DBMS II ASSIGNMENT 1

1) Explain INTO clause with syntax and example.

The 'SELECT' command will fetch the values from the database, and 'INTO' clause will assign these values to the local variable of the PL/SQL block. 'SELECT' statement should return only one record while using 'INTO' clause as one variable can hold only one value.

Syntax :

BEGIN

SELECT <columnl>,..<column_n> **INTO** <vanable 1 >,. .<variable_n>

FROM <table_name>

WHERE <condition to fetch the required records>;

END;

Example : write a pl/sql program to display total number of employees in department no 30.

```
Run SQL Command Line

SQL> declare
  2  eno int;
  3  begin
  4  select count(*) into eno from emp_devangi where deptno=30;
  5  dbms_output.put_line('Total no of employees in deptartment 30 : '||eno);
  6  end;
  7  /
Total no of employees in deptartment 30 : 6

PL/SQL procedure successfully completed.

SQL> _
```

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 :
variablename tablename.columname%type [:= value];

example : Write a pl/sql program to count total salary where commission is not null.

```
Run SQL Command Line

SQL> declare
  2  s emp_devangi.sal%type;
  3  begin
  4  select sum(sal) into s from emp_devangi where comm is not null;
  5  dbms_output.put_line(s);
  6  end;
  7  /
5600

PL/SQL procedure successfully completed.

SQL> _
```

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

```
Run SQL Command Line

SQL> declare
  2  eno int;
  3  begin
  4  select count(*) into eno from emp_devangi where JOB='MANAGER' and DEPTNO=20;
  5  dbms_output.put_line('Total number of employess working as MANAGER in deptno 20 : '||eno);
  6  end;
  7  /
Total number of employess working as MANAGER in deptno 20 : 1

PL/SQL procedure successfully completed.

SQL>
```

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 you to set a default value for a variable at the declaration time. To assign a default value to a variable, you use the assignment operator (:=) or the DEFAULT keyword. In this example, instead of using the assignment operator := , we used the DEFAULT keyword to initialize a variable.

```
Run SQL Command Line

SQL> declare
  2  msg varchar(20) default 'Hello Devangi';
  3  begin
  4  dbms_output.put_line(msg);
  5  end;
  6  /
Hello Devangi

PL/SQL procedure successfully completed.

SQL>
```

Yes, we can changed the value of default variable during execution time
Example :

```
Run SQL Command Line

SQL> declare
  2  msg varchar(20) default 'Hello Devangi';
  3  begin
  4  msg := 'How are you?';
  5  dbms_output.put_line(msg);
  6  end;
  7  /
How are you?

PL/SQL procedure successfully completed.

SQL>
```

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

Every constant, variable, and parameter has a datatype, which specifies a storage format, constraints, and valid range of values.

Types of datatypes

1) **Number types :** It is used store numeric data (integers, real numbers, and floating-point numbers), represent quantities, and do calculations.

2) **Number :** It is used to store fixed-point or floating-point numbers. You can specify *precision*, which is the total number of digits, and *scale*, which is the number of digits to the right of the decimal point.
Syntax : NUMBER(precision,scale)

3) **Varchar2 :** use the VARCHAR2 datatype to store variable-length character data.

4) **Boolean :** It is used to store the logical values TRUE, FALSE, and NULL (which stands for a missing, unknown, or inapplicable value). Only logic operations are allowed on BOOLEAN variables.

5) **Char :** It is used to store alphanumeric data, represent words and text, and manipulate character strings.

6) **Date :** It is used to store fixed-length datetimes, which include the time of day in seconds

Example :