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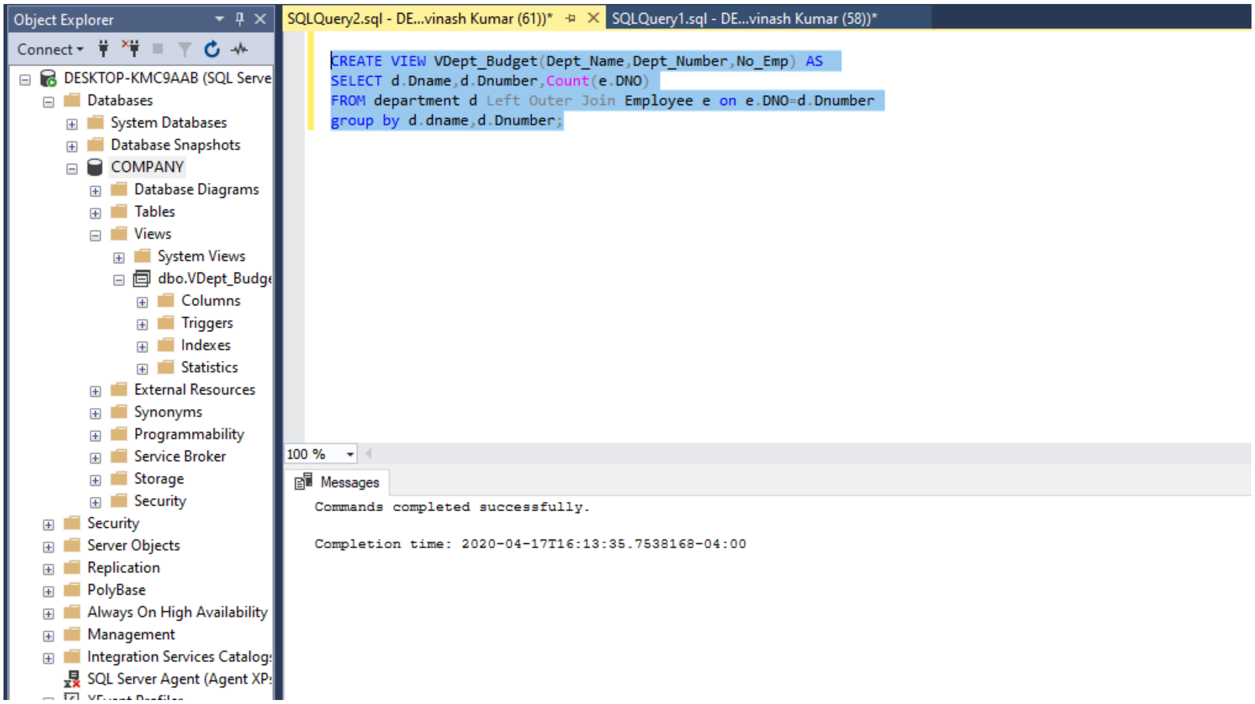
**CSU ID: 2762646**
**Description: Creating View and stored procedure in Microsoft SQL**

**Part1 on View:**

**1-1)Create a view named VDept_Budget that reports headcount for each department.**
**The report includes 3 columns as follow:**
**Dept_Name, Dept_Number, No_Emp.**
**Include all the departments.**
**Show the content of the view through SQL (Select * from VDept_Budget;)**

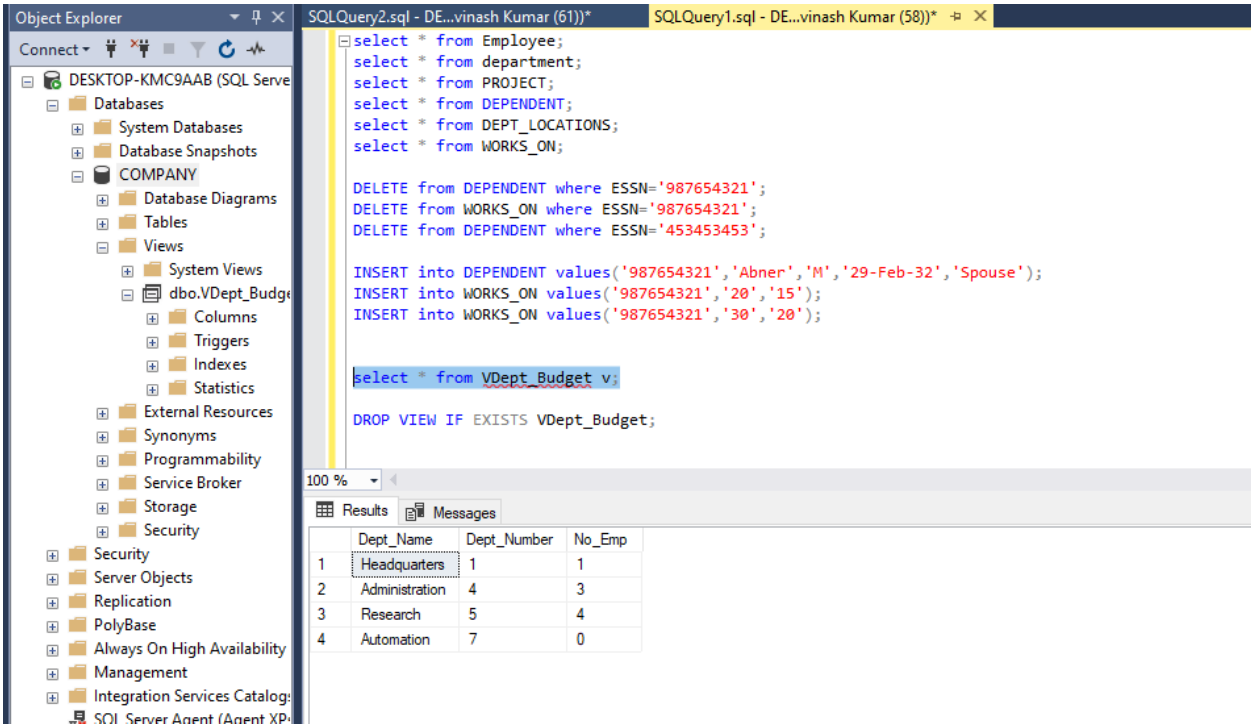
```
CREATE VIEW VDept_Budget(Dept_Name,Dept_Number,No_Emp) AS
SELECT d.Dname,d.Dnumber,Count(e.DNO)
FROM department d Left Outer Join Employee e on e.DNO=d.Dnumber
group by d.dname,d.Dnumber;
```



```
CREATE VIEW VDept_Budget(Dept_Name,Dept_Number,No_Emp) AS
SELECT d.Dname,d.Dnumber,Count(e.DNO)
FROM department d Left Outer Join Employee e on e.DNO=d.Dnumber
group by d.dname,d.Dnumber;
```

```
Commands completed successfully.

Completion time: 2020-04-17T16:13:35.7538168-04:00
```

```
select * from VDept_Budget v;
```

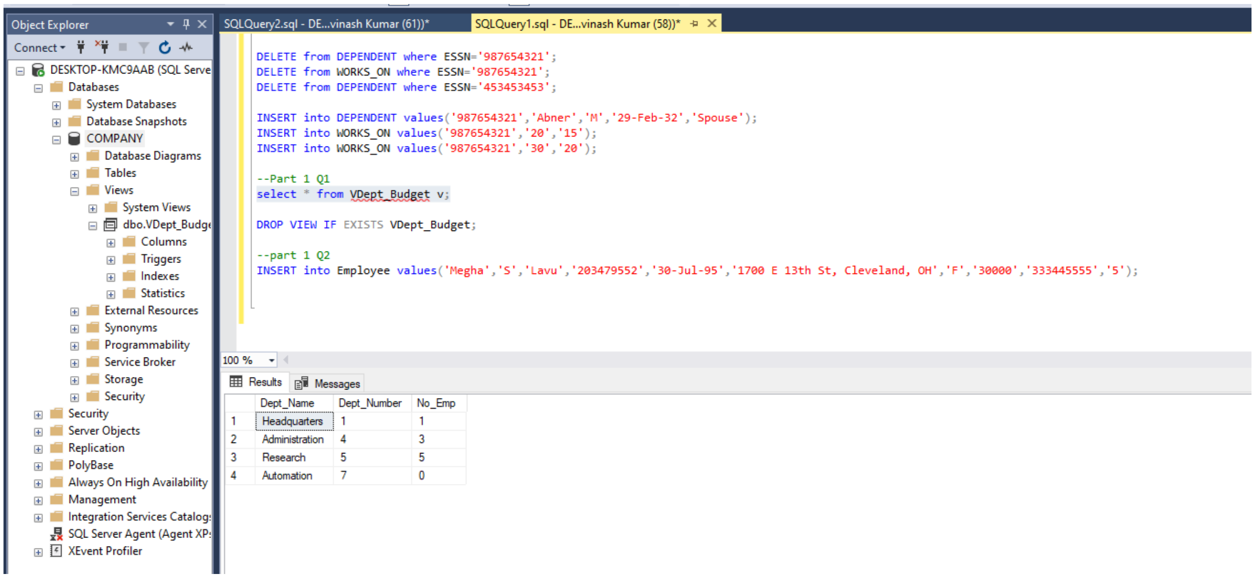


```
select * from Employee;
select * from department;
select * from PROJECT;
select * from DEPENDENT;
select * from DEPT_LOCATIONS;
select * from WORKS_ON;

DELETE from DEPENDENT where ESSN='987654321';
DELETE from WORKS_ON where ESSN='987654321';
DELETE from DEPENDENT where ESSN='453453453';

INSERT into DEPENDENT values('987654321','Abner','M','29-Feb-32','Spouse');
INSERT into WORKS_ON values('987654321','20','15');
INSERT into WORKS_ON values('987654321','30','20');


select * from VDept_Budget v;

DROP VIEW IF EXISTS VDept_Budget;
```

|  | Dept_Name | Dept_Number | No_Emp |
|---|---|---|---|
| 1 | Headquarters | 1 | 1 |
| 2 | Administration | 4 | 3 |
| 3 | Research | 5 | 4 |
| 4 | Automation | 7 | 0 |

**1-2) Add yourself or anyone to Employee table in the database . Then Show the content of your view again through SQL (Select * from VDept_Budget;) to see if your view is updated according to the changes you just made in the base table Employee.**

```
--part 1 Q2
    INSERT into Employee values('Megha','S','Lavu','203479552','30-Jul-95','1700 E 13th St,
    Cleveland, OH','F','30000','333445555','5');


    select * from VDept_Budget v;
```



```
DELETE from DEPENDENT where ESSN='987654321';
DELETE from WORKS_ON where ESSN='987654321';
DELETE from DEPENDENT where ESSN='453453453';

INSERT into DEPENDENT values('987654321','Abner','M','29-Feb-32','Spouse');
INSERT into WORKS_ON values('987654321','20','15');
INSERT into WORKS_ON values('987654321','30','20');

--Part 1 Q1
select * from VDept_Budget v;

DROP VIEW IF EXISTS VDept_Budget;

--part 1 Q2
INSERT into Employee values('Megha','S','Lavu','203479552','30-Jul-95','1700 E 13th St, Cleveland, OH','F','30000','333445555','5');
```

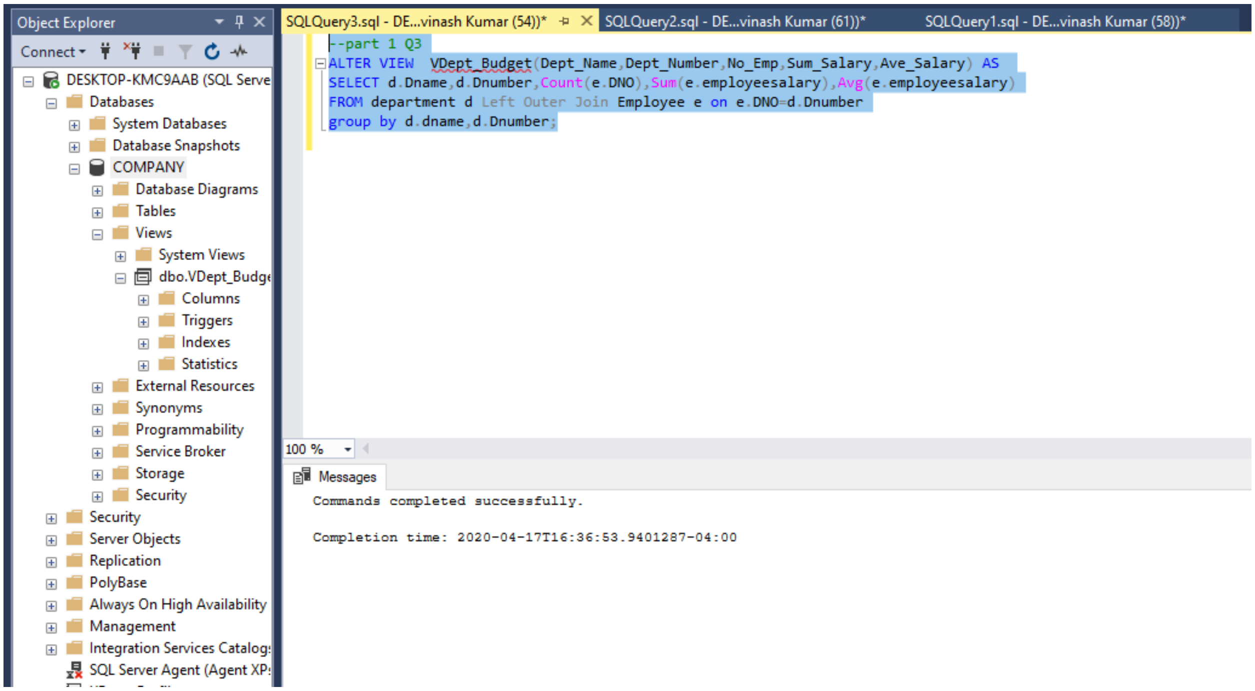
|  | Dept_Name | Dept_Number | No_Emp |
|---|---|---|---|
| 1 | Headquarters | 1 | 1 |
| 2 | Administration | 4 | 3 |
| 3 | Research | 5 | 5 |
| 4 | Automation | 7 | 0 |

**1-3) Then Change your view to add two more info – Sum_Salary, Ave_Salary for each department. Include all the departments. Your report (view) lists 5 Columns as follow: Dept_Name, Dept_Number, No_Emp, Sum_Salary, Ave_Salary**

**Show the content of your changed view to report the updated info after changes in the view and the database.**

**Show your SQL statements and the result of each step in a Word document. Add screenshots showing your SQLs and the results to show your report is updated before and after the changes in the database**

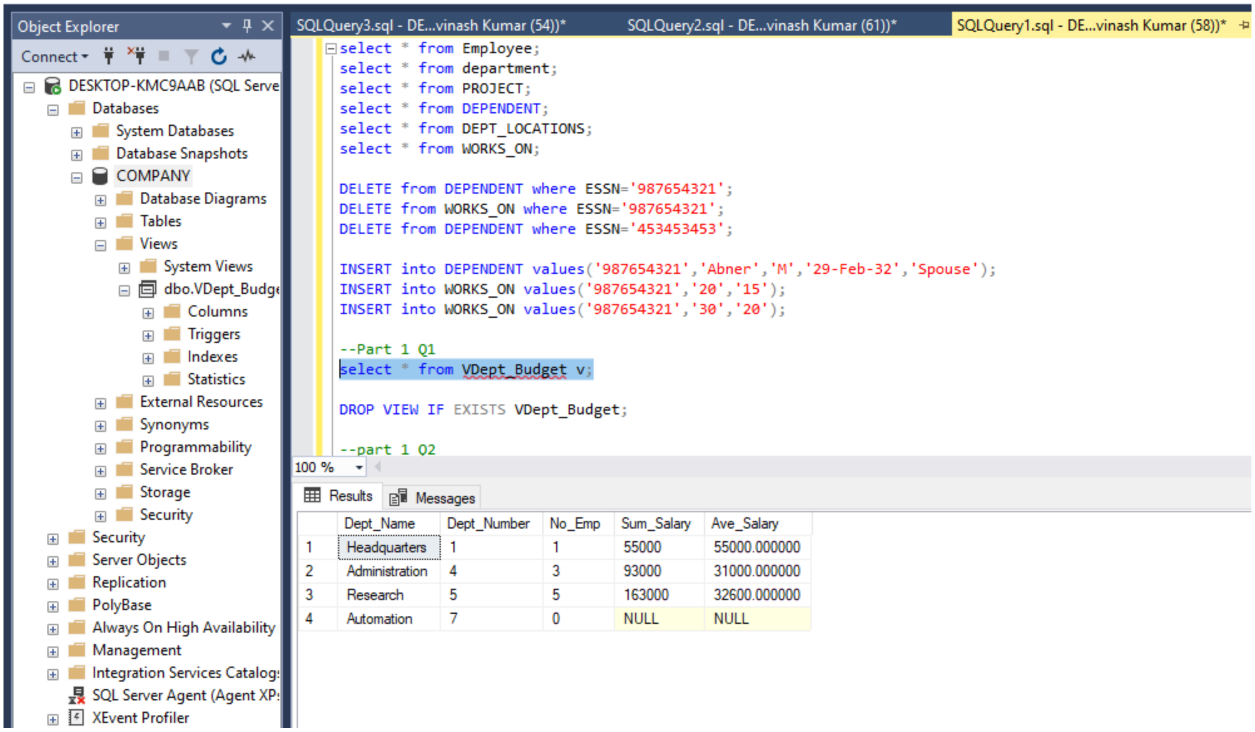
```
--part 1 Q3
ALTER VIEW  VDept_Budget(Dept_Name,Dept_Number,No_Emp,Sum_Salary,Ave_Salary)
AS
SELECT d.Dname,d.Dnumber,Count(e.DNO),Sum(e.employeesalary),Avg(e.employeesalary)
FROM department d Left Outer Join Employee e on e.DNO=d.Dnumber
group by d.dname,d.Dnumber;
```



```
--part 1 Q3
ALTER VIEW  VDept_Budget(Dept_Name,Dept_Number,No_Emp,Sum_Salary,Ave_Salary) AS
SELECT d.Dname,d.Dnumber,Count(e.DNO),Sum(e.employeesalary),Avg(e.employeesalary)
FROM department d Left Outer Join Employee e on e.DNO=d.Dnumber
group by d.dname,d.Dnumber;
```

```
Commands completed successfully.

Completion time: 2020-04-17T16:36:53.9401287-04:00
```

select * from VDept_Budget v;



```
select * from Employee;
select * from department;
select * from PROJECT;
select * from DEPENDENT;
select * from DEPT_LOCATIONS;
select * from WORKS_ON;

DELETE from DEPENDENT where ESSN='987654321';
DELETE from WORKS_ON where ESSN='987654321';
DELETE from DEPENDENT where ESSN='453453453';

INSERT into DEPENDENT values('987654321','Abner','M','29-Feb-32','Spouse');
INSERT into WORKS_ON values('987654321','20','15');
INSERT into WORKS_ON values('987654321','30','20');

--Part 1 Q1
select * from VDept_Budget v;

DROP VIEW IF EXISTS VDept_Budget;

--part 1 Q2
```

|   | Dept_Name | Dept_Number | No_Emp | Sum_Salary | Ave_Salary |
|---|---|---|---|---|---|
| 1 | Headquarters | 1 | 1 | 55000 | 55000.000000 |
| 2 | Administration | 4 | 3 | 93000 | 31000.000000 |
| 3 | Research | 5 | 5 | 163000 | 32600.000000 |
| 4 | Automation | 7 | 0 | NULL | NULL |

**Part2 on Stored Procedure using Cursor**

**Write a Stored Procedure SP_Report_ NEW_Budget using the view you created in Part 1-3).**

**Use CURSOR to write the stored Procedure for the tasks below.**

**Your Stored Procedure SP_Report_ NEW_Budget does the following tasks:**

**It creates a new table NEW_Dept_Budget as follow:**

**NEW_Dept_Budget has 5 columns**

**Dept_No (Int)**
**Dept_Name (Char(30))**
**COUNT_Emp (INT)**
**New_SUM_Salary (INT)**
**New_AVE_Salary (INT)**

1) **Check if the view VDept_Budget is empty or not (by counting rows from the view).**

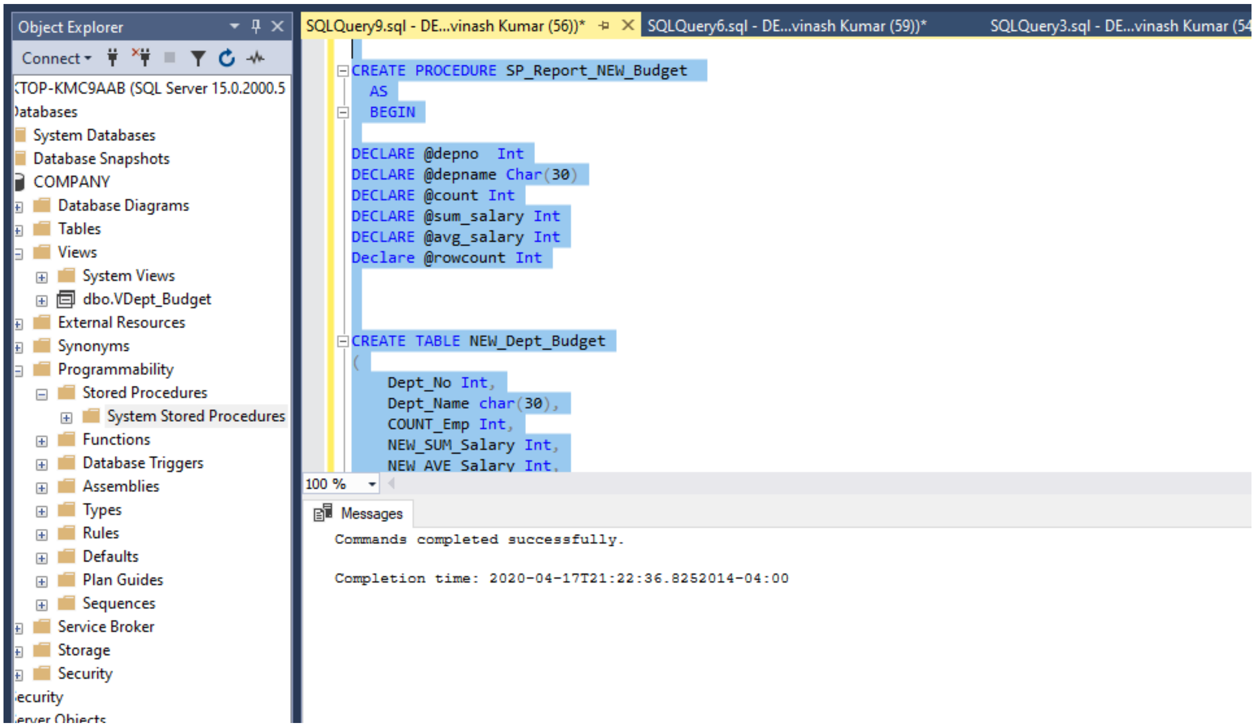
2) **If not empty , For each row of the view VDept_Budget, Calculate New_SUM_Salary, New_AVE_Salary as follow:**
   **If Dept = 1, Increase SUM(salary) 10%**
   **If Dept = 4, Increase SUM(salary) 20%**
   **If Dept = 5, Increase SUM(salary) 30%**
   **If Dept = 7, Increase SUM(salary) 40%**

3) **Insert each column value into the new table NEW_Dept_Budget.**

**Output (snapshot of screen) each Function and Procedure created and Show all the tables contents with Select statement in your output.**

```
CREATE PROCEDURE SP_Report_NEW_Budget
  AS
  BEGIN

DECLARE @depno  Int
DECLARE @depname Char(30)
DECLARE      @count Int
DECLARE @sum_salary Int
DECLARE @avg_salary Int
Declare @rowcount Int



CREATE TABLE NEW_Dept_Budget
(
            Dept_No Int,
            Dept_Name char(30),
            COUNT_Emp Int,
            NEW_SUM_Salary Int,
            NEW_AVE_Salary Int,
)
IF EXISTS (select * from VDept_Budget v)

-- checks whether the view is empty or not
Select @rowcount=count(*)
from VDept_Budget v
--PRINT @rowcount

IF @rowcount > 0

BEGIN

DECLARE deptno_cursor cursor For
 select v.Dept_Name, v.Dept_Number,v.No_Emp,v.Sum_Salary,v.Ave_Salary
                        from VDept_Budget v

                        OPEN deptno_Cursor
                        BEGIN
FETCH NEXT FROM deptno_cursor into
@depname,@depno,@count,@sum_salary,@avg_salary
                        while @@FETCH_STATUS =0
                          BEGIN
                                if @depno=1
                                                begin
                                                  SET @sum_salary= @sum_salary*1.1
                                                  SET @avg_salary= @avg_salary*1.1
```

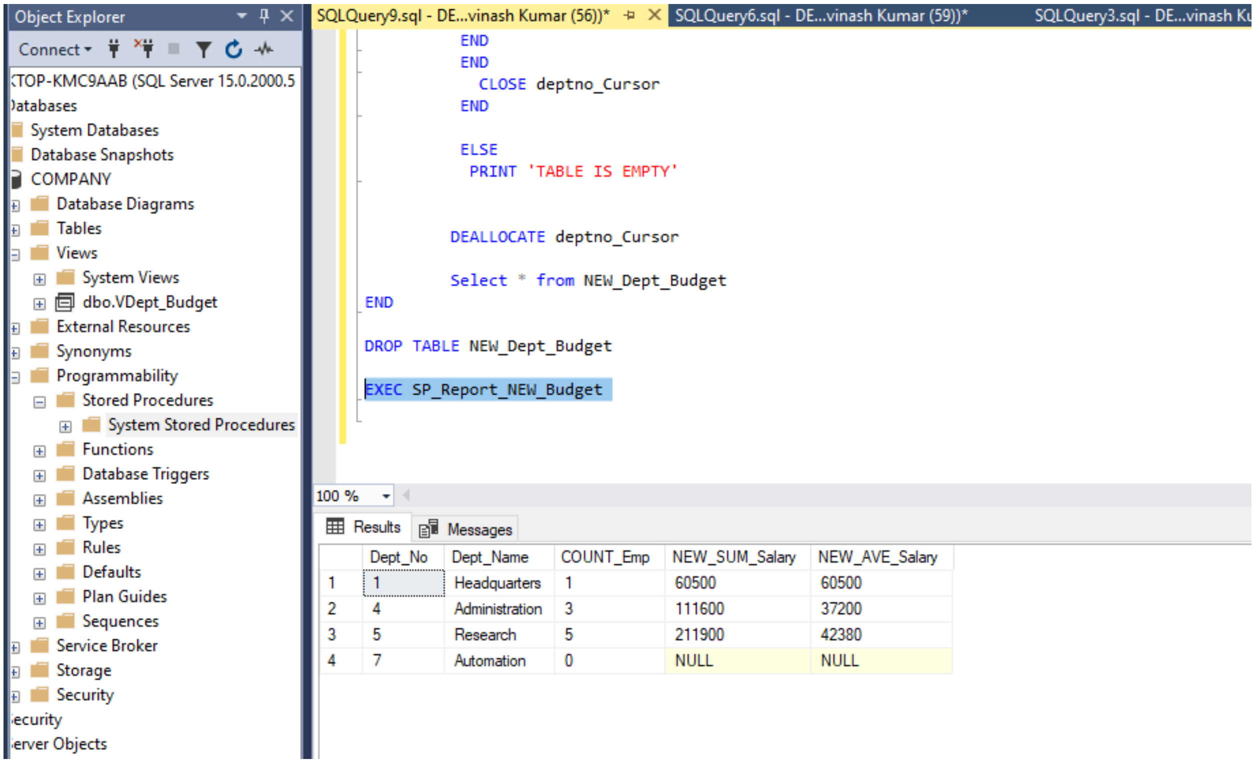
```
                            end
                            else if @depno=4
                           begin
                            SET @sum_salary= @sum_salary*1.2
                             SET @avg_salary= @avg_salary*1.2
                            end
                           else if @depno=5
                           begin
                             SET @sum_salary= @sum_salary*1.3
                             SET @avg_salary= @avg_salary*1.3
                            end
                            else if @depno=7
                           begin
                           SET @sum_salary= @sum_salary*1.4
                             SET @avg_salary= @avg_salary*1.4
                            end
              INSERT INTO NEW_Dept_Budget
values(@depno,@depname,@count,@sum_salary,@avg_salary)
                     FETCH NEXT FROM deptno_cursor into
@depname,@depno,@count,@sum_salary,@avg_salary

              END
              END
               CLOSE deptno_Cursor
              END

              ELSE
               PRINT 'TABLE IS EMPTY'


              DEALLOCATE deptno_Cursor

              Select * from NEW_Dept_Budget
    END
```



```
CREATE PROCEDURE SP_Report_NEW_Budget
  AS
  BEGIN

DECLARE @depno  Int
DECLARE @depname Char(30)
DECLARE @count Int
DECLARE @sum_salary Int
DECLARE @avg_salary Int
Declare @rowcount Int


CREATE TABLE NEW_Dept_Budget
(
    Dept_No Int,
    Dept_Name char(30),
    COUNT_Emp Int,
    NEW_SUM_Salary Int,
    NEW_AVE_Salary Int,
```

```
Commands completed successfully.

Completion time: 2020-04-17T21:22:36.8252014-04:00
```

EXEC SP_Report_NEW_Budget



```
                END
                END
                  CLOSE deptno_Cursor
                END

                ELSE
                 PRINT 'TABLE IS EMPTY'


              DEALLOCATE deptno_Cursor

              Select * from NEW_Dept_Budget
END

DROP TABLE NEW_Dept_Budget

EXEC SP_Report_NEW_Budget
```

|   | Dept_No | Dept_Name | COUNT_Emp | NEW_SUM_Salary | NEW_AVE_Salary |
|---|---|---|---|---|---|
| 1 | 1 | Headquarters | 1 | 60500 | 60500 |
| 2 | 4 | Administration | 3 | 111600 | 37200 |
| 3 | 5 | Research | 5 | 211900 | 42380 |
| 4 | 7 | Automation | 0 | NULL | NULL |