

In the name of God
Database Lab
Spring 2016

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1 Results and Conclusions

1. First query to create table schema:

```
CREATE TABLE "persons-1"
(
    P_Id int identity(1,1),
    LastName varchar(255),
    FirstName varchar(255),
    Address varchar(255),
    City varchar(255),
    primary key (FirstName, LastName)
);

(a) SELECT * FROM "persons-1" ORDER BY LastName ASC;
(b) INSERT INTO "persons-1" (LastName, FirstName, Address, City)
    VALUES ('Hansen', 'Ola', 'Timoteivn 10', 'Sandnes');
    INSERT INTO "persons-1" (LastName, FirstName, Address, City)
    VALUES ('Svendson', 'Tove', 'Borgvn 23', 'Sandnes');
    INSERT INTO "persons-1" (LastName, FirstName, Address, City)
    VALUES ('Pettersen', 'Kari', 'Storgt 20', 'Stavanger');
    INSERT INTO "persons-1" (LastName, FirstName, Address, City)
    VALUES ('Nilsen', 'Tom', 'Vingvn 23', 'Stavanger');
    SELECT * FROM "persons-1";
(c) BEGIN TRANSACTION t1

    UPDATE "persons-1" SET phone_number='0019392' where P_id=1;
    UPDATE "persons-1" SET phone_number='0019392' where P_id=2;
```

```

UPDATE "persons-1" SET phone_number='0019392' where P_id=3;
UPDATE "persons-1" SET phone_number='0019392' where P_id=4;

COMMIT TRANSACTION t1;

SELECT * FROM "persons-1";
(d) SELECT FirstName,LastName,Full_address = (CASE P_id
      WHEN 1 THEN 'Jomhori'
      WHEN 2 THEN 'Enghelab'
      WHEN 3 THEN 'Felestin'
      ELSE 'Ferdowsi'
    END) FROM "persons-1";
(e) SET identity_insert "persons-1" ON;
    BEGIN TRANSACTION t1
    INSERT INTO "persons-1"
      (P_id, FirstName, LastName, City,Address, phone_number) VALUES
      (7,'Tjessem','Jakob', 'Nissestien 67', 'Sandnes','0017673276');
    SELECT * FROM "persons-1" ORDER BY FirstName ASC;
    COMMIT TRANSACTION t1;
(f) DECLARE @temp int;
    SELECT @temp = max(P_id) FROM "persons-1";
    WHILE @temp > 0 BEGIN
      PRINT 'Okay';
      SET @temp=@temp-1;
    END
(g) DECLARE @temp int;
    SELECT @temp = max(P_id) FROM "persons-1";
    WHILE @temp > 0 BEGIN
      PRINT 'Okay';
      SET @temp=@temp-1;
    END
(h) SET identity_insert "persons-1" ON;
    DELETE FROM "persons-1" WHERE FirstName='taylor';
    DECLARE @temp nvarchar(255);
    SELECT @temp = phone_number FROM "persons-1" WHERE Firstname='Tjessem';
    DECLARE @casted int;
    SET @casted = cast(@temp as int);
    IF @temp < 0011234567
      INSERT INTO "persons-1" (P_id,FirstName,Lastname, Address,City,phone_number)
        VALUES (6,'taylor','Jackson','Nisseisten87','Sandnes','0011234567')
    ELSE
      INSERT INTO "persons-1" (P_id, FirstName, Lastname, Address, City, phone_number)
        VALUES (8,'taylor','Jackson','Nisseisten87','Sandnes','0011234567')
    SELECT * FROM "persons-1";

```

2. Creating table schema

```
CREATE TABLE "students-1"(  
    name varchar(255),  
    student_id int primary key,  
    grade int  
);
```

(a) Adding data to table:

```
DELETE FROM "students-1";  
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R1',8831047,12);  
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R2',8831043,10);  
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R3',8831031,15);  
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R4',8831051,16);  
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R1',8831012,11);  
SELECT * FROM "students-1";
```

(b) Achieving result:

```
DECLARE @temp table(  
    nameb varchar(255),  
    student_idb int,  
    new_grade int,  
    old_grade int  
);  
UPDATE "students-1" SET  
    "students-1".grade = "students-1".grade + 2 OUTPUT inserted.name,  
    inserted.student_id,inserted.grade,deleted.grade INTO @temp  
    WHERE "students-1".grade < 15;  
SELECT * FROM @temp;
```