

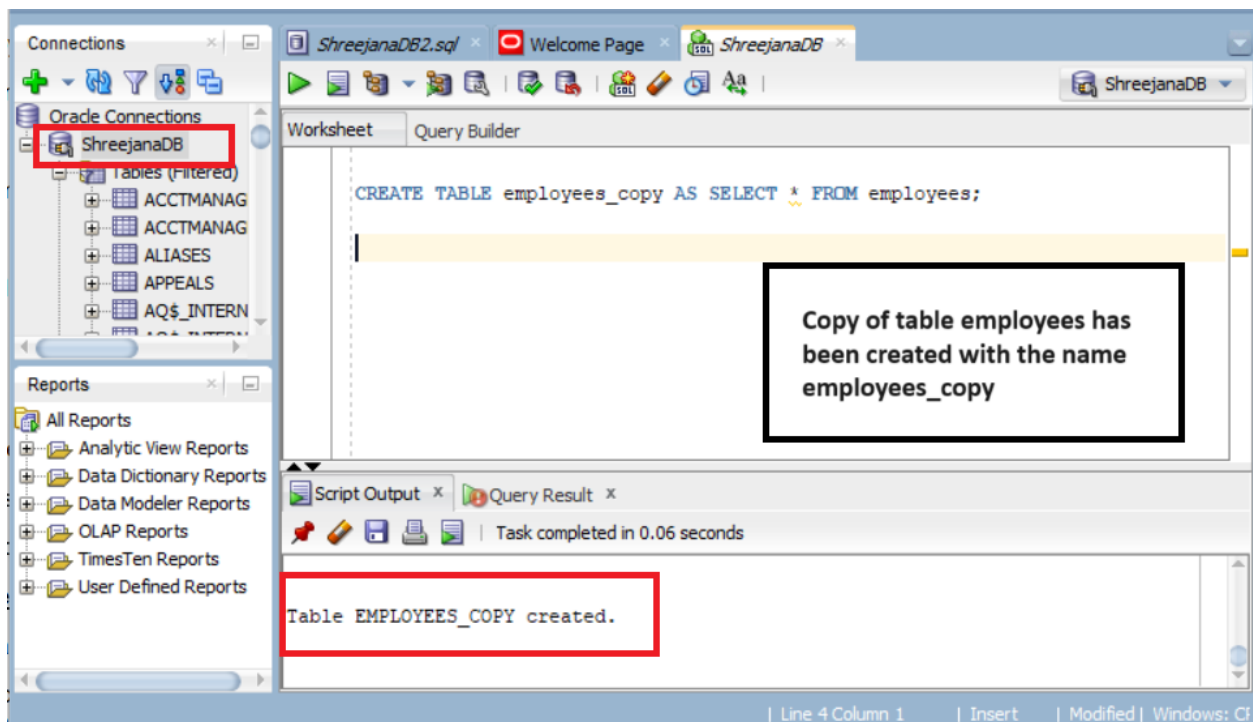
Database Programming - CSD 4203

Practical Exercise #1 – 2024S

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1. Create a copy of the table employee (New table name is employees_copy)



2. Write anonymous block to display FirstName and Salary of employee number 110 (use %TYPE)

The screenshot displays the Oracle SQL Developer interface. On the left, the 'Connections' pane shows 'ShreejanaDB' selected. The main workspace is the 'Query Builder', containing a PL/SQL anonymous block. The block declares two variables, `v_first_name` and `v_salary`, using the `%TYPE` attribute. It then performs a `SELECT` query on the `employees_copy` table for `employee_id = 110`. The results are displayed using `DBMS_OUTPUT.PUT_LINE`. The 'Script Output' pane at the bottom shows the execution results: 'FIRST NAME: John' and 'SALARY: 8200'. The status bar indicates 'Task completed in 0.052 seconds' and 'PL/SQL procedure successfully completed.'

```
DECLARE
    v_first_name employees_copy.first_name%TYPE;
    v_salary employees_copy.salary%TYPE;
BEGIN
    SELECT first_name, salary
    INTO v_first_name,
         v_salary
    FROM employees_copy
    WHERE employee_id = 110;

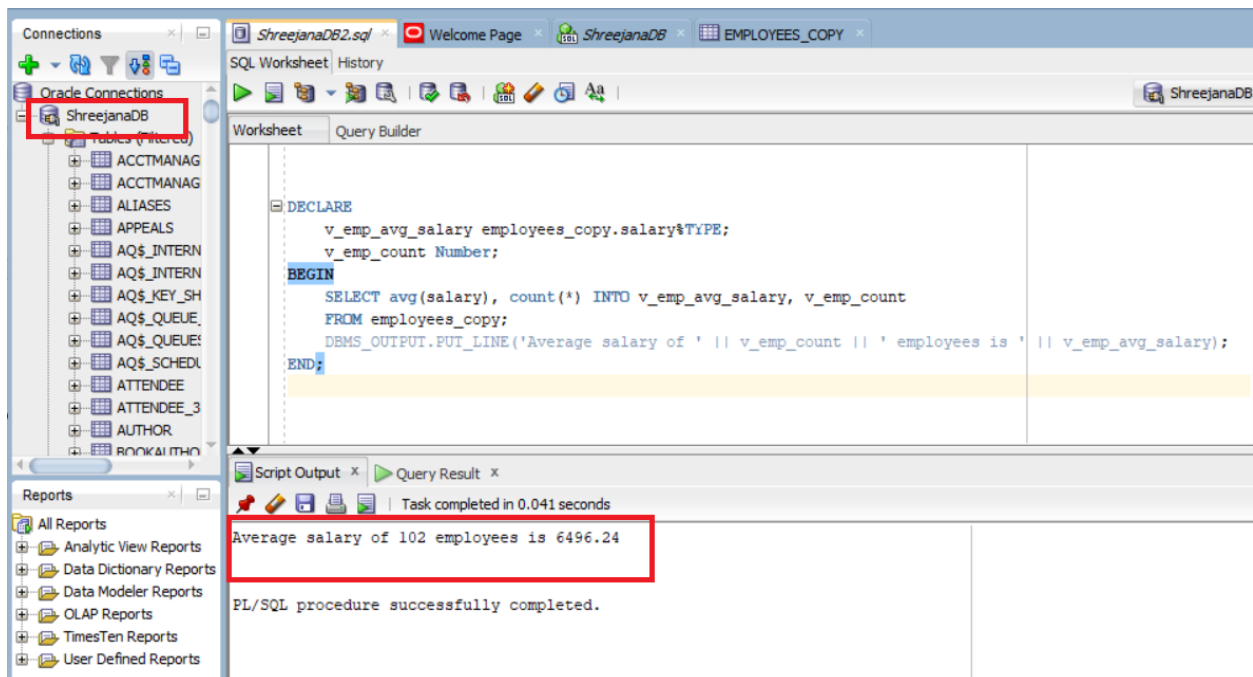
    --Displaying the retrieved values
    DBMS_OUTPUT.PUT_LINE('FIRST NAME: ' || v_first_name);
    DBMS_OUTPUT.PUT_LINE('SALARY: ' || v_salary);
END;
```

Task completed in 0.052 seconds

FIRST NAME: John
SALARY: 8200

PL/SQL procedure successfully completed.

3. Write anonymous block to display average salary of all employees (use %TYPE)



4. What is the difference between %ROWTYPE and %TYPE?

%TYPE and %ROWTYPE are the attributes in Oracle PL/SQL. They are used to declare variables that inherit the data types of existing database objects. These attributes help to enhance code consistency and flexibility. Some of the differences between these attributes are given below:

S.N	%TYPE	%ROWTYPE
1.	It declares a variable with the same data type and size that represents a database column	It declares a variable of type record that represents either a full or partial row of a database or view.
2.	It focuses on single columns	It focuses on complete rows
3.	It is best used for procedures and functions where individual column values are processed.	It is best used for cursors where entire rows are fetched and processed.
4.	It automatically adapts to changes in the data type of the referenced column.	It automatically adapts to changes in the structure of the referenced table or cursor.