Group 60 Step 6 Final PDF

URL: http://flip3.engr.oregonstate.edu:12487

Summary:
We made countless changes over the course of the term due to peer and grader feedback. The most impactful being after step 2 where we had to cut out some entities and combine them to make everything run a little smoother. Here is a brief list of the big changes:

- Combined entities down to 2 intersection stables: Subscriptions and TitleHost.
- Limited location of service to the US only in order to avoid making a separate entity to deal with out of country users.
- Added a unique username to Users table so users could be located with something other than ID.
- Changed platform_id in TitleHost table to be able to accept NULL values.
- Changed Update and Delete features from forms to buttons in table to keep UI clean.
- Added in cors permissions to ensure that the site works properly on the OSU flip servers.
- Updated DML queries to work properly within site application.
- Added proper comments and citations to finished code.

Aside from the changes listed above, from Step 2 and on, most changes were small like applying normalization, and including dropdowns for foreign keys.

There were some instances where we decided against parts of a review, such as expanding to allow out of US users or only allowing certain pieces of information to be updated in our Users form, rather than all of it. These decisions were made based on what we believed was best for our database and the image we had in mind of the overall project.

We debated on and jumped back and forth from React and Node multiple times. Eventually, we decided to stick with react and have been working in react only from step 4 on. We are extremely grateful for our classmates and the instructional staff in helping us see our project through!

Project Outline:

Group Members:
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Project Title: OneStopAnime - A multi-subscription streaming platform for anime.

Overview:

OneStopAnime is a western streaming platform that allows its users to manage their subscriptions to the top anime streaming platforms and stream all of the anime content directly from our site. During beta,

OneStop Anime is only available in the United States. According to <u>these statistics</u>, Netflix reported anime viewership has increased "50% from the previous year. The demand for Japanese anime is growing each year as other countries apart from Japan discover the genre" and the predicted growth rate is "7.9% CAGR until 2030". This means that different studios are going to sell the streaming rights to multiple different platforms.

By having a membership to OneStop, viewers can access and stream anime from other streaming platforms through premium subscriptions. These premium subscriptions include Crunchyroll, Funimation, Netflix, Hulu, HBO Max, and HiDive. Members of OneStop can pick and choose which platforms they want to subscribe to and our service will bundle and display all of the anime content from their platforms. Each subscription will cost as much as their platform's premium subscription + our website's service fee. Our service increases convenience and utility. Instead of navigating through countless titles that a user has no interest in, only anime titles will be displayed on our site. Having all of the desired content consolidated in one place will save the user from digging through each individual platform searching for the right title.

Our service will support 100,000 users. The company expects 8,000 new Customers and about 20,000 changes to Subscriptions annually. A database driven website will record Customers and their Subscriptions ensuring our service can support a large number of users through an organized system for managing and accessing their subscriptions. This will also support the scalability and growth of the company. The database encompasses 4 main entities; Customers, Subscriptions, Streaming Platforms, and Titles. The customer and subscription entities are the main focus of the database.
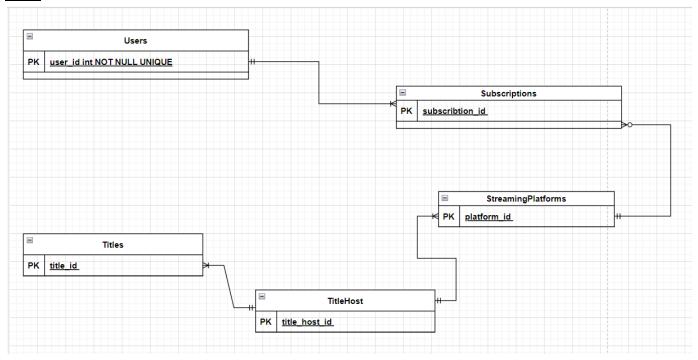
Database Outline:
- **Users** – Keeps track of users of OneStop.
    - PK - user_id int, AUTO INCREMENT, NOT NULL, UNIQUE
    - first_name varchar(45) NOT NULL
    - last_name varchar(45) NOT NULL
    - street_address varchar(250) NOT NULL
    - city varchar(45)
    - state varchar(45)
    - postal_code varchar(10)
    - email varchar(45) NOT NULL
    - username varchar(50) NOT NULL UNIQUE
    - <u>Relationships</u>: 1:M relationship between Users and Subscriptions, as one user can have many subscriptions and each subscription can belong to one user. This is done by implementing the user id(the primary key in the customers table) as a foreign key in the subscriptions table.

- **Subscriptions**– Intersection Table between Users and StreamingPlatforms. Records each individual subscription and which platforms that subscription belongs to.
    - PK - subscription_id int, AUTO INCREMENT NOT NULL UNIQUE
    - FK– user_id int NOT NULL

- FK– platform_id int NOT NULL
- sub_start date
- Relationships:
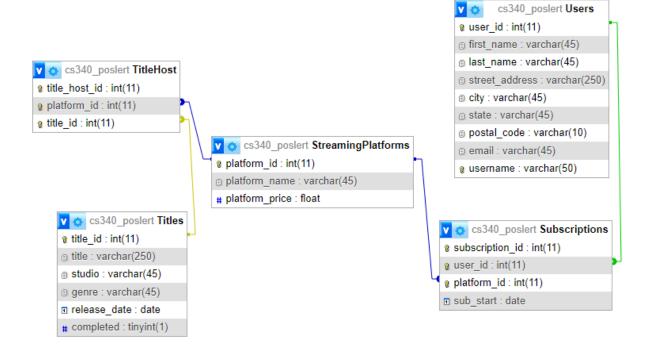- Intersection table between Users and StreamingPlatforms.
  M:1 relationship between Users and Subscriptions because each user can have multiple subscriptions but subscription can only belong to one User. user_id from Users is a foreign key in the Subscriptions table. 1:M relationship between StreamingPlatforms and Subscription as each platform can have many subscriptions belonging to it, but each subscription can only belong to one platform. platform_id from StreamingPlatforms is a foreign key in the Subscriptions table

- **StreamingPlatforms**– Defines each 3rd party streaming platform that OneStop offers premium subscriptions to.
    - PK – platform_id int, AUTO INCREMENT, NOT NULL, UNIQUE
    - platform_name varchar(45) NOT NULL
    - platform_price float
    - Relationships: 1:M relationship between StreamingPlatforms and Subscriptions as each streaming platform can have multiple subscriptions but each subscription only belongs to one platform. This table's platform_id is a foreign key in Subscriptions. 1:M relationship between StreamingPlatforms and TitleHost, the platform_id is a foreign key in the TitleHost table.

- **TitleHost**– Intersection table between Titles and StreamingPlatforms. Records individual title IDs and which streaming platform they belong to.
    - PK - title_host_id int AUTO INCREMENT NOT NULL UNIQUE
    - FK - platform_id
    - FK - title_id NOT NULL
    - Relationships: Intersection table between Titles and StreamingPlatoforms. 1:1 with Streaming Platforms as each platform will only have 1 title_host ID number. 1:M with Titles as each title can be streamed on multiple platforms. platform_id and title_id are foreign keys in this table.

- **Titles**– Keeps track of each anime title that is available for streaming on OneStop.
    - PK – title_id int, AUTO INCREMENT NOT NULL UNIQUE
    - title varchar(250) NOT NULL
    - studio varchar(45) NOT NULL
    - genre varchar(45)
    - release_date date
    - completed boolean NOT NULL
    - Relationships: M:M relationship between Title and StreamingPlatforms with TitleHost as an intersection table. Different platforms may both carry the same

title and each platform has multiple titles. host_id from TitleHost is a foreign key in the Titles table.

ERD:

Schema:

Sample Data:

Users

ID	First Name	Last Name	Billing Address	City	State	Postal Code	Email	Username
1	Naruto	Uzumaki	356 NE Portobello Road	Beverly Hills	California	90210	ramenlover88@gmail.com	9tailfox
2	Lelouch	Lamperouge	1745 SE Lions Mane Street	Los Angeles	California	90507	LelouchViBritannia@gmail.com	pizzalover
3	Satoru	Gojo	8734 SW Shiitake Way	Ramona	California	92065	gojo_infinity@gmail.com	redbluepurple

Subscriptions - after JOINS
(Originally username and platform_name are not included)

Subscription ID	Customer ID	Platform ID	Sub Start Date	Username	Platform Name
1	2	1	9-22-2018	pizzalover	Netflix
2	3	2	12-15-2022	redbluepurple	CrunchyRoll
3	1	5	1-27-2023	9tailfox	HiDive

StreamingPlatforms

Platform ID	Platform Name	Platform Price
1	Netflix	15.99
2	CrunchyRoll	9.99
3	HBO Max	9.99
4	Funimation	9.99
5	HiDive	4.99

TitleHost - after JOINS
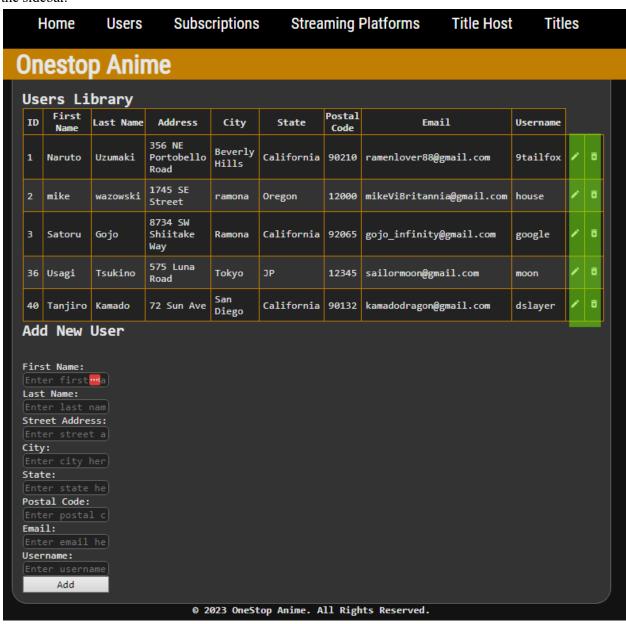(Originally only include title_host_id, platform_id, and title_id)

Title Host ID	Platform ID	Title ID	Platform Name	Title
1	5	3	HiDive	Jujutsu Kaisen
2	2	4	CrunchyRoll	Hunter x Hunter
3	1	5	Netflix	Code Geass
4	4	6	Funimation	Death Parade
5	4	6	Funimation	Death Parade

Titles

Title ID	Title	Studio	Genre	Release Date	Completed
1	Yona of the Dawn	Pierrot	Adventure/Epic Fantasy/Romance	10-7-2014	True
2	Tokyo Ghoul	Pierrot	Drama/Horror/Supernatural	6-4-2014	True
3	Jujutsu Kaisen	Mappa	Adventure/Dark Fantasy/Supernatural	10-23-2020	False
4	Hunter x Hunter	Nippon TV	Adventure Fiction/Fantasy/Martial Arts	10-2-2011	True
5	Code Geass	Sunrise	Alternate History/Mecha/Military	11-30-2007	True
6	Death Parade	Madhouse	Psychological Thriller	3-2-2013	True

UI Screenshots:

Users Create/Read/Update/Delete - Create is the form at the bottom, update and delete are the icons in the sidebar.

| Home | Users | Subscriptions | Streaming Platforms | Title Host | Titles |

Onestop Anime

Users Library

ID	First Name	Last Name	Address	City	State	Postal Code	Email	Username		
1	Naruto	Uzumaki	356 NE Portobello Road	Beverly Hills	California	90210	ramenlover88@gmail.com	9tailfox	✎	🗑
2	mike	wazowski	1745 SE Street	ramona	Oregon	12000	mikeViBritannia@gmail.com	house	✎	🗑
3	Satoru	Gojo	8734 SW Shiitake Way	Ramona	California	92065	gojo_infinity@gmail.com	google	✎	🗑
36	Usagi	Tsukino	575 Luna Road	Tokyo	JP	12345	sailormoon@gmail.com	moon	✎	🗑
40	Tanjiro	Kamado	72 Sun Ave	San Diego	California	90132	kamadodragon@gmail.com	dslayer	✎	🗑

Add New User

First Name:
[Enter first na]
Last Name:
[Enter last nam]
Street Address:
[Enter street a]
City:
[Enter city her]
State:
[Enter state he]
Postal Code:
[Enter postal c]
Email:
[Enter email he]
Username:
[Enter username]
[Add]

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Upon clicking the Update icon, you will be redirected to this form and current information will be auto populated. Make changes as desired.

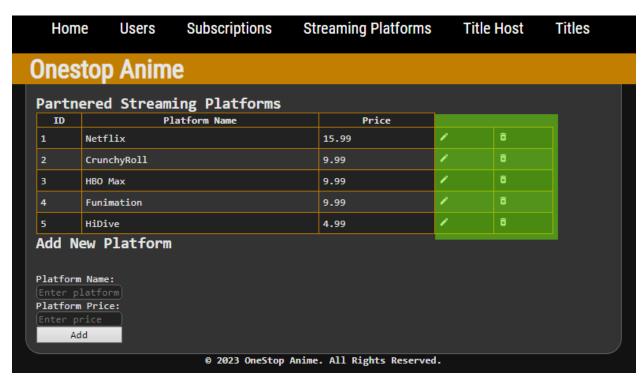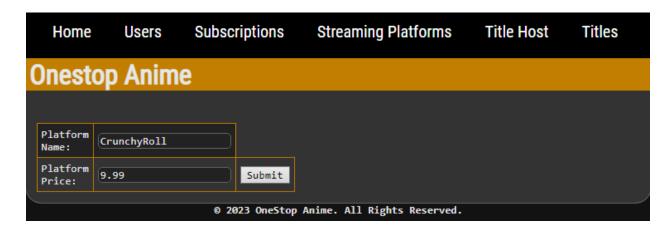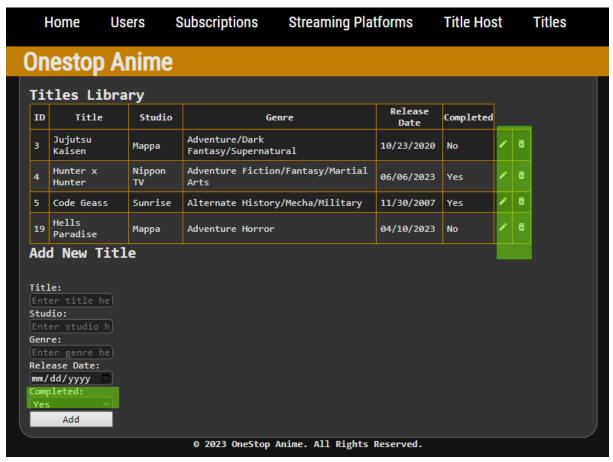**Streaming Platforms** Create/Read/Update/Delete - Create is the form at the bottom, update and delete are the icons in the sidebar.
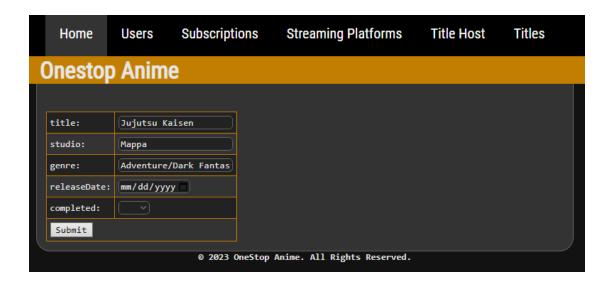

Upon clicking Update, you will be redirected to this form and current information will be auto populated. Make changes as desired.
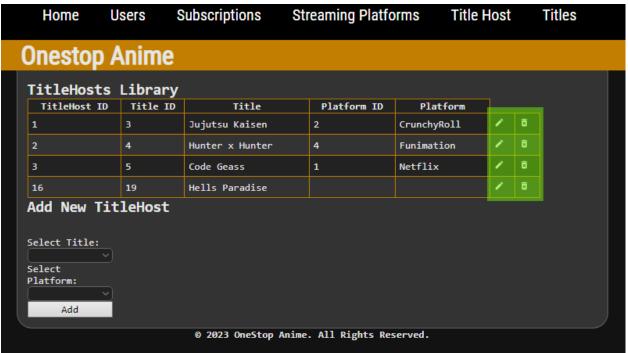
Titles Create/Read/Update/Delete - Create is the form at the bottom, update and delete are the icons in the sidebar. Completed in the Create is in the form of a dropdown menu of Yes/No with corresponding booleans.
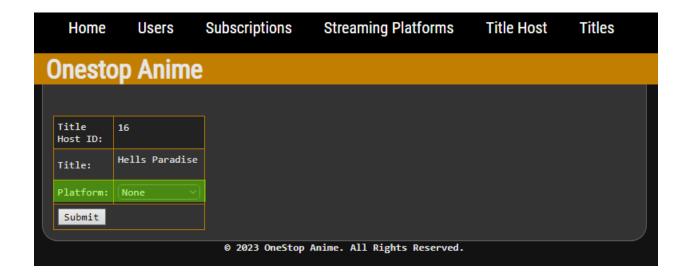

Upon clicking Update, you will be redirected to this form and current information will be auto populated. Make changes as desired.

TitleHost Create/Read/Update/Delete - Create is the form at the bottom with both corresponding foreign keys implemented as dropdowns. Update and delete are the icons in the sidebar. <mark>Delete will remove the M:M relationship from the table.</mark>

When the Update icon is clicked, it redirects to this form. Make changes as desired. <mark>Our M:M Update is implemented here. Platform ID is nullable in this table, indicating that that title is not currently available on any platforms. Updating platform_id to None will remove the relationship.</mark>

Subscriptions Create/Read/Delete - Create is the form at the bottom with both corresponding foreign keys(username, platform) implemented as dropdowns. Delete is the icon in the sidebar. <mark>Delete will remove the M:M relationship.</mark>