



select LPAD('hello', 8, '&')
from Dual;

LPAD('hello', 8, '&')

&&&hello

* RPAD Function

To add characters to
the right of a given string.

RPAD('hello', 8, '&')

hello &&&

* LTRIM:

LTRIM('hhhelloh', 'h')

elloh

More Functions on
www.techonthenet.com



* RTRIM:

RTRIM('hellohh', 'h')

hello

Numeric SRFs

(1) ROUND

Round(107.088, 2)

107.09

Round(107.088)

107

Round(107.9) → 108

ROUND(561, -3)

Check

(2) Trunc number

Trunc (107.08461, 3)

↓
107.084

Trunc (107.08461) → 107

Date/Time Functions

(1) Sysdate

select sysdate from dual

Sysdate

05/25/2019

(2) systimestamp

select systimestamp from dual;

→ 25-MAY-19 06:48:45.183845 PM +00:00

(3) Add_months

(i) select add_months ('05/25/2019', 3)
from dual;

→ 08/25/2019

(ii) select add_months ('05/25/2019', -3)
from dual;

→ 02/25/2019

(iii) select add_months (sysdate, 3)
from dual;

→ 02/20/2020

(4) Months - between

select months - between
('07/12/2018', '05/23/2019')
from dual;

→ -10.354833

(5) Trunc date

(i) select trunc(systimestamp)
from dual;

→ 05/29/2019

ii) select trunc(systimestamp,
'YEAR') from dual;

→ 01/01/2019

iii) select trunc(hiredate, 'MONTH')
from dual;

As Trunc, Hiredate from dual;
emp

Trunc	Hiredate
-------	----------

11/01/1981	11/17/1981
05/01/1981	05/01/1981
06/01/1981	06/09/1981
12/01/1982	12/09/1982

iv) select ename, hiredate,
trunc(hiredate, 'MONTH')
from emp
where trunc(hiredate, 'YEAR')
= '01/01/1982';

ename	Hiredate	Trunc
Scott	12/09/1982	12/01/1982
Miller	01/23/1982	01/01/1982

To_char:

It converts something (date and number) to a character representation.

(i) select to_char (sysdate, 'mm-dd-yyyy') from dual;

→ 05-29-2019

NOTE: We can change the format
'dd-mm-yyyy',
'yyyy-mm-dd', etc.

Format Element	How it works	Value Returned
----------------	--------------	----------------

YEAR	Year spelled out	Two Thous. Nine
------	------------------	-----------------

MM		04
----	--	----

MONTH		MARCH
-------	--	-------

MON		MAR
-----	--	-----

DAY	TUE
DD	25
YYYY	2007

ii) To more readable date in English:

select to_char (sysdate, 'ddth "of" MONTH, yyyy') from dual;

→ 31st of may, 2016

NOTE: Any non default format element needs to be put in " ".
eg: " of ", etc.

iii) select to_char (comm) from emp;

to_char (comm)	→ Data type of this attribute is <u>string</u> <u>now</u>
1400	
600	
-	

1) Select ename, sal,
to_char(sal, '\$99,999.99')
from emp;

ename	sal	to_char
Ward	1250	\$1,250.00
Martin	800	\$800.00

To-Date Function

Converts string representation
into date value.

To-Date('str', 'fmt')

(i) select to-date('2012-08-27',
'yyyy-mm-dd') from dual;

→ 08/27/2012

ii) select to-date('3 of June, 2012',
'dd "of" Month, yyyy')
from emp dual;

→ 06/03/2012

NVL Function:

```
select ename, NVL(comm, 0),
       comm from emp;
```

ename	NVL	comm
Jones	0	-
Martin	1400	1400
Blake	0	-

NOTE: (i) NVL function
number into number
(like '1400' → 1400)

NOTE:

```
select comm, NVL(comm, 'zero')
       from emp;
```

→ Error

(Because, here comm has a numeric data type, so we cannot change it into a string like 'zero')

NVL Function,
Number

NVL Function,

Data type

Number ^{converts} → Number
String → ~~String~~

Q) Write a query for wherever there is a NULL data in commission, convert it into 'No Data Found'.

→

```
select comm,
       to_char(NVL(comm, 0), 'No Data Found')
       from emp;
```

comm	Result
-	No data found
1400	1400
-	No data found

NVL Function can change
(Number into Number) and
(String into String) Only.

Q) Write a query to replace
Null value into Commission
into 'No Data Found'.

→ select Comm,
NVL(to_char(comm), 'No Data Found')

Comm	NVL
-	No Data Found
1400	1400
-	No Data Found

If arg1 = arg2, then it is replaced
with empty cell.

NULLIF Function

This function returns an empty
cell if the particular
value is matched.

nullif (arg1, arg2)

select ename, length(ename),
nullif(length(ename), 5) as Nullif
from emp;

ename	Length (ename)	Nullif
King	4	4
Blake	5	-
Clark	5	-
Turner	6	6

NOTE: In the above query,
if length(ename) = 5
then it is replaced
with empty cell.

NOTE: (i) Nullif (arg1, arg2)
 Both Number
 (ii) Nullif (arg1, arg2)
 Both character

EXAMPLE: select, ename, length (ename),
NVL (Nullif (To-char (length (ename),
To-char (5))) as Replace
 → 'Length is 5'
 from emp;

Ename	Length	Replace
King	4	4
Blake	5	Length is 5
Clark	5	Length is 5
Turner	6	6

10 Rows
 → Single
 → Row
 → Function
 10 Rows

10 Rows
 → Group
 → Function
 1 Row

NOTE: Group Functions are only allowed in
SELECT clause.



* Grouping Functions:

(1) MAX() Function

select max(sal) from emp;

MAX(sal)

5000

(2) MIN() Function

select min(sal) from emp;

Min(sal)

800

(3) SUM() Function :

select sum(sal) from emp;

sum(sal)

29025



8) Write a query that returns
the amount we pay to
the highest paid Manager.

→ select max(sal)
from emp
where Job = 'Manager';

(4) AVG() Function

select avg(sal) from emp;

Avg(sal)

2073.2142...

(5) COUNT() Function

select count(ename) from emp;

→ 14

NOTE: Count Function only
counts fields or cells
that contain data.

(It does not count
NULL or empty cells)

$\text{avg}(\text{sal})$ is same as
 $\text{sum}(\text{sal}) / \text{count}(*)$

Q) To find job average salary of each job title.

⇒ `select avg(sal) from emp
where Job = 'Clerk';`

→ 1037.5

`select avg(sal) from emp
where Job = 'Manager';`

→ 2758.3333...

`select avg(sal) from emp
where Job = 'Salesman';`

→ 1400

And so on...

This method is a very time consuming process for very large data (suppose 100 Job title)

We have a function named 'GROUP BY', which will ease the problem.

(6) GROUP BY Function:

(i) `select avg(sal), Job
from emp
group by job;`

Avg (sal)	Job
1037.5	Clerk
1400	Salesman
5000	President
2758.333...	Manager
3000	Analytics

NOTE:

NO group functions in where clause

(Only single row functions allowed in WHERE clause)

Instead we will use 'Having' keyword