**Part 1**

Write and execute the proper SQL commands to add a field (name: num\_movies datatype: int) to the ACTORS table. You will also need to initialize the field value to zero for all existing records in the ACTORS table. (See the [w3 schools page](https://www.w3schools.com/sql/sql_alter.asp) for help with adding a field to an existing table).

Alter table actors add num\_rentals INT;

Command(s) completed successfully.

select actor\_id, num\_rentals from actors

actor\_id num\_rentals

1 NULL

2 NULL

3 NULL

4 NULL

5 NULL

6 NULL

7 NULL

8 NULL

9 NULL

10 NULL

11 NULL

12 NULL

13 NULL

(13 row(s) affected)

Update actors set num\_rentals = 0;

(13 row(s) affected)

select actor\_id, num\_rentals from actors

actor\_id num\_rentals

1 0

2 0

3 0

4 0

5 0

6 0

7 0

8 0

9 0

10 0

11 0

12 0

13 0

(13 row(s) affected)

Alter Table actors Alter Column num\_rentals INT NOT NULL

Command(s) completed successfully.

**Part 2**

Create three triggers for each of the events... INSERT, UPDATE, DELETE. The trigger will either add, subtract or add/subtract the occurrence of the event.

Create Trigger tr\_movie\_cast\_insert

On movie\_cast For Insert

       As

       Begin

Update actors

SET num\_rentals = num\_rentals + 1

Where actor\_id = (Select actor\_id from Inserted);

       END;

Command(s) completed successfully.

Create Trigger tr\_movie\_cast\_delete

On movie\_cast For Delete

       As

       Begin

Update actors

SET num\_rentals = num\_rentals - 1

Where actor\_id = (Select actor\_id from Deleted);

       END;

Command(s) completed successfully.

Create Trigger tr\_movie\_cast\_update

On movie\_cast For Update

       As

       Begin

Update actors

SET num\_rentals =num\_rentals+1

Where actor\_id = (Select actor\_id from Inserted);

Update actors

SET num\_rentals = num\_rentals-1

Where actor\_id = (Select actor\_id from Deleted);

       END;

Command(s) completed successfully.

**Part 3**

Write and execute SQL commands to test the three events. You need to show the value of num\_movies with a SELECT statement before the event and then after the event.

Insert into movie\_cast values (new value);

(1 row(s) affected)

(1 row(s) affected)

select actor\_id, num\_rentals from actors

actor\_id num\_rentals

1 0

2 0

3 1

4 0

5 0

6 0

7 0

8 0

9 0

10 0

11 0

12 0

13 0

(13 row(s) affected)

Update movie\_cast

Set actor\_id= (value)

Where actor\_id = (existing value) and movie\_id = (existing value)

(1 row(s) affected)

(1 row(s) affected)

(1 row(s) affected)

select actor\_id, num\_rentals from actors

Delete from movie\_cast where actor\_id = (value) and movie\_id = (value)

(1 row(s) affected)

(1 row(s) affected)

select actor\_id, num\_rentals from actors