Lec 1/5 lesson(1-5)

Q1:

```
Select   e.firt_name, j .job_title ,e.hiredate,h.job_id,h.start_date,h.end_date
From  emp e,jobs  j ,job_history  h
Where  e.job_id =j.job_id  AND  h.empid= e.empid ;
```

Q2:

```
Select   c.country_id ,c.name,d.departement_name
From   countries  c, locations l , department d
Where  c.country_id=l.country_id  AND  l.location_id =d.location_id   ;
```

Q3:

```
Select    d.departement_name,avg(e.salary)
 From   department d, employee e
Where  d.departemt_id =e.departement_id
Group by  d.departement_name
Having   avg(e.salary) >=10000 ;
```

Q4:

```
Select   d.departement_number ,d.departement_name , count(e.employee_id)
 From   department d ,employee e
 Where  d.departement_id = e.depeartement_id
Group by  departement_number ,departement_name
Having  avg(e.salary )   /* the avg salary of each department */ < select( avg(salary)  from
employee )   /* avg salary  of the employees  in the company */
```

Any arguments in select or order by and not in group by will give me an error

PL/SQL → simulate the programming with the sql

Tool → SQL Developments && SQL plus

#Data in oracle is case sensitive

#NULL value : is an defined value ,if I put it in an arithmetic expression it will evaluate the expression to NULL , so we need to handle the NULL values "later on".

To save case sensitivity of alias but it between " "

distinct : will use to view the rows in non repeated way

you can make concatenation for text using ' ' ,

Select lname || 'is a' ||job from employee

If you need to change the delimiter

Select lname || q '[is't a :]' job from employee

' is the old delimiter [is the new delimiter q → used tochange form old ' to new [

the text && date must be put in ' '

The default way to write date date ='DD-MON-RR'

IS NULL → is a compare operator

like 'S%' 's_' → to get matched pattern

% many char 's%' → began with s

_ one char '-s%' → the second char is

Not ,And ,OR

you can sort using Alias of column || the number column in select statement

like '\-' → find the exact -

#like '%4%' → find all the have exact 4 , put before 4 \

These will get all values that has 'any char 4 any char '

Substitution values

value get from user & scope is the statement

put before the variable & variable

WHERE job_id='&job_number' ; → will receive value from user and put instead of &job_number

select name ,job_id ,&job_name

From employee

Order by &job_name

// this to avoid to show prompt to enter the job_name twice ,, if I need to save it in memory used && for first and & for second

select name ,job_id ,&&job_name /* this will enter first and save im memory */

From employee

Order by &job_name

/*The scope of variable : for all statement until you write undefined variable

To remove the variable from the memory */

/* You can also defined variable as constant without= need to allow user to enter the value using : Define employee_num =100 like &&employee_num

And can use it in the statement using &employee_num */

System variable :

Can be set on off value

Set verify on → will display the old && new values of the variable substation

Set verify off → will un display the old && new values of the variable substation

The scope is the open session

Define && undefined can't be written in the sql plus notepad "'buffer"

Ed → to open the buffer that carry the last statement

And can be run using /

Functions

Types of function

1- Single-row function input one row , o/p one row
2- Multi –row function input multi-row , o/p one row for each group of input

Char function:

1- Case –convention :change the case of char
   Lower(" STRING") → change to upper
   Upper("String") → change to upper case

2- Char manipulation

CONCAT() , SUBSTR(), LPAD("",10,*) /*put * in the begin of string until the string length =10 */

Replace ("string" 'char1' by 'char2')→replace all char1 by char 2

TRIM ('char' from 'string') → cut char from string

INSTR("string" ,char) →return number of this char in string if not exists return 0

Number Functions :

1- ROUND(45.926 ,2)→ 45.93 "cut and round after . by2 "
2- TRUNC(45.926,2)→ 45.92 "cut till 2digit after ."
3- MOD(1600,300)→ 300 "divide"

-1 mean number to 10 before .

-2 mean number to 100 before.

1 mean numbers to 1 after .

0 scut all after .

select TRUNC(25.36,2) from DUAL ; /* Dummy default output table , used when I use function that does't get any data from tables of DB "

sysdate → function return the date and time that are in the data base servers

current_date → function return the date for the current zone

Date functions:

1. Months_between () → will get months between two dates first -second
2. ADD_MONTHS (date,number of months) → add number of months to the date
3. NEXT_DAY(date, Friday) → will get the date of the next Friday after this date
4. LASR_DATE(date) → retun the last day in the month
5. Round('date','month') → will see day and round it to new month or old month

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Conversion function

1. Implicit conversion
    - Date to char "date in default format "
    - Number to char "if number is valued " '1215' not '15$'
2. Explicit conversion

    - To _date('char',format)
      #Date like '1/12/1989' this will not in format mast and the system will not understand this date .
      #We use this function to allow system to understand the date using the format specified
      # used in where condition && update && insert

    - To_number('char' format)
      # to allow the system to understand the input number that has different formats likes 12$, using the format specifier
      # used in where condition && update && insert

    - To_char('date',format)

      # To display the date using specific format in the showing only "select statement"

    - To_ char (number,format)
      # TO display the number using the set format "select statement"

There are different format s :

Number format mask && date format mask

Hour format → HH:MM:SS AM ||PM

1000,000 → 9999999 number of 9 > number of digits in number

Steps to run schema

- Conn system "press enter " passwd
- Create user identified by passwd ;
- Grant db a user ;
- Conn user /passwd
- Right click on run bar , edit paste
- Select * from tab ;
- Desc emp ;
- to clear screen → clear screen ;