|  |  |
| --- | --- |
| 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,'Job',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,'KARTHIK',19000,TO\_DATE('03-SEP-2022','DD-

MON-YYYY'));

1 row created.

SQL> INSERT INTO stack VALUES(103,'JEGAN',99000,TO\_DATE('14-OCT-2024','DD-

MON-YYYY'));

1 row created.

SQL> INSERT INTO stack VALUES(104,'Jisoo',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,'Rose',21800,TO\_DATE('08-NOV-2022','DD-

MON-YYYY'));

1 row created.

SQL> INSERT INTO stack VALUES(107,'Jennie',27100,TO\_DATE('19-MAY-2024','DD-

MON-YYYY'));

1 row created.

SQL> INSERT INTO stack VALUES(108,'RAJ',27180,TO\_DATE('21-AUG-2023','DD-MONYYYY'));

1 row created.

SQL> INSERT INTO stack VALUES(109,'KUMAR',29280,TO\_DATE('04-DEC-2022','DD-

MON-YYYY'));

1 row created.

**ADDING EVENT:**

SQL> INSERT INTO staff VALUES(100, 'Paper Presentation', TO\_TIMESTAMP('08:15:00', 'HH24:MI:SS')); 1 row created.

SQL> INSERT INTO staff VALUES(101, 'Quiz-competition', TO\_TIMESTAMP('09:45:00', 'HH24:MI:SS')); 1 row created.

SQL> INSERT INTO staff VALUES(102, 'Coding-competition', 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, 'Award-ceremony', TO\_TIMESTAMP('15:00:00', 'HH24:MI:SS')); 1 row created.

SQL> INSERT INTO staff VALUES(108, 'Robotics', TO\_TIMESTAMP('15:45:00', 'HH24:MI:SS')); 1 row created.

SQL> INSERT INTO staff VALUES(109, 'GUEST LECTURE', TO\_TIMESTAMP('16:30:00', 'HH24:MI:SS')); 1 row created.

**CURRENT DATE:**

SQL> SELECT

1. schedule\_id,
2. event\_name,
3. TO\_CHAR(event\_start, 'HH24:MI:SS') AS start\_time,
4. TO\_CHAR(event\_start + INTERVAL '1' HOUR, 'HH24:MI:SS') AS end\_time,
5. (INTERVAL '1' HOUR) AS duration
6. FROM staff;

SCHEDULE\_ID EVENT\_NAME START\_TI END\_TIME DURATION

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* 1. Paper Presentation 08:15:00 09:15:00 +0001:00:00
  2. Quiz-competition 09:45:00 10:45:00 +00 01:00:00
  3. Coding-competition 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

* 1. Coding-Hunt 12:40:00 13:40:00 +00 01:00:00
  2. 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

1. Award-ceremony 15:00:00 16:00:00 +00 01:00:00
2. Robotics 15:45:00 16:45:00 +00 01:00:00

SCHEDULE\_ID EVENT\_NAME START\_TI END\_TIME DURATION

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1. GUEST LECTURE 16:30:00 17:30:00 +00 01:00:00 10 rows selected.

SQL> SELECT

1. schedule\_id,
2. event\_name,
3. TO\_CHAR(event\_start, 'HH24:MI:SS') AS start\_time
4. FROM staff
5. WHERE EXTRACT(HOUR FROM event\_start) < 12;

SCHEDULE\_ID EVENT\_NAME START\_TI

----------- ------------------------------ -------- 100 Paper Presentation 08:15:00

101 Quiz-competition 09:45:00 102 Coding-competition 10:20:00

103 Project-Presentation 11:50:00

**ADDING DATE:**

SQL> SELECT

1. s1.schedule\_id,
2. s1.event\_name,
3. s1.event\_start,
4. s2.schedule\_id AS duplicate\_schedule\_id,
5. s2.event\_name AS duplicate\_event\_name,
6. s2.event\_start AS duplicate\_time
7. FROM staff s1
8. JOIN staff s2 ON s1.event\_start = s2.event\_start
9. WHERE s1.schedule\_id < s2.schedule\_id;

no rows selected

**EMPLOYEES HIRED ON ALTERNATE DAYS:**

SQL> SELECT

1. schedule\_id,
2. event\_name,
3. TO\_CHAR(event\_start, 'HH24:MI:SS') AS start\_time
4. FROM staff
5. ORDER BY event\_start DESC;

SCHEDULE\_ID EVENT\_NAME START\_TI

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|  |  |  |  |
| --- | --- | --- | --- |
| 109 |  |  | GUEST LECTURE 16:30:00 |
| 108 |  |  | Robotics 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 |  |  | Coding-competition 10:20:00 |
| 101 |  |  | Quiz-competition 09:45:00 |
| 100 |  |  | Paper Presentation 08:15:00 |

10 rows selected.

**EXTRACT:**

SQL> SELECT

1. COUNT(\*) AS afternoon\_events
2. FROM staff
3. WHERE EXTRACT(HOUR FROM event\_start) BETWEEN 12 AND 19;

AFTERNOON\_EVENTS

---------------- 6

**ADDING END TIME TO THE TABLE EVENT:**

SQL> SELECT

1. schedule\_id,
2. event\_name,
3. TO\_CHAR(event\_start, 'HH:MI:SS AM') AS start\_time,
4. TO\_CHAR(event\_start + INTERVAL '1' HOUR, 'HH:MI:SS AM') AS end\_time 6 FROM staff;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 101 |  |  | Quiz-competition 09:45:00 AM | 10:45:00 AM |
| 102 |  |  | Coding-competition 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 |  |  | Robotics 03:45:00 PM | 04:45:00 PM |

SCHEDULE\_ID EVENT\_NAME START\_TIME END\_TIME

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100 Paper Presentation 08:15:00 AM 09:15:00 AM

109 GUEST LECTURE 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

1. FROM event
2. 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 operations for ordering data by date and time were successfully performed. The records in the table were retrieved and sorted based on their event\_start time.