:15:00

10 rows selected.

EXTRACT:

```
SQL> SELECT
       COUNT(*) AS afternoon_events
       FROM staff
       WHERE EXTRACT(HOUR FROM event_start) BETWEEN 12 AND 19;
```

AFTERNOON_EVENTS
6

ADDING END TIME TO THE TABLE EVENT:

```
SQL> SELECT
      schedule_id,
      event_name,
      TO_CHAR(event_start, 'HH:MI:SS AM') AS start_time,
      TO_CHAR(event_start + INTERVAL '1' HOUR, 'HH:MI:SS AM') AS end_time
      FROM staff;
```

SCHEDULE_ID	EVENT_NAME	START_TIME	END_TIME
100	Iot	08:15:00 AM	09:15:00 AM
101	Drama Fest	09:45:00 AM	10:45:00 AM
102	Web	10:20:00 AM	11:20:00 AM
103	Project-Presentation	11:50:00 AM	12:50:00 PM
104	Coding-Hunt	12:40:00 PM	01:40:00 PM
105	FAREWELL	01:25:00 PM	02:25:00 PM
106	CULTURAL	02:10:00 PM	03:10:00 PM
107	Award-ceremony	03:00:00 PM	04:00:00 PM
108	Hack Blitz	03:45:00 PM	04:45:00 PM
109	APP MANIA	04:30:00 PM	05:30:00 PM

10 rows selected.

TO VIEW THE TABLE:

```
SQL> SELECT eid, ename, TO_CHAR(start_time, 'HH24:MI:SS') AS start_time
    FROM event
    WHERE EXTRACT(HOUR FROM start_time) >= 15;
```

no rows selected

CONTENTS	MARKS ALLOTED	MARKS OBTAINED
Aim,Algorithm,SQL,PL/SQL	30	
Execution and Result	20	
Viva	10	
Total	60	

RESULT

The SQL queries to sort data by date and time were executed successfully, and the records were retrieved in order based on their event_start timestamps.