DBS Labsheet-10

(Prof. R. Gururaj)

PLSQL Sequences.

- A PL-SQL *sequence* is a user-defined schema-bound object that generates a series of numeric values.
- Sequences are frequently used in many databases because many applications require each row in a table to contain a unique value and sequences provide an easy way to generate them.
- The sequence of numeric values is generated in an ascending or descending order at defined intervals and can be configured to restart when it exceeds max_value.

Command used:

```
CREATE SEQUENCE sequence_name
```

SQL> create sequence bookid_seq start with 501;
Sequence created.

SQL> select * from book;

SQL> insert into book values(bookid_seq.nextval, 'Physics', 790);

PL-SQL Cursor

A cursor is a special construct in PL/SQL used to hold data rows returned by SQL query.
It can be seen as a reserved area of memory in which the output of a query can be stored.
It held in the reserved area of DBMS at server.
Cursor commands:

Open
Fetch
Close
Attributes:
%rowcount // returns number of rows fetched so far
%found // returns true if last fetch returned a row otherwise False
%notfound // returns true if last fetch did not return a row
%isopen // returns true if cursor is open

Example 1:
// Procedure to print book id and price in the format, using cursors
"For the book with id : XXX the price is :###"
Note : the above cannot be achieved with simple SQL SELECT statement.

Exercise-1:

// Procedure to print eno , ename and dname in the format,
Employee with ID: <XXX> is <name> and works with <dname> department

Employee with ID:7369 is SMITH and works with RESEARCH department
……
For all employees (use cursor)

Exercise-2:

To complete the previous Labsheet (LS-9) exercise problem.

We already have following Tables with data.
DEPT: dnum int(pk), dname vc(20),dloc vc(10)
EMP: eno int (pk), ename vc(15), job vc(10), mgr int(fk), hiredate date, sal int, comm int, deptno int(FK)
// mgr is FK indicating the manager managing the emp, and refer to eno of same table

Now, write a function *compute_bonus* that takes the *eno* of an Employee as argument and returns the bonus for that employee, based on the following formula.

Bonus= (2XSalary) + (5X Comm) + Incentive.

Incentive is based on the JOB and is as follows.

For CLERK 1000; SALESMAN 1500; MANAGER 2000; ANALYST 2000; PRESIDENT 3000.

Conclusion to DBS Lab:

Discuss what we covered and learnt through this Lab-work.

End-semester DBS Lab exam details will be announced soon by the IC.

*****