

Oracle PL/SQL – Program Structure

- The basic unit of PL/SQL program is the **block**.
- PL/SQL programs are divided and written in logical blocks of code.
- Each block consists of three sub parts
 - Declarations
 - Executable Commands
 - Exception Handling

Declaration	Starts with the keyword DECLARE	Optional	Defines all variables, cursors, subprograms, and other elements to be used in the program.
Executable Commands	Enclosed between the keywords BEGIN and END	Mandatory	Consists of the executable PL/SQL statements of the program. Should have at least one executable line of code, which may be just a NULL command to indicate that nothing should be executed.
Exception Handling	Starts with the keyword EXCEPTION.	Optional	Contains exceptions that handle errors in the program.

- **DECLARE – Optional**
 - Variables, cursors, user-defined exceptions
- **BEGIN – Mandatory**
 - SQL statements
 - PL/SQL statements
- **EXCEPTION – Optional**
 - Actions to perform when errors occur
- **END; – Mandatory**

```
DECLARE  
...  
BEGIN  
...  
EXCEPTION  
...  
END;
```

- Comments are explanatory statements which are written in the code to help others understand the code better.
- All characters available inside the comment are ignored by PL/SQL compiler.
- PL/SQL supports two types of comments
 - single-line comment (starts with --)
 - multi line comment (enclosed within /* and */)

```
DECLARE
```

```
    -- variable declaration
```

```
    message varchar2(20):= 'Hello, World!';
```

```
BEGIN
```

```
    /*
```

```
        PL/SQL executable statement(s)
```

```
    */
```

```
    dbms_output.put_line(message); -- print message in the console
```

```
END;
```

```
/
```

Output :

Hello World

PL/SQL procedure successfully completed.