



DEPARTMENT OF COMPUTER ENGINEERING

EXPERIMENT NO 9

Title: Study and implement procedure and function in database system.

Aim: Perform Procedure and Function.

Theory:

A function calculates the results of a program based on the inputs provided, whereas a procedure is used to perform some tasks in a specific order.

What is a Procedure?

A procedure is a set of instructions which takes input and performs a certain task. In SQL, procedures do not return a value. In Java, procedures and functions are same and also called subroutines.

In SQL, a procedure is basically a precompiled statement which is stored inside the database. Therefore, a procedure is sometimes also called a stored procedure.

A procedure always has a name, list of parameters, and compiled SQL statements.

What is Function?

A function, in the context of computer programming languages, is a set of instructions which takes some input and performs certain tasks. In SQL, a function returns a value. In other words, a function is a tool in SQL that is used to calculate anything to produce an output for the provided inputs. In SQL queries, when a function is called, it returns the resulting value. It also controls to the calling function. However, in a function, we cannot use some DML statements like Insert, Delete, Update, etc.

Also, a function can be called through a procedure. Based on definition, there are two types of functions namely, predefined function and user defined function.

```
CREATE PROCEDURE HelloWorldprocedure
```

```
AS
```



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```
PRINT "Hello World";  
  
exec HelloWorldprocedure  
  
CREATE FUNCTION  
  
dbo.helloworldfunction()  
  
RETURNS varchar(20)  
  
AS  
  
BEGIN  
  
RETURN "Hello world"; END  
  
select dbo.helloworldfunction() as regards
```



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Write a program to Calculate a factorial using procedure

Create procedure factor(@number int) as

begin

Declare @i int = 1, @result int=1 while

((@i<=@number)

Begin

Set @result = @result * @i

Set @i += 1

End

Select @result

End

Exec factor 5

Conclusion: Hence in this way a procedure and function performed successfully.