**Function - Syntax [T-SQL]**

***CREATE FUNCTION (Function name (@input\_parameter datatype)***

***RETURNS return\_datatype***

***AS***

***BEGIN***

***Declare @output\_parameter(return datatype)***

***SELECT***

***FROM***

***WHERE***

***RETURN @output\_parameter***

***END***

**Procedure - Syntax [T-SQL]**

***CREATE PROCEDURE Froc\_name ( @input variable <data type>***

***@output variable data type output***

***@output2 variable datatype output )***

***AS***

***BEGIN***

***Declare @variable***

***SELECT***

***FROM***

***WHERE***

***END***

**Tutorial 05**

Consider the following schema from the previous lab sheet.

1. Physician (eid, ename, position)

2. Department (did, name, head)

*Foreign key (head) references Physician (eid)*

3. Works\_in (physician, department) Foreign key (physician) references Physician (eid)

*Foreign key (department) references Department (did) 4. Patient (pid, name, address, phone, insuranceId)*

5. Appointments (appointmentId, patient, physician, startTime, endTime, room)

*Foreign key (physician) references Physician (eid) Foreign key (patient) references Patient (pid)*

6. Drugs (Code, name, brand)

7. Prescribes (physician, patient, drug, date, appointment, dose)

*Foreign key (physician) references Physician (eid)*

*Foreign key (patient) references Patient (pid)*

*Foreign key (drug) references Drugs (Code)*

Answer the following questions with reference to the schema below. Use the given data set and check the correctness of your answers in the SQL Server.

1 - Write a T-SQL function to return the number of physicians in a given department.

Create function getPhysicianCount (@did int) returns int

As

Begin

Declare @pcount int

Select @pcount = COUNT(physician)

From works\_in w

Where w.department = @did

Return @pcount

End

Declare @result int

Exec @result = getPhysicianCount

Print @result

2 - Write the command(s) you would use to print the number of physicians in the ‘Psychiatry’ using the function you have created in the previous question.

Create function getPhysicianCount (@dname varchar(20) returns int

As

Begin

Declare @pcount int

Select @pcount = COUNT(physician)

From department d, works\_In w

Where d.did = w.department and d.name = @dname

Return @pcount

End

Declare @result int

Exec @result = getPhysicianCount\_Byname ‘pramuk’

Print @result

SELECT \* FROM department

SELECT \* FROM works

3 - Write a T-SQL function that returns the number of appointments a given physicians have on a given date.

Create function getAppointmentCount (@date date, @phID int) return int

As

Begin

Declare @apCount int

Select @apCount = COUNT(a.appointment Id)

From appointment a

Where a.physician = @phID and cast(a.startTime as date) = @date

Returns @apCount

End

4 - Write a T-SQL procedure that outputs number of drugs prescribed to a given patient by a given doctor

Create procedure getDrugCount(@patientID int, @phID int,

@drugCount int output )

As

Begin

Select @drugCount = count (\*)

From prescribes pr

Where pr.patient = @patientID

And

Pr.physician = @phID

End

Declare @result int

Exce getDrugCount 1000000001,1, @result output

Print @result