

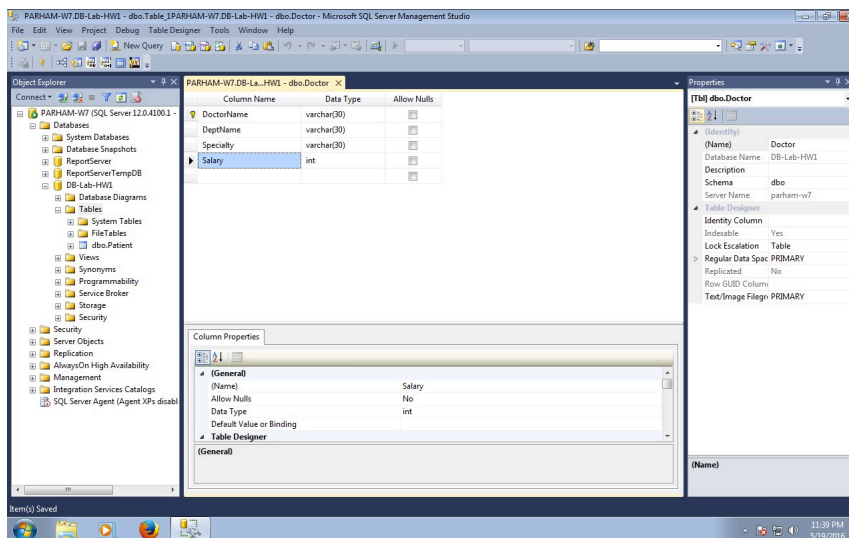
# Database Lab Homework - 1

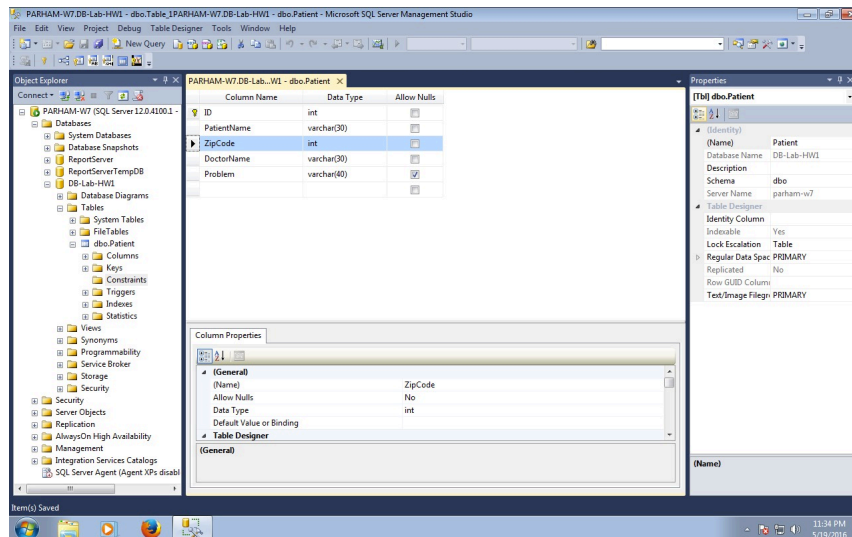
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May 20, 2016

## 1 PROBLEM 1





## 2 PROBLEM 2

```
CREATE PROCEDURE PatientFindOrAdd
    @id int, @name varchar(30),
    @zipcode int, @doctorName varchar(30),
    @problem varchar(40)
AS
    IF EXISTS (SELECT * FROM Patient WHERE PatientName = @name) AND EXISTS (SELECT * FROM Patient, Doctor
        WHERE Patient.DoctorName = Doctor.DoctorName AND Patient.P
        SELECT Doctor.DoctorName, Doctor.Specialty
        FROM Patient, Doctor
        WHERE Patient.DoctorName = Doctor.DoctorName AND Patient.P
    ELSE IF NOT EXISTS (SELECT * FROM Patient where PatientName = @name) AND NOT EXISTS
        INSERT INTO Patient VALUES(@id, @name, @zipcode, @doctorName, @problem);
    ELSE
        PRINT('ERROR: PatientName or ID Not Found');
```

## 3 PROBLEM 3

### 3.1 A

Functions are computed values and cannot perform permanent environmental changes to SQL Server (i.e. no INSERT or UPDATE statements allowed).

A Function can be used inline in SQL Statements if it returns a scalar value or can be joined upon if it returns a result set.

Statements that return a result set can be used within a stored procedure but not within a stored function.

### 3.2 B

```
CREATE FUNCTION DoctorSpecialty(  
    @ID int  
) RETURNS varchar(30)  
BEGIN  
    DECLARE @specialty varchar(30);  
    SELECT @specialty=Doctor.Specialty FROM Doctor, Patient WHERE Patient.ID=@ID and Patient.D  
    RETURN @specialty  
END
```

## 4 PROBLEM 4

```
CREATE TRIGGER DoctorInsertDelete  
ON Doctor  
AFTER INSERT, DELETE  
AS  
    INSERT INTO DoctorLog SELECT inserted.*, 'Insert' FROM inserted;  
    INSERT INTO DoctorLog SELECT deleted.*, 'Delete' FROM deleted;
```