

Q. What is PL/SQL?

-> PL/SQL is an extension of SQL

-> PL/SQL is a block structured language.

-> The PL/SQL programming language was developed by Oracle Corporation in the late 1980s

#### PL/SQL Variables

Q. What is mean by Variable?

-> The thing whose value change/varies from time to time is called variable

-> In simple word it is a name given to a storage area

Q. How to declare variable in PL/SQL

-> You must declare the PL/SQL variable in the declaration section or in a package as a global variable

-> Syntax for declaring variable:

```
variable_name datatype := value;
```

Example

```
first_number number; // if we not not providing value then it is NULL.  
second_number number:=20;
```

-> Naming rules for PL/SQL variables

Rule 1) The variable name should not exceed 30 characters.

Rule 2) Variable name should not be the same as the table's column of that block.

Rule 3) The name of the variable must begin with ASCII letter.  
i.e variable name should not start with digit

Example

```
i) total_number number; --> valid  
ii) 123_total number;---> invalid  
iii total_123 number;--Valid  
iv) _total number; --> valid
```

Rule 4) Blank space is not allowed in the name of variable

Example

i) total sum number; --> invalid

ii) total\_sum number; --> valid

Rule 5) keywords cannot be used as variable name

create number; --> invalid

-> Initializing(Providing values) Variables in PL/SQL

1) Default value of variable is NULL

Example

age number;

2) If you want to provide a variable with other value than NULL value, you can do so during the declaration, by using any one of the following methods.

i) The DEFAULT keyword

ii) The assignment operator (:=)

Example

age number := 0;

greetings varchar2(20) DEFAULT 'Hello Pl/SQL';

-> PL/SQL Constants

Q. What is mean by Constants?

-> Whose values does not change or remain unchanged is called constant.

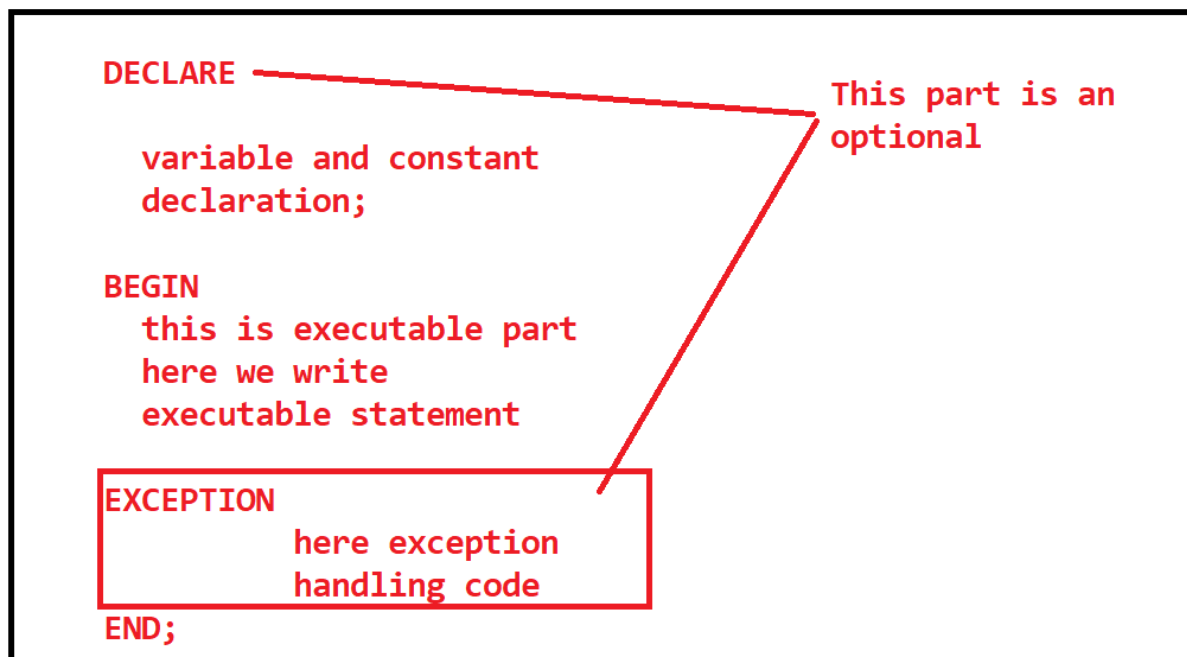
-> Syntax to declare a constant:

constant\_name CONSTANT datatype := VALUE;

Example

PI CONSTANT number:=3.14;

## PL/SQL Block Structure



Q. Write a PL/SQL block to Print "Hello" on console

```
begin  
  
    dbms_output.put_line('Hello');  
  
end;
```

**Q. Write a PL/SQL block to print addition of two number**

**Declare**

```
n1 number:=10;  
n2 number:=20;  
result number:=0;
```

**begin**

```
result:= n1+n2;  
dbms_output.put_line('Addition is '||result);
```

**end;**

Q. 1 Write a PL/SQL block to Print addition of 3 number

Q. Write a PL/SQL block to print subtraction of two number

Q. Write a PL/SQL block to print multiplication of three numbers

Q Write a PL/SQL block to Print division of two number

**Q. Write a PL/SQL block to Print length of String**

**Declare**

```
name varchar(200):='Good Morning';  
result number:=0;
```

**begin**

```
select upper(name) into result from dual;  
dbms_output.put_line('Length is '||result);
```

**end;**

**Q. Write a PL/SQL block to convert Lower case String into Upper Case and print that converted String**

**Declare**

```
name varchar(200):='Good Morning';  
result varchar(200):=' ';
```

**begin**

```
select upper(name) into result from dual;  
dbms_output.put_line('Upper Case is '||result);
```

**end;**

```
Declare
    name varchar(200):='Good Morning';
    result varchar(200):=' ';
begin
    select upper(name) into result from dual;
    dbms_output.put_line('Upper Case is '||result);
EXCEPTION
    WHEN OTHERS
    THEN
        dbms_output.put_line('Exception has Occured');
End;
```

Q. Write a Program to print todays date on Console

Q. Write a program to join two Strings and print result