

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)
    ELSE
      INSERT INTO "persons-1" (P_id, FirstName, Lastname, Address, City, phone_number) VA
      SELECT * FROM "persons-1";

```

2. Creating table schema

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

(a) Adding data to table:

```
DELETE FROM "students-1";\n
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R1',8831047,12);\n
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R2',8831043,10);\n
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R3',8831049,11);\n
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R4',8831051,16);\n
INSERT INTO "students-1" (name,student_id,grade) VALUES ('R1',8831012,11);\n
SELECT * FROM "students-1";\n
```

(b) Achieving result:

```
declare @temp table(\n
    nameb varchar(255),\n
    student_idb int,\n
    new_grade int,\n
    old_grade int\n
);\n
UPDATE "students-1" SET "students-1".grade = "students-1".grade + 2 output inserted.\n
inserted.student_id,inserted.grade,deleted.grade into @temp where "students-1".grade < 16;\n
SELECT * FROM @temp;\n
```