# 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

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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 lower

Upper("String")  change to upper case

1. 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

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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 .

1. 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

# Conversion function

1. Implicit conversion

* Date to char "date in default format "
* Number to char "if number is valued " '1215' not '15$'

1. 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 ;