Car Data Website

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Executive Summary

There were many changes we made on our project throughout the term for better usability of our website and database. One early change we made was changing our Library entity to be an intersection table between Users and Games. We did this because the table wasn't being used to store any other information, so we thought it made more sense to use it only as an intersection table. A peer suggested that we make this change. To help us access rows of our intersection tables easier, we added unique IDs to them. Originally, their primary keys were a combination of the two foreign keys. This made it harder to implement in code, so we added a unique ID and used that as the primary key. A peer suggested we change this. At first, we decided not to, but once we ran into problems with implementing it into code, we decided to go through with the change. We changed some of our VARCHAR types to TEXT types in case the user needs to input more text than a VARCHAR allows. We did this for gameDescription and reviewDescription. Feedback from a peer helped us realize we should change this. On all dropdown menus that display IDs, we added the respective name or title that the ID is associated with. It would be harder for the user to know if only the ID was displayed. We added a feature that autofills the update forms once the user selects the ID they want to update. We added this feature so that the user can easily know what the current values are. This was a feature we wanted to implement from the beginning and had some peers suggest we add it. We also made it so fields that shouldn't be null can't be entered as null. The add and update forms clearly say which fields are optional. If a field that isn't optional is left blank, the form can't be entered and a small error message will appear. We originally had edit buttons on each row of the table, but we decided to remove them because the user can use the update form at the button of the page. We had a peer suggest this, but it was also something we wanted to do since the update form is on the same page. Additionally, we made each table scrollable if there's enough rows. Since the forms are at the bottom of the page, the scrollable table ensures that the forms are always able to be seen. The table will never be too long. We also added a search bar to the Games page. The user can search by gameTitle. They can also click the 'reset' button to display all the records.

Project Outline

This is a database driven website that is responsible for all of the Games, Genres, Users, and the Game's Reviews stored in a database. It is an admin-facing interface that can handle 100's of games for 100's of users. Using this interface, an admin is able to add, update and remove games from a user's account. Each game can have multiple

genres and reviews. Each game can have no genre, or up to all genres associated with it. Each game can have no reviews, or up to one review from each user associated with it. This site's user interface also allows admins to edit, add and remove these genres and reviews.

- ○ Games(Team): records the details of the games
    - ■ gameID: int(11), auto_increment, unique, not NULL, PK
    - ■ gameTitle: varchar(45), unique, not NULL
    - ■ gameDescription: text, not NULL
    - ■ gameRating: decimal(4,2), NULL
    - ■ gamePrice: decimal(7,2), not NULL
    - ■ Relationships
        - ● M:M relationship between Games and Genres is implemented using an intersection table. The intersection table has gameID and genreID as FKs.
        - ● 1:M relationship between Games and Reviews is implemented with gameID as a FK in Reviews.
        - ● M:M relationship implemented between Games and Users using an intersection table. The intersection table has gameID and customerID as FKs.
- ○ Genres(assigned to Alex): records information about genres
    - ■ genreID: int(11), auto_increment, unique, not NULL, PK
    - ■ genreName: varchar(45), unique, not NULL
    - ■ Relationships
        - ● M:M relationship between Games and Genres is implemented using an intersection table. The intersection table has gameID and genreID as FKs.
- ○ Users(assigned to Robin): records information about the user
    - ■ userID: int(11), auto_increment, unique, not NULL, PK
    - ■ userName: varchar(45), unique, not NULL
    - ■ userEmail: varchar(45), not NULL
    - ■ userStoreCredit: decimal(7,2), not NULL
    - ■ Relationships
        - ■ M:M relationship implemented between Games and Users using an intersection table. The intersection table has gameID and customerID as FKs.
        - ■ 1:M relationship between Reviews and Users is implemented with userID as a FK in Reviews.
- ○ Reviews(Team): records information about the reviews of a game
    - ■ reviewID: int(11), auto_increment, unique, not NULL, PK
    - ■ userID: int(11), NULL, FK
    - ■ gameID: int(11), not NULL, FK

- reviewRating: int(11), not NULL
- reviewDescription: text, NULL
- Relationships
  - 1:M relationship between Games and Reviews is implemented with gameID as a FK in Reviews.
  - 1:M relationship between Reviews and Users is implemented with userID as a FK in Reviews.
- Games_Genres(assigned to Alex): Intersection table for the M:M between Games and Genres
  - gameGenreID: int(11), unique, NOT NULL, PK
  - gameID: int(11), NOT NULL, FK
  - genreID: int(11), NOT NULL, FK
  - Relationships
    - 1:M relationship with Games is implemented with gameID as a FK in Games_Genres
    - 1:M relationship with Genres is implemented with genreID as a FK in Games_Genre
- Users_Game(assigned to Alex)s: Intersection table for the M:M relationship between Users and Games
  - userGameID: int(11), unique, NOT NULL, PK
  - userID: int(11), NOT NULL, FK
  - gamesID: int(11), NOT NULL, FK
  - Relationships
    - 1:M relationship with Users is implemented with userID as a FK in Users_Games
    - 1:M relationship with Games is implemented with gamesID as a FK in Users_Games

ERD:
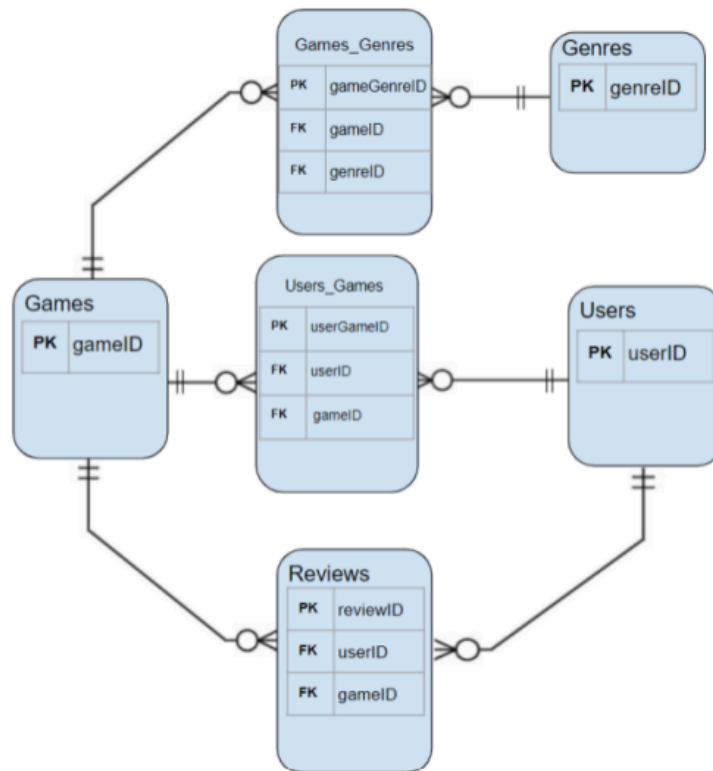
Schema:
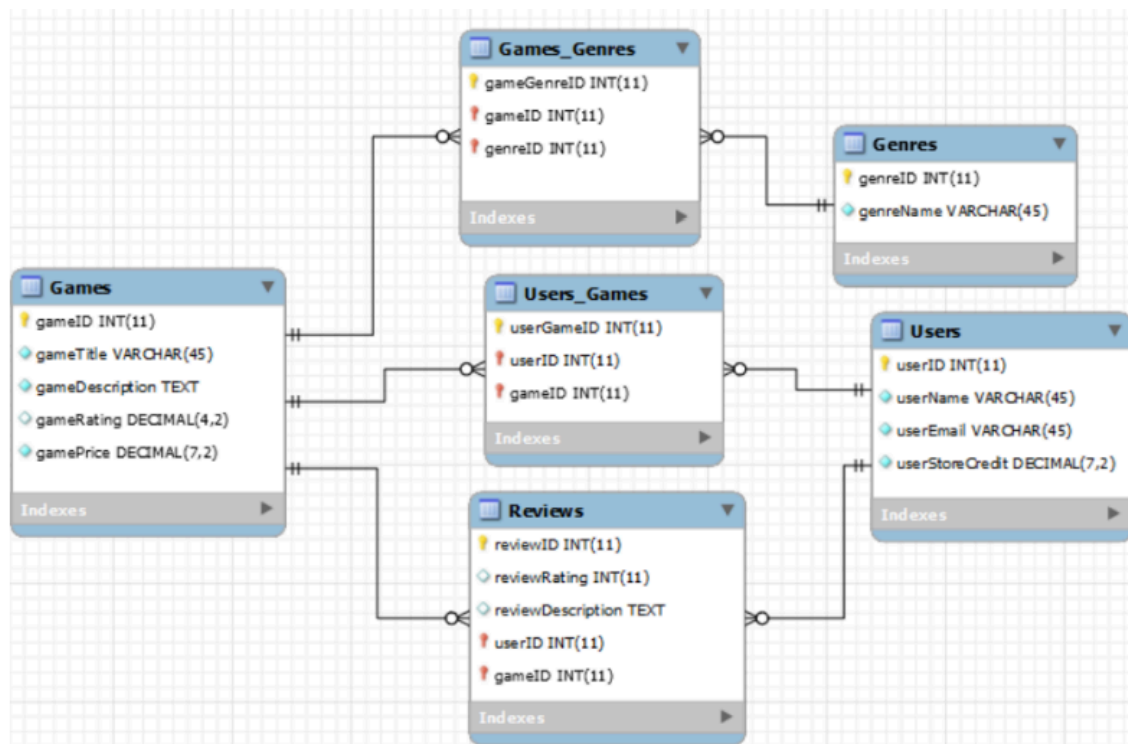
Sample Data

Games:

gameID	gameTitle	gameDescription	gameRating	gamePrice
1	Dauntless	A free-to-play, co-op action RPG with gameplay sim...	8	29.99
2	World of Tanks	If you like blowing up tanks, with a quick and int...	9	49.99
3	Warframe	A cooperative free-to-play third person online act...	8	19.99
4	CRSED: F.O.A.D.	Take the battle royale genre and add mystical pow...	9	19.99
5	Crossout	A post-apocalyptic MMO vehicle combat game!	6	22.99

Users:

userID	userName	userEmail	userStoreCredit
1	nwillars0	egietz0@cargocollective.com	433
2	calbrighton1	gelletson1@artisteer.com	178
3	lshrimpton2	thandley2@yahoo.co.jp	968
4	sfeldberger3	epoland3@baidu.com	318
5	mpurdom4	mlorek4@4shared.com	234

Reviews:

reviewID	userID	gameID	reviewRating	reviewDescription
1	1	3	8	I saw one of these in Finland and I bought one.
2	5	2	9	I saw one of these in Cote dIvoire and I bought on...
3	2	4	9	heard about this on ndombolo radio, decided to giv...
4	4	5	9	i use it for 10 weeks when im in my sauna.
5	3	1	9	this video games is standard.

Genres:

genreID	genreName
1	Shooter
2	Plarform
3	RPG
4	MMO
5	Fighting

Users_Games:

userID	gameID
1	5
2	3
3	1
4	4
5	2

Games_Genres:

gameID	genreID
1	3
2	5
3	2
4	4
5	1

User Interface

Welcome splash screen:
No CRUD functionalities. Navbar to select tables (Click again to return)
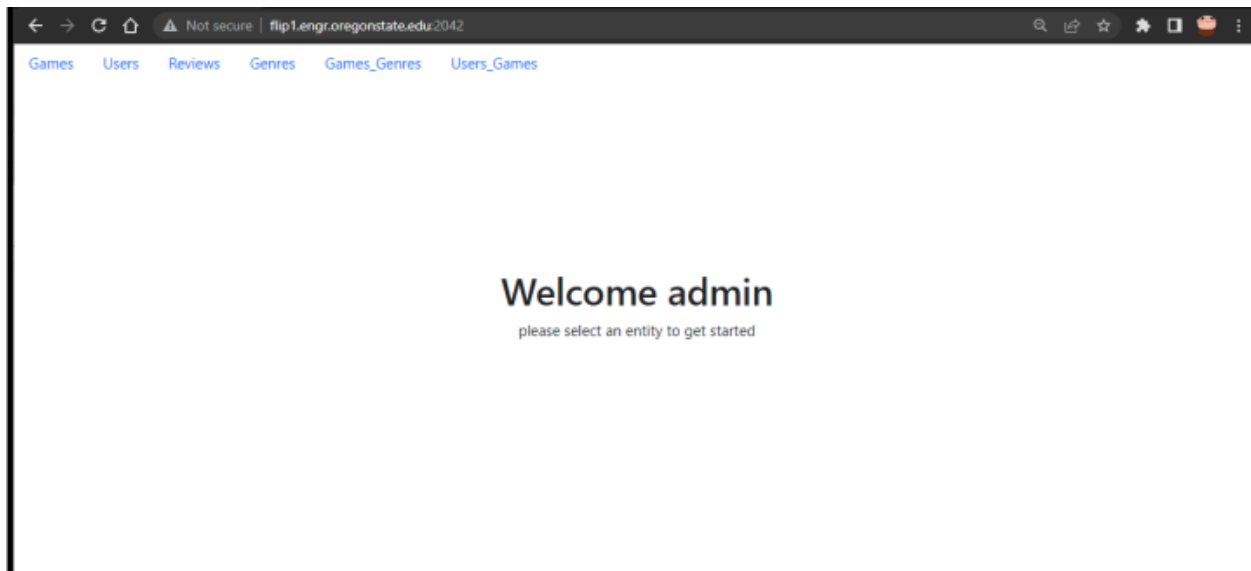
Games table page:
Full CREATE/READ/UPDATE/DELETE as well as SEARCH functionalities.

Users table page:

Full CREATE/READ/UPDATE/DELETE functionalities

Reviews table page:
Full CREATE/READ/UPDATE/DELETE functionalities.

Genres table page:
Full CREATE/READ/UPDATE/DELETE functionalities.

Games_Genres intersection table page:
CREATE/READ/DELETE functionalities.

Games_Genres intersection table page

gameGenreID	gameID	genreID	
1	1	3	Delete
11	1	5	Delete
6	2	4	Delete
5	3	7	Delete
4	5	10	Delete
12	5	11	Delete
15	6	4	Delete
7	6	6	Delete

Add Relationship:

Game:
ID: 6 || Name: Bass Monkey

Genre:
ID: 9 || Name: Action

Add Game Genre

Users_Games intersection table page:
CREATE/READ/DELETE functionalities.

userGameID	userID	gameID	
8	2	3	Delete
3	2	9	Delete
1	3	1	Delete
13	4	6	Delete
4	5	3	Delete
14	5	15	Delete
5	7	4	Delete
15	7	5	Delete
12	9	5	Delete

Add Relationship:

userID:
ID: 13 || Name: buttonwrap

gameID:
ID: 6 || Name: Bass Monkey

Add Game