

## QUERIES

### ① SELECT:

SELECT Column1, Column2 from TableName

i) SELECT \* FROM HR.Employees

ii) SELECT \* FROM HR.Employees  
WHERE (CONDITION)

iii) <> not equal

iv) where name = 'Julia'

v) where name like 'J%n'

vi) AND, OR, NOT

### ② SINGLE FUNCTION:

Count, Max, Min, Sum, Avg

4  
SELECT count(\*) FROM HR.Employees

Select max(salary) From HR.Employees

Select min(salary) From HR.Employees

Select avg(salary) From HR.Employees

## ④ DISTINCT :

i) SELECT DISTINCT Name FROM HR.Employee

## ⑤ DESC :

DESC HR.Employee

## ⑥ Sorting :

i) Select Exp\_id From HR.Employee order by Exp\_id

ii) ~~Select Exp\_id From HR.Employee~~  
order by Exp\_id desc

## ⑦ IN , BETWEEN:

- i) Select \* From Employee where  
Salary IN (6000, 10000, 17000)
- ii) Select \* From Employee where  
Salary NOT IN [10000, 9000, 17000]

ii) Select \* from HR.Employee where  
Salary between 10000 and 100000

Employee

⑦ Functions :

i) Select Round (Comision\_pct) from Employees

ii) Select Lower (None) from Employees

iii) Select TrimUp (None) from Employees

iv) Select Upper (None) from Employees

v) Select Length (None) . from Employees

vi) | Select Replace (None, I, 4) from Employees

vii) Select Convert ('Eman', 'Ptn') from and

viii) LPAD (String value, n, pad\_value)

ix) Trim ('! trim Text' FROM 'String value')

x) TO\_CHAR ( hire Date , ' Month DD, YYYY )

o

xii) TO\_CHAR (Salary, '\$ 999.999')

⑧ INSERT:

Insert INTO TableName (Col1Name, Col2Name)  
VALUES (Col1Value, Col2Value)

ex Insert into Employees (E\_id, Name)  
value ('17-K-3827', 'Estam')

⑨ UPDATE:

Update TableName set Dep\_Name = 'HR'  
where Dep\_id = 280

⑩ DELETE:

Delete from TableName [where...]

ex Delete from HR.Departments  
where D\_id = 270

# Delete from HR.Employees  
where Dep\_id IN (240, 250, 260)

⑪ Create Table :

# Create Table Table Name  
(  
E\_id      VARCHAR (20),  
Name      VARCHAR (20),  
);

⑫ ALTER :

i) ALTER table HR.Students ADD  
PRIMARY KEY (std\_id)

ii) ALTER table HR.Students ADD (Age NUMBER)

iii) ALTER table [TableName] read only

iv) ALTER Table HR.Students read only

⑬ Drop Table:

i) Drop table [TableName] [PURGE]

ii) Drop table Emp

iii) Drop table Emp PURGE

⑭ IS NULL

i) Select \* From Employees Where Mgr\_id IS NULL

⑮ GROUP BY:

SELECT ColumnName(s) FROM TableName  
GROUP BY ColumnName(s)

# Select avg(salary) as averageSalary  
From HR.Employee Group by Dep\_id

### ⑯ GROUP BY HAVING :

Select ColumnName(s) from TableName  
Group By ColumnName(s) HAVING CONDITION

### ⑰ Sub Queries :

Select colName from tableName  
where colName expression operator  
(select colName from tableName where condition)

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i) Select E\_id, E\_name from HR.Employees  
where Salary <  
(select avg(salary) from HR.Employees)

ii) Update Employees

Set salary = salary \* 0.25  
where Age IN  
(select age from Employees where age >= 29);

⑯ JOIN:

Left Join , Right Join , Inner Join, Full Join

i) Select colName  
from table1  
Inner Join table2  
ON table1.colName = table2.colName

Select F\_N, L\_N, Emp\_id  
From Employees  
Inner Join Department  
ON Employees.Emp\_id = Department.Emp\_id

⑰ Date Functions:

These take value of  
data type DATE.

## ② Conversion Functions:

They help to convert  
a value in one form to another form.  
NVL, TO\_CHAR, TO\_NUMBER, TO\_DATE.

## ③ Numeric Functions:

- ① ABS (x)
- ② CEIL (x)
- ③ FLOOR (x)
- ④ TRUNC (x,y)
- ⑤ ROUND (x,y)
- ⑥ MOD(x,y)

⑦ sign (x)

## ④ Character Text Functions:

- ① Lower (string)
- ② Upper (string)
- ③ Initcap (string)
- ④ LTRIM (string\_value, trim\_text)
- ⑤ RTRIM (string\_value, trim\_text)
- ⑥ Substr (string, m, n)
- ⑦ Length (string)
- ⑧ LPAD (string, n, pad\_value)
- ⑨ RPAD (string, n, pad\_value)

(23) Date Function:

- ii) ADD\_MONTHS (date, n)
- iii) MONTHS\_BETWEEN (x1, x2)
- iv) ROUND (x, date-format)
- v) TRUNC (x, date-format)
- vi) NEXT\_DAY (x, week-day)
- vii) LAST\_DAY (x)
- viii) SYSDATE
- ix) NEW\_TIME (x, zone1, zone2)
- x) ADD\_MONTHS()
- xii) MONTH\_BETWEEN()
- xii) NEXT\_DAY()

xiii) Last\_Day()

xiv) New\_Time()

④ Conversion Function:

i) TO\_CHAR (x,[y])

ii) TO\_DATE (x, [date format])

iii) TO\_NUMBER

iv) NVL (x,y)

⑤ Extract Function:

i) Select extract (day from sysdate)  
as only\_day from dual

## ⑥ Constraint:

### i) Column Level

Column [data type] [CONSTRAINT <constraint name> Primary Key]  
1.

### ii) Table Level

CONSTRAINT [constraint name] Primary Key [column]  
1

### iii) Column Level

Create Table Test  
(

    ID NUMBER CONSTRAINT Test\_PK PRIMARY KEY  
    );

### iv) Table Level

Create Table Test

(  
    CONSTRAINT Test\_PK PRIMARY KEY (ID)  
),

## ⑦ UNIQUE

i) Column Level

Column [data type] [CONSTRAINT name] [UNIQUE]

over Primary

Create Table Test

(...,

None VARCHAR2(20)

CONSTRAINT Test\_Non\_UK UNIQUE,

) ;

ii) Table Level

Constraint [constraint name] Unique (colName)

Primary

Create Table Test

(...,

None VARCHAR2(20),

STD VARCHAR2(20),

Constraint Test\_Non\_UK Unique (None)

) ;

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②8) Foreign Key:

i) at column level

COLUMN [datatype] [constraint] [constraint name]  
[References] [table name (colName)]

4 Create Table Test

(  
    code VarChar2(5),

    CONSTRAINT Test\_FK References  
        Parent\_Test (code),

) ;

ii) at table level

Constraint [constraintName] [Foreign key]  
    (Foreign key colName) References  
    [referenced table Name (referenced colName)]

② ALTER :

- i) Alter Table Emp Rename to Emp-New;
- ii) Alter Table Emp-New ADD (Test Col VARCHAR(2))
- iii) Alter Table Emp Rename Column Test to TestNew
- iv) Alter Table Emp Drop Column TestNew
- v) Alter Table Emp ADD Primary Key (E-ID)
- vi) Alter Table Emp Drop Primary Key
- vii) Alter Table Emp Read Only

⑩ Check Constraint:

if Create Table EMP

(

Emp\_id NUMBER(4) NOT NULL

Check(Emp\_id > 0) Primary Key

);

⑪ IN / ANY / ALL :

IN	Equal to any member in list
ANY	Compare value to each value returned by subquery
ALL	Compare value to every value returned by subquery

### ② Compound Queries:

Union	All distinct rows selected by either query
Union ALL	All rows selected by either include duplicates
Intersect	All distinct rows selected by both query
Minus	All rows are in first but not in second

### ③ Join

Select L.L\_name, H.H\_name, H.Contact\_no

From Location as L, Hotel as H

Where L.Loc\_id = H.Loc\_id

AND L.L\_name = 'Sant'

③④ PK / FK :

```
Create Table EMP
(
    E_id      NUMBER NOT NULL,
    D_id      NUMBER NOT NULL,
    E_name    Number(15, 4),
    Salary    Number(15, 4),
    Constraint EMP_KEY Primary Key Emp(E_id),
    Constraint EMP_FK Foreign Key EMP(D_id) References Dept(D_id)
);
```

③⑤

Default :

```
Create Table EMP
(
    D_id      NUMBER Not Null Default 1
    Constraint EMP_FK
    Foreign Key (D_id) References Dep(D_id)
    ON DELETE SET NULL
    ON UPDATE CASCADE,
);
```

③⑥

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C

⑥ Check :

i) D\_id NUMBER Not NULL  
CHECK (D\_id > 0 AND D\_id < 100);  
ii) CHECK (Mg\_Salary > Clerk\_Salary)

⑦ Select From 3 Tables :

Select Pnumber, Dnum, Address  
From Project, Department, Employee  
Where Dnum = Dnumber AND Mg\_Sal = Sal