

Executive Summary

We created Game Tracker to provide gamers with a medium with which they can find new games, create personal favorites, leave reviews/ratings, and log their playtime sessions. We believe our website can serve as a hub for gamers to create and share new experiences. This data for Game Tracker is structured with a relational database, which will be accessible to our administrative team through our front-end.

In our initial outline, we planned to implement a user accessible interface, including end user account creation, log-in/log-out functionality, and password encryption. However, as the project progressed, we decided to prioritize the core functionality of our database and website over this front-end UI implementation. Ultimately, we determined that this website would better serve to provide Game Tracker administrators with the tools needed to manage user and website data. This change was primarily influenced by feedback from our peers and professor.

The initial HTML prototype was created with the intention of being used by an end user. However, our peers brought up key missing functionality from our prototype, specifically insert/delete/update functionality. We did not intend for our end users to have access to this functionality, as it would provide them with the excessive privilege of being able to insert, edit and delete vital data in our database. To adhere to project functionality requirements and ensure the security of our database, we decided that the change to administrative control was the optimal solution.

Thus, we implemented an interface that allows our admins to add/remove/update users, games, user favorites, user comments, user ratings, and user sessions in our database. Thus, the administrators will have full access to the data in every entity table. We implemented Search functionality that will allow our admins to thoroughly search and retrieve information from each table. Please refer to the outline below for our Database schema.

Game Tracker Project Outline

Website URL: http://flip3.engr.oregonstate.edu:8142/browse_users

We have designed a relational database for Game Tracker, a website where users can browse games, create personal favorites, leave ratings/reviews, and log their playtime sessions. Game Tracker was designed to be a hub for gamers to explore new games as well as share their experiences. The website we created provides Game Tracker administrators with the tools needed to manage user and website data. In this outline, we will describe the entity tables, how they relate to one another, and how our administrators will access them.

Database Outline

User Table

Variable	Type	Example
id	int	349343
name	varchar(255)	Dekutree93
email	varchar(255)	aaron22@gmail.com

We will store a unique id for each user. This id is permanent and is created when the user is added. The id will auto increment with each new user. The user table will also hold the user name, email address. Our admins will have access to modify the name and email of each user through our website. They will be able to add and remove users from the table. They will also be able to search for users by name or email.

Game Table

Variable	Type	Example
id	int	19493
name	varchar(255)	Super Mario 64
developer	varchar(255)	Nintendo
genre	varchar(255)	Adventure
platform	Varchar(255)	Nintendo 64

Our game table will store game id, game name, developer, genre, and platform for each game. Admins will be able to populate this table through the Add Game button on the Games page. Once a game is added to the Game Table, it can be favorited, rated, reviewed, and logged. We ensured proper search functionality, as the admins will be able to search the table by game name, developer, genre, and platform. This will ensure that the table can be thoroughly sorted as needed.

userFavoriteGame Table

Variable	Type	Example	Constraints
id	int	345	
user_id	int	349343	fk
game_id	int	19493	fk
rating	float	8.3	
rating_comment	varchar(8000)	Great game. I really enjoyed the final boss. Look forward to the sequel.	

Since our favorite system will use a many-to-many relationship, we will need to create a link table. The userFavoritesGame table links to user_id and game_id. It holds the user, game, rating (on a 10 point scale), rating date, user comment, edit date, and the date favorited. Admins will be able to add a favorite by clicking the Add Favorite button for a respective user on the Users page. On the Favorites page, admins will have the ability to modify the rating and/or rating comment, as well as delete the

favorite altogether. They will also be able to search the userFavoriteGame table by user name and game name.

Finally, we will have the gameSession table. This will keep track of accumulated play time for a particular game.

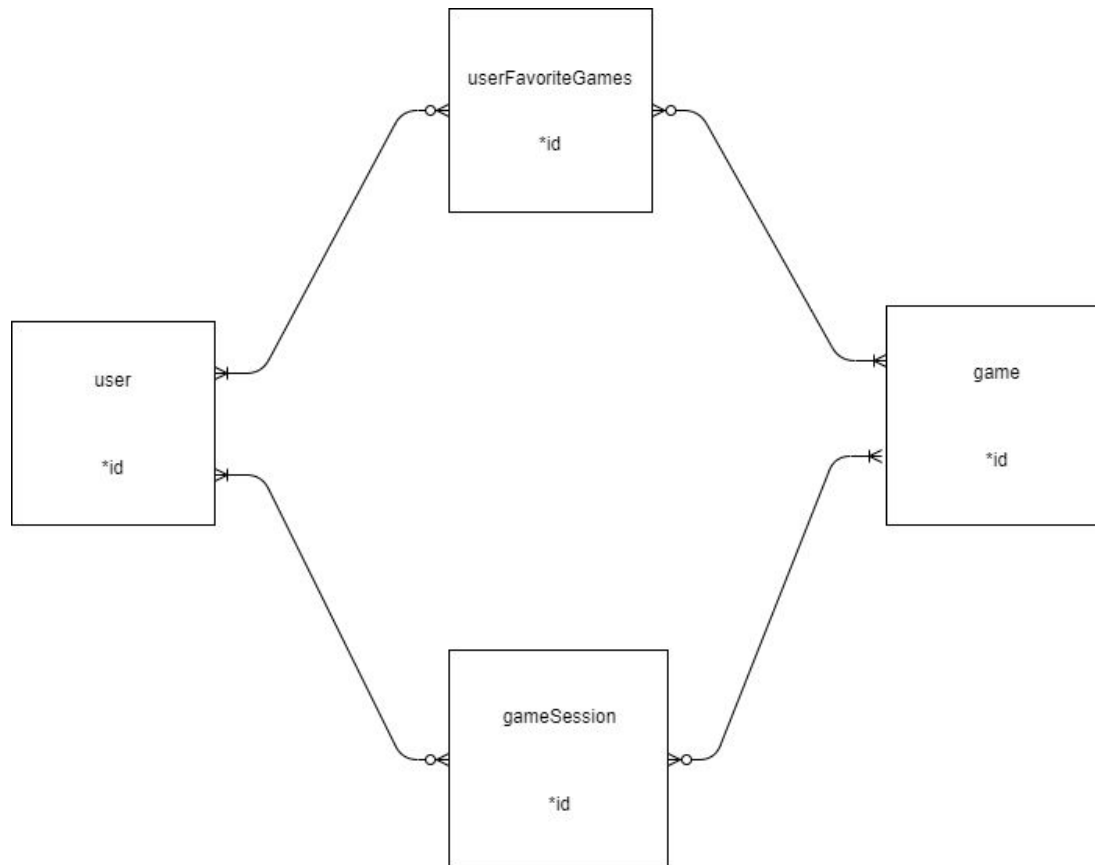
gameSession Table

Variable	Type	Example	Constraints
id	Int	47462	
user_id	Int	4395959	FK
game_id	Int	98958	FK
started_at	datetime	YYYY-MM-DD hh:mm:ss (2019-11-01 08:30:42)	
ended_at	datetime	YYYY-MM-DD hh:mm:ss (2019-11-01 08:30:59)	

This table will store a user's playtime session for a particular game by logging a start and end time.

Admins will be able to add a game session by clicking the Add Session button on either the Sessions page or Users Page. They will be able to update or delete the game session on the Sessions page. In addition, they can search for a game session using either the user name or game name.

Entity-Relationship Diagram



Schema

```
user(  
  id,  
  name,  
  email  
)
```

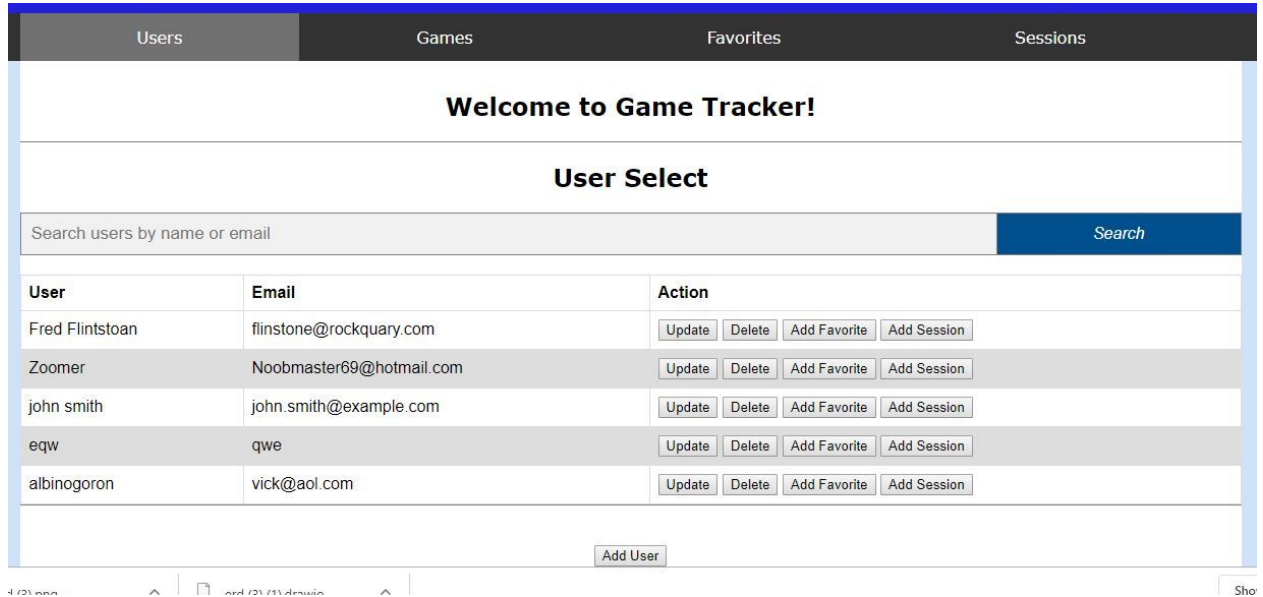
```
game(  
  id,  
  name,  
  developer,  
  genre,  
  platform  
)
```

```
userFavoriteGame(  
  id,  
  user_id,  
  game_id,  
  rating,  
  rating_comment  
)
```

```
gameSession(  
  id,  
  user_id,  
  game_id,  
  started_at,  
  ended_at  
)
```

UI Screenshots

DISPLAY / SEARCH / DELETE users page



Users Games Favorites Sessions

Welcome to Game Tracker!

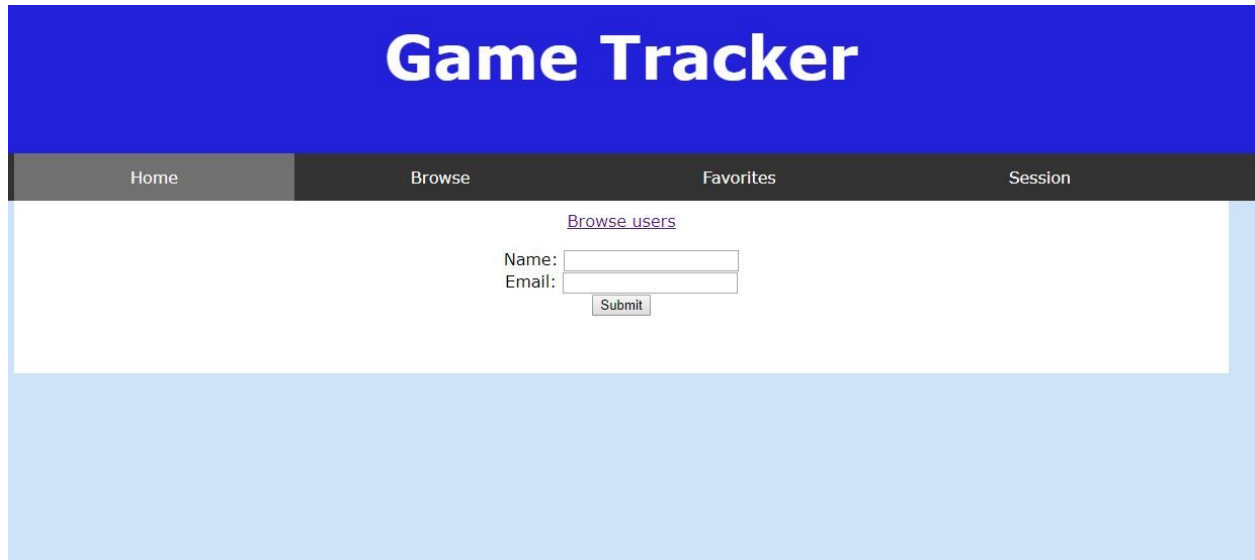
User Select

Search users by name or email Search

User	Email	Action
Fred Flintstoan	flinstone@rockquary.com	Update Delete Add Favorite Add Session
Zoomer	Noobmaster69@hotmail.com	Update Delete Add Favorite Add Session
john smith	john.smith@example.com	Update Delete Add Favorite Add Session
eqw	qwe	Update Delete Add Favorite Add Session
albinogoron	vick@aol.com	Update Delete Add Favorite Add Session

Add User

CREATE user page



Game Tracker

Home Browse Favorites Session

[Browse users](#)

Name:

Email:

Submit

UPDATE user page

Game Tracker

[Home](#)[Browse](#)[Favorites](#)[Session](#)

[Browse users](#)

Name: Fred Flintstoan

Email: flinstone@rockquary.com

Submit

DISPLAY / SEARCH / DELETE games page

[Users](#)[Games](#)[Favorites](#)[Sessions](#)

Browse Games

Search Games..

Search

Name	Developer	Genre	Platform	
Grand Theft Auto 54	rockstar games	action-adventure	PlayStation 4	<div>UpdateDelete</div>
Asteroids	Atari	space	standup	<div>UpdateDelete</div>
Star Wars Rebellion	LucasArts	Strategy	PC	<div>UpdateDelete</div>
Solitaire	Microsoft	card game	MS Dos	<div>UpdateDelete</div>

Add Game

CREATE game page

Game Tracker

Home

Browse

Favorites

Session

[Browse games](#)
Game name:
Developer:
Genre:
Platform:

UPDATE game page

Game Tracker

Home

Browse

Favorites

Sessions

[Browse games](#)
Name:
Developer:
Genre:
Platform:

DISPLAY / SEARCH / DELETE favorite games page

Game Tracker

Users	Games	Favorites	Sessions
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User Favorites

Search favorites by user and game name				Search
User	Game	Rating	Comment	Actions
Fred Flintstoan	Asteroids	9.0	I can't stop playing this game.	<input type="button" value="Update"/> <input type="button" value="Delete"/>
Zoomer	Asteroids	2.0	This game is so boring.	<input type="button" value="Update"/> <input type="button" value="Delete"/>
eqw	Grand Theft Auto 54	4.0	ad	<input type="button" value="Update"/> <input type="button" value="Delete"/>
eqw	Star Wars Rebellion	2.0	This game takes forever to play.	<input type="button" value="Update"/> <input type="button" value="Delete"/>

CREATE favorite game page

Game Tracker

Home	Browse	Favorites	Session
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[Browse favorites](#)

User:

Game:

Rating (1-5):

Comment:

UPDATE favorite game page

Game Tracker

[Home](#)[Browse](#)[Favorites](#)[Sessions](#)

[Browse favorites](#)

Rating:
Comment:

Submit

DISPLAY / SEARCH / DELETE game session

Game Tracker

[Users](#)[Games](#)[Favorites](#)[Sessions](#)

Game Sessions

Search game sessions by user or game name

Search

User	Game	Started	Ended	Actions
Fred Flintstean	Asteroids	2019-11-20 10:10:10	2019-11-21 12:10:10	<div>UpdateDelete</div>
eqw	Asteroids	2019-11-18 08:08:08	2019-11-18 11:42:21	<div>UpdateDelete</div>

Add Game Session

CREATE game session page

Game Tracker

Home Browse Favorites Sessions

[Browse sessions](#)

User:

Game:

Started at (YYYY-MM-DD HH:MM:SS):

Ended at (YYYY-MM-DD HH:MM:SS):

UPDATE game session page

Game Tracker

Home Browse Favorites Sessions

[Browse sessions](#)

Game:

Started:

Ended: