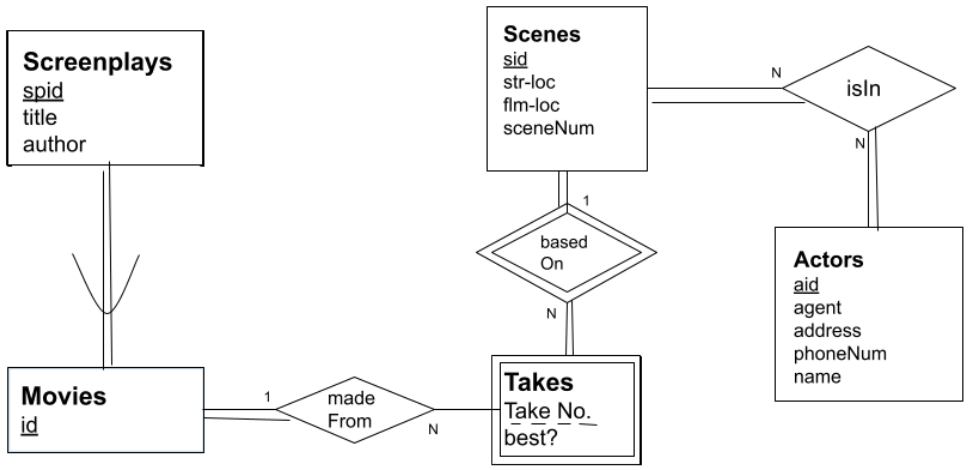
COMP 3005 Assignment 2

P1

Assumptions:

- Actors have to appear in some scene(s) of some movie(s) to be listed in the database

E-R Diagram:



Schema:

Movies	
spid	mid

Screenplays		
spid	title	author

Takes			
mid	sid	takeNum	best?

Scenes			
sid	str-loc	flm-loc	sceneNum

IsIn	
sid	aid

Actors				
aid	address	name	phoneNum	agent

Foreign Keys:

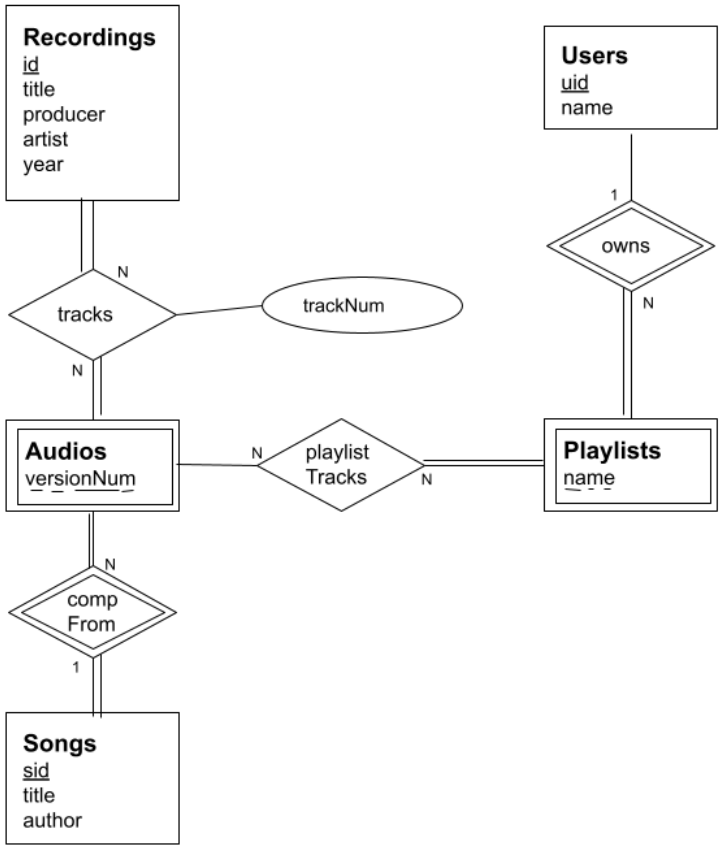
- spid in Movies refers to the column of the same name in the Screenplays table
- sid in Takes refers to the column of the same name in the Scenes table
- mid in Takes refers to the column of the same name in the Movies table
- sid in IsIn refers to the column of the same name in the Scenes table
- aid in IsIn refers to the column of the same name in the Actors table

P2

Assumptions:

- You can put different versions of the same song on a playlist but not a recording (i.e. the sid is enough to uniquely identify a song in the Tracks table)

E-R Diagram:



Schema:

Recordings				
id	title	producer	artist	year

Users	
uid	name

Songs		
sid	title	author

Audios	
sid	versionNum

Playlists	
uid	pName

Tracks			
rid	sid	versionNum	trackNum

PlaylistTracks			
uid	pName	sid	versionNum

Foreign Keys:

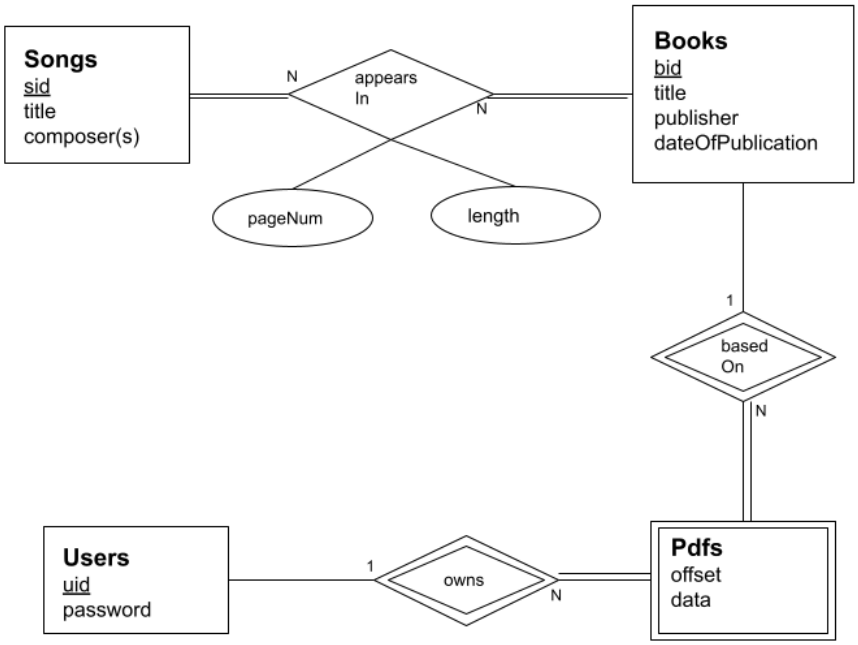
- sid in Audios refers to the column of the same name in the Songs table
- uid in Playlists refers to the column of the same name in the Users table
- rid in Tracks refers to the id column in the Recordings table
- sid and versionNum in Tracks refer to the columns of the same name in the Audios table
- uid and pName in PlaylistTracks refer to the columns of the same name in the Playlists table
- Sid and versionNum refer to the columns of the same name in the Audios table

P3

Assumptions:

- Users cannot upload multiple pdf copies of the same book
- Songs will appear in multiple books

E-R Diagram:



Schema:

Songs		
sid	title	composer(s)

Books			
bid	title	publisher	dateOfPublication

Users	
uid	password

Pdfs			
uid	bid	offset	data

AppearsIn			
sid	bid	length	pageNum

Foreign Keys:

- uid in Pdfs refers to the column of the same name in the Users table
- bid in Pdfs refers to the column of the same name in the Books table
- sid in AppearsIn refers to the column of the same name in the Songs table
- bid in AppearsIn refers to the column of the same name in the Books table

P4

Assumptions:

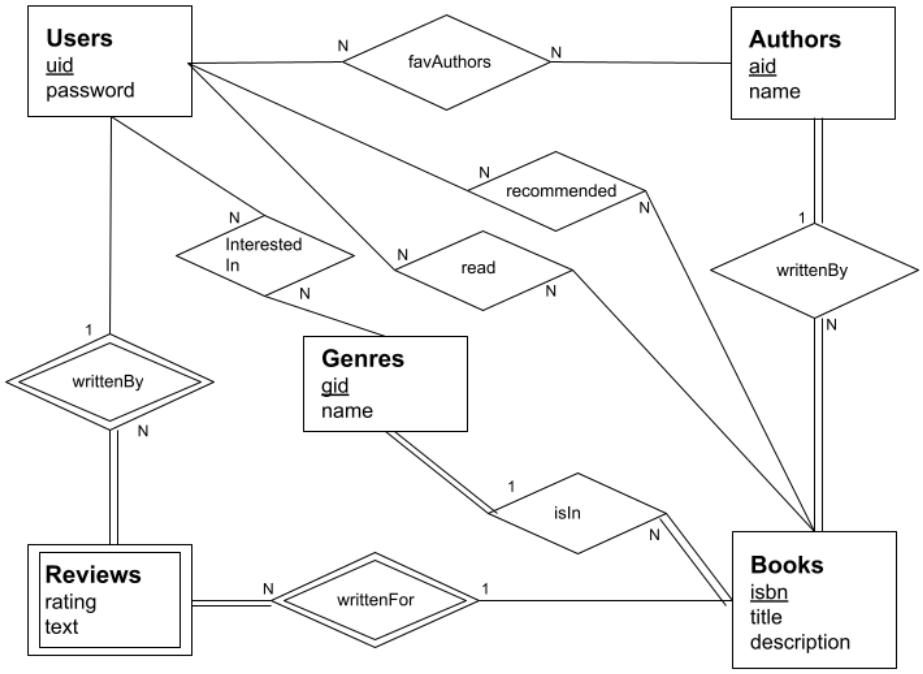
- Users cannot write multiple reviews of the same book
- Not all books will have been read by a user, and users will not necessarily have read any books
- Not all books will appear in recommendations and users won't get recommendations until they enter some data
- Not all authors will be somebody's favourite and not all users will have favourites
- Not all users will specify genre interests and a genre will not necessarily be interesting to any users
- Books will not have multiple authors

Scenario:

1. Store data (title, cover, description, author) for many books in a variety of genres.
2. Allow the user to create a list of books they have read as well as an optional rating based on how much they enjoyed each book (ratings will be editable).
3. Allow users to create a list of their favourite authors.
4. Provide a list of reviews for any particular book and allow users to write their own reviews of books that they choose.
5. The database will allow users to search for books in many ways including: by topic or genre, by title, by author, or by ISBN.
6. Users will be able to easily add to and edit their "reading list" as well as maintain a list of topics they are interested in.
7. The application should provide users a list of recommendations that will be automatically generated and updated based on their personal data.

8. Recommendations will be based off many factors including: books related to the user's topics of interest, books by similar authors, books read by others with similar interests etc.
9. The target size of the database would be upwards of 10, 000 books.
10. The application hosting should be web based and give users a to simple interface to browse and easily view and edit their data using any popular browser (chrome, safari, firefox etc.).

E-R Diagram:



Schema:

Books				
<u>isbn</u>	title	author	description	genre

Users	
<u>uid</u>	password

Authors	
aid	name

Genres	
gid	name

Reviews			
isbn	uid	rating	text

favAuthors	
uid	author

Recommended	
uid	isbn

Read	
uid	isbn

Interests	
uid	genre

Foreign Keys:

- author in Books refers to the aid column in the Authors table
- genre in Books refers to the gid column in the Genres table
- isbn in Reviews refers to the column of the same name in the Books table
- uid in Reviews refers to the column of the same name in the Users table
- uid in favAuthors refers to the column of the same name in the Users table
- author in favAuthors refers to the aid column in the Authors table
- uid in Recommended refers to the column of the same name in the Users table
- isbn in Recommended refers to the column of the same name in the Books table
- uid in Read refers to the column of the same name in the Users table
- isbn in Read refers to the column of the same name in the Books table
- uid in Interests refers to the column of the same name in the Users table
- genre in Interests refers to the gid column in the Genres table