Ex.No.10	DATE AND TIME FUNCTION

AIM

To perform SQL date and time functions.

CREATE TABLE

```
SQL> CREATE TABLE emp(
  2  id NUMBER(4),
  3  name VARCHAR2(20),
  4  salary NUMBER(5),
  5  hire_date DATE
  6  );
```

Table created.

```
SQL> CREATE TABLE event(
  2  eid NUMBER(4),
  3  ename VARCHAR2(20),
  4  start_time TIMESTAMP
  5  );
```

Table created.

INSERT VALUES

```
SQL> INSERT INTO emp VALUES (1011, 'Karthik', 46000, TO_DATE('05-MAY-2018',
'DD-MON-YYYY'));
```

1 row created.

```
SQL> INSERT INTO emp VALUES (1012, 'Divya', 52000, TO_DATE('22-AUG-2019',
'DD-MON-YYYY'));
```

1 row created.

```
SQL> INSERT INTO emp VALUES (1013, 'Vishnu', 49000, TO_DATE('14-SEP-2020', 'DD-
MON-YYYY'));
```

1 row created.

SQL> INSERT INTO emp VALUES (1014, 'Meera', 41000, TO_DATE('30-JUN-2021', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1015, 'Rohit', 37000, TO_DATE('12-JAN-2022', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1016, 'Sneha', 53000, TO_DATE('19-DEC-2018', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1017, 'Sanjay', 44000, TO_DATE('25-MAR-2017', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1018, 'Lakshmi', 56000, TO_DATE('03-APR-2016', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1019, 'Arjun', 47000, TO_DATE('09-NOV-2019', 'DD-MON-YYYY'));

1 row created.

SQL> INSERT INTO emp VALUES (1020, 'Nithya', 39000, TO_DATE('17-FEB-2020', 'DD-MON-YYYY'));

1 row created.

ADDING EVENT:

SQL> INSERT INTO event VALUES (1011, 'App Development', TO_TIMESTAMP('08:30:00', 'HH24:MI:SS'));

1 row created.

```
SQL> INSERT INTO event VALUES (1012, 'Data Science Talk',
TO_TIMESTAMP('09:30:00', 'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1013, 'Cloud Computing',
TO_TIMESTAMP('10:30:00', 'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1014, 'Robotics Demo', TO_TIMESTAMP('11:30:00',
'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1015, 'Gaming Competition',
TO_TIMESTAMP('13:00:00', 'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1016, 'Ethical Hacking',
TO_TIMESTAMP('14:30:00', 'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1017, 'AI Panel Discussion',
TO_TIMESTAMP('15:30:00', 'HH24:MI:SS'));
```

1 row created.

```
SQL> INSERT INTO event VALUES (1018, 'Innovation Challenge',
TO_TIMESTAMP('16:30:00', 'HH24:MI:SS'));

1 row created.

SQL> INSERT INTO event VALUES (1019, 'Blockchain Basics',
TO_TIMESTAMP('17:30:00', 'HH24:MI:SS'));

1 row created.

SQL> INSERT INTO event VALUES (1020, 'Entrepreneur Talk',
TO_TIMESTAMP('18:30:00', 'HH24:MI:SS'));

1 row created.
```

CURRENT DATE:

```
SQL> SELECT
  2  eid,
  3  ename,
  4  TO_CHAR(start_time, 'HH24:MI:SS') AS start_time,
  5  TO_CHAR(start_time + INTERVAL '1' HOUR, 'HH24:MI:SS') AS end_time,
  6  TO_CHAR(INTERVAL '1' HOUR, 'HH24:MI:SS') AS duration
  7 FROM event;

       EID ENAME              START_TI END_TIME DURATION
---------- -------------------- -------- -------- ------------
      1011 App Development      08:30:00 09:30:00 +00 01:00:00
      1012 Data Science Talk    09:30:00 10:30:00 +00 01:00:00
      1013 Cloud Computing      10:30:00 11:30:00 +00 01:00:00
      1014 Robotics Demo        11:30:00 12:30:00 +00 01:00:00
      1015 Gaming Competition   13:00:00 14:00:00 +00 01:00:00
      1016 Ethical Hacking      14:30:00 15:30:00 +00 01:00:00
      1017 AI Panel Discussion  15:30:00 16:30:00 +00 01:00:00
      1018 Innovation Challenge 16:30:00 17:30:00 +00 01:00:00
      1019 Blockchain Basics    17:30:00 18:30:00 +00 01:00:00
      1020 Entrepreneur Talk    18:30:00 19:30:00 +00 01:00:00
```

10 rows selected.

```
SQL> SELECT
  2    eid,
  3    ename,
  4    TO_CHAR(start_time, 'HH24:MI:SS') AS start_time
  5  FROM
  6    event
  7  WHERE
  8    EXTRACT(HOUR FROM start_time) < 12;

       EID ENAME                START_TI
---------- -------------------- --------
      1011 App Development      08:30:00
      1012 Data Science Talk    09:30:00
      1013 Cloud Computing      10:30:00
      1014 Robotics Demo        11:30:00
```

ADDING DATE

```
SQL> UPDATE event
  2  SET start_time = TO_TIMESTAMP('2025-04-28 ' || TO_CHAR(start_time,
'HH24:MI:SS'), 'YYYY-MM-DD HH24:MI:SS');

10 rows updated.

SQL> SELECT e1.eid, e1.ename, TO_CHAR(e1.start_time, 'DD-MON-YYYY
HH24:MI:SS') AS start_time,
  2         e2.eid AS duplicate_eid, e2.ename AS duplicate_ename, TO_CHAR(e2.start_time,
'DD-MON-YYYY HH24:MI:SS') AS duplicate_time
  3  FROM event e1
  4  JOIN event e2
  5    ON e1.start_time = e2.start_time
```

```
  6   AND e1.eid < e2.eid;

no rows selected
```

EMPLOYEES HIRED ON ALTERNATE DAYS:

```
SQL> SELECT eid, ename, TO_CHAR(start_time, 'DD-MON-YYYY HH24:MI:SS') AS
start_time
  2  FROM (
  3     SELECT eid, ename, start_time,
  4            ROW_NUMBER() OVER (ORDER BY start_time) AS rn
  5     FROM event
  6  )
  7  WHERE MOD(rn, 2) = 1
  8  ORDER BY start_time DESC;

       EID ENAME              START_TIME
---------- -------------------- ----------------------------
      1019 Blockchain Basics    28-APR-2025 17:30:00
      1017 AI Panel Discussion  28-APR-2025 15:30:00
      1015 Gaming Competition   28-APR-2025 13:00:00
      1013 Cloud Computing      28-APR-2025 10:30:00
      1011 App Development      28-APR-2025 08:30:00
```

EXTRACT:

```
SQL> SELECT COUNT(*) AS afternoon_events
  2  FROM event
  3  WHERE EXTRACT(HOUR FROM start_time) BETWEEN 12 AND 17;

AFTERNOON_EVENTS
----------------
               5
```

ADDING END TIME TO THE TABLE EVENT:

```
SQL> SELECT
  2    eid,
  3    ename,
  4    TO_CHAR(start_time, 'HH:MI:SS AM') AS start_time,
  5    TO_CHAR(start_time + INTERVAL '1' HOUR, 'HH:MI:SS AM') AS end_time
  6  FROM event;

       EID ENAME               START_TIME  END_TIME
---------- -------------------- ----------- -----------
      1011 App Development      08:30:00 AM 09:30:00 AM
      1012 Data Science Talk    09:30:00 AM 10:30:00 AM
      1013 Cloud Computing      10:30:00 AM 11:30:00 AM
      1014 Robotics Demo        11:30:00 AM 12:30:00 PM
      1015 Gaming Competition   01:00:00 PM 02:00:00 PM
      1016 Ethical Hacking      02:30:00 PM 03:30:00 PM
      1017 AI Panel Discussion  03:30:00 PM 04:30:00 PM
      1018 Innovation Challenge 04:30:00 PM 05:30:00 PM
      1019 Blockchain Basics    05:30:00 PM 06:30:00 PM
      1020 Entrepreneur Talk    06:30:00 PM 07:30:00 PM

10 rows selected.
```

TO VIEW THE TABLE

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

       EID ENAME               START_TI
---------- -------------------- --------
```

1017 AI Panel Discussion 15:30:00

1018 Innovation Challenge 16:30:00

1019 Blockchain Basics 17:30:00

1020 Entrepreneur Talk 18:30:00

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

RESULT

The sql order by date and time operations are performed.