QUẢN TRỊ DỮ LIỆU - CT467 BÀI THỰC HÀNH 3 - MYSQL NÂNG CAO (TT)

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Bài 1: Tạo Trigger

1.

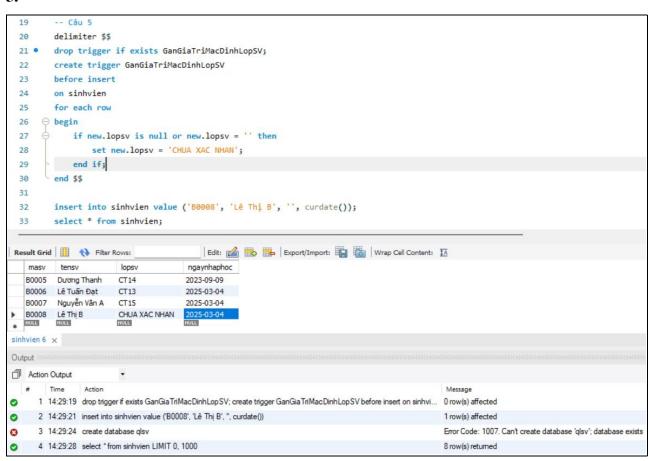
```
20
         delimiter $$
 21
 22 • create trigger kiemtrahopleMaSV
 23
         before insert
 24
         on sinhvien
 25
         for each row
      ⊖ begin
 26
              if new.masv is null or new.masv = '' then
 27
                  signal sqlstate '45000'
 28
 29
                   set message_text = "Mã SV không được trống";
 30
              end if;
 31
         end $$
 32
         insert into sinhvien values ('', 'Lê Tuấn Đạt', 'CT12', '2021-10-01');
 33 •
Output
Action Output
       Time
                Action
                                                                                                          Message
      1 14:02:06 create trigger kiemtrahopleMaSV before insert on sinhvien for each row begin if new.masv is null or new.masv =... 0 row(s) affected
     2 14:02:10 insert into sinhvien values (", "Lê Tuấn Đạt", "CT12", "2021-10-01")
                                                                                                         Error Code: 1644. Mã SV không được trống
```

```
Cau 2
 20
          delimiter $$
 21
 22 • drop trigger if exists kiemtraxoaSV;
 23
         create trigger kiemtraxoaSV
 24
         before delete
 25
         on sinhvien
 26
          for each row
 27
      ⊖ begin
              if old.lopsv = 'CT12' then
 28
                  signal sqlstate '45000'
 29
                  set message_text = 'Không thể xóa sinh viên của lớp CT12';
 30
              end if;
 31
 32
 33
 34
         delete from sinhvien where masv = 'B0003';
 35
          -- Câu 1
 36
 37
         delimiter $$
 38
Output :
Action Output
      1 14:08:03 drop trigger if exists kiemtraxoaSV; create trigger kiemtraxoaSV before delete on sinhvien for each row begin if o... 0 row(s) affected
0
0
   2 14:08:06 delete from sinhvien where masv = 'B0003'
                                                                                                        Error Code: 1644. Không thể xóa sinh viên của lớp CT12
```

```
-- Câu 3
 19
 20
         delimiter $$
 21
         drop trigger if exists TuDongCapNhatNgayNhapHoc;
 22 •
          create trigger TuDongCapNhatNgayNhapHoc
 23
 24
         before insert
         on sinhvien
 25
 26
          for each row
       ⊖ begin
 27
              if new.ngaynhaphoc is null then
 28
                  set new.ngaynhaphoc = curdate();
 29
              end if;
 30
 31
         end $$
 32
         insert into sinhvien(masv, tensv, lopsv) value ('B0006', 'Lê Tuấn Đạt', 'CT13');
 33
         select * from sinhvien;
 34
                                            | Edit: 🔏 🖶 | Export/Import: 🏣 👸 | Wrap Cell Content: 🔣
masv
         tensv
                         lopsv ngaynhaphoc
  B0003 Trương Hải Hà
                        CT12
                               2022-10-02
  B0004 Lê Văn Cường CT14 2023-09-01
   B0005 Dương Thanh
                        CT14 2023-09-09
   B0006 Lê Tuấn Đạt
                       CT13 2025-03-04
  NULL
sinhvien 4 ×
Output :
Action Output
      Time
                Action
                                                                                                    Message
      1 14:21:33 drop trigger if exists TuDongCapNhatNgayNhapHoc; create trigger TuDongCapNhatNgayNhapHoc before ins... 0 row(s) affected
      2 14:21:35 insert into sinhvien(masv, tensv, lopsv) value ('B0006', 'Lê Tuấn Đạt', 'CT13')
                                                                                                    1 row(s) affected
      3 14:21:37 select *from sinhvien LIMIT 0, 1000
                                                                                                    6 row(s) returned
```

4.

```
-- Câu 4
 19
 20
       delimiter $$
      drop trigger if exists TuDongThemMaSV;
 22
      create trigger TuDongThemMaSV
 23
         before insert
 24
         on sinhvien
 25
         for each row
 26 ⊝ begin
 27
             if substring(new.masv, 1, 1) != 'B' then
 28
                 set new.masv = concat('B', new.masv);
 29
             end if;
 30
        end;
 31
 32
        insert into sinhvien value ('0007', 'Nguyễn Văn A', 'CT15', curdate());
 33
        select * from sinhvien;
| Edit: 🕍 📆 📙 | Export/Import: 🏣 👸 | Wrap Cell Content: 🔣
   masv tensv
B0004 Lê Văn Cường
                        lopsv ngaynhaphoc
                        CT14 2023-09-01
   B0005 Dương Thanh
                        CT14
                              2023-09-09
   B0006 Lê Tuấn Đạt CT13 2025-03-04
B0007 Nguyễn Văn A
                        CT15
                               2025-03-04
sinhvien 5 ×
Output
Action Output
  # Time
                                                                                                     Message
    1 14:24:49 drop trigger if exists TuDongThemMaSV; create trigger TuDongThemMaSV before insert on sinhvien for each ...
                                                                                                    Running...
2 14:24:49 drop trigger if exists TuDongThemMaSV; create trigger TuDongThemMaSV before insert on sinhvien for each ... Error Code: 2014 Commands out of sync; you can't run this command no
    3 14:25:03 insert into sinhvien value ('0007', 'Nguyễn Văn A', 'CT15', curdate())
0
                                                                                                    1 row(s) affected
   4 14:25:07 select *from sinhvien LIMIT 0, 1000
                                                                                                    7 row(s) returned
0
```



Bài 2: Sử dụng nhóm lệnh Transaction

6.

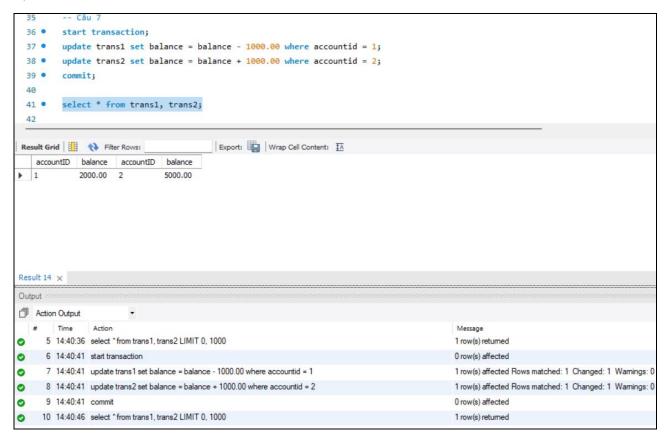
```
44 •
 45 •
          update trans1 set balance = 3000.00 where accountid = 1;
 46 •
          update trans2 set balance = 4000.00 where accountid = 2;
 47 .
  48
  49 •
          select * from trans1, trans2;
  50
  51
          -- Câu 5
 Export: Wrap Cell Content: IA
   accountID balance accountID balance
             3000.00 2
                                 4000.00
Result 11 ×
Output :
Action Output
  # Time
                                                                                                      Message

    1 14:37:54 start transaction

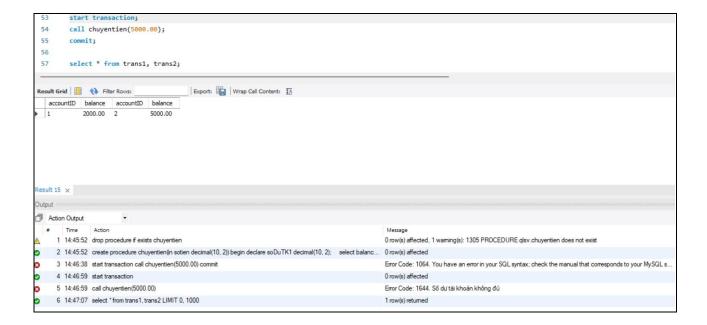
                                                                                                      0 row(s) affected
2 14:37:54 update trans1 set balance = 3000.00 where accountid = 1
                                                                                                      0 row(s) affected Rows matched: 1 Changed: 0 Warnings: 0
      3 14:37:54 update trans2 set balance = 4000.00 where accountid = 2
                                                                                                      1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

    4 14:37:54 commit

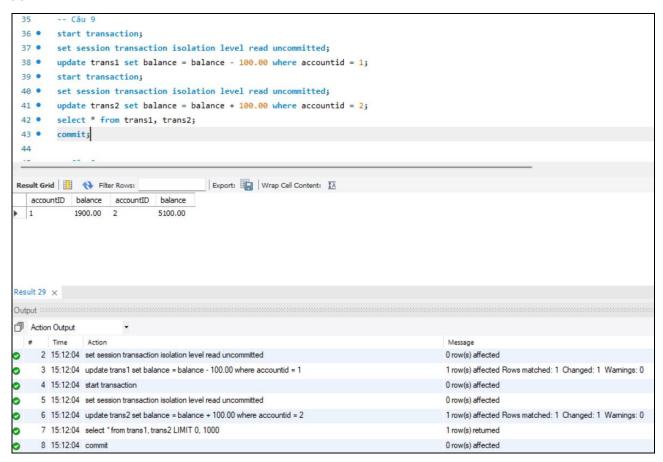
                                                                                                      0 row(s) affected
      5 14:37:56 select *from trans1, trans2 LIMIT 0, 1000
                                                                                                      1 row(s) returned
```



```
36
         delimiter $$
 37
 38 • drop procedure if exists chuyentien $$
 39 • create procedure chuyentien(in sotien decimal(10, 2))
 40 ⊝ begin
 41
            declare soDuTK1 decimal(10, 2);
 42
            select balance from trans1 where accountid = 1 into soDuTK1;
 43
            if soDuTK1 >= sotien then
                update trans1 set balance = balance - sotien where accountid = 1;
 44
 45
                 update trans2 set balance = balance + sotien where accountid = 2;
 46
           else
 47
                rollback;
                signal sqlstate '45000'
 48
                set message_text = 'Số dư tài khoản không đủ';
 49
 50
             end if;
      end $$
 51
 52
 53
         -- Câu 7
Output ::::
Action Output
              Action
      Time
                                                                                                 Message
   1 14:45:52 drop procedure if exists chuyentien
                                                                                                0 row(s) affected, 1 warning(s): 1305 PROCEDURE qlsv.chuyentien does not exist
2 14:45:52 create procedure chuyentien (in sotien decimal (10, 2)) begin declare so Du TK1 decimal (10, 2); select balance... 0 row(s) affected
```



Bài 3: Các mức cô lập (isolation) trong transaction



Bài 4: Deadlock

