

**BÀI TẬP TUẦN**  
**TÊN SINH VIÊN: VŨ BẢO LÂM**  
**LỚP: N01**  
**MÃ SINH VIÊN: 211241205**

**BÀI TẬP TRIGGER**

**Câu 1**

**Trước update**

```
1 USE [BT_TRIGGER_QLYHOCSINH]
2 --Cau1
3 create trigger trig_cau1
4 on DIEM
5 after insert, update
6 as begin
7     update DIEM
8     set DTB = ((d.TOAN + d.VAN)*2+ d.LY+ d.HOA)/6
9     from DIEM d join inserted on d.MAHS = inserted.MAHS
10 end
11 update DIEM
12 set LY = 4 from DIEM where MAHS = N'00014'
13 select * from DIEM where MAHS = N'00014'
14 --Cau 2
15 create trigger trig_cau2
16 on DTBM
```

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLAI
00014	8.5	0	4.5	10	NULL	NULL

Query executed successfully.

**Sau update**

```
1 USE [BT_TRIGGER_QLYHOCSINH]
2 --Cau1
3 create trigger trig_cau1
4 on DIEM
5 after insert, update
6 as begin
7     update DIEM
8     set DTB = ((d.TOAN + d.VAN)*2+ d.LY+ d.HOA)/6
9     from DIEM d join inserted on d.MAHS = inserted.MAHS
10 end
11 update DIEM
12 set LY = 4 from DIEM where MAHS = N'00014'
13 select * from DIEM where MAHS = N'00014'
14 --Cau 2
15 create trigger trig_cau2
16 on DTBM
```

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLAI
00014	8.5	4	4.5	10	7.58333333333333	NULL

Query executed successfully.

## Câu 2

### Trước update

```
SQL_QlyHocSinh_8_AMVU\Admin (51) | ThucHanh01.sql - (LAMVU\Admin (60)) | BaiTap1_QlyHocSi...LAMVU\Admin (63)* < X
16  --Cau 2
17  create trigger trig_cau2
18  on DIEM
19  after insert, update
20  as begin
21      update DIEM
22      set DTB = ((d.TOAN + d.VAN)*2+ d.LY+ d.HOA)/6
23      from DIEM d join inserted on d.MAHS = inserted.MAHS
24
25      update DIEM
26      set XEPLOAI =
27      case
28      when inserted.DTB >=5 then N'Lên lớp'
29      else N'Lưu ban'
30      end
31      from DIEM join inserted on DIEM.MAHS = inserted.MAHS
32  end
33  ---
34  set LY = 4 from DIEM where MAHS = N'00014'
35  select * from DIEM where MAHS = N'00014'
36  --- Cau 3
```

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLOAI
1	00014	8.5	0	4.5	10	NULL

Query executed successfully. LAMVU/SQL EXPRESS (16.0 RTM) | LAMVU\Admin (63) | BT\_TRIGGER\_QLYHOC SINH | 00:00:00 | 1 rows

### Sau update

```
SQL_QlyHocSinh_8_AMVU\Admin (51) | ThucHanh01.sql - (LAMVU\Admin (60)) | BaiTap1_QlyHocSi...LAMVU\Admin (63)* < X
16  --Cau 2
17  create trigger trig_cau2
18  on DIEM
19  after insert, update
20  as begin
21      update DIEM
22      set DTB = ((d.TOAN + d.VAN)*2+ d.LY+ d.HOA)/6
23      from DIEM d join inserted on d.MAHS = inserted.MAHS
24
25      update DIEM
26      set XEPLOAI =
27      case
28      when inserted.DTB >=5 then N'Lên lớp'
29      else N'Lưu ban'
30      end
31      from DIEM join inserted on DIEM.MAHS = inserted.MAHS
32  end
33  ---
34  update DIEM
35  set LY = 4 from DIEM where MAHS = N'00014'
36  select * from DIEM where MAHS = N'00014'
```

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLOAI
1	00014	8.5	4	4.5	10	7.58333333333333

Query executed successfully. LAMVU/SQL EXPRESS (16.0 RTM) | LAMVU\Admin (63) | BT\_TRIGGER\_QLYHOC SINH | 00:00:00 | 1 rows

### Câu 3

```
37 --- Cau 3
38 create trigger trig_cau3
39 on DIEM
40 after insert, update
41 as
42 begin
43     update DIEM
44     set DTB = ((d.TOAN + d.VAN)*2+ d.LY+ d.HOA)/6
45     from DIEM d join inserted on d.MAHS = inserted.MAHS
46
47     update DIEM
48     set XEPLROI =
49     case
50         when i.DTB >=5 and i.TOAN >=4 and i.VAN >=4 and i.LY>=4 and i.HOA>=4
51         then N'Lên lớp'
52         else N'Lưu ban'
53     end
54     from DIEM join inserted i on DIEM.MAHS = i.MAHS
55 end
```

### Trước update

The screenshot shows the SQL Server Enterprise Manager interface. The top pane displays the trigger code for 'trig\_cau3'. The bottom pane shows the 'Results' tab with a single row of data from the 'DIEM' table.

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLROI
00014	8.5	0	4.5	10	NULL	NULL

Query executed successfully.

### Sau update

The screenshot shows the same SQL Server Enterprise Manager interface. The top pane displays the trigger code. The bottom pane shows the 'Results' tab with a single row of data from the 'DIEM' table after the update.

MAHS	TOAN	LY	HOA	VAN	DTB	XEPLROI
00014	8.5	6	4.5	10	7.91666666666667	Lên lớp

## Câu 4

### Trước update

```
66 --Cau4
67
68 create trigger trig_cau4
69 on DSHS
70 after delete
71 as
72 begin
73     delete from DIEM
74     where MAHS in ( select MAHS from deleted )
75 end
76
77 select * from DSHS where MAHS = N'00014'
78 select * from DIEM where MAHS = N'00014'
79 delete DSHS where MAHS = N'00014'
80
81
82 INSERT [dbo].[DIEM] ([MAHS], [TOAN], [LY], [HOA], [VAN], [DTB], [XEPILOAI]) VALUES (N'00014', 8.5, 6, 4.5, 10, 7.91666666666667, Lớn)
```

MAHS	HO	TEN	NU	NGAYSINH	MALOP	GHICHU	XEPILOAI
00014	Trang Phi	Hung	0	1975-11-04 00:00:00.000	10A2	NULL	NULL

MAHS	TOAN	LY	HOA	VAN	DTB	XEPILOAI
00014	8.5	6	4.5	10	7.91666666666667	Lớn

### Sau update

```
66 --Cau4
67
68 create trigger trig_cau4
69 on DSHS
70 after delete
71 as
72 begin
73     delete from DIEM
74     where MAHS in ( select MAHS from deleted )
75 end
76
77 select * from DSHS where MAHS = N'00014'
78 select * from DIEM where MAHS = N'00014'
79 delete DSHS where MAHS = N'00014'
80
81
82 INSERT [dbo].[DIEM] ([MAHS], [TOAN], [LY], [HOA], [VAN], [DTB], [XEPILOAI]) VALUES (N'00014', 8.5, 6, 4.5, 10, 7.91666666666667, Lớn)
```

MAHS	HO	TEN	NU	NGAYSINH	MALOP	GHICHU	XEPILOAI
------	----	-----	----	----------	-------	--------	----------

MAHS	TOAN	LY	HOA	VAN	DTB	XEPILOAI
------	------	----	-----	-----	-----	----------

## BÀI TẬP 2

### CÂU 1

```
BaiTap2_QlyKhach...LAMVU\Admin (54)* x QLKhachSan.sql -...(LAMVU\Admin (60))*
1 USE QLKhachSan_BTuan
2
3 --1. Viết truy vấn tạo bảng doanh thu (tDoanhThu) gồm các trường
4 go
5 CREATE TABLE [dbo].[tDoanhThu](
6     [MaDK] [nvarchar](3) NOT NULL,
7     [LoaiPhong] [nvarchar](2) NULL,
8     [SoNgayO] [int] NULL,
9     [ThucThu] [bigint] NULL,
10    PRIMARY KEY CLUSTERED ([MaDK] ASC))
11
12 --2. Tạo Trigger tính tiền và điền tự động vào bảng tDoanhThu như sau:
13 --Các trường lấy thông tin từ các bảng và các thông tin sau:
14 --Trong đó:
```

### CÂU 2

```
19 CREATE OR ALTER TRIGGER trig_cau2
20 ON tDangKy
21 AFTER INSERT, UPDATE
22 AS
23 BEGIN
24     SET NOCOUNT ON;
25     DECLARE @MaDK nvarchar(3), @NgayVao datetime, @NgayRa datetime, @SoNgayO int,
26             @DonGia int, @ThucThu bigint;
27
28     SELECT @MaDK = i.MaDK, @NgayVao = i.NgayVao, @NgayRa = i.NgayRa, @DonGia = lp.DonGia
29     FROM inserted i
30     INNER JOIN tLoaiPhong lp ON i.LoaiPhong = lp.LoaiPhong;
31     SET @SoNgayO = DATEDIFF(DAY, @NgayVao, @NgayRa);
32     IF @SoNgayO < 10
33         SET @ThucThu = @DonGia * @SoNgayO;
34     ELSE IF @SoNgayO >= 10 AND @SoNgayO < 30
35         SET @ThucThu = ROUND(@DonGia * @SoNgayO * 0.95, 0);
36     ELSE
37         SET @ThucThu = ROUND(@DonGia * @SoNgayO * 0.9, 0);
38     IF EXISTS (SELECT 1 FROM tDoanhThu WHERE MaDK = @MaDK)
39         UPDATE tDoanhThu SET ThucThu = @ThucThu WHERE MaDK = @MaDK;
40     ELSE
41         INSERT INTO tDoanhThu (MaDK, ThucThu) VALUES (@MaDK, @ThucThu);
42     END;
43     INSERT [dbo].[tDangKy] ([MaDK], [SoPhong], [LoaiPhong], [NgayVao], [NgayRa])
44     VALUES (N'016', N'601', N'A', CAST(N'2023-04-03T00:00:00.000' AS DateTime), CAST(N'2023-04-05T00:00:00.000' AS DateTime))
45     update tDangKy set NgayRa='2023-04-08' where MaDK='016'
46     select * from tDoanhThu where MaDK='016'
```

Results				
	MaDK	LoaiPhong	SoNgayO	ThucThu
1	016	NULL	NULL	1000000



### CÂU 3

```
42 select * from tDoanhThu
43 --3. Thêm trường DonGia vào bảng tDangKy, tạo trigger cập nhật tự động cho trường này.
44 alter table tDangKy
45 add DonGia money null
46
47 create or alter trigger trig_cau3
48 on tLoaiPhong for insert, update, delete as
49 begin
50 update tDangKy set tDangKy.DonGia = isnull(inserted.DonGia,0)
51 from tDangKy join inserted on inserted.LoaiPhong = tDangKy.LoaiPhong
52 where tDangKy.LoaiPhong = inserted.LoaiPhong
53 end
54
55 select * from tDangKy
56 select * from tLoaiPhong where LoaiPhong='C'
57 update tLoaiPhong set DonGia= 3000000 where LoaiPhong='C'
58 go
59 select * from tDangKy
60
```

163 %

Results

Messages

	MaDK	SoPhong	LoaiPhong	NgayVao	NgayRa	DonGia
4	004	102	A	1998-05-02 00:00:00.000	1998-05-15 00:00:00.000	NULL
5	005	405	B	1998-05-03 00:00:00.000	1998-05-05 00:00:00.000	NULL
6	006	608	C	1998-06-01 00:00:00.000	1998-07-05 00:00:00.000	3000000.00
7	007	304	C	1998-06-05 00:00:00.000	1998-06-08 00:00:00.000	3000000.00
8	008	201	B	1998-06-30 00:00:00.000	1998-07-15 00:00:00.000	NULL
9	009	205	A	1999-07-01 00:00:00.000	1999-07-30 00:00:00.000	NULL
10	010	601	B	1999-01-01 00:00:00.000	1999-01-12 00:00:00.000	NULL

Query executed successfully.

LAMVU\SQLXPRESS (16.0 RTM) LAMVU\Admin (54) QLKhachS

Query executed successfully.

LAMVU\SQLEXPRESS (16.0 RTM) | LAMVU\Admin (54) | QLKhachSi

### CÂU 4

```
72
73 --4. Thêm trường tổng tiêu dùng (TongTieuDung) và bảng khách hàng và tính tự động tổng
74 --tiền khách hàng đã trả cho khách sạn mỗi khi thêm, sửa, xóa bản tDangKy
75 alter table tKhachHang
76 add TongTieuDung bigint null
77 create or alter trigger trig_cau4
78 on tDangKy
79 after insert, update, delete
80 as begin
81
82 update tKhachHang set tKhachHang.TongTieuDung= A.tien
83 from (select tChiTietKH.LoaiKH, sum(isnull(ThucThu,0)) as tien
84 from inserted right join tDoanhThu
85 on tDoanhThu.MaDK = inserted.MaDK
86 join tChiTietKH on tChiTietKH.MaDK = inserted.MaDK
87 group by tChiTietKH.LoaiKH
88 )A
89 where tKhachHang.LoaiKH = A.LoaiKH
90 end
91 select * from tKhachHang
92 update tDangKy set NgayVao = '1998-04-20' where MaDK = '001'
93 select * from tKhachHang
94
```

LoaiKH	DienGiai	TongTieuDung
1	Khách vắng lại	400000
2	Khách hàng thân thiết	NULL
3	Khách có thẻ của công ty Bảo hiểm	NULL

Query executed successfully.

LAMVU\SQLEXPRESS (16.0 RTM) | LAMVU\Admin