**IT440/540 Final Project – Cinema Database**

**Data Model**



**DDL & DML**

1. Implement the Cinema database and create the database in SQL Server. Don’t forget to implement the primary and foreign keys.
2. Add records to each table. Make sure that each table has at least 5 records and the table Showing, Ticket and Order need to have at least 15 records. Write the insert statements, execute them and make sure all data is entered correctly.

**Extra Constraints**

Write procedures, triggers or functions to handle the constraints listed below. It does not matter how you solve the problem but I want you to write at least 2 triggers and 2 stored procedures. For every procedure, trigger or function that you write make sure you use correct error handling with TRY/CATCH and implement the transaction logic like we discussed in class.

1. ~~Only ‘M’ or ‘F’ can be entered as a gender for a customer.~~
2. ~~Every Order needs to have at least one OrderDetail record.~~
3. ~~Ticket: the combination of ShowingID and CategoryID needs to be unique.~~
4. ~~Only one movie can be displayed at a time in an auditorium.~~
5. ~~It is not allowed sell more tickets than there are seats available for a showing.~~
6. ~~If a customer has ordered a ticket it is not allowed to change any information for that showing.~~
7. ~~A movie needs to be released before it can be shown to the customers.~~
8. ~~A Customer needs to be older than 13 to order a ticket.~~
9. ~~A Customer that is younger than 17 is not allowed to purchase a ticket for an R-rated movie.~~
10. ~~A movie is required to have at least one genre.~~

**\* Write code to test your logic for each constraint to show that your logic is working correctly.**

**Queries**

1. Return all movies that have not sold any tickets.
2. ~~Return the total sales per movie per year.~~
3. Return the number of available seats for each movie per showing date.
4. Return the number of tickets sold per year per category.
5. Return all the movies that have had sold out showings.
6. Return per category the number of moviegoers.
7. What’s the average age of the moviegoers per movie.