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Database Systems
Due: 2/5/2017

# Session # 5, Stored Procedures

## *Objective*

Introducing Stored Procedures as a powerful tool to validate data entering and reading from the database.

## *Problem Statement*

Consider the following database schema:

**DEPT** (Dnumber , Dname, Founded, Mgr_ssn, Budget)
**EMPLOYEE** (Ssn, Ename , Bdate, Dno, Salary)

Note that the attribute Founded represents the foundation date of the department.

Implement PL/SQL blocks to do the following:

1- Create a stored function *Count_Emp (*Dnumber NUMBER*)* that returns the number of employees working for the department Dnumber
2- Create a stored procedure that ensures that Year(DEPT.Founded) >=1960 for all departments; if a row violates this constraint then set its date to be '01-JAN-1960'
3- Create a trigger to ensure that no department has more than 8 employees
4- Create a trigger to implement "ON UPDATE CASCADE" for the foreign key EMPLOYEE.Dno.
5- Create a trigger to ensure that whenever an employee is given a raise in salary, his department manager's salary must be increased to be at least as much.

## *Lab Session*

1- Open MySQL workbench and connect to the database using any database account specified, then create the database schema described above.
2- Add the needed procedures using the schema navigator. Create and submit the required procedures, functions and triggers.
3- Test the created functions/procedures/triggers by suitable SQL statements to ensure their correctness.
4- Disconnect from the Database.