**Introduction to pl/sql**

**Explain how rowtype can be used in pl/sql?**

The %Rowtype attribute provides a record type that represents a row in a database table. The record can store an entire row of data selected from the table or fetched from a cursor or cursor variable. Variables declared using %Rowtype are treated like those declared using a datatype name. You can use the %Rowtype attribute in variable declarations as a datatype specifier.

You can assign a list of column values to a record by using the select or fetch statement. The column names must appear in the order in which they were declared. Select-items fetched from a cursor associated with %Rowtype must have simple names or, if they are expressions, must have aliases.

**What is the difference between the columntype and rowtype in pl/sql**

These two are used with cursors to store the returing result from the query.

**%TYPE:** A variable is declared to be of %type when we are referring to a single specific column.when we declare a variable to be of %type of a column,the variable datatype   
becomes the datatype of that column..here it can only one datatype that of the column.  
  
**%ROWTYPE:** same as above but takes a single row at a time and can accomidate multiple datatypes.it can store whole row at a time containing different datatypes.

**Write a code to demonstrate the column type?**

**CREATE TABLE employees\_temp (empid NUMBER(6) NOT NULL PRIMARY KEY,**

**deptid NUMBER(6) CONSTRAINT check\_deptid CHECK (deptid BETWEEN 100 AND 200),**

**deptname VARCHAR2(30) DEFAULT 'Sales');**

**DECLARE**

**v\_empid employees\_temp.empid%TYPE;**

**v\_deptid employees\_temp.deptid%TYPE;**

**v\_deptname employees\_temp.deptname%TYPE;**

**BEGIN**

**v\_empid := NULL; -- this works, null constraint is not inherited**

**-- v\_empid := 10000002; -- invalid, number precision too large**

**v\_deptid := 50; -- this works, check constraint is not inherited**

**-- the default value is not inherited in the following**

**DBMS\_OUTPUT.PUT\_LINE('v\_deptname: ' || v\_deptname);**

**END;**

**/**

**Write the pl/sql code to give the usage of rowtype?**

Table employee:

Id varchar2(4),

First\_Name VARCHAR2(10 BYTE),

Last\_Name VARCHAR2(10 BYTE),

Start\_Date DATE,

End\_Date DATE,

Salary Number(8,2),

City VARCHAR2(10 BYTE),

Description VARCHAR2(15 BYTE)

declare

cursor c\_countEmps is select count(\*) count, sum(salary) sum from employee;

r\_testRec c\_countEmps%ROWTYPE;

begin

open c\_countEmps;

fetch c\_countEmps into r\_testRec;

close c\_countEmps;

DBMS\_OUTPUT.put\_line('number of emps is:'||r\_testRec.count);

DBMS\_OUTPUT.put\_line('sum of emp salaries is:'||r\_testRec.sum);

end;

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