

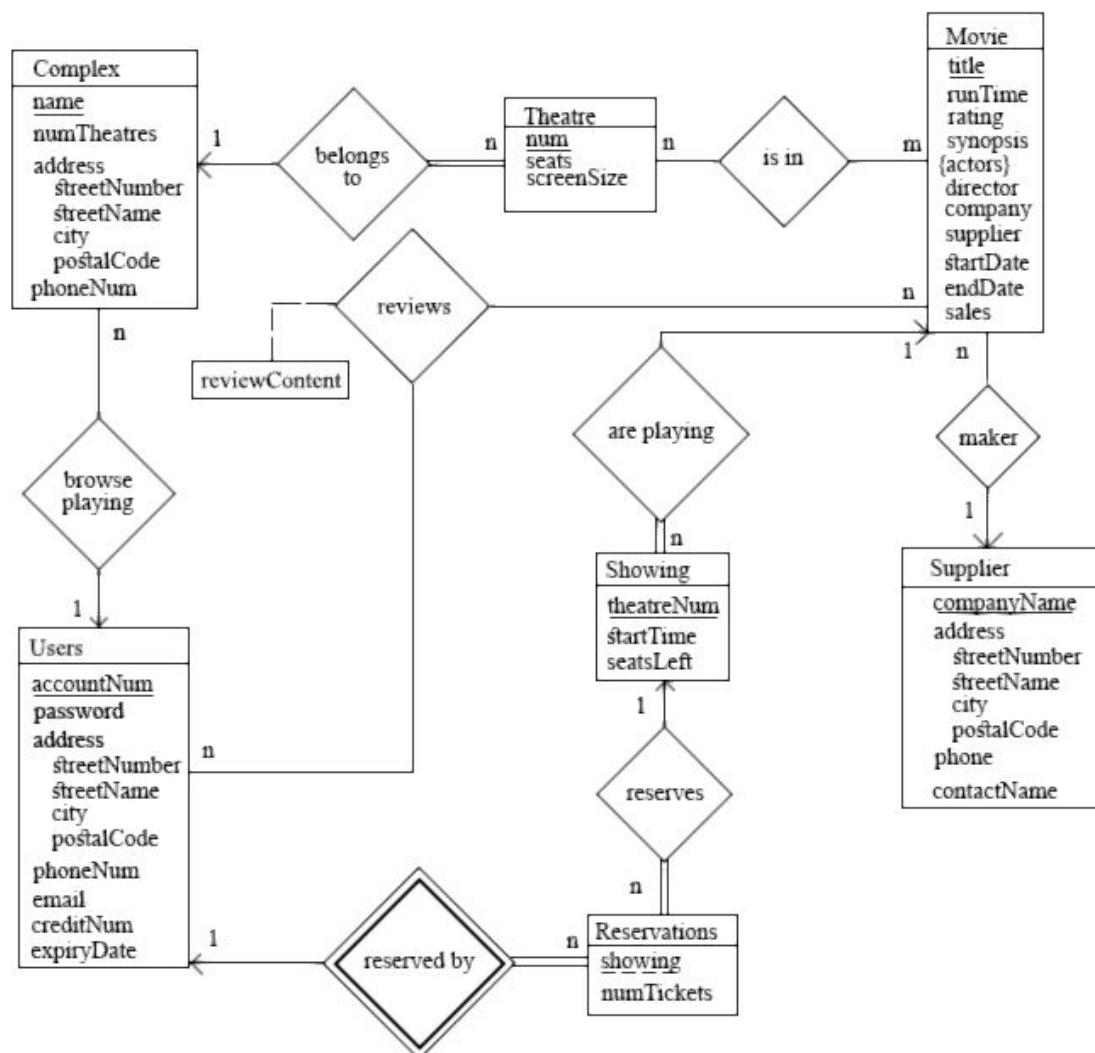
CISC332 Project - Group 69
Deliverable 1: Database Design and Implementation
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Assumptions

While designing and implementing the ER diagram, there were several assumptions we made that lead us to the final result below.

- All the theatre complexes that the database represents reside in the same country, therefore there is no need to ask within the composite attribute “address”.
- All movies have a list of actors (multivalued) but there is only one director, production company, and supplier for each Movie.
- All “customers” can write multiple reviews for more than one movie therefore, it has a relation of n-m but it is not total as not all customers will write a review.
- Our Users entity represents both the Members and Administrators of the system since if we used a flag to indicate Admin, the attributes creditNum and expiryDate could be null. This would result in an error for Members as each customer must indicate their credit card information. If we implemented a hierarchy where the lower level entities inherit high level entities, the Admin entity would not have attributes as the project description did not indicate anything unique. Therefore, we decided to combine them into one entity, since an Administrator can do some things a Member can such as browse playing. However, they can do more such as add/update the movie showings. Since all the entities already have a relation in some shape or form with Users, the Administrator can complete their functionalities.
- All the stated requirements for each entity is assumed that it is needed, therefore they cannot be null.
- The attribute “seatsLeft” in Showing entity can be null, as if it is null, it indicates that no seats are left.
- The attribute “streetNumber” found in Complex, Supplier, and Users entities is of type VARCHAR since we assume that some addresses might have numbers in them. (ie. 2A Johnson St.)
- The complex’s name, supplier’s company name, and movie title is unique and does not change.
- Since there must be the functionality of determining the most popular movie/theatre, we added the attribute “sales” in the Movie entity that indicates how many tickets the movie has sold at all theatres.
- It is assumed that the runtime duration of each Movie is indicated in minutes.
- It is assumed that the startTime of the showing of each movie is indicated in 24-hour clock therefore it can be represented as an INTEGER.

Entity-Relationship Schema



DDL for Relational Schema

Please refer to the attached .ddl file labelled omtsdb.ddl - This is the file that contains the DDL for our relational schema developed from the designed ER diagram.

We populated our database as instructed from the project requirements however, we did not include that in the .ddl file since once the INSERT INTO commands are put it, it becomes a DML and not a DDL. As a result, we have outlined our INSERT statements below in which we populated our database with some data.

```

INSERT INTO Complex values
(SilverCity Cineplex,3,90A,Silver
Dr,Mississauga,L4M0E8,9058582789),(Courtney Park Cineplex,2,
2048,Courtney Dr, Mississauga, L2K9E8, 9058291839),(Odensmith
Cineplex, 5, 78, John Counter Blvd, Kingston, K2L1E9,
6138910284);
  
```

```
INSERT INTO Theatre values
(1,400,large), (2,250,small), (3,500,large), (4,350,medium);
```

```
INSERT INTO Supplier values
(Universal,4234,Hollywood Blvd, Toronto,L5M3I9,9058293849,John
Smith),(Fox,1029,Alpaca Ave, Vancouver, R8E0G2,3239867742,
Leah Lee),(Warner Brothers,100, Kent Dr, Toronto, L2M5R3,
6479304837, Lance Arm);
```

```
INSERT INTO Movie values
(Shape of Water,123,PG,Lady falls in love with fishman,
Guillermo del Toro, TSG Entertainment, Fox, 11122017,
24012018, 400),(Get Out,104,R,Man goes to town with girlfriend
and things go array, Jordan Peele, QC Entertainment,
Universal,14022017, 24042017);
```

```
INSERT INTO Users values
(5327957122,abc123,53,Johnson
Street,Kingston,K7L2T5,6135983987,sk8terboi@hotmail.com,519130
5873371489,1118), (2980578390,lol23!,9932,Centre
Street,Kingston,K7L4E6,6093890765,blitz@gmail.com,902678498762
3456,0819);
```

```
INSERT INTO Showing values
(1, 1305, 50), (2, 2130, 24), (3, 1520, 100), (4, 1745, 70);
```

```
INSERT INTO Reservations values
(5327957122, 2130, 5), (2980578390, 1305, 2);
```

```
INSERT INTO ReviewContent values
(5327957122, Shape of Water, Great music in the movie and
really got my fins tingling!), (5327957122, Get Out, Had me
jumping out of my seat and contains a strong message);
```