* 1. **Data Query Language**

1. SQL> select staff\_name as sname,design\_code as dcode from staff\_master where hiredate < TO\_DATE('01/01/2003','DD/MM/YYYY') and staff\_sal between 12000 and 25000;

SNAME DCODE

--------------------------------------------- ----------

Shyam 102

Mohan 102

Anil 102

1. SQL>select staff\_code,staff\_name,dept\_code from staff\_master where (Months\_Between(sysdate,hiredate)/12)>=18 order by hiredate;

STAFF\_CODE STAFF\_NAME DEPT\_CODE

---------- -------------------------------------------------- ----------

100005 John 10

1. SQL> select \* from staff\_master where mgr\_code is null;

no rows selected.

1. SQL> select \* from book\_master where book\_pub\_year between 2001 and 2004 and book\_name like '%[&]%';

no rows selected.

1. SQL> select staff\_name from staff\_master where staff\_name like '%[ \_ ]%';

no rows selected.

## 2.1: Single Row Functions:

1) SQL> select staff\_name,'$'||staff\_sal from staff\_master;

STAFF\_NAME

--------------------------------------------------

'$'||STAFF\_SAL

-----------------------------------------

Arvind

$17000

Shyam

$20000

Mohan

$24000

STAFF\_NAME

--------------------------------------------------

'$'||STAFF\_SAL

-----------------------------------------

Anil

$20000

John

$32000

Allen

$42000

STAFF\_NAME

--------------------------------------------------

'$'||STAFF\_SAL

-----------------------------------------

Smith

$62000

Raviraj

$18000

Rahul

$22000

STAFF\_NAME

--------------------------------------------------

'$'||STAFF\_SAL

-----------------------------------------

Ram

$32000

10 rows selected.

2) select student\_name, TO\_CHAR(student\_dob,’MONTH DD YYYY’) from student\_master where TO\_CHAR(student\_dob,’DAY’) LIKE(‘%SATURDAY%’) or TO\_CHAR(student\_dob,’DAY’) LIKE(%SUNDAY%);

STUDENT\_NAME

--------------------------------------------------

TO\_CHAR(STUDENT\_DOB,'MONTHDDYYYY')

--------------------------------------------

Ravi

NOVEMBER 01 1981

Raj

JANUARY 14 1979

Arvind

JANUARY 15 1983

STUDENT\_NAME

--------------------------------------------------

TO\_CHAR(STUDENT\_DOB,'MONTHDDYYYY')

--------------------------------------------

Mehul

JANUARY 17 1982

Vijay

JANUARY 19 1980

Rajat

JANUARY 20 1980

STUDENT\_NAME

--------------------------------------------------

TO\_CHAR(STUDENT\_DOB,'MONTHDDYYYY')

--------------------------------------------

Ramesh

DECEMBER 27 1980

Amit Raj

SEPTEMBER 28 1980

8 rows selected.

3) select staff\_name, ROUND( MONTHS\_BETWEEN(sysdate,hiredate)) as MONTHS\_WORKED from staff\_master order by MONTHS\_WORKED DESC;

STAFF\_NAME MONTHS\_WORKED

-------------------------------------------------- -------------

John 217

Anil 215

Allen 214

Ram 205

Mohan 205

Shyam 204

Smith 203

Arvind 193

Raviraj 193

Rahul 182

10 rows selected.

4) select \* from staff\_master where TO\_CHAR(hiredate,'DD') BETWEEN 1 and 15 and TO\_CHAR(hiredate,'MONTH') LIKE '%DECEMBER%';

STAFF\_CODE STAFF\_NAME DESIGN\_CODE

---------- -------------------------------------------------- -----------

DEPT\_CODE STAFF\_DOB HIREDATE MGR\_CODE STAFF\_SAL

---------- --------- --------- ---------- ----------

STAFF\_ADDRESS

--------------------------------------------------------------------------------

100009 Rahul 102

20 16-JAN-78 11-DEC-03 100006 22000

Hyderabad

1. select staff\_name,staff\_sal,

CASE

WHEN staff\_sal >= 50000 THEN 'A'

WHEN staff\_sal >= 25000 AND staff\_sal < 50000 THEN 'B'

WHEN staff\_sal >= 10000 AND staff\_sal < 25000 THEN 'C'

ELSE 'D'

END CASE

from staff\_master;

STAFF\_NAME STAFF\_SAL C

-------------------------------------------------- ---------- -

Arvind 17000 C

Shyam 20000 C

Mohan 24000 C

Anil 20000 C

John 32000 B

Allen 42000 B

Smith 62000 A

Raviraj 18000 C

Rahul 22000 C

Ram 32000 B

1. rows selected.

6) select staff\_name,TO\_CHAR(hiredate,'MONTH DD YYYY'),TO\_CHAR(hiredate,'DAY') as DAY from staff\_master order by mod( TO\_CHAR(hiredate,'D')+5,7);

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

Allen

APRIL 23 2001

MONDAY

Smith

MARCH 12 2002

TUESDAY

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

Arvind

JANUARY 15 2003

WEDNESDAY

Rahul

DECEMBER 11 2003

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

THURSDAY

Ram

JANUARY 17 2002

THURSDAY

Raviraj

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

JANUARY 11 2003

SATURDAY

Mohan

JANUARY 19 2002

SATURDAY

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

Anil

MARCH 11 2001

SUNDAY

Shyam

FEBRUARY 17 2002

SUNDAY

STAFF\_NAME

--------------------------------------------------

TO\_CHAR(HIREDATE,'MONTHDDYYYY')

--------------------------------------------

DAY

------------------------------------

John

JANUARY 21 2001

SUNDAY

10 rows selected.

7) select INSTR('Mississippi','i',1,3) from dual;

INSTR('MISSISSIPPI','I',1,3)

----------------------------

8

8)

9)

select student\_code,student\_name,DECODE(dept\_code,20,'Electricals',30,'Electronics','Others') dept\_name from student\_master;

STUDENT\_CODE STUDENT\_NAME DEPT\_NAME

------------ -------------------------------------------------- -----------

1001 Amit Others

1002 Ravi Others

1003 Ajay Electricals

1004 Raj Electronics

1005 Arvind Others

1006 Rahul Others

1007 Mehul Electricals

1008 Dev Others

1009 Vijay Electronics

1010 Rajat Others

1011 Sunder Others

STUDENT\_CODE STUDENT\_NAME DEPT\_NAME

------------ -------------------------------------------------- -----------

1012 Rajesh Electronics

1013 Anil Electricals

1014 Sunil Others

1015 Kapil Others

1016 Ashok Others

1017 Ramesh Electronics

1018 Amit Raj Others

1019 Ravi Raj Others

1020 Amrit Others

1021 Sumit Electricals

21 rows selected.

## 2.2: Group Functions:

1)

select staff\_code,ROUND(MAX(staff\_sal),0)as Maximum,ROUND(MIN(staff\_sal),0)as Minimum,ROUND(SUM(staff\_sal),0)as Total,ROUND(AVG(staff\_sal),0)as Average from staff\_master group by staff\_code;

STAFF\_CODE MAXIMUM MINIMUM TOTAL AVERAGE

---------- ---------- ---------- ---------- ----------

100001 17000 17000 17000 17000

100002 20000 20000 20000 20000

100003 24000 24000 24000 24000

100004 20000 20000 20000 20000

100005 32000 32000 32000 32000

100006 42000 42000 42000 42000

100007 62000 62000 62000 62000

100008 18000 18000 18000 18000

100009 22000 22000 22000 22000

100010 32000 32000 32000 32000

10 rows selected.

## 3.1: Joins and Subqueries

1)