A **Stored Procedure** in SQL Server is a **precompiled collection of one or more SQL statements** that you can execute as a single unit. Think of it as a **function** or **method** in programming that performs a specific task—like retrieving data, inserting, updating, or deleting records.

**Benefits of Using Stored Procedures**

* **Reusability** – Write once, use many times
* **Performance** – Precompiled and cached for faster execution
* **Security** – You can restrict access to underlying tables and grant execution only
* **Maintainability** – Centralized logic that's easier to manage and update
* **Reduced Network Traffic** – Only the procedure call is sent, not the entire SQL

**Syntax:**

1. A screen shot of a computer program

   AI-generated content may be incorrect.**Create a Stored Procedure**

**Example: This is a stored procedure called GetEmplyeesByDepartment**

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1. **Execute a Stored Procedure**

It can be executed in two ways

1. **Procedure with OUTPUT Parameter**

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**NB:** TotalEmployees show the total number of employees.

**Calling it:**

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1. **Procedure with INSERT or UPDATE**

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1. **Modifying a Procedure**

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**For example:** Modified: **Add @Status** parameter to filter active/inactive employees

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1. **Delete a Procedure**

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**Best Practices**

* Always include BEGIN and END to define the procedure block clearly.
* Use meaningful parameter names.
* Handle errors using TRY...CATCH blocks.
* Use SET NOCOUNT ON to reduce unnecessary messages during execution

**Example with Error Handling**

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