

NAME: Nicholas Jacob  
STUDENT ID: # 113578513  
GRADED HOMEWORK NUMBER: 3  
COURSE: CS/DSA 4513 DATABASE MANAGEMENT  
SECTION: ONLINE  
SEMESTER: FALL 2023  
INSTRUCTOR: DR. LE GRUENWALD  
SCORE:

## 1. Screenshots

(a)

```
77 |
78 | INSERT INTO Performer
79 | (pid,pname,years_of_experience,age)
80 | VALUES
81 | (1,'Jacob',22,40) --the pid 1 has already been used so I cannot add myself as the greatest preformer.
82 |
83 |
84 |
```

Results Messages

Failed to execute query. Error: Violation of PRIMARY KEY constraint 'PK\_Performe\_\_0037091AD388CA68'. Cannot insert duplicate key in object 'dbo.Performer'. The duplicate key value is (1). The statement has been terminated.

(b)

```
76 |
77 |
78 | INSERT INTO Performer
79 | (pname,years_of_experience,age)
80 | VALUES
81 | ('Jacob',22,40) --I do not give myself a pid and that is not allowed
82 |
83 |
84 |
```

Results Messages

Failed to execute query. Error: Cannot insert the value NULL into column 'pid', table 'cs-dsa-4513-sql-db.dbo.Performer'; column does not allow nulls. INSERT fails. The statement has been terminated.

(c)

```
78 | Insert INTO Acted
79 | Values
80 | (2,'Hitchhikers Guide to the Galaxy') --there is no movie Hitchhikers Guide to the Galaxy
81 |
82 |
83 |
```

Results Messages

Failed to execute query. Error: The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_mname". The conflict occurred in database "cs-dsa-4513-sql-db", table "dbo.Movie", column 'mname'. The statement has been terminated.

```
74 | (3,'Fight Club'),
75 | (4,'Alien')
76 |
77 | delete
78 | from Performer
79 | where pid = 4
80 |
81 | --I cannot delete preformer 4 since they acted in Alien (and others)
82 |
83 |
```

Results Messages

Failed to execute query. Error: The DELETE statement conflicted with the REFERENCE constraint "FK\_pid". The conflict occurred in database "cs-dsa-4513-sql-db", table "dbo.Acted", column 'pid'. The statement has been terminated.

```
77 |
78 | update Acted
79 | set mname = 'Hitchhikers Guide to the Galaxy'
80 | where pid = 4
81 |
82 | --I cannot update the acted table to a movie that does not exist in the movie table
83 |
84 |
```

Results Messages

Failed to execute query. Error: The UPDATE statement conflicted with the FOREIGN KEY constraint "FK\_mname". The conflict occurred in database "cs-dsa-4513-sql-db", table "dbo.Movie", column 'mname'. The statement has been terminated.

```

16
17
18 SELECT *
19 FROM Movie
20 where mname is NULL
21 -- Since mname is the PRIMARY KEY, it can never be null. This query does not throw an error but also returns no results (and will never return results!)
22
23

```

Results Messages				
Search to filter items...				
mname	genre	minutes	release_year	did
No results				

(d)

- I choose to index the Movie table on genre attribute. We had three queries that used genre so it was not a terrible option for indexing. It was a secondary index since mname was the primary index (and primary key).

```

4 create index genre_index on Movie(genre)
5 Select genre,AVG(minutes) as avg_length_in_min
6 FROM Movie Group BY genre

```

Results Messages	
Search to filter items...	
genre	avg_length_in_min
Action	125
Animation	104
Comedy	89
Drama	125
Sci-Fi	115