

Exp - 4 Inbuilt functions in SQL

Aim: To perform manipulate records of table using
Inbuilt functions in SQL.

Single Row / Scalar functions →

Q1} List the hiredate of employees who work in dept no 20
in format like 'Wednesday January 12, 1983'.

Select to_char(hiredate, 'Day month dd, yyyy') as
hiring date from dept

Q2} Display the hiredate & with time of employees who work in
dept no 20.

Q3} Each employee receives a salary review after every 150 days of
service. Now list employee name, hiredate & first salary review date
of each employee who work in dept 20.

Q4) Date Functions

- i) Select add_months(sysdate, 2) from dual;
- ii) Select last_day(sysdate) from dual;
- iii) Select to_date('10-02-09', 'dd-mm-yy') from dual;
- iv) Select to_char(sysdate, 'dy dd mon yyyy') from dual;
- v) Select months_between(sysdate, to_date('10-10-07', 'dd-mm-yy')) from dual;
- vi) Select round(sysdate, 'year') from dual;
- vii) Select round(sysdate, 'month') from dual;
- viii) Select round(sysdate, 'day') from dual;
- ix) Select trunc(sysdate, 'year') from dual;
- x) Select trunc(sysdate, 'month') from dual;
- xi) Select trunc(sysdate, 'day') from dual;
- xii) Select greatest(sysdate, to_date('02-10-06', 'dd-mm-yy'), to_date('12-07-12', 'dd-mm-yy'), to_date('12-07-12', 'dd-mm-yy')) from dual;
- xiii) Select sysdate+25 from dual;
Select sysdate-25 from dual;
- xiv) Select sysdate-to_date('02-10-06', 'dd-mm-yy') from dual;

Q9 Outputs →

i) ADD MONTH

20 - APR - 23

ii) Last-day

28 - FEB - 23

iii) To-Date

10 - FEB - 09

iv) Mon 20 FEB 2023

v) MONTHS_between(sysdate,to_date('10-10-07','DD-MM-YY'))
184.3293322

vi) Next-day

22 - FEB - 23

vii) round(sysdate,'year')
01 - JAN - 23

viii) round(sysdate,'month')
01 - MAR - 23

ix) round(sysdate,'day')
19 - FEB - 23

x) round(sysdate)
20 - FEB - 23

xi) Create ↑
20 - FEB - 23

xii) Sysdate +25
17 - MAR - 23

xiii) Sysdate - 25
26 - JAN - 23

xiv) sysdate-to-date('02-10-06','DD-MM-YY')
5985.21632

S/P Vanjind

Q5} Character Functions

- ① Select initcap('jesus christ') from dual;
- ② Select lower('DIED') from dual;
- ③ Select upper('for us') from dual;
- ④ Select trim('Lordourgod', 'Lord') from dual;
- ⑤ Select rtrim('godlouseyou', 'you') from dual;
- ⑥ Select translate('jack', 'j', 'b') from dual;
- ⑦ Select replace('jack and sue', 'j', 'b2') from dual;
- ⑧ Select substr('way of sin is death', 10, 3) from dual;

Q6} Conversion Functions

- ① Select to_date('10-02-09', 'dd-mm-yy') from dual;
- ② Select to_char(sysdate, 'dy dd mon yy') from dual;
- ③ Select to_char(12345.5, 'L099, 999.99') from dual;
- ④ Select to_number('123') from dual;

Q5 Outputs →

- i) Jesus Christ
- ii) lower
died
- iii) UPPER
FOR US
- iv) LTRIM
our god
- v) RTRIM
god loves
- vi) TRAN
back
- vii) Replace('JACK AND JUE')
black A blue
- viii) SUB
sim

Op Verified

Q6 Outputs →

- i) TO_DATE
10-FEB-09
- ii) TO_CHAR
Mon 20 FEB 2023
- iii) TO_CHAR(12345.5,'L099,999,99')
\$ 012,345.50
- iv) TO_NUMBER ('123')
123

Op Verified

Q7 Numeric Functions

- i Select $\text{abs}(-15)$ from dual;
- ii Select $\text{ceil}(33.645)$ from dual;
- iii Select $\cos(150)$ from dual;
- iv Select $\cosh(0)$ from dual;
- v Select $\exp(2)$ from dual;
- vi Select $\text{floor}(100.2)$ from dual;
- vii Select $\ln(5)$ from dual;
- viii Select $\log(2,64)$ from dual;
- ix Select $\text{mod}(17,3)$ from dual;
- x Select $\text{power}(5,3)$ from dual;
- xi Select $\text{round}(125.67854,2)$ from dual;
- xii Select $\sin(-19)$ from dual;
- xiii Select $\sqrt[4]{\sin(40)}$ from dual;
- xiv Select $\sinh(45)$ from dual;
- xv Select $\text{sqrd}(7)$ from dual;
- xvi Select $\tan(45)$ from dual;

Q70. outputs →

i) $\text{Abs}(-15)$
- - - - -
- - - - - 15

ii) $\text{ceil}(33.645)$
- - - - -
- - - - - 34

iii) $\cos(180)$
- - - - -
- 0.59846007

iv) $\cosh(0)$
- - - - -
- - - - - 1

v) $\exp(2)$
- - - - -
7.3890561

vi) ~~$\cosh(100)$~~ (100.2)
- - - - -
- - - - - 100.

vii) $\ln(5)$
- 1.60943791

viii) $\log(2164)$
- - - - -
- - - - - 6

ix) $\text{Mod}(17,3)$
- - - - -
- - - - - 2

x) $\text{Power}(17,3)$
- - - - -
- - - - - 4913

xi) Round
- - - - -
- - - - - 125.68

xii) $\sin(-19)$
- - - - -
- - - - - 0.14987721

xiii) $\sin(90)$
- - - - -
- - - - - 0.893996664

xiv) $\sinh(45)$
- - - - -
- - - - - 1.7467E+19

xv) $\frac{\sqrt{7}}{2.64575131}$

xvi) $\tan(45)$
- - - - -
- - - - - 1.67977519

O/P Verified

XVII) Select trunc(60) from dual;

XVIII) Select trunc(125.5764,2) from dual;

Q8) Miscellaneous Functions

- i) Select uid from dual;
- ii) Select user from dual;
- iii) Select size('Hello') from dual;
- iv) Select null(comm,50) from emp where empno=7369;

Group Functions →

Q9) Find the no. of rows in EMP table.

Select count(empno) as noofrows;

Q10) Find number of designations in EMP table.

Select count(unique job) from EMP;

Q11) Find no. of employees who earn commission in EMP table

Select count(comm) as commission from emp;

Q12) What is the difference b/w following queries

SOL) Select count(comm) from emp;

SOL) select count(null(comm,0)) from emp;

(XVII) $\text{tanh}(60)$

(XVIII) $\text{TRUNC}(125.576412)$

Q8) Outputs \rightarrow

i) $\frac{\text{UID}}{98}$

ii) $\frac{\text{User}}{\text{RA2111028010163}}$

iii) $\frac{\text{vsize('Hello')}}{5}$

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Q13} Find the total salary paid to employees.
Select sum(sal) from emp;

Q14} Find max, min, avg salary in EMP Table
Select max(sal), min(sal), avg(sal) from emp;

Q15} Find number of employees who work in deptno = 30,
Select count(*) from emp where deptno = 30;

Q16} Select max salary paid to a 'CLERK'.

Select max(sal) From emp WHERE JOB = 'CLERK';

Q17} List the dept no. & no. of employees in each department.
Select job, count(*) From Emp Group By job Order By count(*) desc;

Q18} List jobs & no. of employees in each job. The result should be in descending order of num. of employees

SQL> Select job, count(*) from emp group by job
Order by count(*) desc;

Q19} List the total salary, max, min salary & avg salary of the employees jobwise.

Select job, sum(sal), max(sal), min(sal), avg(sal) From emp Group By job, deptno;

Q20} List the total salary, max & min salary & avg salary of employees jobwise, for department 20 & display only those rows having an average salary > 1000.

SQL> select job, sum(sal), max(sal), min(sal), avg(sal)
from emp group by job, deptno having deptno = 20 and avg(sal) > 1000;

Q21} List the job & total salary of employees jobwise for jobs other than 'PRESIDENT' and display only those rows showing total salary > 5000 .

Select job, sum(sal) From emp group by job WHERE job <> 'PRESIDENT' and sum(sal) > 5000 ;

Q22} List the job, no. of employees & avg salary of employees jobwise. Display only the row where no. of employees in each job ~~is~~ is more than 2.

Select job, count(*), avg(sal) From emp group by job having Count(*) > 2 .

Result → Thus, inbuilt SQL functions are used to manipulate records.

Exp No	4	Date	13/2/2023
Experiment Name	Inbuilt functions in SQL		
Understanding the concept		3	
SQL Query identification and validation		3	
Viva Q&A		3	
Total		9	
Verified by			