# Store Procedure

What is a Stored Procedure?

A stored procedure is a prepared SQL code that you can save, so the code can be reused over and over again.
So if you have an SQL query that you write over and over again, save it as a stored procedure, and then just call it to execute it.
You can also pass parameters to a stored procedure, so that the stored procedure can act based on the parameter value(s) that is passed.

1. Use CREATE PROCEDURE OR CREATE PROC statement to create SP

Note: When naming user defined stored procedures, Microsoft recommended not to use sp_ as a prefix. All system store procedures, and prefixed with sp_. This avoids any ambiguity between user defined and system stored procedure and system stored procedures and any conflicts, with some future system procedure.

To Execute the Store Procedure

1. spGetEmpName
2. EXEC spGetEmpName
3. Execute spGetEmpName

## Syntax

```
Create Procedure (Procedure Name)
As
Begin
        Statement
End
```

## View the text definition of Procedure

```
sp_helptext ProcedureName
```

## Rename Procedure

```
Sp_rename 'OldProcedureName ','NewProcedureName '
```

# TABLE

Results | Messages

| | ID | Name | Age | GenderID | City | Salary |
|---|---|---|---|---|---|---|
| 1 | 1 | YASIN- 6089 | 39 | 1 | NOIDA | 50000.00 |
| 2 | 2 | RAMANDEEP - 5617 | 19 | 1 | NOIDA | 25301.00 |
| 3 | 3 | MOHAMMED - 9037 | 60 | 1 | BANGALORE | 45632.00 |
| 4 | 4 | AJIT - 9028 | 23 | 1 | NOIDA | 32054.00 |
| 5 | 5 | GURPREET - 9032 | 25 | NULL | NOIDA | 15021.00 |
| 6 | 6 | RODNELL - 9013 | 59 | 1 | CHENNAI | 18000.00 |
| 7 | 7 | PANKAJ - 7090 | 29 | NULL | LUCKNOW | 21000.00 |
| 8 | 8 | KUMAR - 8016 | 35 | 1 | LUCKNOW | 25000.00 |
| 9 | 9 | SONU - 9059 | 19 | 1 | LUCKNOW | 80000.00 |
| 10 | 1... | SAKSHI - 9058 | 30 | 2 | DELHI | 36000.00 |
| 11 | 1... | RAJESH - 6039 | 26 | 1 | DELHI | 50123.00 |
| 12 | 1... | NILESH - 8077 | 27 | 1 | BANGALORE | 30148.00 |
| 13 | 1... | PRIYA - 8078 | 25 | NULL | DELHI | 36000.00 |
| 14 | 1... | RAMESH - 8079 | 25 | NULL | LUCKNOW | 39000.00 |

**Example**

Create Procedure Name, Age, and City from tblPerson

**Command**

```
Create Procedure spNamAgeCity
AS
Begin
        Select name,Age, City From tblPerson
End
```

**Execute Command**

spNamAgeCity
Exec spNamAgeCity
Execute spNamAgeCity

# Store Procedure with Parameter

Parameter and variables have an @ prefix in their name.

## Syntax

```
Create Procedure ProcedureName
@varname1 data type,
@varname2 data type
As
Begin
        Statement
End
```

To Execute:

Execute spGetExployeeByGenderandDepart 'Male' , 1

Execute spGetExployeeByGenderandDepart @Department=1, @Gender = 'Male'

**To view the text, of the store procedure**

Sp_helptext 'SPName'

1. To change the store procedure, user ALTER PROCEDURE statement
2. To delete the SP, user DROP PROC 'SPName' or DROP PROCEDURE SPName'
3. To encrypt the text of the SP, use WITH ENCRYPTION option. It is not possible to view the text of encrypted SP.

**Example**

```
Create Proc spNameSalary
@City nvarchar(20),
@Salary money
As
Begin
Select City,Salary From tblPerson
Where City=@City and Salary=@Salary
End
```

## Alter the Procedure

## Syntax

```
Alter Procedure ProcedureName
@varname1 data type,
@varname2 data type ……
@varnamen data type
As
Begin
        Statement change here
End
```

### Example with Encryption

```
Alter Proc spNameSalary
@City nvarchar(20),
@Salary money
With Encryption
As
Begin
Select City,Salary From tblPerson
Where City=@City and Salary=@Salary
End
```

## Insert Value Store Procedure

**Ques. Create procedure to insert value in the tblPerson**

```
CREATE Procedure spInserttblPerson
@ID as int,
@Name as varchar(50),
@Age as int,
@GenderID as int,
@City varchar(50),
@Salary money
AS
Begin
	insert into tblperson(ID,Name,Age,GenderID, City,Salary)
values(@ID,@Name,@Age,@GenderID,@City,@Salary)
End

Exec spInserttblPerson 15, 'SURESH - 8089',26,1,'DELHI',45303
```

## Delete Value Store Procedure

Create Delete Procedure

```
CREATE Proc spdeletetblPerson
@ID as int
AS
Begin
    delete from tblPerson where EmpID=@ID
End
```

Execute Procedure

```
Exec spdeletetblPerson 15
```

# Store Procedure with Output Parameter

**Example**

```
Create Proc spGetSalarybyCity
@City varchar(50),
@TotalSal money output
As
begin

        Select @TotalSal=SUM(salary) from tblPerson
        where City=@City
end
```

**Execute**

```
Declare @SalTotal money
Execute spGetSalarybyCity @City='Delhi', @TotalSal=@SalTotal out
Print @SalTotal
```

**With multiple output parameter**

```
Create Proc spGetEmpdetail
@ID int,
@Name varchar(50) output,
@City varchar(50) output,
@Salary money output
As
Begin
Select @Name=Name,@City=City,@Salary=Salary from tblPerson where ID=@ID
End
```

**Execute**

```
Declare @ID int,@Name varchar(50) ,@City varchar(50) , @Salary money

Set @ID=2
Execute spGetEmpdetail
@ID=@ID,@Name=@Name output,@City=@City output,@Salary=@Salary output

Select @ID as ID,@Name as Name,@City as City, @Salary as Salary
```

# Store Procedure Optional Parameter

**Example**

```
Create Proc spGetEmdetailOptional
@Name varchar(50)= null ,
@City varchar(50)= null ,
@Salary money = null
As
Begin
Select * from tblPerson    where (Name like @Name+'%' or @Name IS NULL)and
(City=@City or @City IS NULL)and (Salary>@Salary or @Salary IS NULL)
End
```

**Execute**

```
Execute spGetEmdetailOptional
Execute spGetEmdetailOptional @Name='S'
```