**Stored Procedure**

 A **Stored Procedure** is a pre-compiled set of SQL statements stored on the database server, enabling efficient execution of complex tasks by encapsulating logic and promoting code reuse.

**What they are:**

Stored procedures are essentially named blocks of SQL code that can be executed as a single unit.

**Purpose:**

They are designed to perform specific tasks or operations on the database, such as inserting, updating, deleting, or retrieving data.

**Benefits:**

* **Code Reusability:**You can call the same procedure multiple times from different parts of your application or database logic, avoiding code duplication.
* **Improved Performance:**Stored procedures are pre-compiled and stored on the database server, leading to faster execution compared to sending individual SQL statements.
* **Enhanced Security:**Stored procedures can help control access to sensitive data by encapsulating the logic and limiting direct access to the underlying tables.
* **Transaction Management:** Stored procedures can be used to manage transactions, ensuring that a series of operations are either all completed successfully or rolled back in case of an error.

**Creating Stored Procedures:**

* Use the CREATE PROCEDURE statement to define a stored procedure.
* Specify the procedure name, input parameters (if any), and the SQL statements to be executed.

**Calling Stored Procedures:**

* Use the CALL statement to execute a stored procedure.
* Pass any required input parameters to the procedure when calling it.

**Syntax:**

CREATE OR REPLACE PROCEDURE insert\_data(a integer, b integer)

LANGUAGE SQL

AS $$

INSERT INTO tbl VALUES (a);

INSERT INTO tbl VALUES (b);

$$;

OR

CREATE OR REPLACE PROCEDURE insert\_data(a integer, b integer)

LANGUAGE SQL

BEGIN ATOMIC

INSERT INTO tbl VALUES (a);

INSERT INTO tbl VALUES (b);

END;