**EX.NO:08 DATE AND TIME FUNCTIONS**

**02.05.2024**

**AIM**

To perform SQL date and time functions.

**Table:**

create table employee(eid number(5),ename varchar(10),salary number(7),dept varchar(6),doj date,dob date);

SQL> insert into empww values(1,'Dinesh',20000,'ECE',to\_date('23-07-2002','dd-mm-yyyy'),to\_date('23-07-1967','dd-mm-yyyy'));

SQL> select \* from employee;

EID ENAME SALARY DEPT DOJ DOB

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1 Dinesh 20000 ECE 23-JUL-02 23-JUN-67

2 GUNAL 15000 CSE 12-OCT-00 01-MAR-55

3 Aanand 12000 IT 03-APR-96 30-MAR-40

4 Diva 11000 ECE 20-AUG-04 18-MAY-80

5 Nadin 10000 IT 30-NOV-08 27-DEC-99

6 nadin 13000 CSD 31-OCT-18 19-SEP-90

7 nadin 18000 FT 25-JUN-22 04-NOV-02

**DATE AND TIME FUNCTIONS ON EMPLOYEE TABLE:**

**To Calculate experience for eid=1:**

SQL> select ename,dept,round(months\_between(sysdate,doj)/12) as experience from employee where eid=1;

ENAME DEPT EXPERIENCE

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Dinesh ECE 22

**To Calculate age for eid=1:**

SQL> select ename,dept,round(months\_between(sysdate,dob)/12) as Age from employee where eid=1;

ENAME DEPT AGE

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Dinesh ECE 57

**To Calculate both age and experience for the relation:**

SQL> select ename,dept,round(months\_between(sysdate,dob)/12) as Age,round(months\_between(sysdate,doj)/12) as experience from employee;

ENAME DEPT AGE EXPERIENCE

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Dinesh ECE 57 22

GUNAL CSE 69 24

Aanand IT 84 28

Diva ECE 44 20

Nadin IT 24 15

nadin CSD 34 5

nadin FT 21 2

**TO FIND THE PROMOTION DATE:**

SQL> select eid,ename,dept,doj+interval'10' year as promotion from employee;

EID ENAME DEPT PROMOTION

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1 Dinesh ECE 23-JUL-12

2 GUNAL CSE 12-OCT-10

3 Aanand IT 03-APR-06

4 Diva ECE 20-AUG-14

5 Nadin IT 30-NOV-18

6 nadin CSD 31-OCT-28

7 nadin FT 25-JUN-32

**TO FIND YEAR OF JOINING:**

SQL> select eid,ename,dept,extract(year from doj) as Year\_of\_joining from em

ployee;

EID ENAME DEPT YEAR\_OF\_JOINING

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1 Dinesh ECE 2002

2 GUNAL CSE 2000

3 Aanand IT 1996

4 Diva ECE 2004

5 Nadin IT 2008

6 nadin CSD 2018

7 nadin FT 2022

**To find Number of months working months:**  
SQL> select eid,ename,dept,trunc(months\_between(sysdate,doj)) as no\_of\_worki

ng\_months from employee;

EID ENAME DEPT NO\_OF\_WORKING\_MONTHS

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1 Dinesh ECE 261

2 GUNAL CSE 282

3 Aanand IT 336

4 Diva ECE 236

5 Nadin IT 185

6 nadin CSD 66

7 nadin FT 22

**TO FIND SENIOR EMPLOYEE :**

SQL> select eid,ename,dept,doj from employee where doj=(select min(doj) fro

m employee);

EID ENAME DEPT DOJ

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3 Aanand IT 03-APR-96

**TO FIND EMPLOYEES HIRED ON SAME DAY:**

SQL> select doj,count(\*) as employees\_hired\_on\_same\_day from employee group by doj order by doj;

DOJ EMPLOYEES\_HIRED\_ON\_SAME\_DAY

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03-APR-96 1

12-OCT-00 1

23-JUL-02 1

20-AUG-04 1

30-NOV-08 1

31-OCT-18 1

25-JUN-22 1

**TIMESTAMP:**

SQL>create table student(sid number(6) primary key,fname varchar(10),lname varchar(10),email varchar(20),enrollment\_date timestamp default current\_timestamp);

SQL> insert into student(sid,fname,lname,email) values(1,'john','Doe','john@

gmail.com');

SQL> select \* from student;

SID FNAME LNAME EMAIL ENROLLMENT\_DATE

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1 john Doe [john@gmail.com](mailto:john@gmail.com) 02-MAY-24 06.35.06.598000 PM

SQL>insert into student(sid,fname,lname,email,enrollment\_date) values(2,'dinesh','kumar','dineshkuma@gmail.com',to\_date('03-MAY-2024 10:30:00','DD-MON-YYYY HH24:MI:SS'));

SQL> select \* from student;

SID FNAME LNAME EMAIL ENROLLMENT\_DATE

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1 john Doe [john@gmail.com](mailto:john@gmail.com) 02-MAY-24 06.35.06.598000 PM

2 dinesh kumar [dineshkuma@gmail.com](mailto:dineshkuma@gmail.com) 03-MAY-24 10.30.00.000000 AM

**DATE AND TIME FUNCTIONS ON DUAL :**

**CURRENT DATE:**

\*This function is used to get the current date in the session time zone

SQL> select current\_date from dual;

CURRENT\_DATE

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26-APR-24

**SYS DATE:**

**\***This function returns the current date and time of the Operating system

SQL> select sysdate from dual;

SYSDATE

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26-APR-24

**EXTRACT:**

**\*** This extract function is used to retrieve a specific component which can be year, day, month.

**For Year**

SQL> select extract(year from to\_date('2020-01-13','YYYY-MM-DD')) as YEAR from dual;

YEAR

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2020

For Month

SQL> select extract(month from to\_date('2020-01-13','YYYY-MM-DD')) as MONTH from dual;

MONTH

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1

**TO\_DATE:**

**\***This function converts a date which is in string type to date value

SQL> select to\_date('23 JUL 2005','DD MON YYYY') converted\_date from dual;

CONVERTED

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23-JUL-05

**TO\_CHAR:**

**\*** It is used to convert a date from DATE value to a specified date format.

SQL> select to\_char(sysdate,'DD MM YYYY') as NEW\_DATE from dual;

NEW\_DATE

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26 04 2024

SQL> select to\_char(sysdate,'DD/MM/YYYY') as NEW\_DATE from dual;

NEW\_DATE

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26/04/2024

**LAST\_DAY:**

**\***This function is used to return the last day of the month of the particular date.

SQL> select last\_day(sysdate) LAST\_DAY from dual;

LAST\_DAY

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**MONTHS\_BETWEEN:**

**\***This function is used to calculate the months between two dates.

\* Round function is used to rounds the value to the specified decimal place.

SQL> select round(months\_between(sysdate,date '2011-04-02')) MONTH\_DIFFERENC

E from dual;

MONTH\_DIFFERENCE

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157

**ADD\_MONTHS:**

**\***This function adds N months to a date and returns the same day N month after.

SQL> select add\_months(sysdate,2) NEWDATE from dual;

NEWDATE

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26-JUN-24

**FROM\_TZ:**

\*This function converts the TIMESTAMP to TIMESTAMP with TIME ZONE value.

SQL> select from\_tz(timestamp '2020-05-01 19:35:10','-07:00') NEWVALUE from

dual;

NEWVALUE

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01-MAY-20 07.35.10.000000000 PM -07:00

**NEW\_TIME:**

\*This function converts a date from one time zone to a different time zone.

SQL> select new\_time(sysdate,'pst','ast') TIME\_IN\_AST from dual;

TIME\_IN\_AST

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26-APR-24

**SESSIONTIMEZONE:**

**\***This function as the name suggest returns the time zone of the current working session.

SQL> select sessiontimezone from dual;

SESSIONTIMEZONE

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+05:30

**SYSTIMESTAMP:**

**\***This function represents a timestamp with a time zone. It displays the result up to fractional seconds.

SQL> select systimestamp from dual;

SYSTIMESTAMP

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26-APR-24 04.14.19.952000 PM +05:30

**TRUNC:**

**\*** TRUNC function in Oracle to truncate the current date (SYSDATE) to the beginning of the current month

SQL> select trunc(sysdate,'MM') MONTH from dual;

MONTH

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01-APR-24

**TZ\_OFFSET:**

**\***This function returns offset of a time zone name from UTC.

SQL> select TZ\_OFFSET('Indian/Christmas') as OFFSET from dual;

OFFSET

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+07:00

**To retrieve list of distinct time Zone:**

\*used to retrieve a list of distinct time zone names from the v$timezone\_names view in Oracle database

SQL> select distinct tzname from v$timezone\_names order by tzname;

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**RESULT:**

Thus, the SQL date and time functions were performed successfully.