

DBMS ASSIGNMENT NO – 1

1 . Explain INTO clause with syntax and example.

The SELECT INTO statement receives data from one or more database tables, and assigns the selected values to variable or collections. It is also simplest and fastest way to fetch a single row from table into variables.

Syntax:

```
SELECT COLUMN_NAME INTO VARIABLE_NAME
```

Example:

Declare

```
N varchar(20);
```

```
J varchar(20);
```

```
begin
```

```
SELECT ename, JOB INTO N, J FROM emp where job='CLERK' and sal=1300;
```

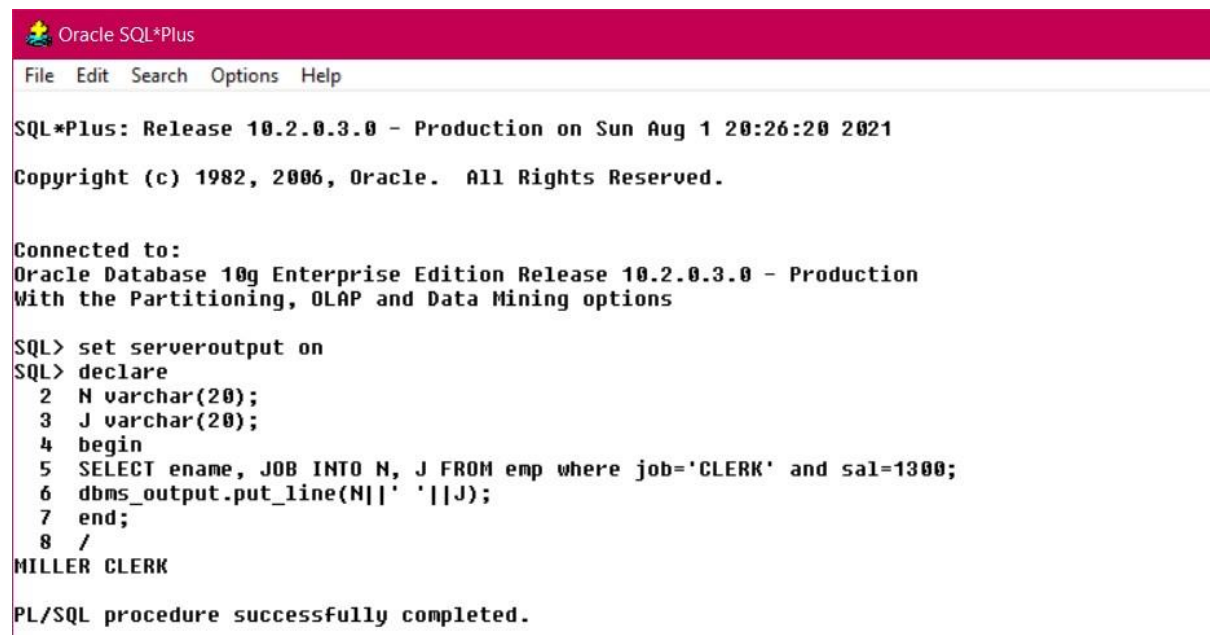
```
dbms_output.put_line(N||' '||J);
```

```
end;
```

```
/
```

Output:

MILLER CLERK



```
Oracle SQL*Plus
File Edit Search Options Help

SQL*Plus: Release 10.2.0.3.0 - Production on Sun Aug 1 20:26:20 2021
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Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options

SQL> set serveroutput on
SQL> declare
  2 N varchar(20);
  3 J varchar(20);
  4 begin
  5 SELECT ename, JOB INTO N, J FROM emp where job='CLERK' and sal=1300;
  6 dbms_output.put_line(N||' '||J);
  7 end;
  8 /
MILLER CLERK

PL/SQL procedure successfully completed.
```

2.Explain %type with syntax and example.

%TYPE attribute provides the data type of a database column to a variable. It is generally used when variables need to hold the value of the same type as declared in the database.

Syntax:

```
VARIABLE_NAME TABLE_NAME.COLUMN_NAME %TYPE[:=VALUE];
```

Example:-

declare

E emp.empno%type;

H emp.hiredate%type;

N emp.ename%type;

begin

SELECT empno, hiredate, ename INTO E, H, N FROM emp

where job='PRESIDENT';

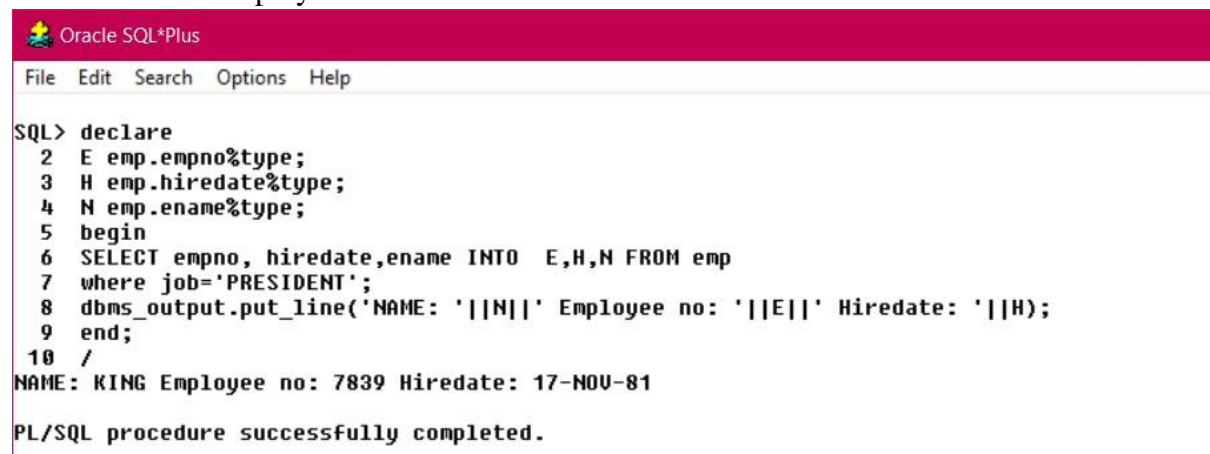
dbms_output.put_line('NAME: '||N||' Employee no: '||E||' Hiredate: '||H);

end;

/

Output:-

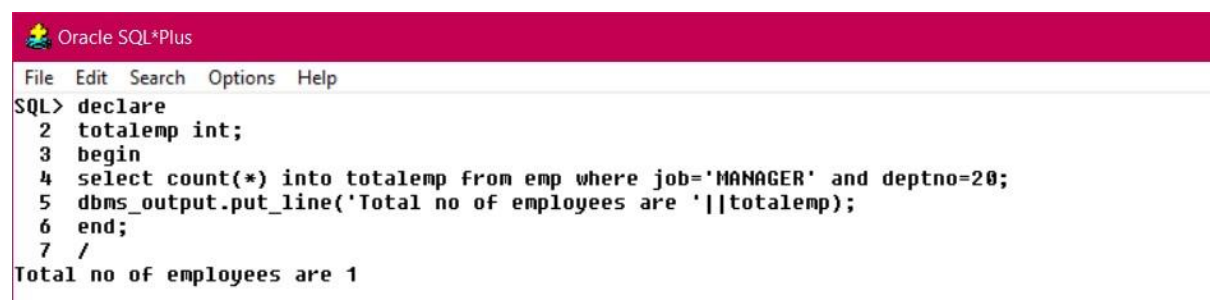
NAME: KING Employee no: 7839 Hiredate: 17-NOV-81



```
Oracle SQL*Plus
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SQL> declare
  2 E emp.empno%type;
  3 H emp.hiredate%type;
  4 N emp.ename%type;
  5 begin
  6 SELECT empno, hiredate, ename INTO E, H, N FROM emp
  7 where job='PRESIDENT';
  8 dbms_output.put_line('NAME: '||N||' Employee no: '||E||' Hiredate: '||H);
  9 end;
 10 /
NAME: KING Employee no: 7839 Hiredate: 17-NOV-81
PL/SQL procedure successfully completed.
```

3. Write a PL/SQL block to print the total number of employees working as MANAGER in deptno 20.



```
Oracle SQL*Plus
File Edit Search Options Help

SQL> declare
  2 totalemp int;
  3 begin
  4 select count(*) into totalemp from emp where job='MANAGER' and deptno=20;
  5 dbms_output.put_line('Total no of employees are '||totalemp);
  6 end;
  7 /
Total no of employees are 1
```

4. What are default variables? How can they be initialized in PL/SQL blocks? Can the value of default variable be changed during execution of program, explain with example?

PL/SQL allows us to set a default value for a variable at the declaration time. To initialize a default value to a variable we can use the assignment operator (:=) or the DEFAULT keyword.

Yes, we can change the value of default variable during execution block.

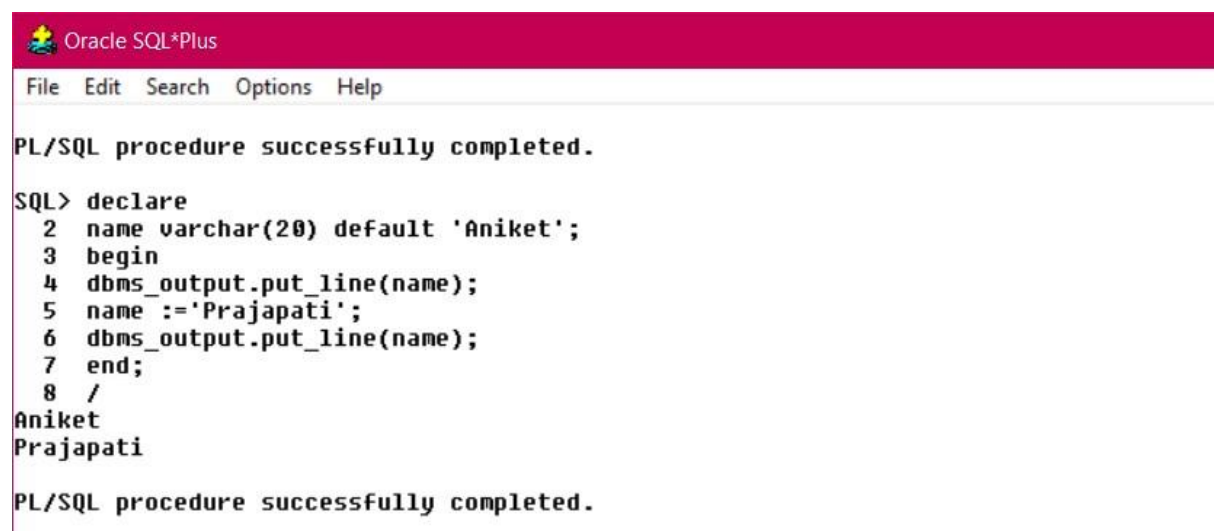
Example:-

```
declare  
  
  varchar(20) default 'Aniket';  
  
begin  
  dbms_output.put_line(name);  
  
  name := 'Prajapati';  
  dbms_output.put_line(name);  
  
end;  
  
/
```

Output:-

Aniket

Prajapati

The screenshot shows the Oracle SQL*Plus command-line interface. At the top is a red header bar with the Oracle SQL*Plus logo and name. Below it is a menu bar with 'File', 'Edit', 'Search', 'Options', and 'Help'. The main window displays the following text:

```
PL/SQL procedure successfully completed.  
  
SQL> declare  
  2  name varchar(20) default 'Aniket';  
  3  begin  
  4  dbms_output.put_line(name);  
  5  name := 'Prajapati';  
  6  dbms_output.put_line(name);  
  7  end;  
  8  /  
Aniket  
Prajapati  
PL/SQL procedure successfully completed.
```

5. What are datatypes? Briefly describe its types. Also give an example.

A data type is an attribute that specifies the type of data that the object can hold: integer data, character data, date and time data, binary strings, and so on. SQL Server supplies a set of system data types that define all the types of data that can be used with SQL Server.

Types Character String Data Types: This category is related to a character type. It allows the user to define the data type of character which can be of fixed and variable length.

Example: char and varchar(length)

Approximate Numeric Data Types: SQL Approximate Numeric category includes floating point and real values.

Example: float and real

Exact Numeric Data Types: Exact numeric has nine types of sub data types. Example: int, decimal and bit

Date and Time Data Types: It stores data of type Date and time. Example: date, time and DateTime.

Output:-

```
SQL> declare
  2 name varchar(20) := 'Aniket';
  3 no int := 20;
  4 decimal float := 21.4;
  5 d date := '21-JULY-2001';
  6 begin
  7 dbms_output.put_line('NAME: '||name||' NO: '||no||' DECIMAL: '||decimal||'DATE: '||d);
  8 end;
  9 /
NAME: Aniket NO: 20 DECIMAL: 21.4DATE: 21-JUL-01
PL/SQL procedure successfully completed.
SQL>
<
```