

Họ tên: Lê Ngọc Phương Thảo

MSSV: 23521467

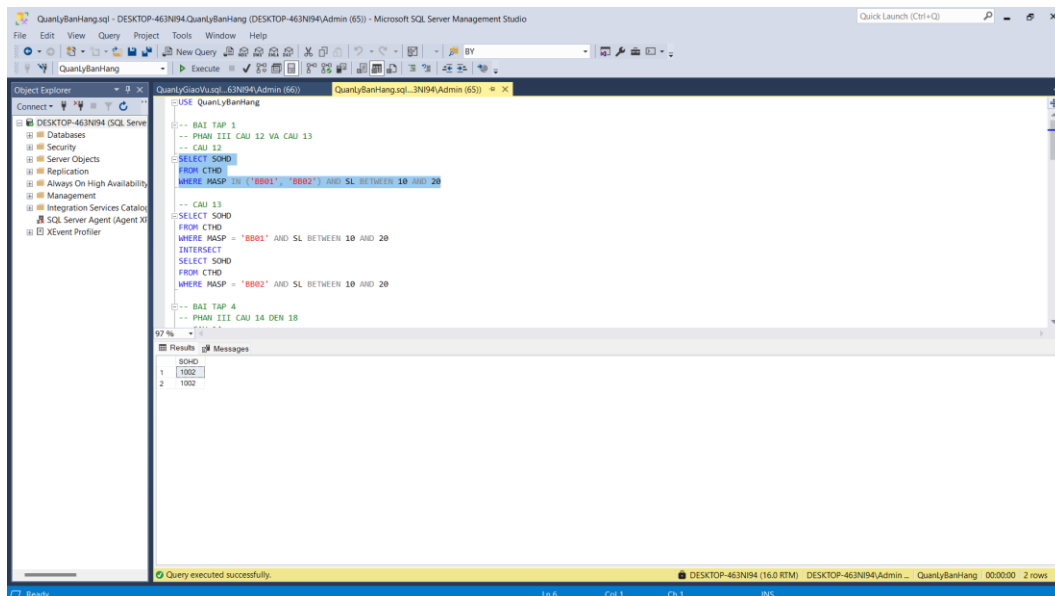
Lớp: IT004.P113

Github: [github.com/lngphgthao/IT004.P113](https://github.com/lngphgthao/IT004.P113)

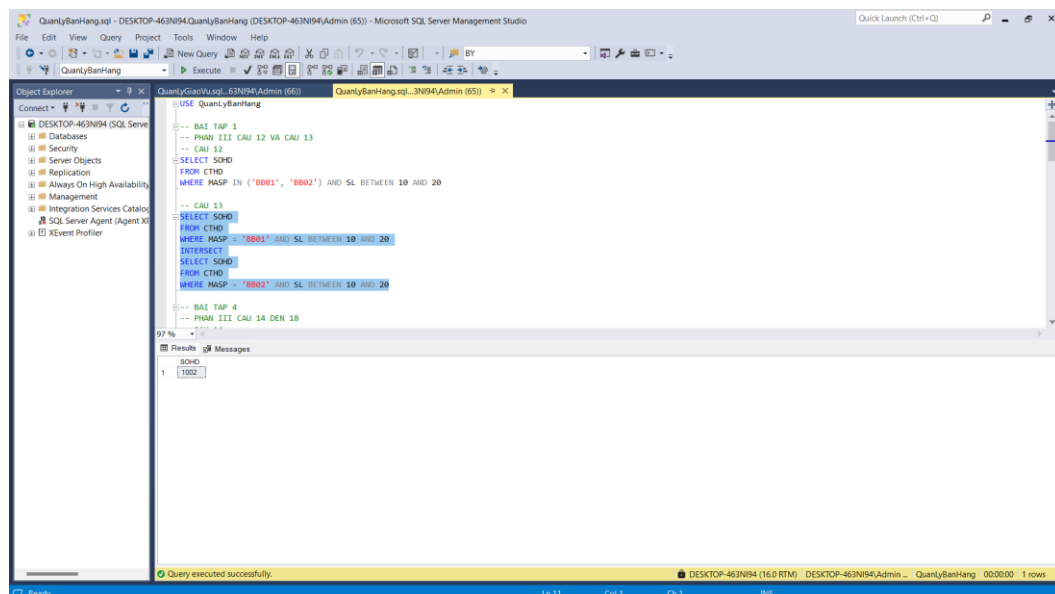
## Lab 03

### 1. Bài tập 1

#### Câu 12:



#### Câu 13:



## Bài tập 2

### Câu 1:

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The 'Object Explorer' on the left shows the server structure. The 'Query Explorer' on the right shows a query named 'BAI TAP 3' with the following SQL code:

```
UPDATE HOCVIEU
SET XEPLOAI = CASE
WHEN DIEMTB >= 9 THEN 'XS'
WHEN DIEMTB >= 8 THEN 'G'
WHEN DIEMTB >= 6.5 THEN 'K'
WHEN DIEMTB >= 5 THEN 'TB'
ELSE 'Y'
END;

SELECT *
FROM GIAOVIEU

-- BAI TAP 3
-- PHAN III CAU 6 DEN CAU 10
-- CAU 6
SELECT TENHOC
FROM MONHOC
WHERE MAH1 IN (
SELECT MAH1
FROM GIAOVIEU
WHERE MAGV IN (
```

The 'Results' pane shows the execution results of the query. The results are displayed in a table with 15 rows and 15 columns. The columns are: MAGV, HOCVIEU, HOCHI, HOCHAM, GIOTINH, NGOSINH, NGLOV, HESO, MUCLUONG, MAHOC, and 10 other columns. The data is as follows:

MAGV	HOCVIEU	HOCHI	HOCHAM	GIOTINH	NGOSINH	NGLOV	HESO	MUCLUONG	MAHOC	10	11	12	13	14	15
GV01	Ho Thanh Son	PTS	GB	Nam	1950-02-05 00:00:00	2004-11-01 00:00:00	5.40	2250000.00	KHMT						
GV02	Tran Tam Thanh	TS	PGS	Nam	1965-12-17 00:00:00	2004-04-20 00:00:00	4.90	2025000.00	HTTT						
GV03	Do Nguyen Phung	TS	GB	Nu	1950-08-01 00:00:00	2004-09-23 00:00:00	4.40	1800000.00	CNPM						
GV04	Tran Nam Son	TS	PGS	Nam	1961-02-22 00:00:00	2005-12-01 00:00:00	4.90	2025000.00	KHMT						
GV05	Mai Thanh Danh	ThS	GV	Nam	1958-12-03 00:00:00	2005-12-01 00:00:00	3.00	1350000.00	HTTT						
GV06	Tran Doan Hung	TS	GV	Nam	1953-11-03 00:00:00	2005-12-01 00:00:00	4.50	2025000.00	KHMT						
GV07	Nguyen Minh Tien	ThS	GV	Nam	1971-11-23 00:00:00	2005-01-03 00:00:00	4.00	1800000.00	KHMT						
GV08	Le Thi Tran	KS	NULL	Nu	1974-03-28 00:00:00	2005-01-03 00:00:00	1.69	769500.00	KHMT						
GV09	Nguyen Tu Lan	ThS	GV	Nu	1966-12-31 00:00:00	2005-01-03 00:00:00	4.00	1800000.00	HTTT						
GV10	Le Tran Anh Loan	KS	NULL	Nu	1972-07-17 00:00:00	2005-01-03 00:00:00	1.86	837000.00	CNPM						
GV11	Ho Thanh Tung	CN	GV	Nam	1980-12-01 00:00:00	2005-05-15 00:00:00	2.67	1201500.00	KHMT						
GV12	Tran Van Anh	CN	NULL	Nu	1981-03-29 00:00:00	2005-05-15 00:00:00	1.69	769500.00	CNPM						
GV13	Nguyen Linh Dan	CN	NULL	Nu	1980-05-23 00:00:00	2005-05-15 00:00:00	1.69	769500.00	KHMT						
GV14	Truong Minh Chau	ThS	GV	Nu	1976-11-30 00:00:00	2005-05-15 00:00:00	3.00	1350000.00	KHMT						
GV15	Le Ha Thanh	ThS	GV	Nam	1978-04-05 00:00:00	2005-05-15 00:00:00	3.00	1350000.00	KHMT						

### Câu 2 + Câu 3 + Câu 4:

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The 'Object Explorer' on the left shows the server structure. The 'Query Explorer' on the right shows a query named 'BAI TAP 3' with the following SQL code:

```
UPDATE HOCVIEU
SET XEPLOAI = CASE
WHEN DIEMTB >= 9 THEN 'XS'
WHEN DIEMTB >= 8 THEN 'G'
WHEN DIEMTB >= 6.5 THEN 'K'
WHEN DIEMTB >= 5 THEN 'TB'
ELSE 'Y'
END;

SELECT *
FROM GIAOVIEU

-- BAI TAP 3
-- PHAN III CAU 6 DEN CAU 10
-- CAU 6
SELECT TENHOC
FROM MONHOC
WHERE MAH1 IN (
SELECT MAH1
FROM GIAOVIEU
WHERE MAGV IN (
```

The 'Results' pane shows the execution results of the query. The results are displayed in a table with 35 rows and 15 columns. The columns are: MAGV, HOCVIEU, HOCHI, HOCHAM, GIOTINH, NGOSINH, NGLOV, HESO, MUCLUONG, MAHOC, and 10 other columns. The data is as follows:

MAGV	HOCVIEU	HOCHI	HOCHAM	GIOTINH	NGOSINH	NGLOV	HESO	MUCLUONG	MAHOC	10	11	12	13	14	15
GV01	Ho Thanh Son	PTS	GB	Nam	1950-02-05 00:00:00	2004-11-01 00:00:00	5.40	2250000.00	KHMT						
GV02	Tran Tam Thanh	TS	PGS	Nam	1965-12-17 00:00:00	2004-04-20 00:00:00	4.90	2025000.00	HTTT						
GV03	Do Nguyen Phung	TS	GB	Nu	1950-08-01 00:00:00	2004-09-23 00:00:00	4.40	1800000.00	CNPM						
GV04	Tran Nam Son	TS	PGS	Nam	1961-02-22 00:00:00	2005-12-01 00:00:00	4.90	2025000.00	KHMT						
GV05	Mai Thanh Danh	ThS	GV	Nam	1958-12-03 00:00:00	2005-12-01 00:00:00	3.00	1350000.00	HTTT						
GV06	Tran Doan Hung	TS	GV	Nam	1953-11-03 00:00:00	2005-12-01 00:00:00	4.50	2025000.00	KHMT						
GV07	Nguyen Minh Tien	ThS	GV	Nam	1971-11-23 00:00:00	2005-01-03 00:00:00	4.00	1800000.00	KHMT						
GV08	Le Thi Tran	KS	NULL	Nu	1974-03-28 00:00:00	2005-01-03 00:00:00	1.69	769500.00	KHMT						
GV09	Nguyen Tu Lan	ThS	GV	Nu	1966-12-31 00:00:00	2005-01-03 00:00:00	4.00	1800000.00	HTTT						
GV10	Le Tran Anh Loan	KS	NULL	Nu	1972-07-17 00:00:00	2005-01-03 00:00:00	1.86	837000.00	CNPM						
GV11	Ho Thanh Tung	CN	GV	Nam	1980-12-01 00:00:00	2005-05-15 00:00:00	2.67	1201500.00	KHMT						
GV12	Tran Van Anh	CN	NULL	Nu	1981-03-29 00:00:00	2005-05-15 00:00:00	1.69	769500.00	CNPM						
GV13	Nguyen Linh Dan	CN	NULL	Nu	1980-05-23 00:00:00	2005-05-15 00:00:00	1.69	769500.00	KHMT						
GV14	Truong Minh Chau	ThS	GV	Nu	1976-11-30 00:00:00	2005-05-15 00:00:00	3.00	1350000.00	KHMT						
GV15	Le Ha Thanh	ThS	GV	Nam	1978-04-05 00:00:00	2005-05-15 00:00:00	3.00	1350000.00	KHMT						

## Bài tập 3

### Câu 6:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
-- CAU 6
SELECT TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH
    FROM GIANGDAY
    WHERE MAGV IN (
        SELECT MAGV
        FROM GIAOVZEN
        WHERE HOTEN = 'Tran Tam Thanh'
    )
) AND HOCKY = 1 AND NAM = 2006

-- CAU 7
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
```

The Results pane shows the following data:

TENMH
Cau hoc noi ngo

The status bar at the bottom indicates "Query executed successfully." and "DESKTOP-463N194 (16.0 RTM) | DESKTOP-463N194\Admin ... | QueryGiaoVu | 00:00:00 | 1 rows".

### Câu 7:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
WHERE HOTEN = 'Tran Tam Thanh'
) AND HOCKY = 1 AND NAM = 2006

-- CAU 7
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH
    FROM GIANGDAY
    WHERE MAGV IN (
        SELECT MAGV
        FROM GIAOVZEN
        WHERE HOTEN = 'Tran Tam Thanh'
    )
) AND HOCKY = 1 AND NAM = 2006

-- CAU 8
```

The Results pane shows the following data:

MAMH	TENMH
THDC	Tin hoc dai cuong

The status bar at the bottom indicates "Query executed successfully." and "DESKTOP-463N194 (16.0 RTM) | DESKTOP-463N194\Admin ... | QueryGiaoVu | 00:00:00 | 1 rows".

## Câu 8:

QuantyGiaoVu.sql - DESKTOP-463N194.QuanLyGiaoVu (DESKTOP-463N194\Admin (66)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

QuantyGiaoVu

Object Explorer

Connect

DESKTOP-463N194 (SQL Serve

Databases

Security

Server Objects

Replication

Always On High Availability

Management

Integration Services Catalog

SQL Server Agent (Agent X)

XEvent Profiler

QuantyGiaoVu.sql...63N194\Admin (66)

QuantyBanHang.sql...3N194\Admin (65)

```
-- CAU 8
SELECT HO, TEN
FROM HOCVIEN
WHERE MAHV IN (
    SELECT TRGLOP
    FROM LOP
    WHERE HALOP IN (
        SELECT HALOP
        FROM GIANGDAY
        WHERE MAGV IN (
            SELECT MAGV
            FROM GIAOVIEN
            WHERE HOTEN = 'Nguyen To Lan'
        ) AND MAMH = 'CSDL'
    )
)
```

97 %

Results Messages

	HO	TEN
1	Nguyen Thanh	Nam

Query executed successfully.

DESKTOP-463N194 (16.0 RTM) DESKTOP-463N194\Admin ... QuantyGiaoVu 00:00:00 1 rows

Item(s) Saved Ln 80 Col 1 Ch 1 INS

## Câu 9:

QuantyGiaoVu.sql - DESKTOP-463N194.QuanLyGiaoVu (DESKTOP-463N194\Admin (66)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

QuantyGiaoVu

Object Explorer

Connect

DESKTOP-463N194 (SQL Serve

Databases

Security

Server Objects

Replication

Always On High Availability

Management

Integration Services Catalog

SQL Server Agent (Agent X)

XEvent Profiler

QuantyGiaoVu.sql...63N194\Admin (66)

QuantyBanHang.sql...3N194\Admin (65)

```
-- CAU 9
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH, TRUOC
    FROM DEKUTEN
    WHERE MAMH = 'CSDL'
)

-- CAU 10
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH, TRUOC
    FROM DEKUTEN
    WHERE MAMH = 'CSDL'
)
```

97 %

Results Messages

	MAMH	TENMH
1	CTDLOT	Cau truc du lieu va giai thuat
2	CTRR	Cau truc noi rac

Query executed successfully.

DESKTOP-463N194 (16.0 RTM) DESKTOP-463N194\Admin ... QuantyGiaoVu 00:00:00 2 rows

Item(s) Saved Ln 98 Col 1 Ch 1 INS

## Câu 10:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
-- CAU 9
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH,TRUOC
    FROM DTEUKTEN
    WHERE MAMH = 'CSDL'
)

-- CAU 10
SELECT MAMH, TENMH
FROM MONHOC
WHERE MAMH IN (
    SELECT MAMH
    FROM DTEUKTEN
    WHERE MAMH_TRUOC = 'CSDL'
```

The Results pane shows the following data:

MAMH	TENMH
PTTKHITTT	Phân tích thiết kế hệ thống thông tin

The status bar at the bottom indicates "Query executed successfully." and "1 rows".

## Bài tập 4

## Câu 14:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
FROM CTHD
WHERE MASP = 'BB02' AND SL BETWEEN 10 AND 20

-- BAI TAP 4
-- PHAN III CAU 14 DEN 18
-- CAU 14
SELECT MASP, TENS
FROM SANPHAM
WHERE NUOCSX = 'Trung Quoc'
UNION
SELECT DISTINCT CTHD.MASP, TENS
FROM CTHD JOIN HOADON
ON CTHD.SOHD = HOADON.SOHD
JOIN SANPHAM
ON CTHD.MASP = SANPHAM.MASP
WHERE NGHD = '2007-01-01'

-- CAU 15
SELECT MASP, TENS
FROM SANPHAM
```

The Results pane shows the following data:

MA SP	TEN SP
BB02	But bi
BB03	But bi
ST01	Số tập 500 trang
ST10	But long
TV01	Tập 100 giây mong
TV02	Tập 200 giây mong
TV07	Tập 100 trang

The status bar at the bottom indicates "Query executed successfully." and "7 rows".

## Câu 15:

QuantlyBanHang.sql - DESKTOP-463N94\QuantlyBanHang (DESKTOP-463N94\Admin (65)) - Microsoft SQL Server Enterprise Manager

Object Explorer: Connect > Desktop-463N94 (SQL Server) > Databases > QuantlyBanHang

Query: QuantlyBanHang.sql...3N94\Admin (65)

```
WHERE NGHD = '2007-01-01'
```

```
-- CAU 15
SELECT MASP, TENSP
FROM SANPHAM
EXCEPT
SELECT DISTINCT CTHD_MASP, TENSP
FROM CTHD JOIN HOADON
ON CTHD_SOHD = HOADON_SOHD
JOIN SANPHAM
ON CTHD_MASP = SANPHAM_MASP

-- CAU 16
SELECT MASP, TENSP
FROM SANPHAM
EXCEPT
SELECT DISTINCT CTHD_MASP, TENSP
FROM CTHD JOIN HOADON
ON CTHD_SOHD = HOADON_SOHD
JOIN SANPHAM
ON CTHD_MASP = SANPHAM_MASP
```

Results: 97 %

	MASP	TENSP
1	BC03	But chi
2	ST09	But long
3	ST10	But long

Query executed successfully.

DESKTOP-463N94 (16.0 RTM) DESKTOP-463N94\Admin ... QuantlyBanHang 00:00:00 3 rows

## Câu 16:

QuantlyBanHang.sql - DESKTOP-463N94\QuantlyBanHang (DESKTOP-463N94\Admin (65)) - Microsoft SQL Server Enterprise Manager

Object Explorer: Connect > Desktop-463N94 (SQL Server) > Databases > QuantlyBanHang

Query: QuantlyBanHang.sql...3N94\Admin (65)

```
EXCEPT
SELECT DISTINCT CTHD_MASP, TENSP
FROM CTHD JOIN HOADON
ON CTHD_SOHD = HOADON_SOHD
JOIN SANPHAM
ON CTHD_MASP = SANPHAM_MASP

-- CAU 16
SELECT MASP, TENSP
FROM SANPHAM
EXCEPT
SELECT DISTINCT CTHD_MASP, TENSP
FROM CTHD JOIN HOADON
ON CTHD_SOHD = HOADON_SOHD
JOIN SANPHAM
ON CTHD_MASP = SANPHAM_MASP
WHERE YEAR(NGHD) = 2006

-- CAU 17
SELECT MASP, TENSP
```

Results: 97 %

	MASP	TENSP
1	BC03	But chi
2	ST09	But long
3	ST10	But long

Query executed successfully.

DESKTOP-463N94 (16.0 RTM) DESKTOP-463N94\Admin ... QuantlyBanHang 00:00:00 3 rows

## Câu 17:

Microsoft SQL Server Management Studio interface showing a query execution for Câu 17. The query is as follows:

```
EXCEPT
SELECT DISTINCT CTID, MASP, TENSP
FROM CTID JOIN HOADON
ON CTID.SOHD = HOADON.SOHD
JOIN SANPHAM
ON CTID.MASP = SANPHAM.MASP
WHERE YEAR(NGHD) = 2006

-- CAU 17
SELECT MASP, TENSP
FROM SANPHAM
WHERE NUOCSX = 'Trung Quoc'
EXCEPT
SELECT DISTINCT CTID, MASP, TENSP
FROM CTID JOIN HOADON
ON CTID.SOHD = HOADON.SOHD
JOIN SANPHAM
ON CTID.MASP = SANPHAM.MASP
WHERE YEAR(NGHD) = 2006 AND NUOCSX = 'Trung Quoc'
```

The results pane shows the following data:

MAASP	TENSP
ST10	Bui lang

Query executed successfully.

## Câu 18:

Microsoft SQL Server Management Studio interface showing a query execution for Câu 18. The query is as follows:

```
ON CTID.SOHD = HOADON.SOHD
JOIN SANPHAM
ON CTID.MASP = SANPHAM.MASP
WHERE YEAR(NGHD) = 2006 AND NUOCSX = 'Trung Quoc'

-- CAU 18
SELECT DISTINCT SOHD
FROM CTID C1
WHERE NOT EXISTS (
    SELECT MASP
    FROM SANPHAM
    WHERE NUOCSX = 'Singapore'
)
EXCEPT
SELECT MASP
FROM CTID C2
WHERE C1.SOHD = C2.SOHD
```

The results pane shows the following data:

SOHD
1001

Query executed successfully.

## Bài tập 5

### Câu 11:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
-- HUPH DIEUKHIEU
WHERE MAHPH_TRUOC = 'CSOL'

)

-- BAI TAP 5
-- PHAM III CAU 11 DEN 18
-- CAU 11
SELECT HOTEN
FROM GIANGDAY JOIN GIAOVIEN
ON GIANGDAY.MAGV = GIAOVIEN.MAGV
WHERE MALOP = 'K11' AND MAHPH = 'CTRR' AND HOCKY = 1 AND NAM = 2006
INTERSECT
SELECT HOTEN
FROM GIANGDAY JOIN GIAOVIEN
ON GIANGDAY.MAGV = GIAOVIEN.MAGV
WHERE MALOP = 'K12' AND MAHPH = 'CTRR' AND HOCKY = 1 AND NAM = 2006

-- CAU 12
SELECT HOCVIEN.MAHV, HO, TEN
```

The Results pane shows the output of the query:

HOTEN
Tran Tam Thanh

The status bar at the bottom indicates the query was executed successfully.

### Câu 12:

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
-- CAU 12
SELECT HOCVIEN.MAHV, HO, TEN
FROM HOCVIEN
WHERE MAHV IN (
    SELECT MAHV
    FROM KETQUATHI A
    WHERE NOT EXISTS (
        SELECT 1
        FROM KETQUATHI B
        WHERE A.MAHV = B.MAHV AND A.MAPH = B.MAPH AND A.LANTHI < B.LANTHI
    ) AND MAHPH = 'CSOL' AND LANTHI = 1 AND KQUA = 'khong dat'
)

-- CAU 13
SELECT MAGV, HOTEN
FROM GIAOVIEN
WHERE MAGV NOT IN (
```

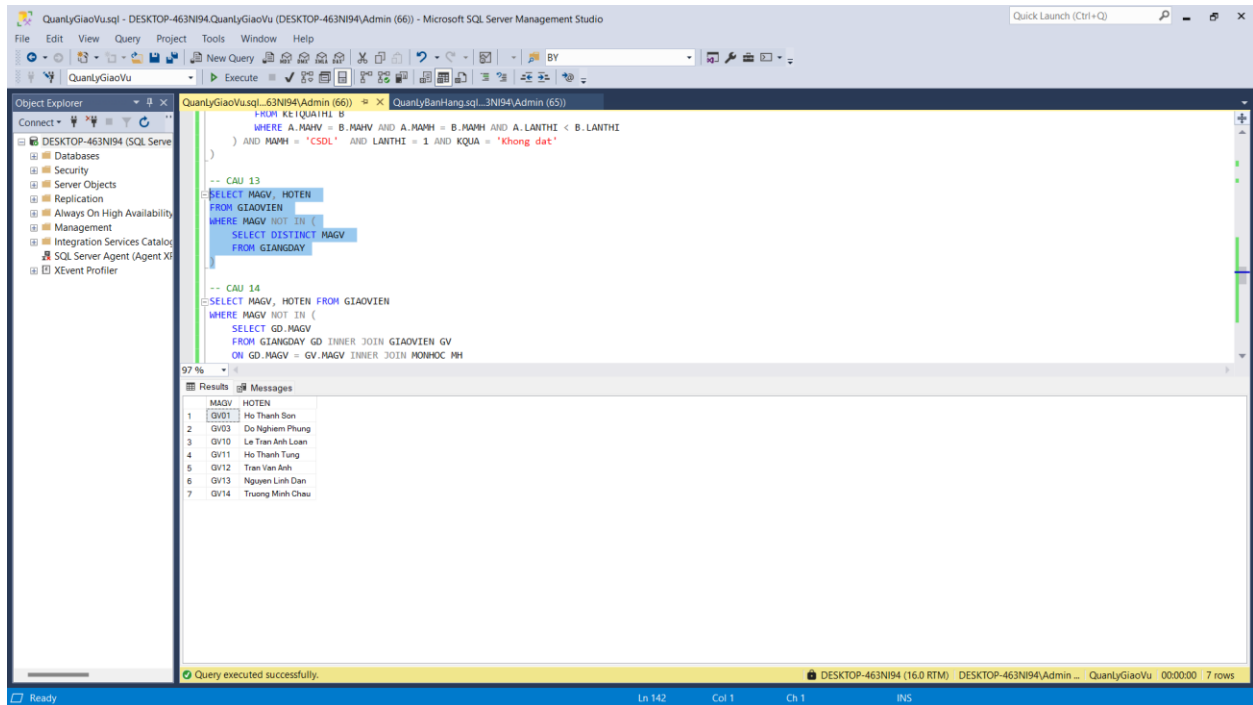
The Results pane shows the output of the query:

MAHV	HO	TEN
K1104	Tran Ngoc	Linh
K1301	Nguyen Thi Kim	Cuc
K1303	Le Duc	Minh

The status bar at the bottom indicates the query was executed successfully.



## Câu 13:



QuantlyGiaoVu.sql - DESKTOP-463N194\QuantlyGiaoVu (DESKTOP-463N194\Admin (66)) - Microsoft SQL Server Management Studio

Object Explorer: Connect - Desktop-463N194 (SQL Server) - Databases - Security - Server Objects - Replication - Always On High Availability - Management - Integration Services Catalog - SQL Server Agent (Agent X) - XEvent Profiler

Query: QuantlyGiaoVu.sql (66) - QuantlyBanHang.sql (65)

```
FROM KEIQUATHI B
WHERE A.MAHV = B.MAHV AND A.MAHV = B.MAHV AND A.LANTHI < B.LANTHI
) AND MAHV = 'CSDL' AND LANTHI = 1 AND KQUA = 'Khong dat'

-- CAU 13
SELECT MAGV, HOTEN
FROM GIAOVIENT
WHERE MAGV NOT IN (
SELECT DISTINCT MAGV
FROM GIANGDAY

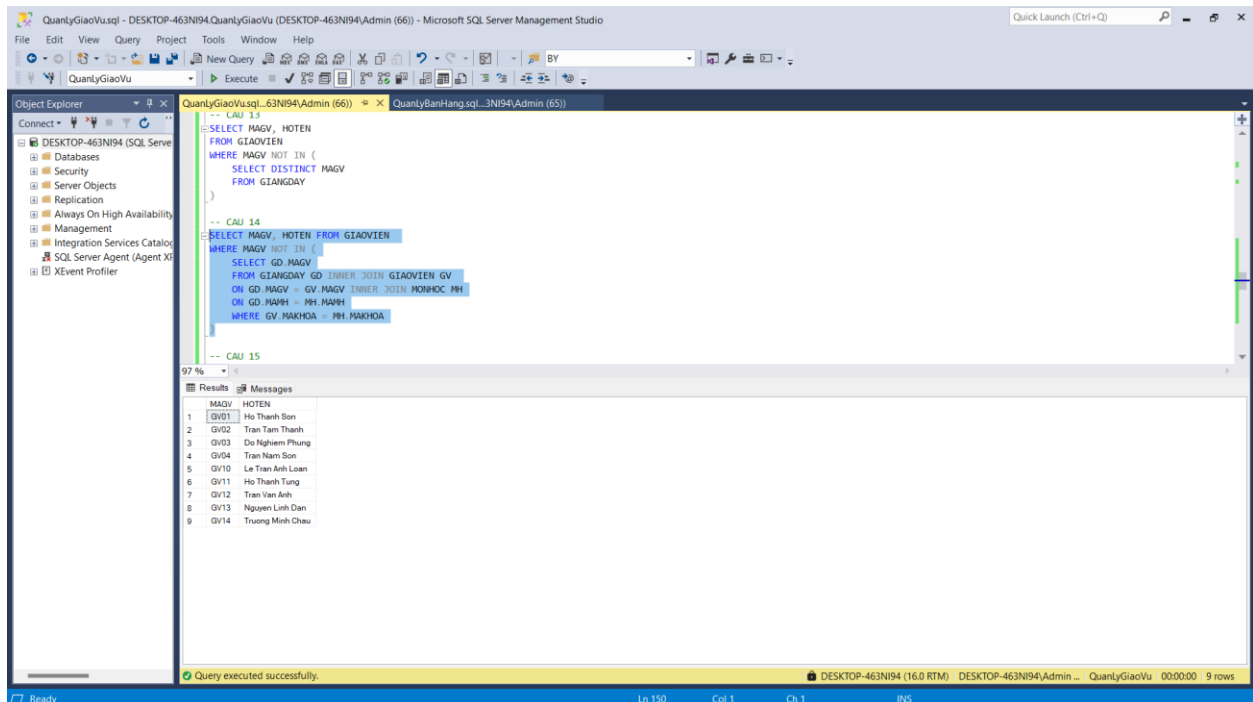
-- CAU 14
SELECT MAGV, HOTEN FROM GIAOVIENT
WHERE MAGV NOT IN (
SELECT GD.MAGV
FROM GIANGDAY GD INNER JOIN GIAOVIENT GV
ON GD.MAGV = GV.MAGV INNER JOIN MONHOC MH
```

Results: 7 rows

	MAGV	HOTEN
1	GV01	Ho Thanh Son
2	GV03	Do Nghiem Phung
3	GV10	Le Tran Anh Loan
4	GV11	Ho Thanh Tung
5	GV12	Tran Van Anh
6	GV13	Nguyen Linh Dan
7	GV14	Truong Minh Chau

Query executed successfully.

## Câu 14:



QuantlyGiaoVu.sql - DESKTOP-463N194\QuantlyGiaoVu (DESKTOP-463N194\Admin (66)) - Microsoft SQL Server Management Studio

Object Explorer: Connect - Desktop-463N194 (SQL Server) - Databases - Security - Server Objects - Replication - Always On High Availability - Management - Integration Services Catalog - SQL Server Agent (Agent X) - XEvent Profiler

Query: QuantlyGiaoVu.sql (66) - QuantlyBanHang.sql (65)

```
-- CAU 13
SELECT MAGV, HOTEN
FROM GIAOVIENT
WHERE MAGV NOT IN (
SELECT DISTINCT MAGV
FROM GIANGDAY

-- CAU 14
SELECT MAGV, HOTEN FROM GIAOVIENT
WHERE MAGV NOT IN (
SELECT GD.MAGV
FROM GIANGDAY GD INNER JOIN GIAOVIENT GV
ON GD.MAGV = GV.MAGV INNER JOIN MONHOC MH
WHERE GV.MAKHOA = MH.MAKHOA

-- CAU 15
```

Results: 9 rows

	MAGV	HOTEN
1	GV01	Ho Thanh Son
2	GV02	Tran Tam Thanh
3	GV03	Do Nghiem Phung
4	GV04	Tran Nam Son
5	GV10	Le Tran Anh Loan
6	GV11	Ho Thanh Tung
7	GV12	Tran Van Anh
8	GV13	Nguyen Linh Dan
9	GV14	Truong Minh Chau

Query executed successfully.

## Câu 15:

```
-- CAU 15
SELECT HO, TEN
FROM HOCVIZEN
WHERE MAHV IN (
    SELECT MAHV
    FROM KETQUATHI A
    WHERE LEFT(MAHV, 3) = 'K11' AND (
        NOT EXISTS (
            SELECT 1 FROM KETQUATHI B
            WHERE A.MAHV = B.MAHV AND A.NAMH = B.NAMH AND A.LANTHI < B.LANTHI
        ) AND LANTHI = 3 AND KQUA = 'Khong Dat'
    ) OR NAMH = 'CTRR' AND LANTHI = 2 AND DIEM = 5
)

-- CAU 16
SELECT HOTEN FROM GIAOVIZEN
```

HO	TEN
Tran Ngoc	Han
Tran Ngoc	Linh
Le Duc	Hien

Query executed successfully.

## Câu 16:

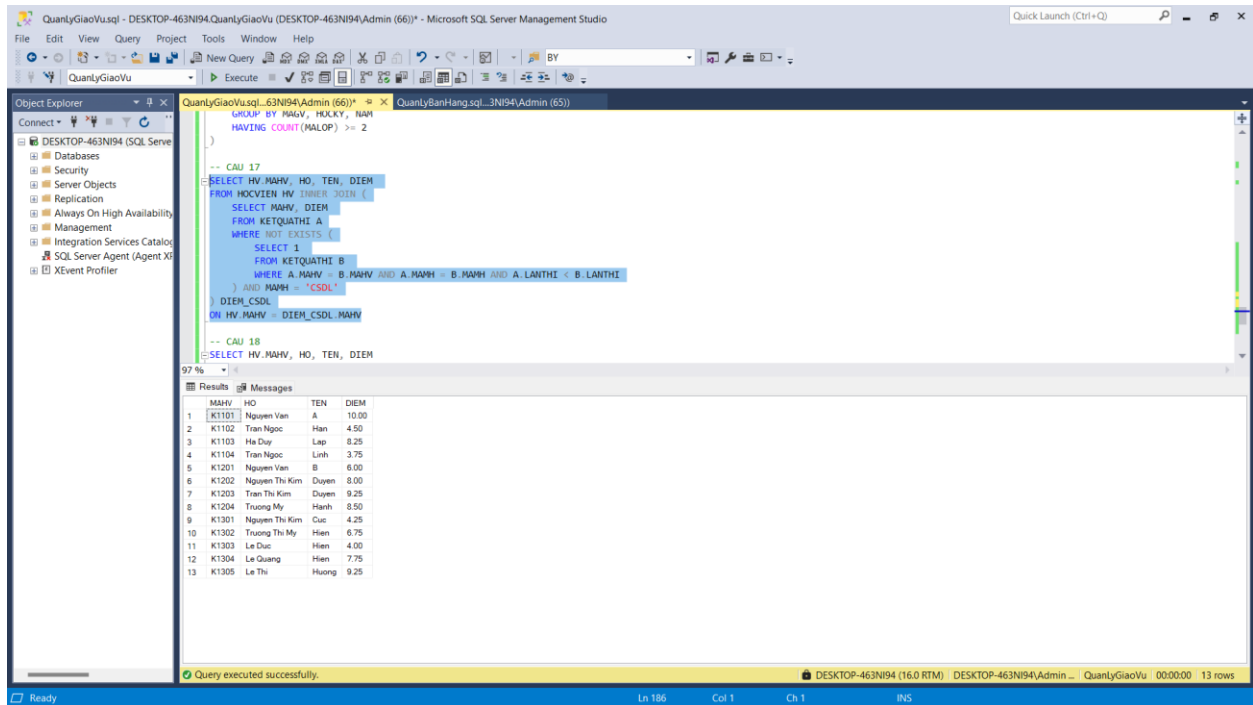
```
NOT EXISTS (
    SELECT 1
    FROM KETQUATHI B
    WHERE A.MAHV = B.MAHV AND A.NAMH = B.NAMH AND A.LANTHI < B.LANTHI
    ) AND LANTHI = 3 AND KQUA = 'Khong Dat'
) OR NAMH = 'CTRR' AND LANTHI = 2 AND DIEM = 5
)

-- CAU 16
SELECT HOTEN
FROM GIAOVIZEN
WHERE MAGV IN (
    SELECT MAGV
    FROM GIANGDAY
    WHERE NAMH = 'CTRR',
    GROUP BY MAGV, HOCKY, NAM
    HAVING COUNT(MALOP) >= 2
)
```

HOTEN
Tran Tam Thanh

Query executed successfully.

## Câu 17:



QuantyGiaoVu.sql - DESKTOP-463N194\QuantyGiaoVu (DESKTOP-463N194\Admin (66))\* - Microsoft SQL Server Management Studio

Object Explorer: Connect - Desktop-463N194 (SQL Serve) > Databases > Security > Server Objects > Replication > Always On High Availability > Management > Integration Services Catalog > SQL Server Agent (Agent X) > XEvent Profiler

Query: QuantyGiaoVu.sql...63N194\Admin (66)\*

```
GROUP BY MAHV, HOCKY, NAM
HAVING COUNT(MALOP) >= 2

-- CAU 17
SELECT HV.MAHV, HO, TEN, DIEM
FROM HOCVIEN HV INNER JOIN (
    SELECT MAHV, DIEM
    FROM KETQUATHI A
    WHERE NOT EXISTS (
        SELECT 1
        FROM KETQUATHI B
        WHERE A.MAHV = B.MAHV AND A.NAMH = B.NAMH AND A.LANTHI < B.LANTHI
    ) AND NAMH = 'CSOL'
) DIEM_CSOL
ON HV.MAHV = DIEM_CSOL.MAHV

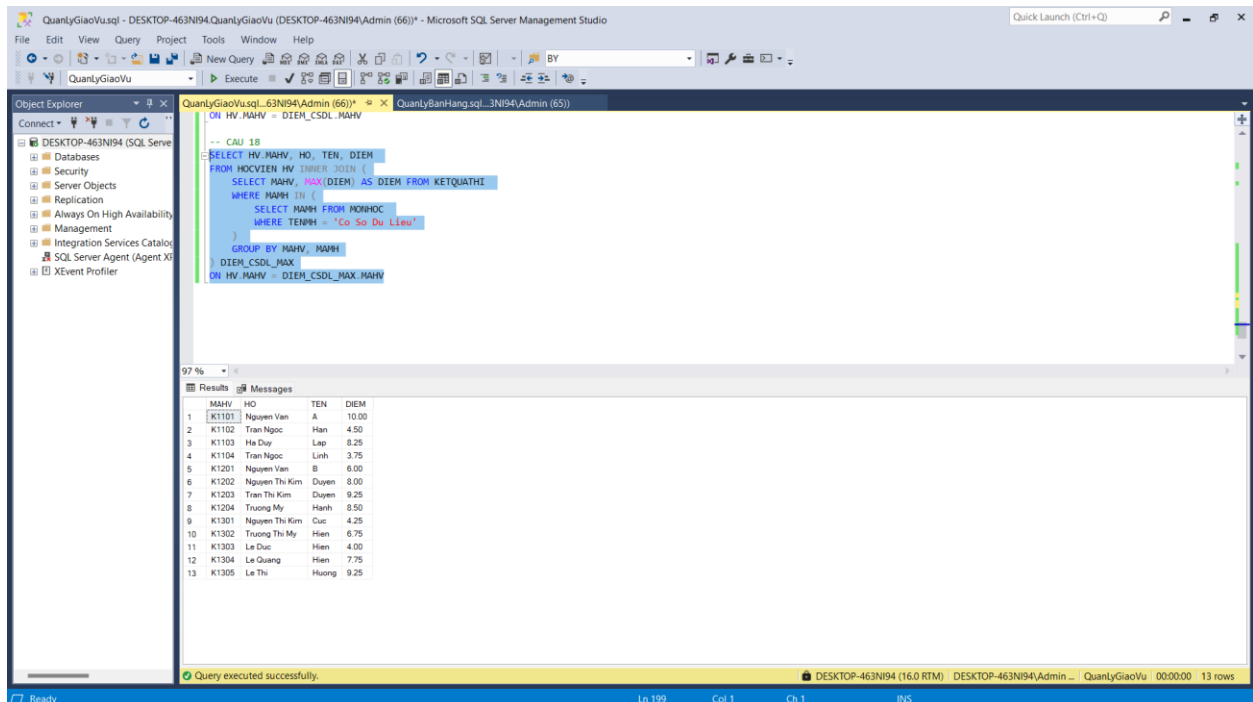
-- CAU 18
SELECT HV.MAHV, HO, TEN, DIEM
```

Results: 13 rows

MAHV	HO	TEN	DIEM
K1101	Nguyen Van	A	10.00
K1102	Tran Ngoc	Han	4.50
K1103	Ha Duy	Lap	8.25
K1104	Tran Ngoc	Linh	3.75
K1201	Nguyen Van	B	6.00
K1202	Nguyen Thi Kim	Duyen	8.00
K1203	Tran Thi Kim	Duyen	9.25
K1204	Truong My	Hanh	8.50
K1301	Nguyen Thi Kim	Cuc	4.25
K1302	Truong Thi My	Hien	6.75
K1303	Le Duc	Hien	4.00
K1304	Le Quang	Hien	7.75
K1305	Le Thi	Huong	9.25

Query executed successfully.

## Câu 18:



QuantyGiaoVu.sql - DESKTOP-463N194\QuantyGiaoVu (DESKTOP-463N194\Admin (66))\* - Microsoft SQL Server Management Studio

Object Explorer: Connect - Desktop-463N194 (SQL Serve) > Databases > Security > Server Objects > Replication > Always On High Availability > Management > Integration Services Catalog > SQL Server Agent (Agent X) > XEvent Profiler

Query: QuantyGiaoVu.sql...63N194\Admin (66)\*

```
ON HV.MAHV = DIEM_CSOL.MAHV

-- CAU 18
SELECT HV.MAHV, HO, TEN, DIEM
FROM HOCVIEN HV INNER JOIN (
    SELECT MAHV, MAX(DIEM) AS DIEM FROM KETQUATHI
    WHERE NAMH IN (
        SELECT NAMH FROM NONHOC
        WHERE TENPH = 'Co So Du Lieu'
    )
) GROUP BY MAHV, MAHV
DIEM_CSOL_MAX
ON HV.MAHV = DIEM_CSOL_MAX.MAHV
```

Results: 13 rows

MAHV	HO	TEN	DIEM
K1101	Nguyen Van	A	10.00
K1102	Tran Ngoc	Han	4.50
K1103	Ha Duy	Lap	8.25
K1104	Tran Ngoc	Linh	3.75
K1201	Nguyen Van	B	6.00
K1202	Nguyen Thi Kim	Duyen	8.00
K1203	Tran Thi Kim	Duyen	9.25
K1204	Truong My	Hanh	8.50
K1301	Nguyen Thi Kim	Cuc	4.25
K1302	Truong Thi My	Hien	6.75
K1303	Le Duc	Hien	4.00
K1304	Le Quang	Hien	7.75
K1305	Le Thi	Huong	9.25

Query executed successfully.