

## What is a Function?

A Function in PL/SQL is a named block that returns a single value and can be used in SQL queries or PL/SQL blocks.

Functions help in modularizing code, reusability, and improving performance.

## 2. Syntax of a Function

```
CREATE OR REPLACE FUNCTION function_name (param1 datatype, param2 datatype)
```

```
RETURN return_datatype
```

```
IS
```

```
-- Declare variables
```

```
BEGIN
```

```
-- Logic & calculations
```

```
RETURN value; -- Must return a value
```

```
EXCEPTION
```

```
-- Error handling
```

```
END function_name;
```

## 3. Key Components of a Function

Function Name → The unique identifier of the function.

Parameters → Input values passed to the function.

RETURN Clause → Specifies the data type of the return value.

BEGIN-END Block → Contains the logic of the function.

RETURN Statement → Returns a single value.

EXCEPTION Handling → Handles errors.

## 4. Types of Functions

1. Scalar Functions (Return a single value)
2. Table Functions (Return multiple rows as a table)
3. Pipelined Functions (Process large data in parallel)
4. Recursive Functions (Function calling itself)