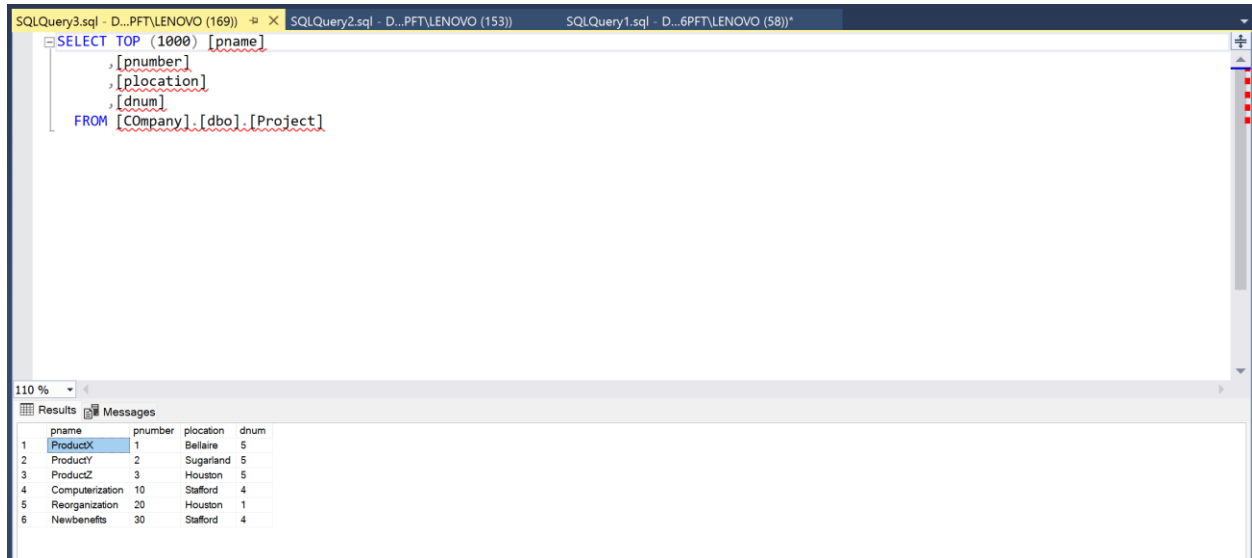


Views:

a.

Tạo view (mã nhân viên, họ tên, mã dự án, tên dự án, số giờ làm việc) chứa thông tin nhân viên, dự án và số giờ làm việc làm cho các dự án đặt tại Houston.

Bảng project ban đầu:



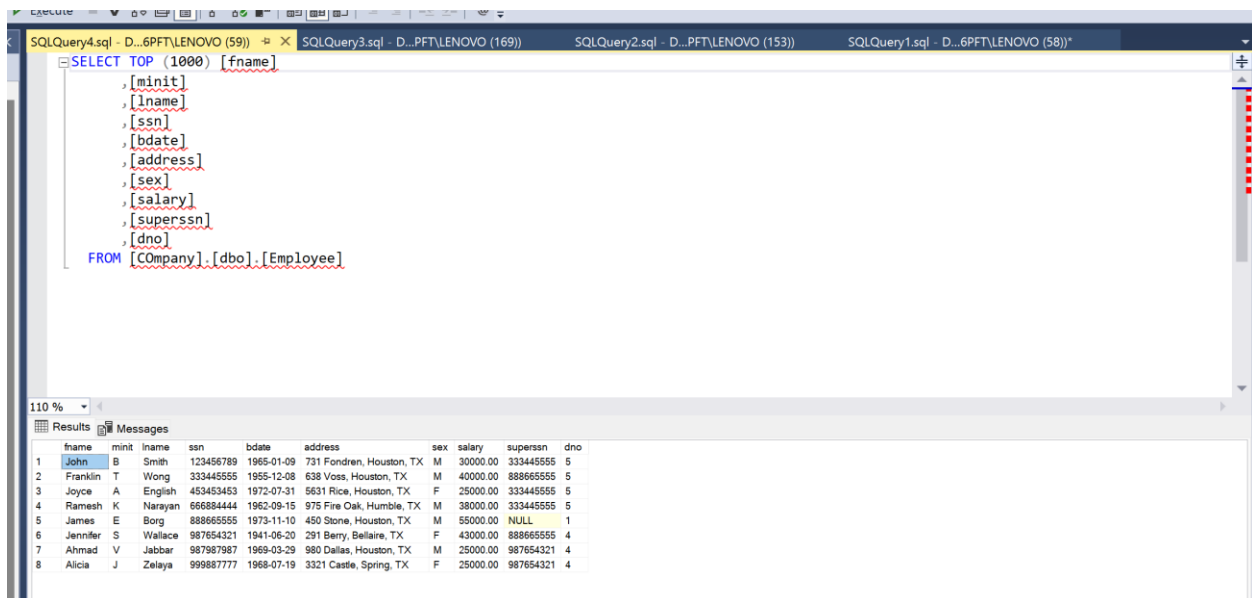
The screenshot shows a SQL query window with the following query:

```
SELECT TOP (1000) [pname]
, [pnumber]
, [plocation]
, [dnum]
FROM [Company].[dbo].[Project]
```

The results pane displays the following data:

	pname	pnumber	plocation	dnum
1	ProductX	1	Bellaire	5
2	ProductY	2	Sugarland	5
3	ProductZ	3	Houston	5
4	Computerization	10	Stafford	4
5	Reorganization	20	Houston	1
6	Newbenefits	30	Stafford	4

Bảng nhân viên ban đầu:



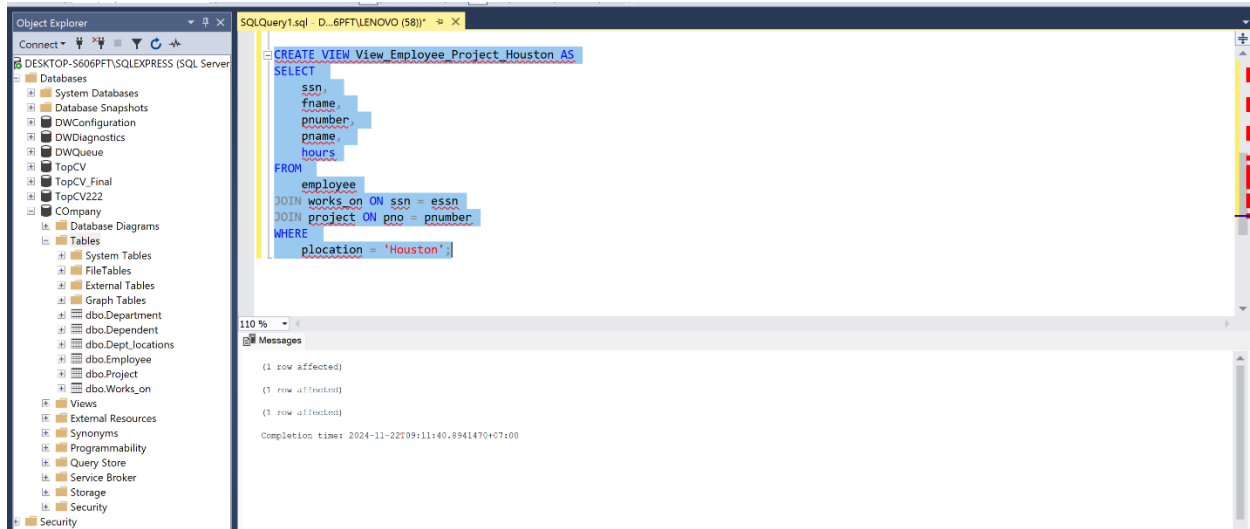
The screenshot shows a SQL query window with the following query:

```
SELECT TOP (1000) [fname]
, [minit]
, [lname]
, [ssn]
, [bdate]
, [address]
, [sex]
, [salary]
, [superssn]
, [dno]
FROM [Company].[dbo].[Employee]
```

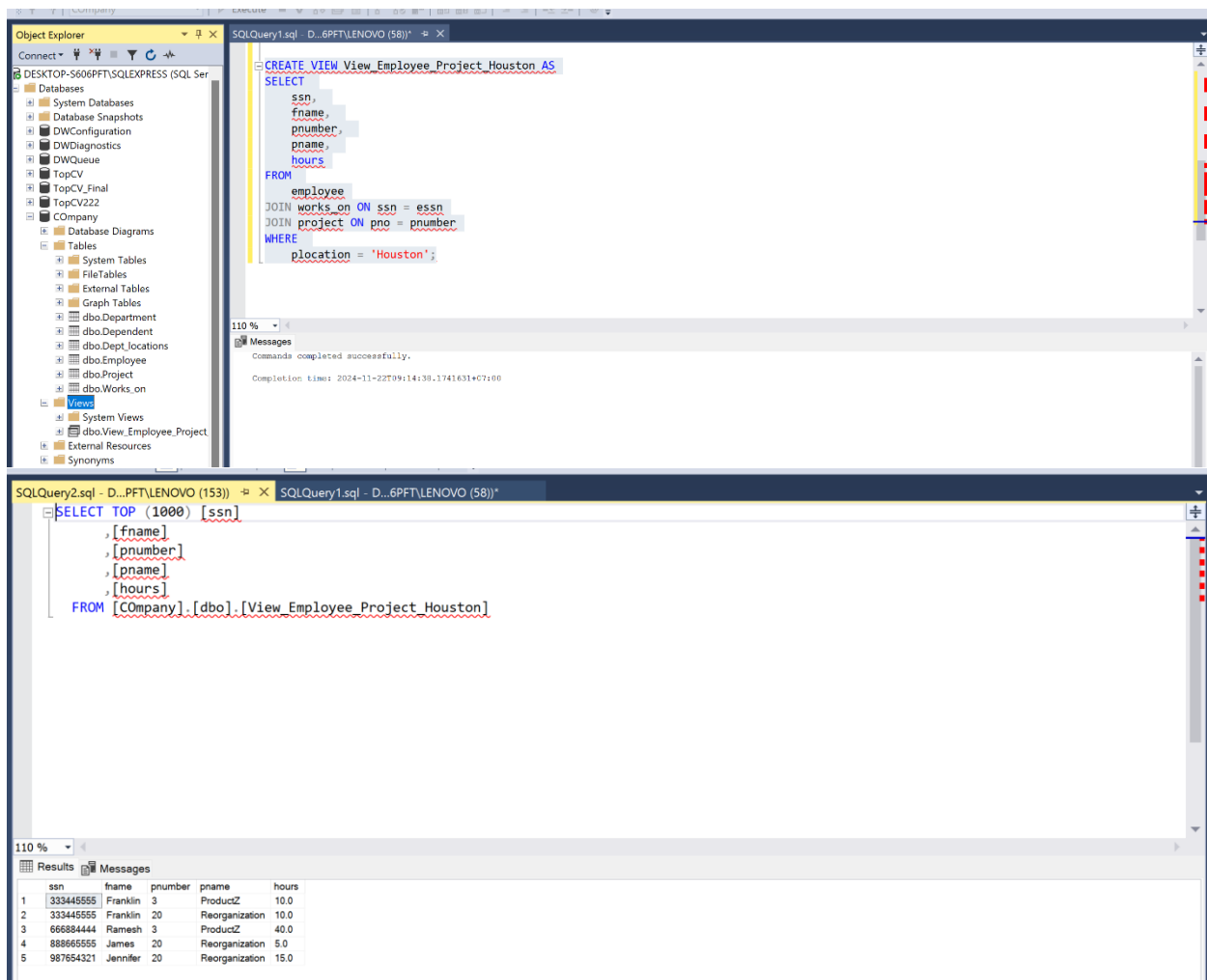
The results pane displays the following data:

	fname	minit	lname	ssn	bdate	address	sex	salary	superssn	dno
1	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
2	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
3	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
4	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
5	James	E	Borg	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
6	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
7	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
8	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

Trước:

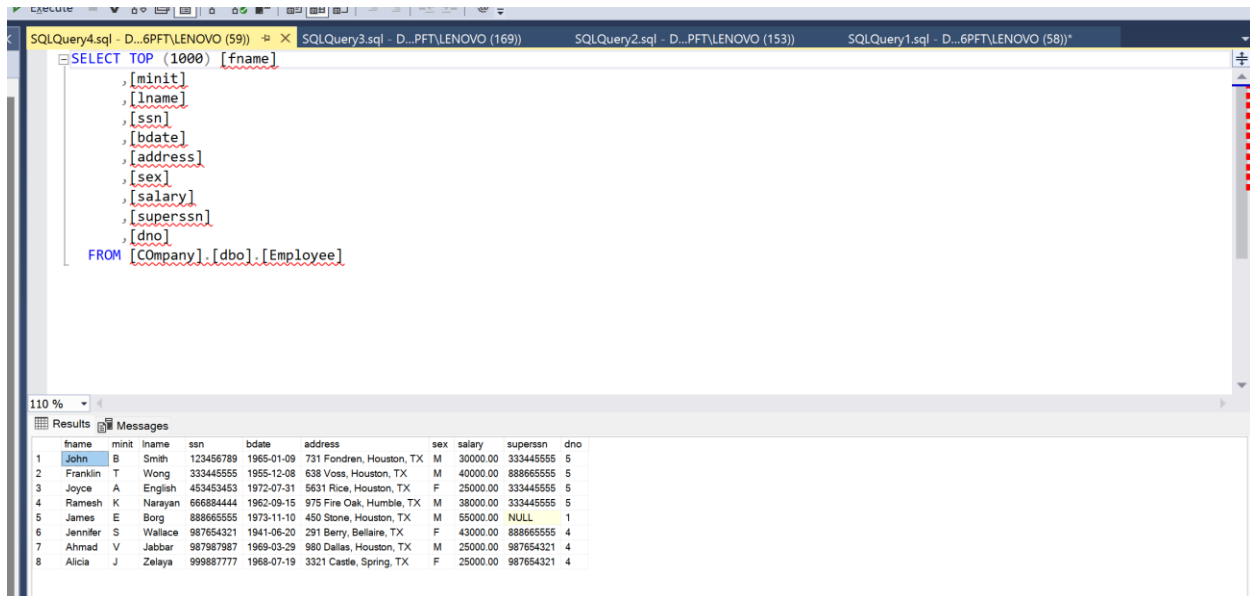


Sau:



Câu 2: Tạo view (họ tên nhân viên, tên người phụ thuộc, ngày sinh) chứa thông tin các con dưới 18 tuổi của các nhân viên (tính đến năm hiện tại).

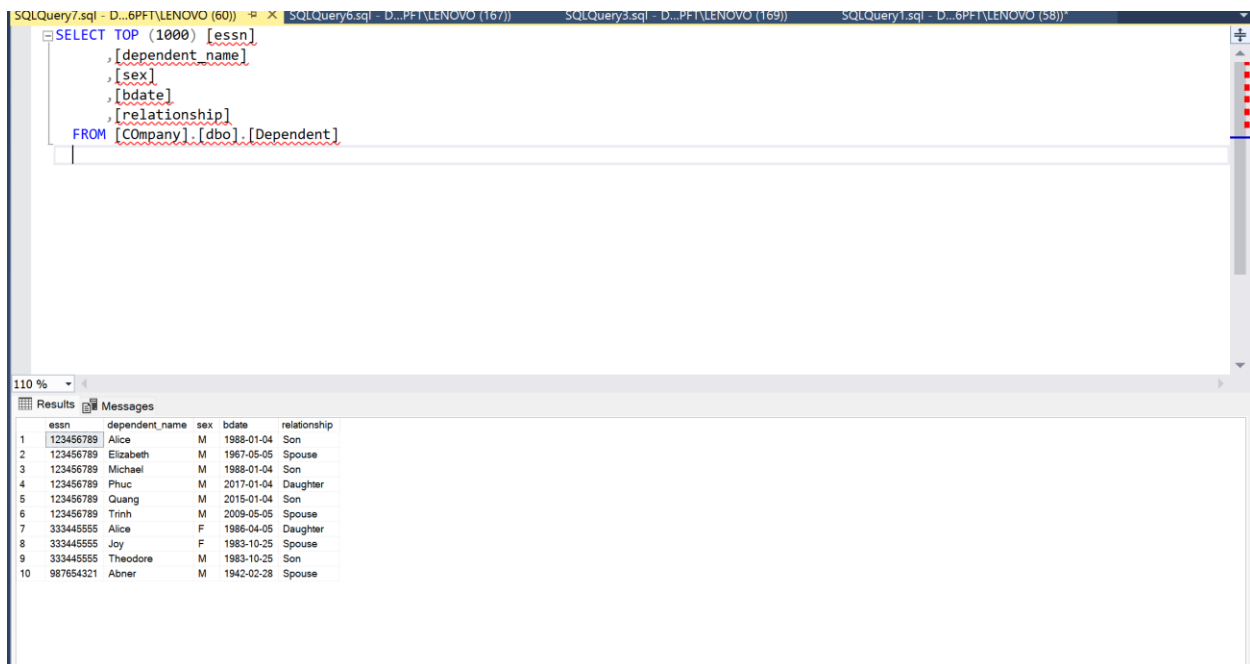
Bảng nhân viên ban đầu:



The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery4.sql - D:\6PFT\LENOVO (59)'. The query is a SELECT statement with columns: fname, minit, lname, ssn, bdate, address, sex, salary, superssn, and dno. The data is retrieved from the [Company].[dbo].[Employee] table. The results pane shows 8 rows of data.

	fname	minit	lname	ssn	bdate	address	sex	salary	superssn	dno
1	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
2	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
3	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
4	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
5	James	E	Borg	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
6	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
7	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
8	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

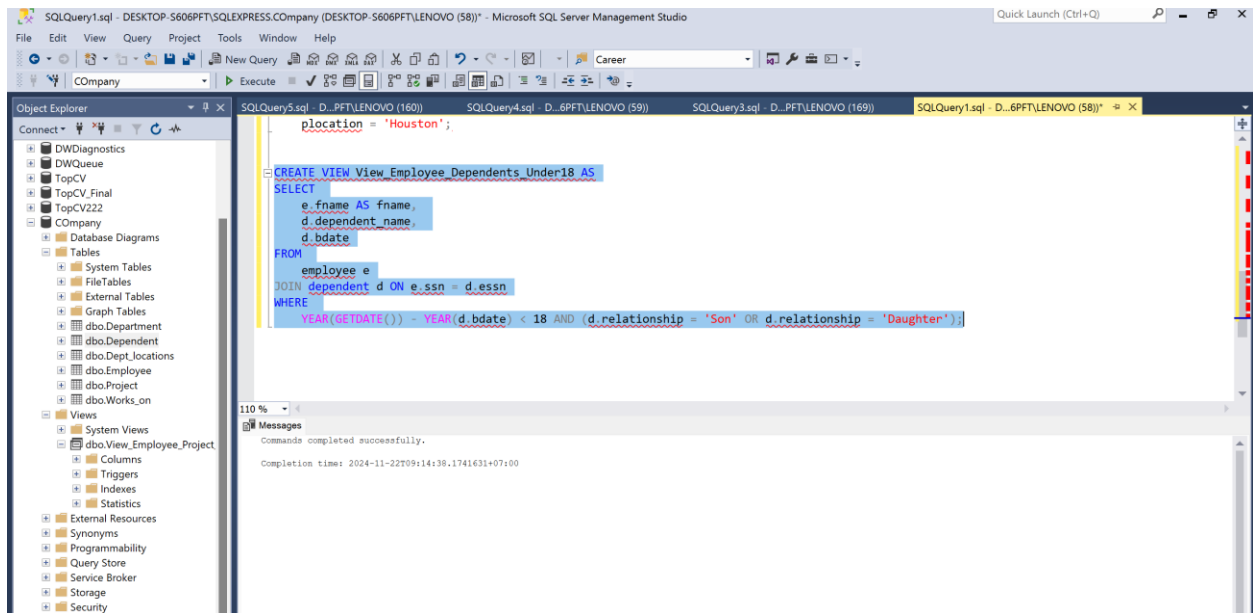
Bảng người phụ thuộc ban đầu:



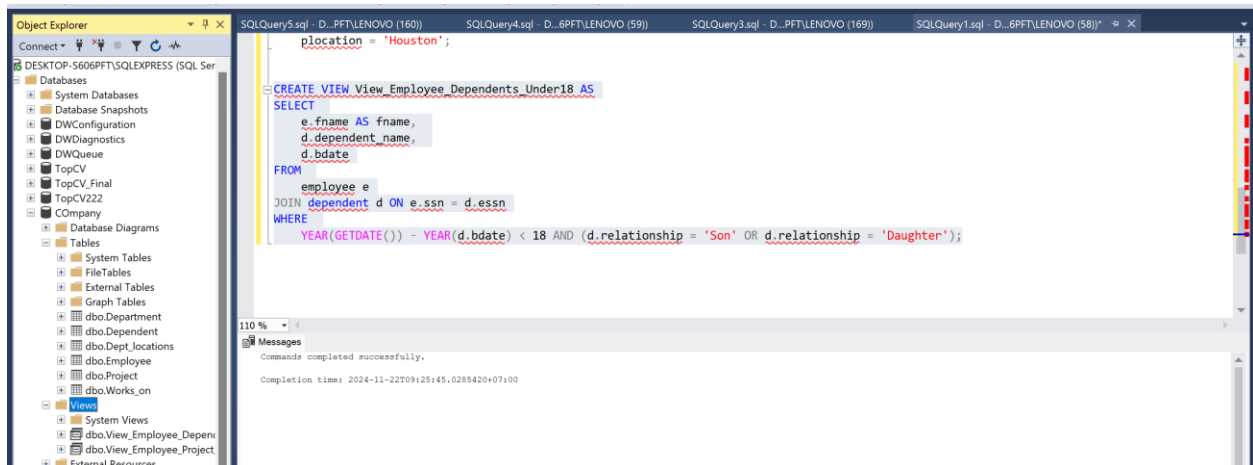
The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery7.sql - D:\6PFT\LENOVO (60)'. The query is a SELECT statement with columns: essn, dependent_name, sex, bdate, and relationship. The data is retrieved from the [Company].[dbo].[Dependent] table. The results pane shows 10 rows of data.

	essn	dependent_name	sex	bdate	relationship
1	123456789	Alice	M	1988-01-04	Son
2	123456789	Elizabeth	M	1967-05-05	Spouse
3	123456789	Michael	M	1988-01-04	Son
4	123456789	Phuc	M	2017-01-04	Daughter
5	123456789	Quang	M	2015-01-04	Son
6	123456789	Trinh	M	2009-05-05	Spouse
7	333445555	Alice	F	1986-04-05	Daughter
8	333445555	Joy	F	1983-10-25	Spouse
9	333445555	Theodore	M	1983-10-25	Son
10	987654321	Abner	M	1942-02-28	Spouse

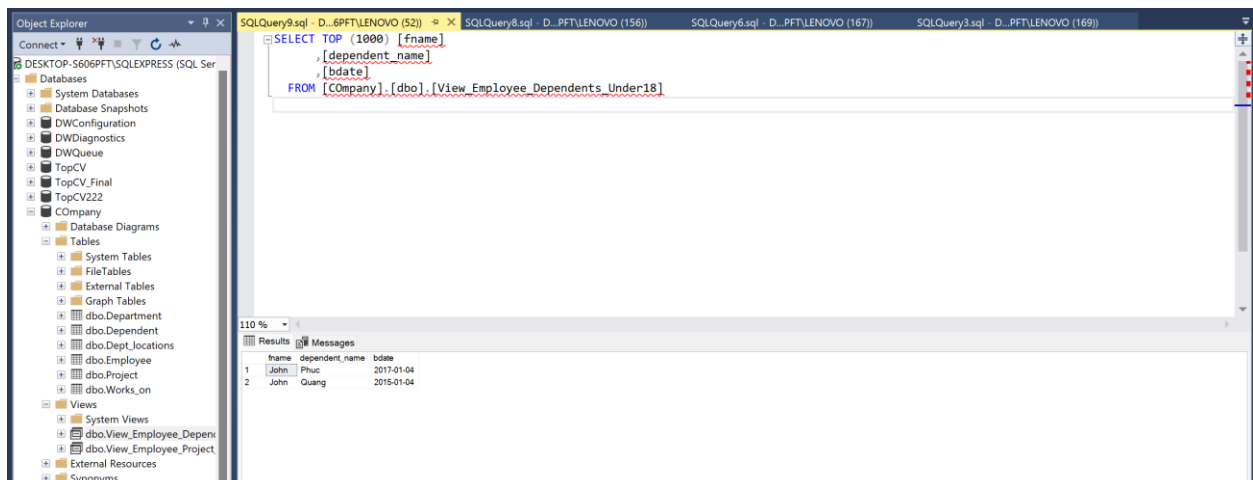
Trước khi chạy:



Sau khi chạy:

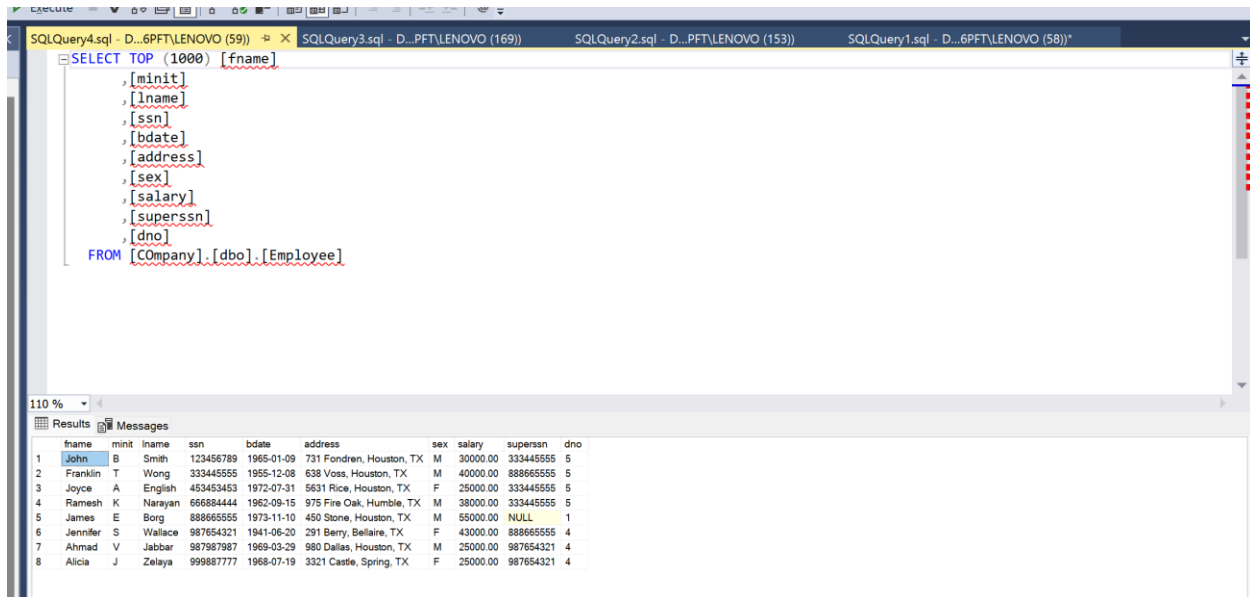


Kết quả:



3. Tạo view chứa thông tin (họ tên nhân viên, ngày sinh, giới tính) của các nhân viên có ngày sinh trong tháng 7. View này chỉ cho phép đọc.

Bảng nhân viên ban đầu



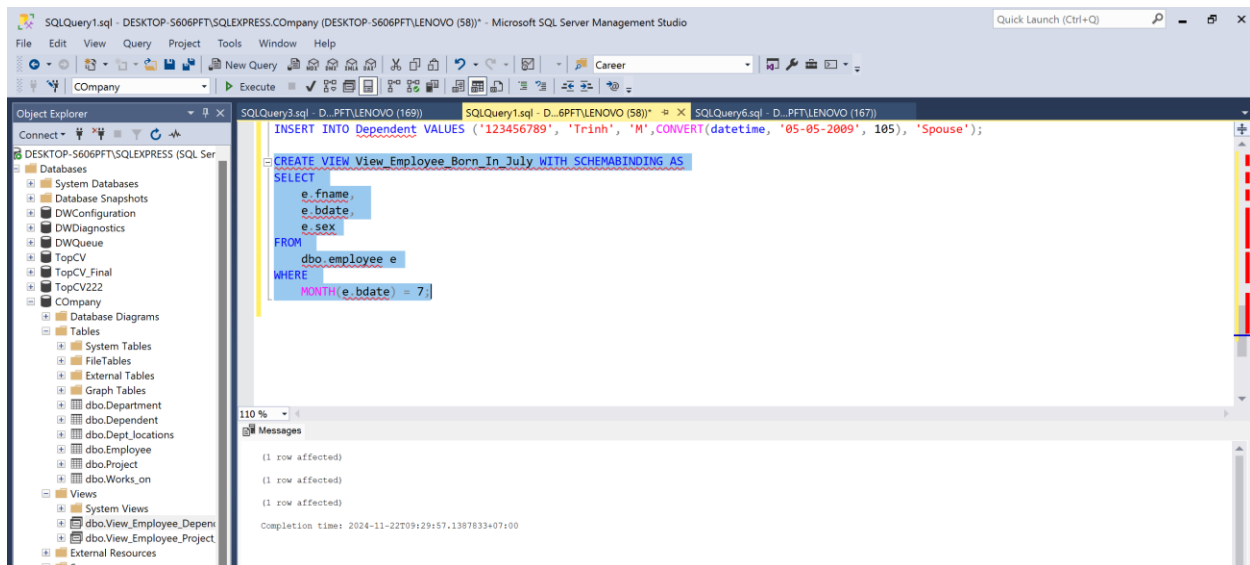
The screenshot shows a SQL query window with the following query:

```
SELECT TOP (1000) [fname],
[fname],
[ssn],
[bdate],
[address],
[sex],
[salary],
[superssn],
[dno]
FROM [Company].[dbo].[Employee]
```

The Results pane shows the following data:

	fname	minit	ssn	bdate	address	sex	salary	superssn	dno
1	John	B	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
2	Franklin	T	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
3	Joyce	A	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
4	Ramesh	K	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
5	James	E	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
6	Jennifer	S	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
7	Ahmad	V	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
8	Alicia	J	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

Trước khi chạy



The screenshot shows a SQL query window with the following query:

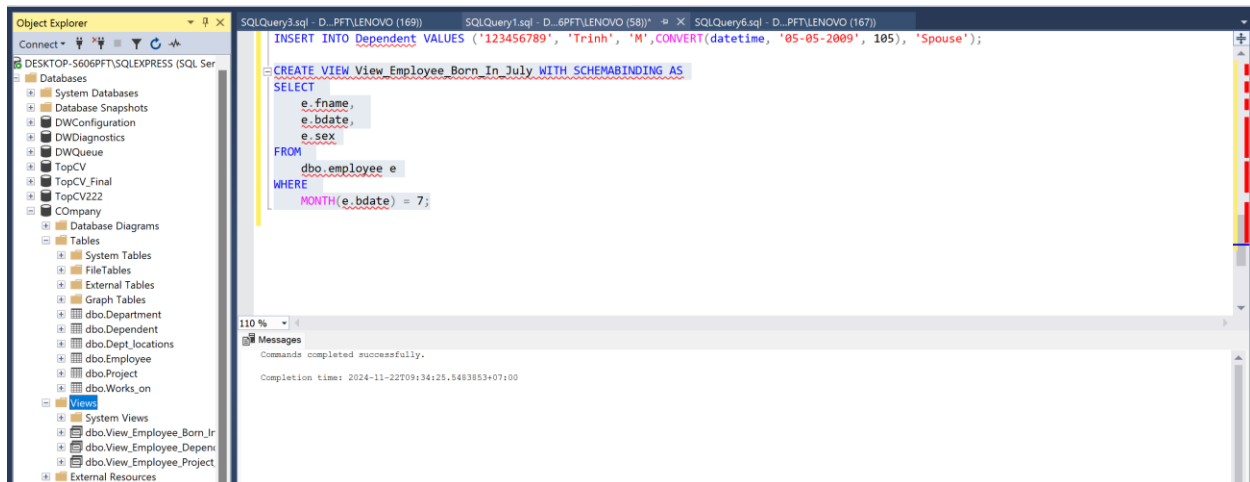
```
INSERT INTO Dependent VALUES ('123456789', 'Trinh', 'M', CONVERT(datetime, '05-05-2009', 105), 'Spouse');

CREATE VIEW View_Employee_Born_In_July WITH SCHEMABINDING AS
SELECT
e.fname,
e.bdate,
e.sex
FROM
dbo.employee e
WHERE
MONTH(e.bdate) = 7;
```

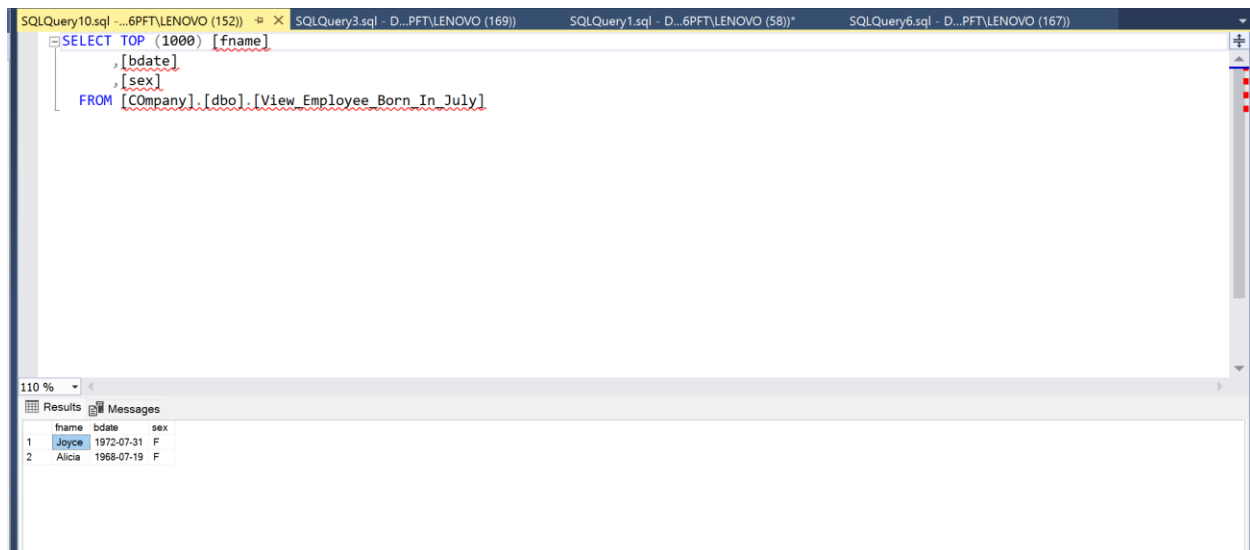
The Messages pane shows the following output:

```
(1 row affected)
(1 row affected)
(1 row affected)
Completion time: 2024-11-22T09:29:57.1397833+07:00
```

Sau khi chạy:



Kết quả:



Procedure:

- Tạo procedure để thêm dữ liệu vào bảng Employee.
Input: Các thông tin cá nhân của nhân viên mới, tên phòng ban, và họ tên người giám sát.
Output: báo thành công hay không. Nếu thất bại, in ra câu báo lỗi.

Bảng nhân viên ban đầu:

The screenshot shows a SQL query window with the following query:

```
SELECT TOP (1000) [fname]
, [minit]
, [lname]
, [ssn]
, [bdate]
, [address]
, [sex]
, [salary]
, [superssn]
, [dno]
FROM [Company].[dbo].[Employee]
```

The results pane shows the following data:

	fname	minit	lname	ssn	bdate	address	sex	salary	superssn	dno
1	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
2	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
3	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
4	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
5	James	E	Borg	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
6	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
7	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
8	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

Trước khi chạy:

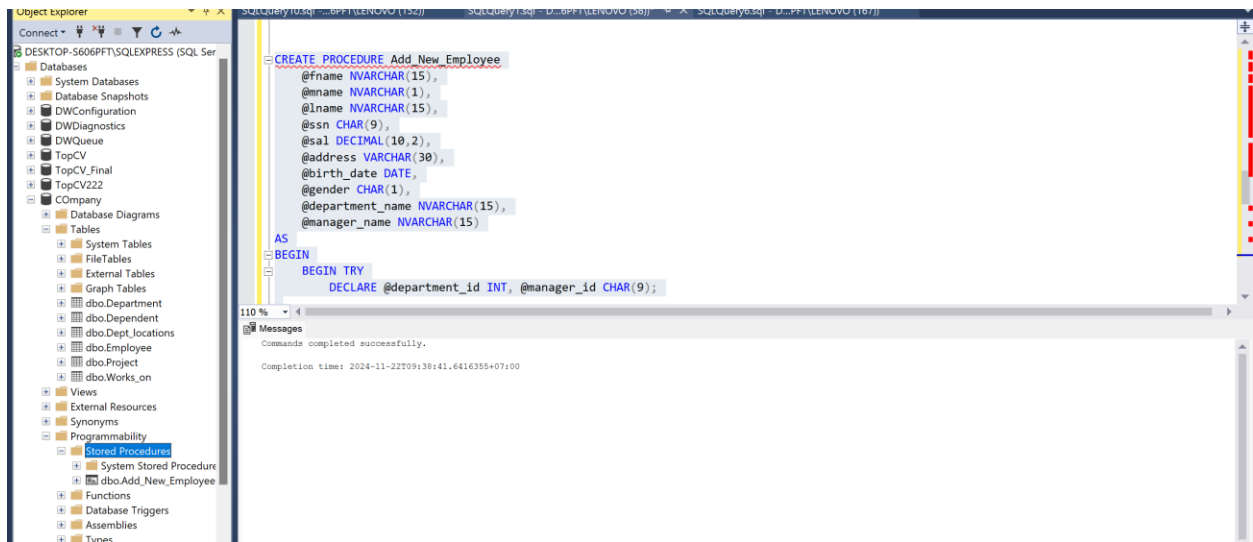
The screenshot shows a SQL query window with the following query:

```
CREATE PROCEDURE Add_New_Employee
@fname NVARCHAR(15),
@lname NVARCHAR(15),
@ssn CHAR(9),
@sal DECIMAL(10,2),
@address VARCHAR(30),
@birth_date DATE,
@gender CHAR(1),
@department_name NVARCHAR(15),
@manager_name NVARCHAR(15)
AS
BEGIN
BEGIN TRY
DECLARE @department_id INT, @manager_id CHAR(9);
```

The Messages pane shows the following output:

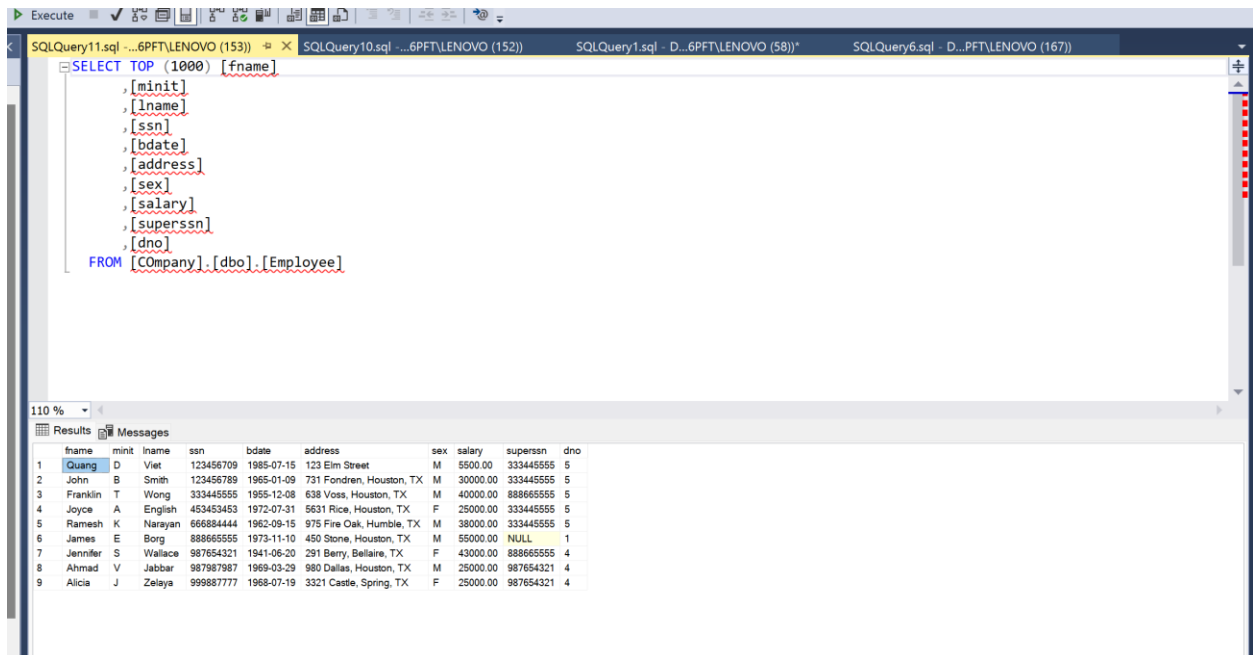
```
Commands completed successfully.
Completion time: 2024-11-22T09:34:25.5483853+07:00
```

Sau khi chạy:



Kết quả:





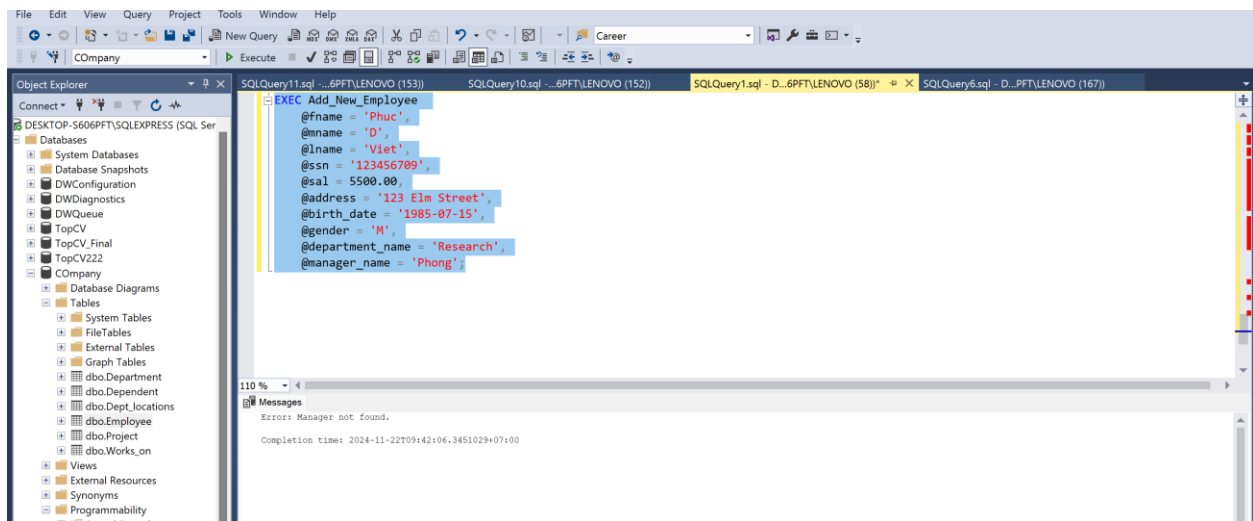
The screenshot shows a SQL query window with the following query:

```
SELECT TOP (1000) [fname]
, [minit]
, [lname]
, [ssn]
, [bdate]
, [address]
, [sex]
, [salary]
, [superssn]
, [dno]
FROM [Company].[dbo].[Employee]
```

Below the query window, the Results pane displays a table with 10 columns: fname, minit, lname, ssn, bdate, address, sex, salary, superssn, and dno. The first 9 rows of data are shown.

	fname	minit	lname	ssn	bdate	address	sex	salary	superssn	dno
1	Quang	D	Viet	123456709	1985-07-15	123 Elm Street	M	5500.00	333445555	5
2	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
3	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
4	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
5	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
6	James	E	Borg	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
7	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellare, TX	F	43000.00	888665555	4
8	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
9	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

Thêm dữ liệu không thành công:



The screenshot shows a SQL query window with the following query:

```
EXEC Add_New_Employee
@fname = 'Phuc',
@lname = 'D',
@lname = 'Viet',
@ssn = '123456709',
@sal = 5500.00,
@address = '123 Elm Street',
@birth_date = '1985-07-15',
@gender = 'M',
@department_name = 'Research',
@manager_name = 'Phong';
```

Below the query window, the Messages pane displays an error message:

```
Error: Manager not found.
Completion time: 2024-11-22T09:42:06.3451029+07:00
```

b. Viết Function tính tổng số dự án của một nhân viên.

Input: mã nhân viên

Output: tổng số dự án mà nhân viên làm

Bảng works_on ban đầu:

The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery12.sql - D:\6PFT\LENOVO (161)'. The query is a SELECT statement with columns 'essn', 'pno', and 'hours' from the 'works_on' table in the 'Company' database. The results pane shows 16 rows of data.

	essn	pno	hours
1	123456789	1	32.5
2	123456789	2	7.5
3	333445555	2	10.0
4	333445555	3	10.0
5	333445555	10	10.0
6	333445555	20	10.0
7	453453453	1	20.0
8	453453453	2	20.0
9	666884444	3	40.0
10	888665555	20	5.0
11	987654321	20	15.0
12	987654321	30	20.0
13	987987987	10	35.0
14	987987987	30	5.0
15	999887777	10	10.0
16	999887777	30	30.0

Trước khi chạy:

The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery12.sql - D:\6PFT\LENOVO (161)'. The query is a CREATE FUNCTION statement for 'Get_Total_Projects'. The messages pane shows an error: 'Error: Manager not found.' and 'Completion time: 2024-11-22T09:42:06.3451029+07:00'.

```

CREATE FUNCTION Get_Total_Projects(@employee_id Char(9))
RETURNS INT
AS
BEGIN
    DECLARE @total_projects INT;

    SELECT @total_projects = COUNT(*)
    FROM works_on
    WHERE essn = @employee_id;

    RETURN @total_projects;
END;

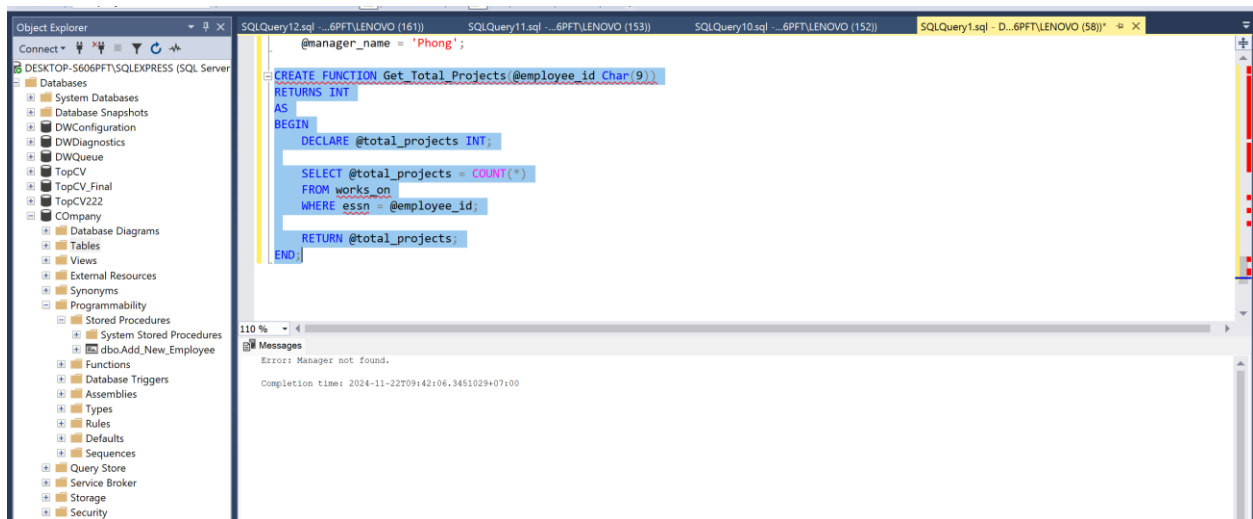
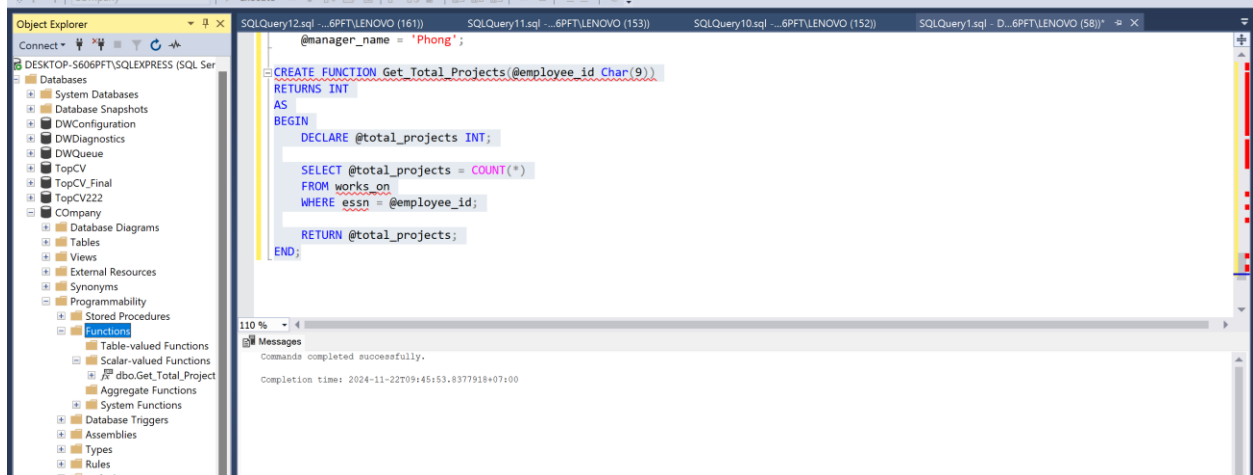
```

Messages

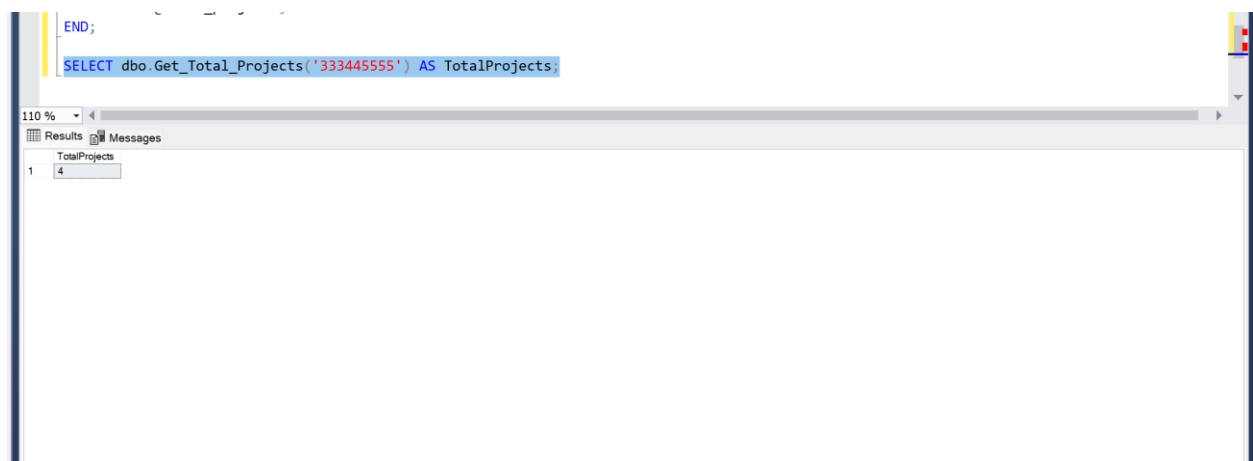
Error: Manager not found.

Completion time: 2024-11-22T09:42:06.3451029+07:00

Sau khi chạy:



Kết quả:



c. Tạo procedure in ra mã nhân viên, họ tên, tên phòng ban, lương năm = lương tháng * 12 của các nhân viên.

Bảng nhân viên ban đầu:

The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery4.sql - D:\6PFT\LENOVO (59)'. The query is a SELECT statement with the following code:

```
SELECT TOP (1000) [fname]
, [minit]
, [lname]
, [ssn]
, [bdate]
, [address]
, [sex]
, [salary]
, [superssn]
, [dno]
FROM [Company].[dbo].[Employee]
```

The results pane shows the following data:

	fname	minit	lname	ssn	bdate	address	sex	salary	superssn	dno
1	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
2	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
3	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
4	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
5	James	E	Borg	888665555	1973-11-10	450 Stone, Houston, TX	M	55000.00	NULL	1
6	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
7	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
8	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000.00	987654321	4

Trước khi chạy:

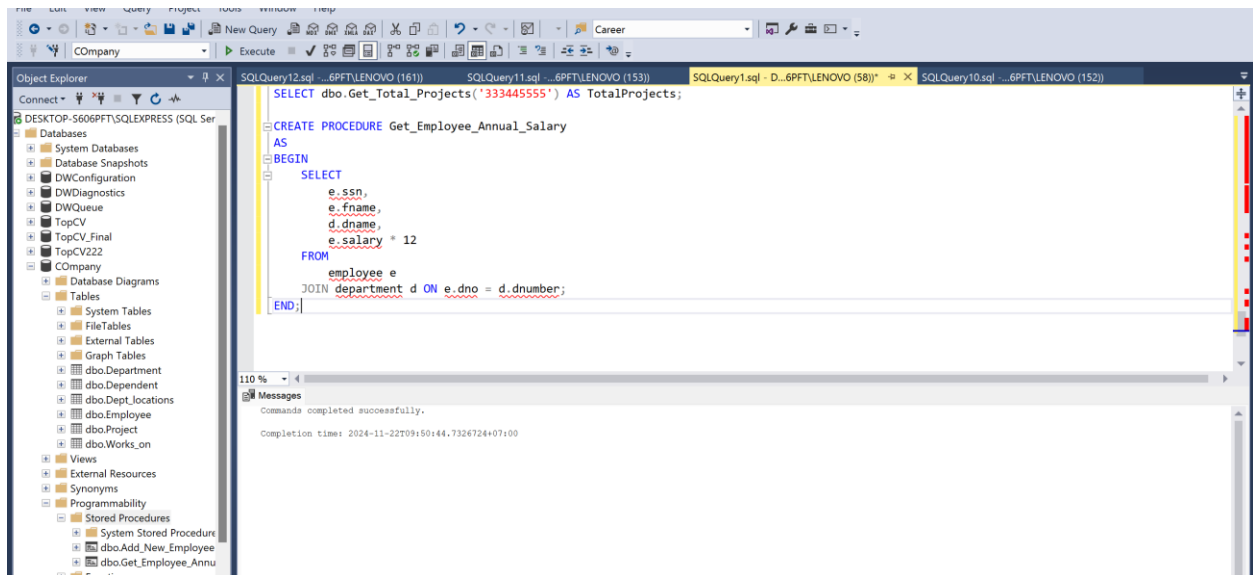
The screenshot shows a SQL Server Enterprise Manager window with a query window titled 'SQLQuery12.sql - 6PFT\LENOVO (161)'. The query is a CREATE PROCEDURE statement with the following code:

```
CREATE PROCEDURE Get_Employee_Annual_Salary
AS
BEGIN
SELECT
e.ssn,
e.fname,
e.dname,
e.salary * 12
FROM
employee e
JOIN department d ON e.dno = d.dnumber;
END;
```

The results pane shows the following data:

	TotalProjects
1	4

Sau khi chạy:



Kết quả:

