Database Outline

Our project will be a database of different kinds of media. Users will be able to delete, add, and update different entities in the database. User's will also be able to see what others have put into the database. The different kinds of media will be:

TV show

Movie

Video Game

Music

Entities: TV show, Movie, Video Game, Music.

'TV_show' Attributes:

 showID [int] Primary Key

 Title [String] The title of the show

 Genre [String] Which genre the show falls into

 Producer[string] The producer who produced the show

 Episode_count [int] how long the series is.

 musicID[int] foreign key, can be null, if it has music it will reference it here

 movieID[int] Foreign key, if the show is related to a movie (ex. Marvel universe shows), it will reference the movie here.

'Movie' Attributes:

 movieID [int] Primary Key

 Title [String] The title of the movie

 Genre [String] Which genre the movie falls under

 Director[string] The director of the movie

 Run_time [int] How long the movie is in minutes

 musicID [int] foreign key If there is music usded, it will reference the music

'Video Game' Attributes:

gameID [int] Primary Key

Title [String] the title of the videogame

Genre [String] The genre the game falls into

gameStudio [int] The studio who made the game

musicID [int] foreign key If a game has music that references a song, this will relate it to it

tvID [int] foreign key If the game is related to a tv show, it will be referenced here

movieID [int] foreign key If the game is based on a movie, it will be referenced here

'Music' Attributes:

musicID [int] Primary Key

musicName [String] Name of the song or music

Artist [String] The person or group who created the music

musicLength [int] how long the song is in minutes.

Relationships:

TV, Movie, Videogame can have multiple music, and a music can be associated with multiple media types.

A single song can be associated with many movies, tvshow, etc.

A TV show can be associated with zero to one movie, and a movie can be associated with zero to one TV show.

A videogame can be associated with zero to one tv show, or zero to one movie.

Project Step 4 Draft reviews

Review 1

- *CREATE functionalities*
  - Does the INSERT form actually work for entities and relationships, as required in the Specs?

    There are insert buttons but they don't seem to work. Either that or the display section doesn't work.

    - Does INSERTing rows in the "M entity" of the 1-to-M relationship rows affect the INSERTing of rows in the "1 entity"?

      It doesn't seem to do anything
    - Does INSERTing rows in the "M entity" of the M-to-M relationship rows affect the INSERTing of rows in the other "M entity"? **Not yet**

    - Anything else that you think is important for the CREATE functionalities and could be improved?

      This section still needs some work
- *READ functionalities*
  - Are rows being listed for all relationships, as described in the Specs?

    No rows are listed at all, or there is no sample data to be shown and no way to add data.
  - Is there a better way that data could be displayed on these pages? OR Could the style of the webpage be improved?

    The display pages should probably have a way to navigate to other pages besides using the browsers back button
  - Anything else that you think is important for READ functionalities and could be improved?

    Nothing else
- *UPDATE functionalities*
  - *Is the UPDATE functionality properly implemented for at least one entity?*

  There doesn't seem to be an update button yet. Maybe it will be part of the display pages
- *What is the effect of this UPDATE on the relationships that the entity is participating in ?*
  :(
- *What is the effect of CREATE and DELETE operations on the other entities that are participating in the relationship with this entity?*

  The *create operations don't seem to work yet. The delete user operation also doesn't seem to work yet.*
- *Anything else that you think is important for the UPDATE functionality?*

  Nothing beyond meeting the project requirments.

- *DELETE functionalities*
  - *Does DELETE work as required by the Project Guide AND as defined by the Project Outline?*
  - *(I leave it to your judgment to determine what other things are important to review for DELETE functionalities.)*

    The only delete function is for users but the display user button doesn't show anything after creating a user so I'm not sure if the delete button does anything.

    This site needs some work still but I'm sure you two will get it ready time! Goodluck!

Review 2

Does the INSERT form actually work for entities and relationships, as required in the Specs?
There is an INSERT button present but does not seems to be implemented fully yet.

-   Does INSERTing rows in the "M entity" of the 1-to-M relationship rows affect the INSERTing of rows in the "1 entity"?
As stated above, inserting does not seem to be functioning just yet. Its ok as long as its implemented in the final submission.

-   Does INSERTing rows in the "M entity" of the M-to-M relationship rows affect the INSERTing of rows in the other "M entity"?
Not yet

-   Anything else that you think is important for the CREATE functionalities and could be improved? The implementation of this section needs to be completed. Once everything is working I can update the review but for now I don't see other improvements that can be made other than making it work.

READ FUNCTIONALITIES
-   Are rows being listed for all relationships, as described in the Specs?
At the moment there seems to be no way to see data/

-   Is there a better way that data could be displayed on these pages? OR Could the style of the webpage be improved?
I think just focus on getting the data to show first. The style of the webpage can be improved upon later once the functional requirements are met. Other than that, you might consider a easier way to navigate to the difference pages. Maybe use links to move from one page to the next.

-   Anything else that you think is important for READ functionalities and could be improved? Nothing else! Work on implementation.

UPDATE FUNCTIONALITIES
-   Is the UPDATE functionality properly implemented for at least one entity? Not implemented yet.

-   What is the effect of this UPDATE on the relationships that the entity is participating in ? N/A

-   What is the effect of CREATE and DELETE operations on the other entities that are participating in the relationship with this entity?
No effect yet.

-   Anything else that you think is important for the UPDATE functionality? Continue working on implementation of this section as well.

<u>**DELETE FUNCTIONALITIES**</u>

- Does DELETE work as required by the Project Guide AND as defined by the Project Outline? (I leave it to your judgment to determine what other things are important to review for DELETE functionalities.) Not yet.

Review 3:

- *CREATE functionalities*
- Does the INSERT form actually work for entities and relationships, as required in the Specs?

- There is a place to insert, but not fully working yet.

-
- Does INSERTing rows in the "M entity" of the 1-to-M relationship rows affect the INSERTing of rows in the "1 entity"?
- Inserting doesn't work yet
- Does INSERTing rows in the "M entity" of the M-to-M relationship rows affect the INSERTing of rows in the other "M entity"?
- Can't insert yet
- Anything else that you think is important for the CREATE functionalities and could be improved?
- Nothing besides getting the functionality working for the final draft
- ***READ functionalities***

-
- Are rows being listed for all relationships, as described in the Specs?
- No way to read data yet
- Is there a better way that data could be displayed on these pages? OR Could the style of the webpage be improved?
- Can't insert anything yet, so can't display anything yet
- Anything else that you think is important for READ functionalities and could be improved?
- Nothing besides getting functionality working for final draft
- ***UPDATE functionalities***
- *Is the UPDATE functionality properly implemented for at least one entity?*
- *Not working yet*
- *What is the effect of this UPDATE on the relationships that the entity is participating in ?*
- *Not working yet*
- *What is the effect of CREATE and DELETE operations on the other entities that are participating in the relationship with this entity?*
- *No effect yet*
- *Anything else that you think is important for the UPDATE functionality*
- *Nothing besides getting functionality working for final draft •   **DELETE functionalities***
  - *Does DELETE work as required by the Project Guide AND as defined by the Project Outline?*
    - *No way to insert data yet, so no way to delete anything yet*
    - *(I leave it to your judgment to determine what other things are important to review for DELETE functionalities.)*

Project step 3 Draft reviews

Review 1

- **Data Manipulation Queries**

  1. *Are the queries syntactically correct? Disregard the part where input will be substituted as shown in the sample_data_manipulation_queries.sql*
     - Hard to say. I don't recognize the "LOCK tables" syntax from any of the lectures, so I can't say for sure if it's correct. I'm guessing it is some kind of permissions operator to ensure successful manipulation of the database. There are also some "SELECT *" queries which I know are typically bad practice (but that doesn't mean it's wrong in this context). Lastly some of your queries manipulate database data via incrementors. Would that be better controlled by the software?
  2. *Are there queries providing all functionalities as required by the CS340 Project Guide ? What query is missing ? What needs to be fixed?*
     - No, there are no DELETE queries.
  3. *Do the queries cover the relationships as required by the CS340 Project Guide?*
     - Yes, except for DELETE.

- **HTML Page**

  1. *Does each functionality listed in the CS340 Project Guide have a corresponding HTML page? (It's okay to implement multiple functionalities on the same HTML page)*
     - Yes, except for the DELETE function on entries.
  2. *Is there a better way that data could be displayed on SHOW functionality pages?*
     - There seems to be a good portion of the HTML unfinished, especially in the sub-pages. However, when they are created, I would recommend focusing on simple UI for showing pages and directing the user around the site.
  3. *Is there a better way that the forms for **UPDATE** and **ADD** functionalities could be implemented?*
     - The UPDATE and ADD functionalities do not appear to be setup yet with HTML front-end.
  4. *Is there a better way that the **DELETE** functionalities could be implemented?*
     - There is no mention of DELETE in the HTML front-end.
  5. *Is there a way to **search** OR **filter** data ? (Remember, it need not work since these are just HTML pages)*
     - There are allusions (a text mentioning an area where it will eventually be), but no HTML front-end capability at this time.

- **DDQ file**
    1. *Is the SQL file **syntactically correct?** This can be easily verified by importing/copy-pasting it in phpmyadmin. (Do not forget to take backup of your own database before you do this!)*
        - Yes. The DDQ file has correct syntax and is well organized. However, the only potential issue may be the assignments of foreign keys to tables that are not yet created. Keep in mind the table is created sequentially, unlike the queries which can "pull" from farther down the code.
    2. *Are the **data types appropriate** considering the description of the attribute in the database outline?*
        - Yes, all data types appear appropriate and correctly constraining.
    3. *Are the **foreign keys correctly defined** when compared to the Schema?*
        - Yes. However, as mentioned in 1., one should be careful of defining foreign keys that reference a yet-to-be-created table. It is better practice to first create the tables (without foreign keys) and then define the relationships of foreign keys.
    4. *Are **relationship tables** present when compared to the ERD/Schema?*
        - No, there appears to NOT be an intermediary table for the many to many relationship.

Review 2

- **Data Manipulation Queries**
    1. *Are the queries syntactically correct? Disregard the part where input will be substituted as shown in the sample_data_manipulation_queries.sql*
        1. *Yes*
    2. *Are there queries providing all functionalities as required by the CS340 Project Guide ? What query is missing ? What needs to be fixed?*
        - There seem to be insert, selects, and updates, but no deletes.
    3. *Do the queries cover the relationships as required by the CS340 Project Guide?*
        - Yes

- **HTML Page**
    1. *Does each functionality listed in the CS340 Project Guide have a corresponding HTML page? (It's okay to implement multiple functionalities on the same HTML page)*
        - It does seem to, yes.
    2. *Is there a better way that data could be displayed on **SHOW** functionality pages?*
        - Perhaps making these forms all boxes in the same website could be more visually pleasing.
    3. *Is there a better way that the forms for **UPDATE** and **ADD** functionalities could be implemented?*
        - Yes, searching for the person to edit seems like it could instead be implemented as a list you look through
    4. *Is there a better way that the **DELETE** functionalities could be implemented?*
        - knowing the id for the team you want to delete seems difficult, I would also recommend using a list here
    5. *Is there a way to **search** OR **filter** data ? (Remember, it need not work since these are just HTML pages)*
        - a list

- **DDQ file**
    1. *Is the SQL file **syntactically correct?** This can be easily verified by importing/copy-pasting it in phpmyadmin. (Do not forget to take backup of your own database before you do this!)*
        - It seems to be correct

2. *Are the **data types appropriate** considering the description of the attribute in the database outline?*
    - Yes
3. *Are the **foreign keys correctly defined** when compared to the Schema?*
    - Yes
4. *Are **relationship tables** present when compared to the ERD/Schema?*
    - Yes

Review 3

- **Data Manipulation Queries**

    1. *Are the queries syntactically correct? Disregard the part where input will be substituted as shown in the sample_data_manipulation_queries.sql*
        1. Yes
    2. *Are there queries providing all functionalities as required by the CS340 Project Guide ? What query is missing ? What needs to be fixed?*
        - There seem to be insert, selects, and updates, but no deletes.
    3. *Do the queries cover the relationships as required by the CS340 Project Guide?*
        - Yes

- **HTML Page**

    1. *Does each functionality listed in the CS340 Project Guide have a corresponding HTML page? (It's okay to implement multiple functionalities on the same HTML page)*
        - yes.
    2. *Is there a better way that data could be displayed on **SHOW** functionality pages?*
        - no
    3. *Is there a better way that the forms for **UPDATE** and **ADD** functionalities could be implemented?*
        - yes
    4. *Is there a better way that the **DELETE** functionalities could be implemented?*
        - use list
    5. *Is there a way to **search** OR **filter** data ? (Remember, it need not work since these are just HTML pages)*
        - add list

- **DDQ file**

    1. *Is the SQL file **syntactically correct?** This can be easily verified by importing/copy-pasting it in phpmyadmin. (Do not forget to take backup of your own database before you do this!)*
        - yes
    2. *Are the **data types appropriate** considering the description of the attribute in the database outline?*
        - yes
    3. *Are the **foreign keys correctly defined** when compared to the Schema?*
        - yes
    4. *Are **relationship tables** present when compared to the ERD/Schema?*
        - yes

Actions based on the feedback

Add the delete queries to the DDQ
Added the delete functionality to the website

Ensured the foreign keys were set up correctly

Project step 2 Draft reviews
Review 1:

1. Are the attributes for each entity in the ERD same as that described in the database outline?

 Yes, all attributes are listed correctly.

2. Is the participation of entities in the relationships same as that described in the outline?

 Maybe, the description of how posts will work seems a little vague but can be interpreted the same way as the diagram. However, I dont think this was intended, currently the diagram shows that every post must have a picture and a video. I think the intended relationship is at least one of either is required.

3. Is the cardinality of entities in the relationships same as that described in the outline?

Yes.

4. Based on the Database outline, could any of the relationships be better off described as an Entity instead ?

 I think the relationship between posts, videos, and pictures would be clearer if an entity was added into the mix. Maybe something like content entity that is related to videos, pictures and posts, this could simplify the ternary relationship.

 5. Is there something that could be changed/improved in the E R Diagram and/or the overall database design?

 The relationship between users and posts is somewhat unclear. How will a post be related to one user? The post doesn't contain a user ID attribute or anything to signify its related to a user. This issue is also present in every relationship between entities, they are related to one another but have no way of knowing what they are related to. I.e. a post knows how many videos it has, but there is nothing linking that post to any of the videos, so in my mind the post would just say 3 videos, with no more information about the videos.

 Schema:

1. Are the relationship tables present where required and correctly defined, when compared with the database outline?

 No, the schema has extra attributes that represent the Id's of other entities that are used in the relationships. This in my opinion is correct, and should actually be applied to most of the entities in the DB. The outline does not mention that keys of other entity being stored as attributes or being used in the relationships.

2. Are foreign keys present where required and correctly defined, when compared with the database outline?

 No. The outline doesn't mention storing foreign keys however the schema does store some. I think the way the schema is represented is correct and the outline should be changed to match the schema.

3. Do the entity attributes match those described in the outline?

Yes, other than the keys.

4. Is there something that could be changed/improved in the Schema and/or the overall database design?

As previously mentioned, I think having entities contain foreign keys will go a long way to adding the intended functionality to the DB.

Review 2:

Are the attributes for each entity in the ERD same as that described in the database outline? Yes

Is the participation of entities in the relationships same as that described in the outline? Yes

Is the cardinality of entities in the relationships same as that described in the outline? Yes

Based on the Database outline, could any of the relationships be better off described as an Entity instead ? Nope

Is there something that could be changed/improved in the E R Diagram and/or the overall database design? Nothing that would really help the design, but if you moved the Post entity to the center of the diagram you could remove all the line overlap.

The best peer review for a Schema would answer all of the following questions:

Are the relationship tables present where required and correctly defined, when compared with the database outline? Yes

Are foreign keys present where required and correctly defined, when compared with the database outline? Well, they are defined in the Schema but not mentioned in the outline.

Do the entity attributes match those described in the outline? Yup

Is there something that could be changed/improved in the Schema and/or the overall database design? I think it looks pretty good, just go change the outline to indicate which attributes should be the primary keys

Review 3:

Are the attributes for each entity in the ERD same as that described in the database outline? Yes

Is the participation of entities in the relationships same as that described in the outline? Yes

Is the cardinality of entities in the relationships same as that described in the outline? Yes

Based on the Database outline, could any of the relationships be better off described as an Entity instead ? No

Is there something that could be changed/improved in the E R Diagram and/or the overall database design? Rearranging the ER diagram a bit could make it more visually appealing and easier to understand.

The best peer review for a Schema would answer all of the following questions:

Are the relationship tables present where required and correctly defined, when compared with the database outline? Yes

Are foreign keys present where required and correctly defined, when compared with the database outline? Foreign keys aren't defined in the outline. Schema looks good though.

Do the entity attributes match those described in the outline? Yes

Is there something that could be changed/improved in the Schema and/or the overall database design? Everything looks good. Although I think you should redesign your Database Outline as an actual outline, as opposed to several small paragraphs

Review 4:

Are the attributes for each entity in the ERD same as that described in the database outline? Yes

Is the participation of entities in the relationships same as that described in the outline? Yes

Is the cardinality of entities in the relationships same as that described in the outline? Yes

Based on the Database outline, could any of the relationships be better off described as an Entity instead ? Yes

Is there something that could be changed/improved in the E R Diagram and/or the overall database design? Maybe it's a good idea to improve the visibility of the ERD diagram, especially for each entity.

Are the relationship tables present where required and correctly defined, when compared with the database outline? Yes

Are foreign keys present where required and correctly defined, when compared with the database outline? Yes

Do the entity attributes match those described in the outline? Yes

Is there something that could be changed/improved in the Schema and/or the overall database design? The schema looks good
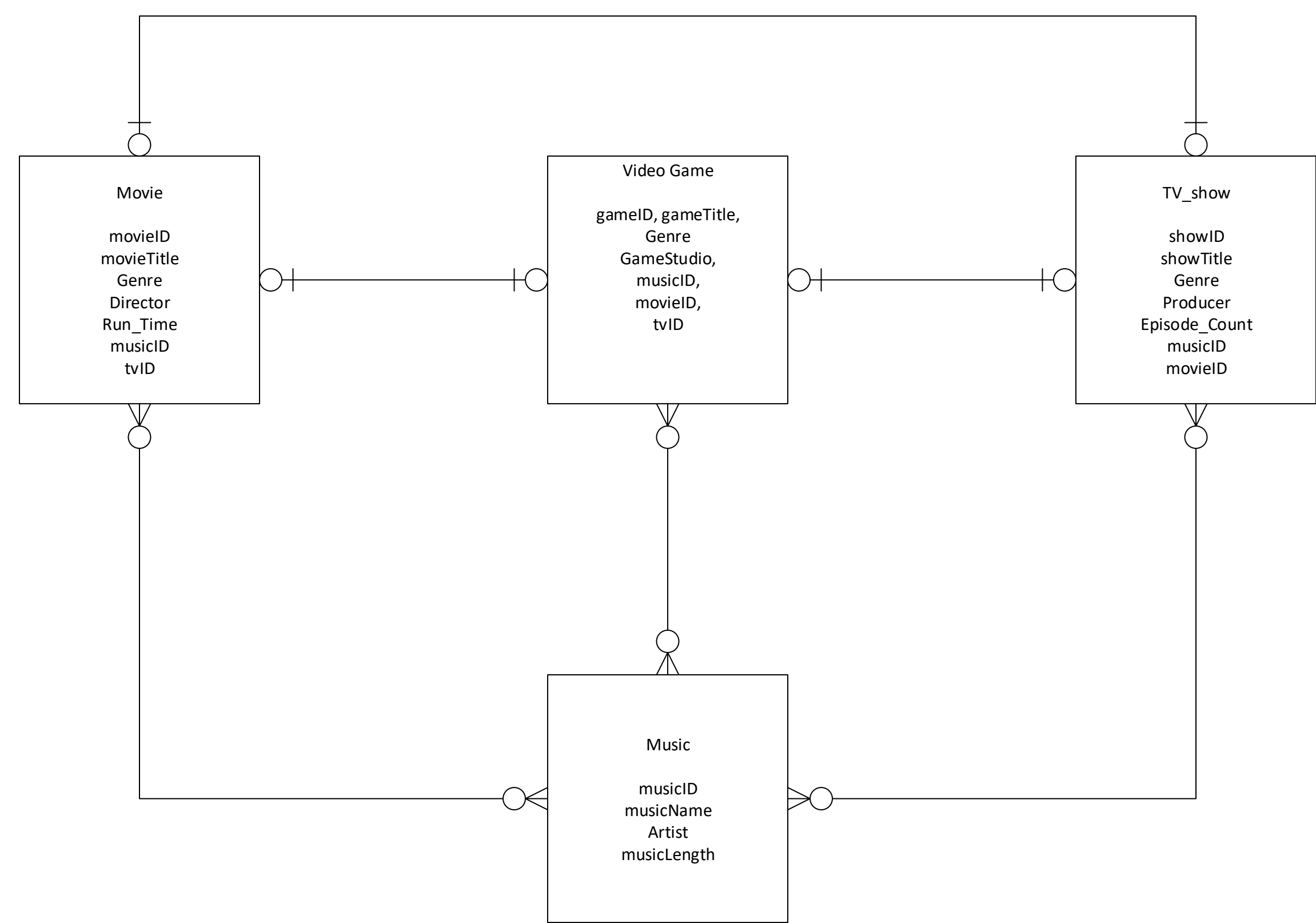
Actions based on the feedback

Change the outline to match the schema with foreign keys. Mention foreign keys in the outline.

Which attributes are primany keys in the outline Move post to center of ED diagram

Based on feedback we added the 'type' of each attribute to our outline. We felt that having a flagged / reports attribute was redundant, instead we will simple use # of reports/

ERD

Movie

movieID
movieTitle
Genre
Director
Run_Time
musicID
tvID

Video Game

gameID, gameTitle,
Genre
GameStudio,
musicID,
movieID,
tvID

TV_show

showID
showTitle
Genre
Producer
Episode_Count
musicID
movieID

Music

musicID
musicName
Artist
musicLength

Schema

Music(

musicID

musicName

Artist

musicLength

)

Movie(

movieID

Title

Genre

Director

Run_time

musicID

)

TV_show(

showID

Title

Genre

Producer

Episode_count

musicID

movieID

)

VideoGame(

gameID

Title

Genre

gameStudio

musicID

tvID

movieID

)