**LAB ASSIGNMENT 7 – Due Sunday Noon**

Execute the below given create and insert statements in SQL Server:

CREATE TABLE employee (

employeeID NUMERIC(5,0) PRIMARY KEY,

employeeFName VARCHAR(30) NOT NULL,

employeeLName VARCHAR(30) NOT NULL,

employeeSalary int

);

CREATE TABLE project (

projectID NUMERIC(4,0) PRIMARY KEY,

projectDesc VARCHAR(200) NOT NULL,

projectStartDate DATETIME DEFAULT getdate(),

projectDuration VARCHAR(30)

);

CREATE TABLE projectAssignment(

employeeID NUMERIC(5,0) FOREIGN KEY REFERENCES employee(employeeID),

projectID NUMERIC(4,0)  FOREIGN KEY REFERENCES project(projectID),

projectRole VARCHAR(20) NOT NULL,

CONSTRAINT projectAssignment\_PK PRIMARY KEY (employeeID, projectID)

);

INSERT INTO project (projectID, projectDesc) VALUES (1001, 'new database');

INSERT INTO project VALUES (1002, 'new website', '2010-01-01', 'six months');

INSERT INTO project VALUES (1003, 'new mobile app', '2013-01-01', 'six months');

INSERT INTO employee VALUES (11111, 'James', 'Smith', 30000);

INSERT INTO employee VALUES (11112, 'Ada', 'Zack', 40000);

INSERT INTO employee VALUES (11113, 'Ben', 'Yale', 50000);

INSERT INTO employee VALUES (11114, 'Callen', 'Wales', 60000);

INSERT INTO employee VALUES (11115, 'Dale', 'Veller', 70000);

INSERT INTO employee VALUES (11116, 'Ethan', 'Miller', 80000);

INSERT INTO employee VALUES (11117, 'Fanny', 'Niel', 90000);

INSERT INTO projectAssignment VALUES (11111, 1001, 'manager');

INSERT INTO projectAssignment VALUES (11112, 1001, 'PHP programmer');

INSERT INTO projectAssignment VALUES (11113, 1001, 'Oracle DBA');

INSERT INTO projectAssignment VALUES (11114, 1001, 'quality assurance');

INSERT INTO projectAssignment VALUES (11115, 1001, 'test engineer');

INSERT INTO projectAssignment VALUES (11117, 1001, 'Oracle DBA');

INSERT INTO projectAssignment VALUES (11115, 1002, 'manager');

INSERT INTO projectAssignment VALUES (11116, 1002, 'test engineer');

INSERT INTO projectAssignment VALUES (11117, 1002, 'test engineer');

INSERT INTO projectAssignment VALUES (11113, 1002, 'test engineer');

INSERT INTO projectAssignment VALUES (11114, 1002, 'quality assurance');

ANSWER THE FOLLOWING QUESTIONS

1. Add an employee using your own name and create a project assignment for yourself using existing project id.
2. Write a scalar function that returns the average salary of the Employees
3. Write a table-valued function that returns the Projects given an EmployeeID as a parameter and
   1. Show the function created
   2. return the results for your own project
4. Alter the Employee table to add a new column called ‘Num of Projects’ which can be **INTEGER** data type. Write a procedure that updates employee table with the total projects assigned to each employee (to the newly created column)
5. Create a trigger that can update the num of projects whenever a new project is assigned to an employee.
   1. Test the trigger with the below insert

INSERT INTO projectAssignment VALUES (11114, 1003, ‘quality assurance');

INSERT INTO projectAssignment VALUES (11115, 1003,'test engineer');

INSTRUCTIONS

* For each question, ensure that the screenshot of the function and procedure scripts and return value is also pasted in the document
* Make sure you paste the before and after screenshots for question 4. That is, the values for ‘Num of Projects’ in Employee before and after execution of the procedure

*Please submit your lab report in one .docx file to BlackBoard. Name your file in this format “IST659-Lab7-Lastname-Firstname.pdf”.*

**Grading Criteria**

1. -1 for each un-attempted question
2. -0.5 for each wrong queries/results
3. -0.25 for each missing screen shot