Stored Procedures

A **stored procedure** is a set of Structured Query Language (SQL) statements with an assigned name, which are **stored** in a relational database management system as a group, so it can be reused and shared by multiple programs.

Create procedure basic syntax

Declaration

```
CREATE PROCEDURE
<SchemaName>.<ProcedureName>

AS

BEGIN


 --Your code ..

  SELECT



END
```

Usage

```
Execute <schemaName>.<ProcedureName>
```

Example

```
CREATE PROCEDURE HomePro.GetAllCustomers
AS
BEGIN
    Select
        CustomerId, FirstName, LastName, ..
    From HomePro.Customers
END
-----
ALTER PROCEDURE HomePro.GetAllCustomers
AS
BEGIN
        .......
END
```

Execute HomePro.GetAllCustomers

Or

Exec HomePro.GetAllCustomers

Naming conventions

- Schema name
- Procedures action name: GET, SET, UPDATE and so on
- Actions detail: AllClients, Clients without schedule
- Alias or owner name for distinguish

Examples:

- HomePro.GetAllCustomers_Andrey
- Bank.GetClientsNoSchedules_Andrey

Parameters

Declaration

```sql
CREATE PROCEDURE Bank.GetClientsByAge_Andrey
        @Age int
AS
BEGIN
    select ClientId, FirstName, LastName
    from Bank.Clients
    where age > @Age
END
```

Usage

```sql
EXEC Bank.GetClientsByAge_Andrey
        @Age = 10
```

Verify the passed value of parameter

```sql
CREATE PROCEDURE Bank.GetClientsByAge_Andrey
      @Age int
AS
BEGIN
    if (@Age < 10 or @Age > 100)
    begin
        Raiserror ('The parameter Age is not valid ', 16,10);
        Return
    end

    select ClientId, FirstName, LastName, Age
    from Bank.Clients
    where age > @Age
END
```