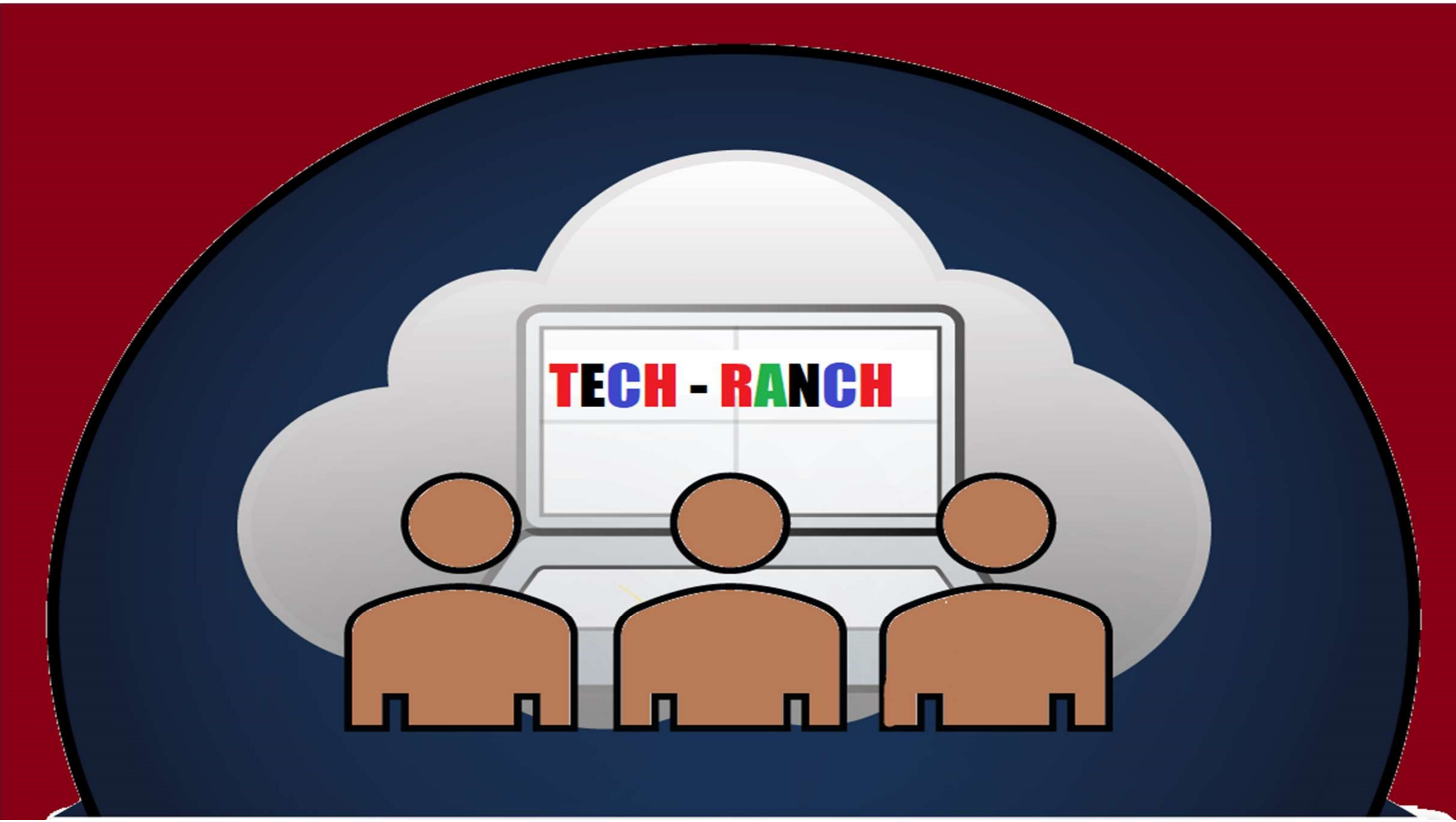
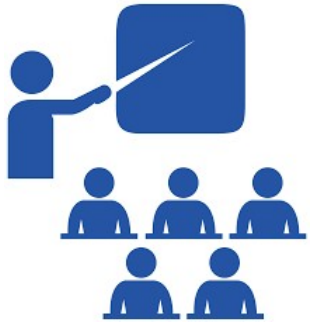

TECH - RANCH



PL/SQL Tutorial

(Procedural - Structured Query Language)

By

Anjali singh

Let's make coding fun!

Chapter 5

PL/SQL Tutorial

Cursors

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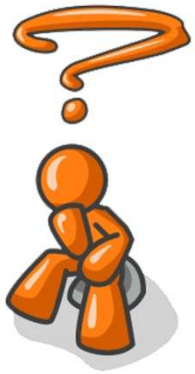
What do we learn in this Chapter?

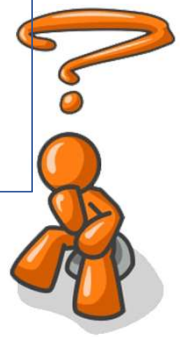


- What is Cursor?
- Types of Cursor
- Cursor Declaration
- Cursor Demonstration
- HOMEWORK

ORACLE

What is Cursors?

Oracle engine uses work area for its internal processing in order to execute an SQL statements. This work area is private to SQL operations called **CURSOR.** Data stored in Cursor called **Active Data set**



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CURSOR

TABLEA

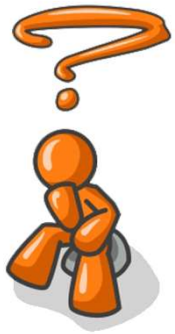
COLA	COLB
ROW11	12
ROW21	10

CURSOR C1

CURSOR C1

CURSOR C1

ORACLE ENGINE MEMORY SPACE



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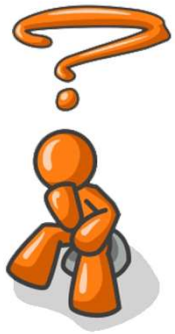
TYPES OF CURSOR

Implicit

- Automatically created by Oracle Engine and managed by Oracle engine internally
- Attributes of this cursor can be used to access information about the status of last SQL statement execution

Explicit

- Defined by developer to get more control over context area.
- Attributes helps to access active data set and program accordingly



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EXPLICIT CURSOR Management

Declare	Open	Fetch	Close
• Declare a cursor for initializing memory	• Opening Cursor for allocating memory	• Fetching cursor for retrieving data • Moves data held in active data set into memory variables	• Closing the cursor to release the allocating memory

FETCH PROCESSING

Client PL/SQL block of code defined Cursor

FETCH

defined

Server Machine user data stored on HDD

Cursor row moves to fetch encountered

TABLE

Active dataset on Server RAM

FETCH

Issued

Current record is fetched into PLSQL Variables

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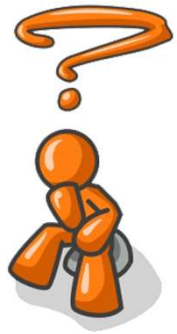
CURSOR SYNTAX

```
DECLARE
CURSOR <cursor_name>
BEGIN
OPEN cursor_name;
FETCH cursor_name into
variables;
CLOSE cursor_name;
End;
```

ATTRIBUTES	DETAILS
%FOUND	Last fetch success
%NOTFOUND	Last fetch failed
%ISOPEN	Explicit cursor is open
%ROWCOUNT	Returns number of rows fetched from active set



Cursors Demonstration

```
SQL> declare
  2  col_a tablea.cola%type;
  3  col_b tablea.colb%type;
  4  cursor c_tablea is select cola, colb from tablea;
  5  begin
  6  open c_tablea;
  7  loop
  8  fetch c_tablea into col_a, col_b;
  9  exit when c_tablea%notfound;
 10  dbms_output.put_line(col_a||' ' ||col_b);
 11  end loop;
 12  close c_tablea;
 13  end;
 14  /
```

Table A

COLA	COLB
ROW11	20
ROW21	12

Practice Project

INVENTORY MANAGEMENT

PRODUCT_ID	DETAILS	PRICE	STOCK_STATUS
IT001	Iron rod	121	OUT
IT002	Steel Bolts	111	IN
IT003	Washer Tar	231	IN
IT004	Foam	112	OUT

HOME WORK!

Instructions

1. Create a cursor to retrieve active data set which is not in stock and add an event using trigger to alert for out of stock to the manager.

For more resource , assistance and questions , please contact techranch2019@gmail.com

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Conclusion

PL/SQL

Stored Procedure

Functions

Trigger

Cursors

Demonstration

Interview Tips

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THANK YOU

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