

# **Triggers**

**ISM 6218**

**Due on September 17**

**The Avengers Team**

***“We will avenge every problem on our way”***

Aitemir Yeskenov (Team Lead)

Nagarjuna Kanneganti

Sai Suraj Argula

Vinay Kumar Reddy Baradi

## Table of Contents

Business Process Supported	1
Requirements Described	2
Database Diagram	2
Use Of For Trigger (Delete)	4
Use Of Instead TriggerCreate an instead trigger to prevent a record from being deleted	6
Use Of For Trigger (Print Message)	8

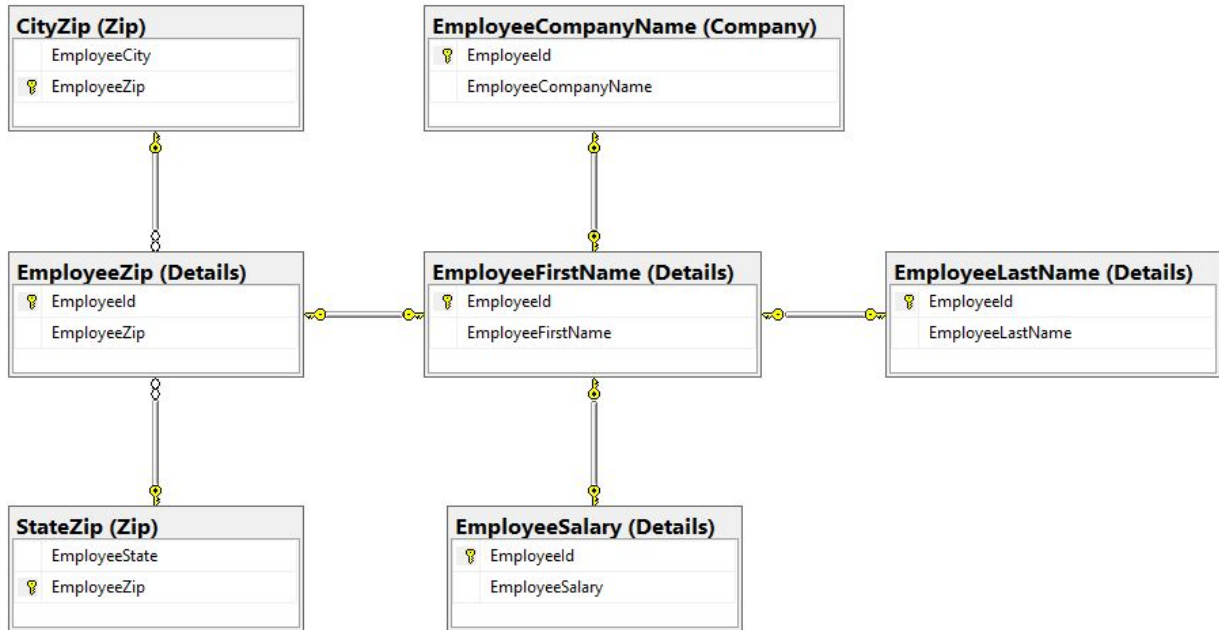
## **Business Process Supported**

For this assignment, we decided to use the Employee database which we created for our previous assignment. The database has different tables related to Employees such as **EmployeeFirstName**, **EmployeeLastName**, **EmployeeSalary**, **EmployeeCityZip**, **EmployeeStateZip** etc. We ran different queries on this database as part of trigger assignment.

### **Requirements Described**

- Create a for trigger if a user attempts to delete a record that record is written to a backup table.
- Create an instead trigger to prevent a record from being deleted.
- Create a for trigger to print a message for any action of your choice.

## Database Diagram



**Create a for trigger if a user attempts to delete a record that record is written to a backup table.**

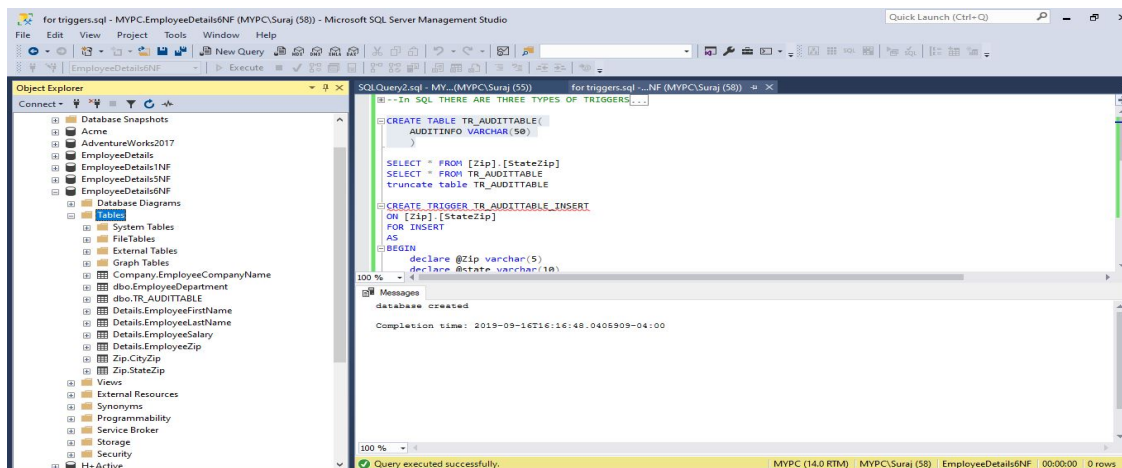
### User Story :-

We're using Employee details database. As the New employees gets into company his details will get updated into All the tables. One such table is StateZip table where employee state and zip will be stored. When we create, delete a record database should have an audit( backup) info of deleted inserted zip and state at a time. So that at any time they can refer back to.

### Creating audit table

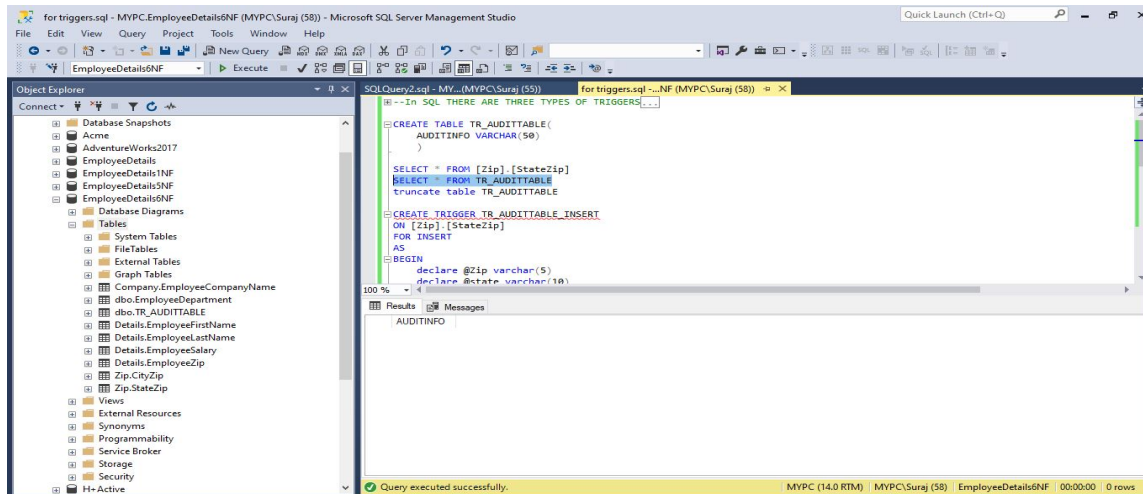
This code will create anew table called AuditTable where the backup data is written to

```
CREATE TABLE TR_AUDITTABLE(  
    AUDITINFO VARCHAR(50)  
)
```



## Empty Audit Table

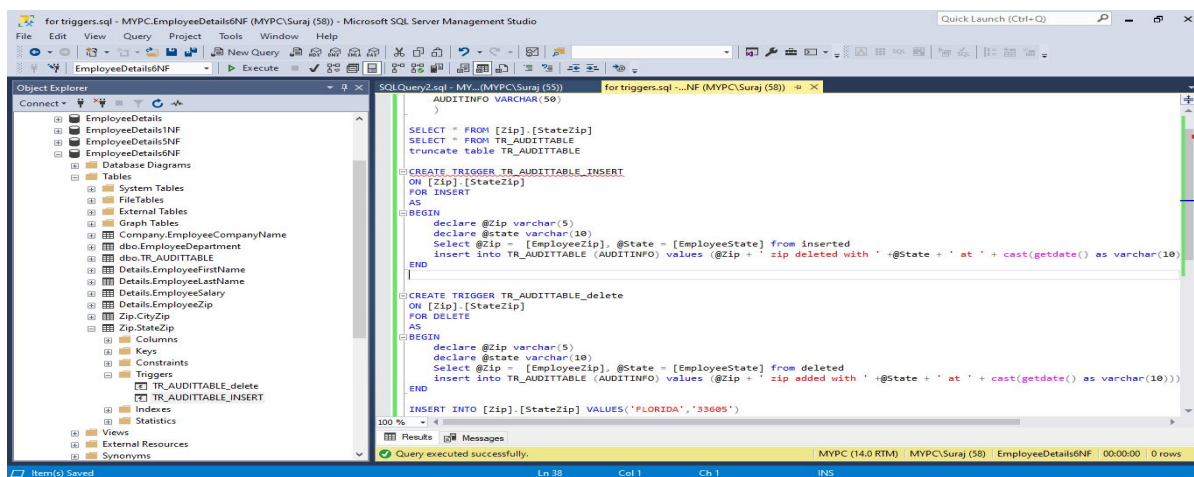
SELECT \* FROM TR\_AUDITTABLE



## Creating trigger for delete

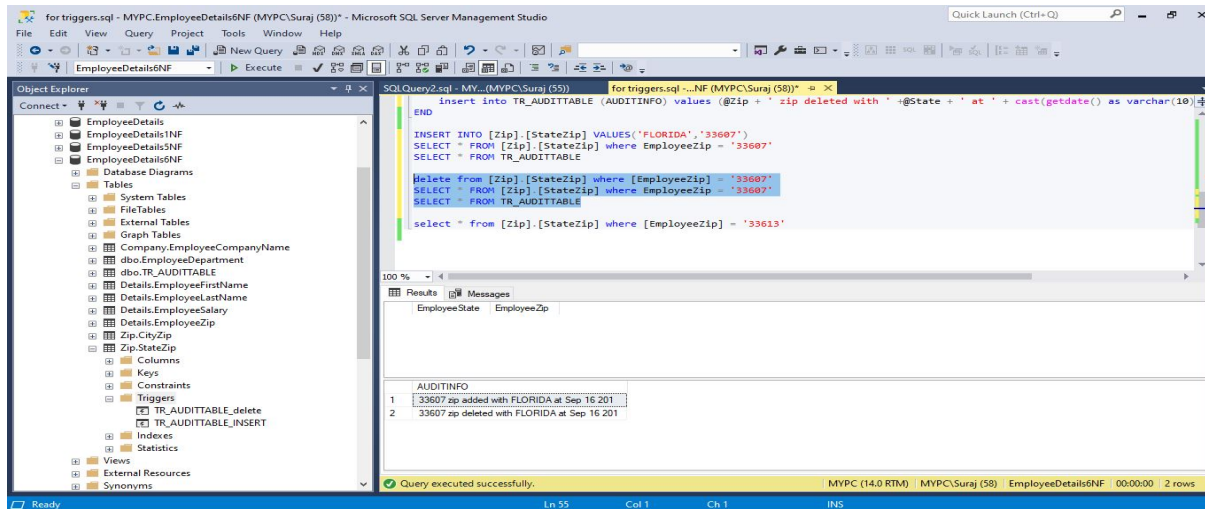
This code will create a delete trigger on statezip table

```
CREATE TRIGGER TR_AUDITTABLE_delete
ON [Zip].[StateZip]
FOR DELETE
AS
BEGIN
    declare @Zip varchar(5)
    declare @state varchar(10)
    Select @Zip = [EmployeeZip], @State = [EmployeeState] from deleted
    insert into TR_AUDITTABLE (AUDITINFO) values (@Zip + ' zip added with ' + @State +
    ' at ' + cast(getdate() as varchar(10)))
END
```



## Check for delete trigger

When we run delete query the data is stored in other table called AuditTable with deleted zip and state.



## Create an instead trigger to prevent a record from being deleted

### User story :

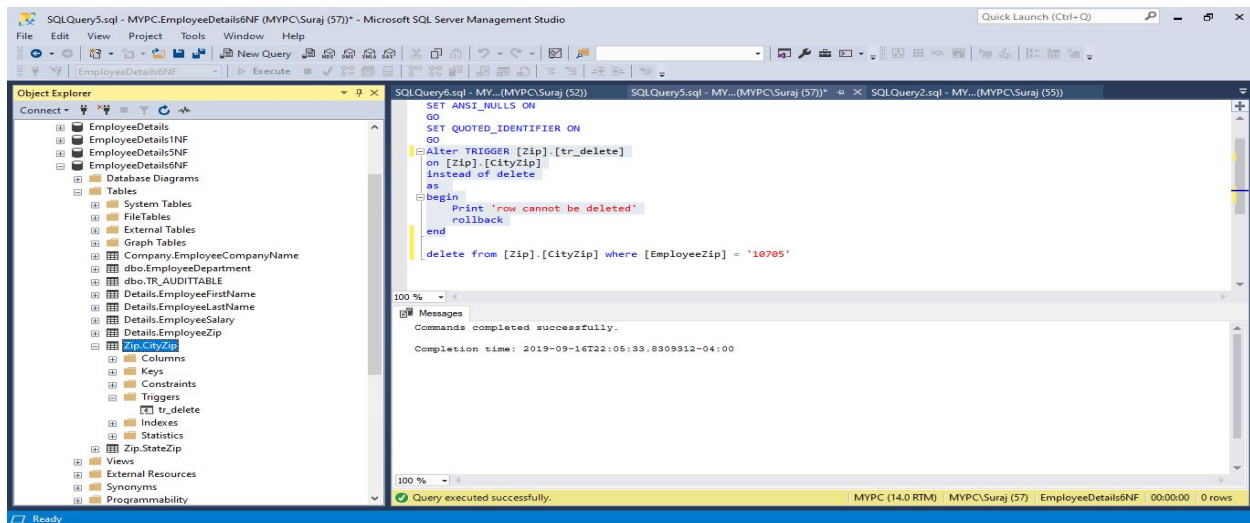
We're using Employee details database. One table in that database is CityZip table where employee City and zip will be stored. When we delete a record from this database, it shouldn't be deleted and instead show "row cannot be deleted" and the query should get rollback and delete no record from the table.

### Creating Instead of trigger:-

This code will create a trigger on table CityZip

```
Create TRIGGER [Zip].[tr_delete]
on [Zip].[CityZip]
instead of delete
as
begin
    Print 'row cannot be deleted'
    rollback
end
```

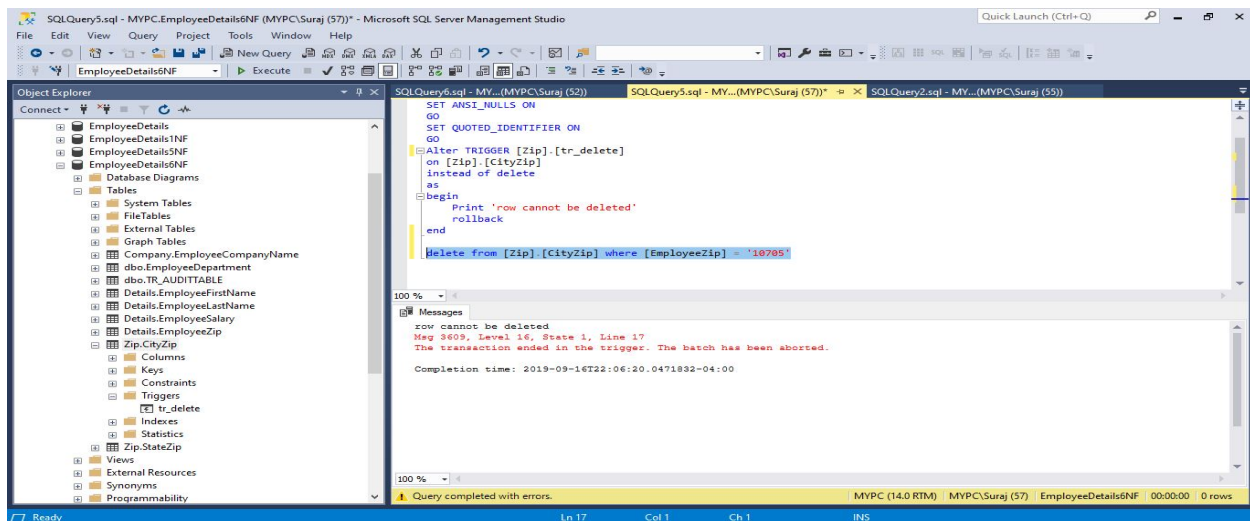




## Check for instead of delete trigger

`delete from [Zip].[CityZip] where [EmployeeZip] = '10705'`

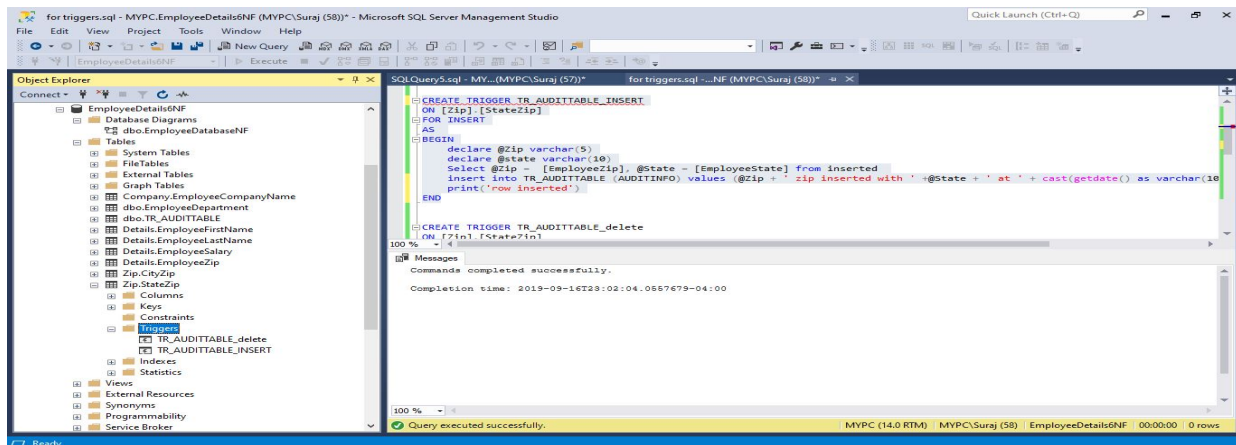
We're trying to delete the record on which we have trigger and the record will not get deleted and roolbacks to its original table.



Create a for trigger to print a message for any action of your choice

## Creating trigger for insert to print message that row is inserted

```
CREATE TRIGGER TR_AUDITTABLE_INSERT
ON [Zip].[StateZip]
FOR INSERT
AS
BEGIN
    declare @Zip varchar(5)
    declare @state varchar(10)
    Select @Zip = [EmployeeZip], @State = [EmployeeState] from inserted
    insert into TR_AUDITTABLE (AUDITINFO) values (@Zip + ' zip deleted with ' + @State
+ ' at ' + cast(getdate() as varchar(10)))
    print('row inserted')
END
```



## Check for insert trigger

```
INSERT INTO [Zip].[StateZip] VALUES('FLORIDA', '33607')
```

This will insert row into table StateZip and prints message that 'row inserted'

