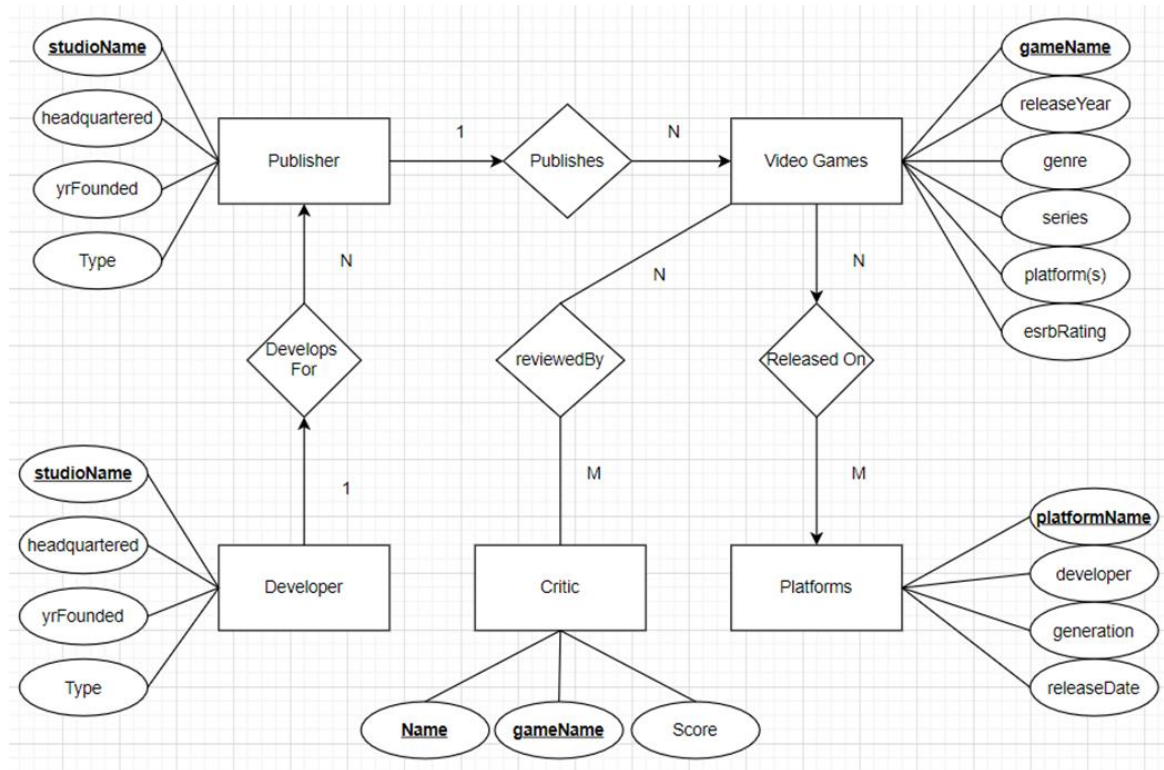Megan Hoeksema

Comp3421 Assignment 3

Diagram:

(a) Relational Model

- Developer (**devStudioName**, headquartered, yrFounded, Type)
- Publisher (**pubStudioName**, headquartered, yrFounded, Type)
- VideoGames (**gameName**, releaseYear, genre, series, platform(s), esrbRating)
- Platforms (**platformName**, developer, generation, releaseDate)
- Critic (**Name, gameName**, score)
- DevelopsFor (**devStudioName**, **pubStudioName**)
- Publishes (**pubStudioName, gameName**)
- ReleasedOn (**gameName, platformName**)
- ReviewedBy (**gameName, Name**)

(b) Create Database and Tables in SQL

```sql
drop database if exists videoGames;
show databases;
create database videoGames;
show databases;
use videoGames;

drop table if exists Developer;
drop table if exists Publisher;
drop table if exists VideoGames;
drop table if exists Platforms;
drop table if exists Critic;
drop table if exists developsFor;
drop table if exists publishes;
drop table if exists releasedOn;
drop table if exists reviewedBy;

create table Developer(devStudioName varchar(20) primary key, headquartered varchar(20) not null, yrFounded int not null, type varchar(20) not null);
create table Publisher(pubStudioName varchar(20) primary key, headquartered varchar(20) not null, yrFounded int not null, type varchar(20) not null);
create table VideoGames(gameName varchar(20) primary key, releaseYear int not null, genre varchar(20), series varchar(20),platform varchar(20) not null,esrbRating varchar(20));
create table Platforms(platformName varchar(20) primary key, developer varchar(20) not null, generation int not null, releaseDate int not null);
create table Critic(name varchar(20), gameName varchar(20), score varchar(20), Primary key(name, gameName));
create table developsFor(devStudioName varchar(20), pubStudioName varchar(20), Primary key(devStudioName, pubStudioName));
create table publishes(pubStudioName varchar(20), gameName varchar(20),Primary key(pubStudioName, gameName));
create table releasedOn(gameName varchar(20), platformName varchar(20), Primary key(gameName, platformName));
create table reviewedBy(gameName varchar(20), name varchar(20), Primary key (gameName, name));
show tables;
```

```
mysql> show tables;
+----------------------+
| Tables_in_videogames |
+----------------------+
| critic               |
| developer            |
| developsfor          |
| platforms            |
| publisher            |
| publishes            |
| releasedon           |
| reviewedby           |
| videogames           |
+----------------------+
9 rows in set (0.00 sec)

mysql> describe developer;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| devStudioName | varchar(20) | NO   | PRI | NULL    |       |
| headquartered | varchar(20) | NO   |     | NULL    |       |
| yrFounded     | int         | NO   |     | NULL    |       |
| type          | varchar(20) | NO   |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)

mysql> describe publisher;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| pubStudioName | varchar(20) | NO   | PRI | NULL    |       |
| headquartered | varchar(20) | NO   |     | NULL    |       |
| yrFounded     | int         | NO   |     | NULL    |       |
| type          | varchar(20) | NO   |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> describe videogames;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| gameName    | varchar(20) | NO   | PRI | NULL    |       |
| releaseYear | int         | NO   |     | NULL    |       |
| genre       | varchar(20) | YES  |     | NULL    |       |
| series      | varchar(20) | NO   |     | NULL    |       |
| platform    | varchar(20) | NO   |     | NULL    |       |
| esrbRating  | varchar(20) | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> describe platforms;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| platformName | varchar(20) | NO   | PRI | NULL    |       |
| developer    | varchar(20) | NO   |     | NULL    |       |
| generation   | int         | NO   |     | NULL    |       |
| releaseDate  | int         | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> describe critic;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| name     | varchar(20) | NO   | PRI | NULL    |       |
| gameName | varchar(20) | NO   | PRI | NULL    |       |
| score    | varchar(20) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> describe developsFor;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| devStudioName | varchar(20) | NO  | PRI | NULL    |       |
| pubStudioName | varchar(20) | NO  | PRI | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

```
mysql> describe publishes;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| pubStudioName | varchar(20) | NO  | PRI | NULL    |       |
| gameName      | varchar(20) | NO  | PRI | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> describe releasedOn;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| gameName      | varchar(20) | NO  | PRI | NULL    |       |
| platformName  | varchar(20) | NO  | PRI | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> describe reviewedBy;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| gameName | varchar(20) | NO   | PRI | NULL    |       |
| name     | varchar(20) | NO   | PRI | NULL    |       |
+----------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

(c) Execute three INSERT commands to insert tuples into one of your relations.

```
mysql>
mysql> insert into videoGames values ('Fallout 4', 2015, 'Action Role-Playing', 'Fallout', 'Xbox One', 'Mature 17+');
Query OK, 1 row affected (0.01 sec)

mysql> insert into videoGames values ('Spider-Man', 2018, 'Action-Adventure', 'Null', 'Playstation 4', 'Teen');
Query OK, 1 row affected (0.00 sec)

mysql> insert into videoGames values ('Mass Effect 3', 2012, 'Action Role-Playing', 'Mass Effect', 'Playstation 3', 'Mature 17+');
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> select * from videogames;
+---------------+-------------+---------------------+-------------+---------------+------------+
| gameName      | releaseYear | genre               | series      | platform      | esrbRating |
+---------------+-------------+---------------------+-------------+---------------+------------+
| Fallout 4     |        2015 | Action Role-Playing | Fallout     | Xbox One      | Mature 17+ |
| Mass Effect 3 |        2012 | Action Role-Playing | Mass Effect | Playstation 3 | Mature 17+ |
| Spider-Man    |        2018 | Action-Adventure    | Null        | Playstation 4 | Teen       |
+---------------+-------------+---------------------+-------------+---------------+------------+
3 rows in set (0.00 sec)
```