In the name of God

Database Lab

Spring 2016

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1 Results and Conclusions

a.
```sql
create table "tblStudent-1"(
stuName varchar(50),
stuID int primary key,
stuGrade real
);

insert into "tblStudent-1" values('Akbar',1,19);
insert into "tblStudent-1" values('Asghar',2,2);
```

b.
```sql
alter procedure rankStu
@grade varchar(50) output
as

declare @iman int;
select @iman=count(*)
from "tblStudent-1" where stuGrade <10;

if @iman < 1
set @grade = 'GOOD';
else if @iman = 2 or @iman = 3
set @grade = 'Normal';
else
set @grade = 'Bad';
```

c.
```sql
declare @res varchar(50);
exec rankStu
```

```sql
    @grade = @res output;
    print @res;
```

d.
```sql
select * from "tblStudent-1";
```

e.
```sql
create procedure updateGrade
@num int
as
declare @iman as int;
select @iman=count(*) from "tblStudent-1"
where stuGrade < 10;
if (@iman < @num)
update "tblStudent-1"  set stuGrade = stuGrade + 1 where  9 < stuGrade and stuGrade < 1
else
update "tblStudent-1"  set stuGrade = stuGrade + 0.5 where  9.5 < stuGrade and stuGrade
```

f.
```sql
declare @num int;

set @num = 1;
exec updateGrade
@num=@num;

select * from "tblStudent-1";
```

g.
```sql
create procedure swap
@A int, @B int output
as
        set @B = @A;
```

h.
```sql
declare @res int;

exec swap
@A = 10,
@B = @res output;
print @res;
```

i.
```sql
alter function find_student (@name varchar(50))
returns int
as
begin
        declare @retval int;
        select @retval=stuGrade from "tblStudent-1" where stuName=@name;
        return @retval;
end;
```

j.
```sql
declare @ret int;
exec @ret=find_student
```

```
@name = 'Akbar';
print @ret;
```

k.
```sql
insert into PostalCode values (
        'Michael',
        'Blythe',
        98027
);

insert into PostalCode values (
        'Linda',
        'Mitchell',
        98027
);

insert into PostalCode values (
        'Jillian',
        'Carson',
        98027
);

insert into PostalCode values (
        'Garrett',
        'Vargas',
        98027
);

insert into PostalCode values (
        'Tsvi',
        'Reiter',
        98027
);

insert into PostalCode values (
        'Shu',
        'Ito',
        98055
);

insert into PostalCode values (
        'Jose',
        'Saraiva',
        98055
);

insert into PostalCode values (
```

```
        'Tete',
        'Mensa-Annan',
        98055
);

insert into PostalCode values (
        'Lynn',
        'Tsofilias',
        98055
);

insert into PostalCode values (
        'Rachel',
        'Valdez',
        98055
);

insert into PostalCode values (
        'Jae',
        'Pak',
        98055
);

insert into PostalCode values (
        'Ranjit',
        'Varkey Chudukatil',
        98055
);

select FirstName, LastName
        ,row_number() over (order by p.PostalCode) as "Row Number"
        ,rank() over (order by p.PostalCode) as Rank
        ,dense_rank() over (order by p.PostalCode) as "Dense Rank"
        from PostalCode as p;
```

l.
```
alter function four_day_later(@d datetime)
returns int
as
begin
        declare @nd datetime;
        set @nd = dateadd(day, 4, @d);
        return datepart(day, @nd);
end;
```

m.
```
declare @d datetime;
declare @res int;
```

```
set @d = getdate();
exec @res = four_day_later
@d = @d;

print @res;
```

n.
```
create function test_insert(@id int)
returns int
as
begin

update "tblStudent-1" set stuID=24;
return 0;
end;
```
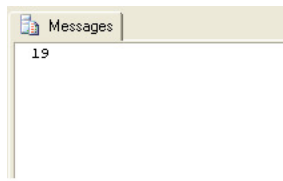
2 Screen Shots

	stuName	stuID	stuGrade
	Akbar	1	19
🖉	Asghar	2	9.5
✳	NULL	NULL	NULL

Table – dbo.tblStudent-1   TEMP40.DB_93_...r-2-exec.sql*

a.

	stuName	stuID	stuGrade
1	Akbar	1	19
2	Asghar	2	10.5

b.

Messages
19

c.

8
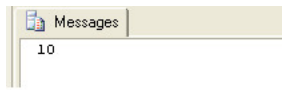
Messages
10

d.

```
create function test_insert(@id int)
returns int
as
begin

delete from "tblStudent-1";
return 0;
end;
```

Messages

Msg 443, Level 16, State 15, Procedure test_insert, Line 6
Invalid use of side-effecting or time-dependent operator in 'DELETE' within a function.

e.

```
TEMP40.DB_93_...\im-par-7.sql  TEMP40.DB_93_...par-3-exec.sql  TEMP40.DB_93_...\im-par-3
create function test_insert(@id int)
returns int
as
begin
declare @hello int;
select @hello=stuID from "tblStudent-1" where stuID = @id;
return 0;
end;
```

Messages

Command(s) completed successfully.

f.

```
create function test_insert(@id int)
returns int
as
begin

select stuID from "tblStudent-1" where stuID = @id;
return 0;
end;
```

Messages

Msg 444, Level 16, State 2, Procedure test_insert, Line 6
Select statements included within a function cannot return data to a client.

g.

```
create function test_insert(@id int)
returns int
as
begin

update "tblStudent-1" set stuID=24;
return 0;
end;
```

Messages

Msg 443, Level 16, State 15, Procedure test_insert, Line 6
Invalid use of side-effecting or time-dependent operator in 'UPDATE' within a function.

h.