Group 6 Project Proposal

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Project URL (OSU VPN required): http://flip3.engr.oregonstate.edu:28901/

Executive Summary

Setting out, our group wanted to imitate a generic Steam-like video game platform which would be console independent and available for PC. Some Ideas we had were to allow a file download to simulate a game download and install and have unique pictures for each game in our catalog. We also wanted to filter games by genre, rating, price, console and wanted to set mock times for hours played per player and since release, amount of downloads. Each user would set up an account with a profile and a user library where they could participate in the rating and commenting on games. Looking back this would have taken numerous complex database interactions and more time than allowed in a semester.

The initial advice from the proposal suggested we bring our expectations way down. We then started with four entities, a cart, game catalog, a customer list, and a record of all purchases to simulate the simplest of stores. To accommodate M:M relationships a user library was soon added and a table to cross reference the game catalog and all the carts to be created.Looking at our original plans, it's obvious that many changes were made and needed as well. When we first began, the site was very ambitious and we had so many ideas to attempt to complete before realizing how complicated things can get with database interaction. The biggest change made was the amount of tables we ultimately ended up using. Before utilizing peer feedback, we had scaled back our table amount quite a bit and relied only on the most basic and most important tables needed for the goal of our site before submitting our Step 3 work. And as time went on, more attributes were added to tables while some were also removed. Most of the early peer feedback was just about updating and refining small details within our project outline for better understanding and readability. Some of the feedback early in the site's development also suggested an expected amount of users or customers, though we decided against this since these suggestions took more of a business look at the site though all the data and information needed to run the site doesn't change based on the amount of users. We didn't want this outline to become a business model of sorts. Steps 4 and 5 caused the most work to be done to the site thus far. Most of the feedback were general comments mentioning what did and didn't work, information we already knew before posting, and nothing was really suggested that led to any major changes being made. The major changes that *were* made were decided upon within the group and caused us to modify a lot of table interactions and caused a lot of work with sessions. There were also a couple errors we were coming across day after day that no peer feedback could really help us with, but we ultimately found fixes for them after a while.

Overall, nearly all of the feedback received was constructive and helpful. Most were just about refining details and fixing simple errors/bugs. There weren't many peer comments that caused major changes to be made. As mentioned above, practically all major changes were made within the group and after group discussions such as adding the ability for a user to create their own unique gamer "handle", an idea not in the early stages of the site. It's safe to say we had a grasp on the requirements of each week's submission, and it was just a matter of time and implementing the work. Once we refined our number of tables and interactions between them, the site came together quite easily after that. Our original plans were definitely focused more on extra things not needed on the site, rather than the basic and general interactions of tables, queries, etc.

Our service, Group6 Games™, will sell games for PCs online. Our database will track orders of video games and keep the customer's order history after purchases are made. Our Games entity will include a Game ID along with game title, selling price, critic rating, and a discount attribute if the game's price becomes discounted at any point. The Customers entity will have a Customer ID and their personal information along with credit card and home address for purchasing and shipping tasks, respectively. Carts will handle the Customer and Game ID, while also holding attributes for each game's price, item numbers, and a Cart ID. Orders entity involves order numbers, Cart IDs, taxes, and purchasing totals. Lastly, we have our Library entity which will store a collection of games customers can keep for possible future purchase and it will utilize such information as Customer and Game ID, along with game titles.

Actual customers will select games from our catalog and any selected games can be added to his/her cart for orders with payment and billing information being displayed on invoices for orders. When customers are ready to check out, their carts will be processed into orders. Information about customers will be updatable and invoices will need to calculate total and discount. Over 9,000 video games are released each year, so the game list in the databases will need to be updated as well. All primary keys stated below will be underlined and "FK" denotes a foreign key.

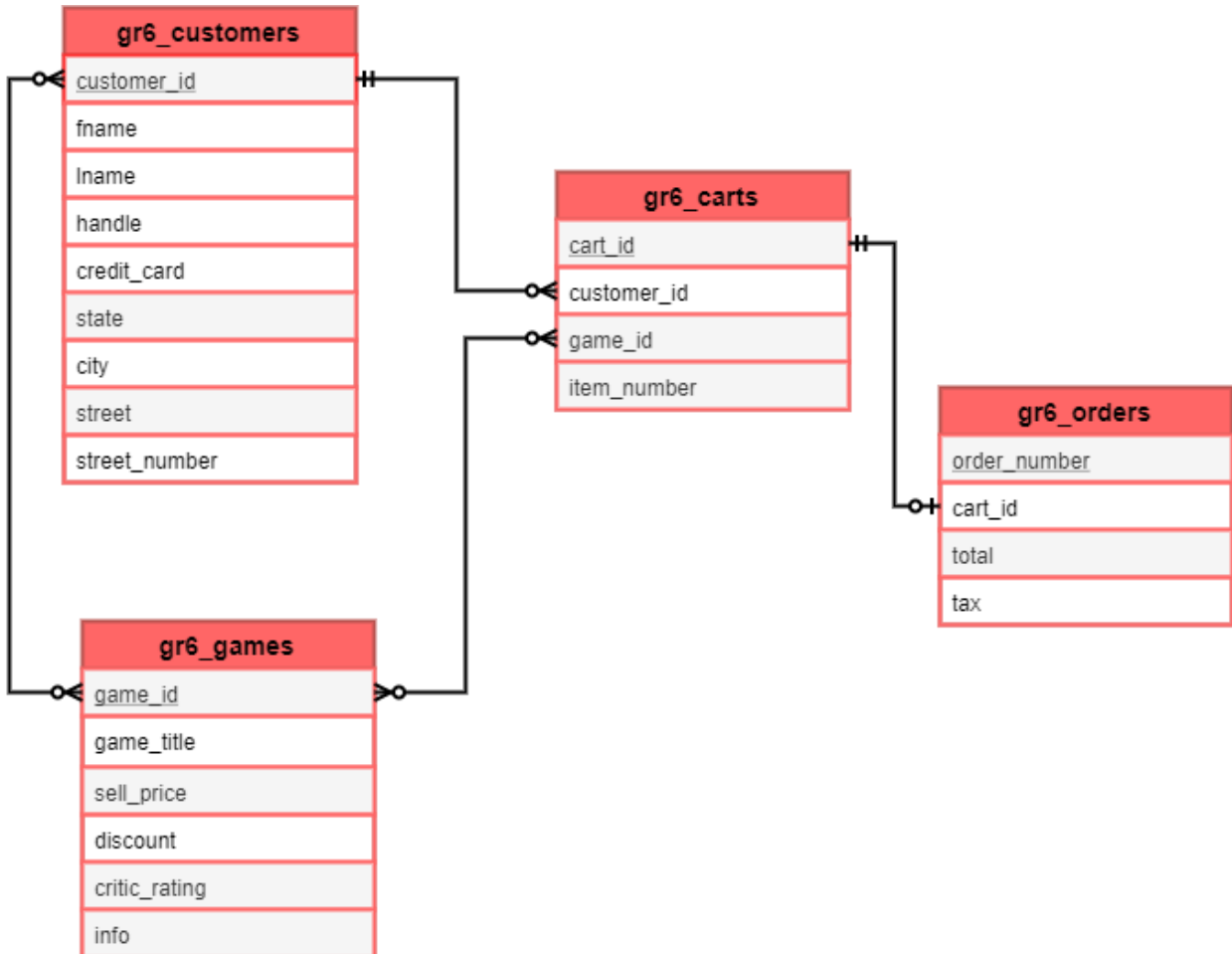**Updated Database Outline:**
Tables

- **gr6_games - M:M with gr6_carts (Handles video game related information such as title, price, possible discount, and their own ID numbers)**
    - game_id: PK (INT) AUTO INCREMENT
    - game_title (VARCHAR)
    - sell_price (DECIMAL)
    - discount (DECIMAL)
    - critic_rating (TINYINT)
    - Info (VARCHAR)

- **gr6_customers - 1:M with gr6_carts (Stores customer information such as their credit card details and home address along with their own ID number)**
    - customer id: PK (INT) AUTO INCREMENT
    - fname: (VARCHAR)
    - lname (VARCHAR)
    - email (VARCHAR)
    - handle(VARCHAR)
    - credit_card (VARCHAR)
    - state (VARCHAR)
    - zip_code (VARCHAR)
    - city (VARCHAR)
    - state (VARCHAR)
    - street (VARCHAR)
    - street_number (VARCHAR)

- **gr6_carts - 1:1 with gr6_orders, M:M with gr6_ames (Handles digital "Carts" that will include important information such as the customer's ID number and it's own Cart ID)**
    - cart_id PK (INT) AUTO INCREMENT
    - customer_id :FK (INT) ON DELETE SET NULL

- **gr6_orders - 1:1 with gr6_carts (Will be created once a "cart" or its items are purchased, stores the cart ID number, taxes, and total purchasing price)**
    - order_number: PK (INT) AUTO INCREMENT UNIQUE
    - cart_id : FK (INT)
    - total (DECIMAL)
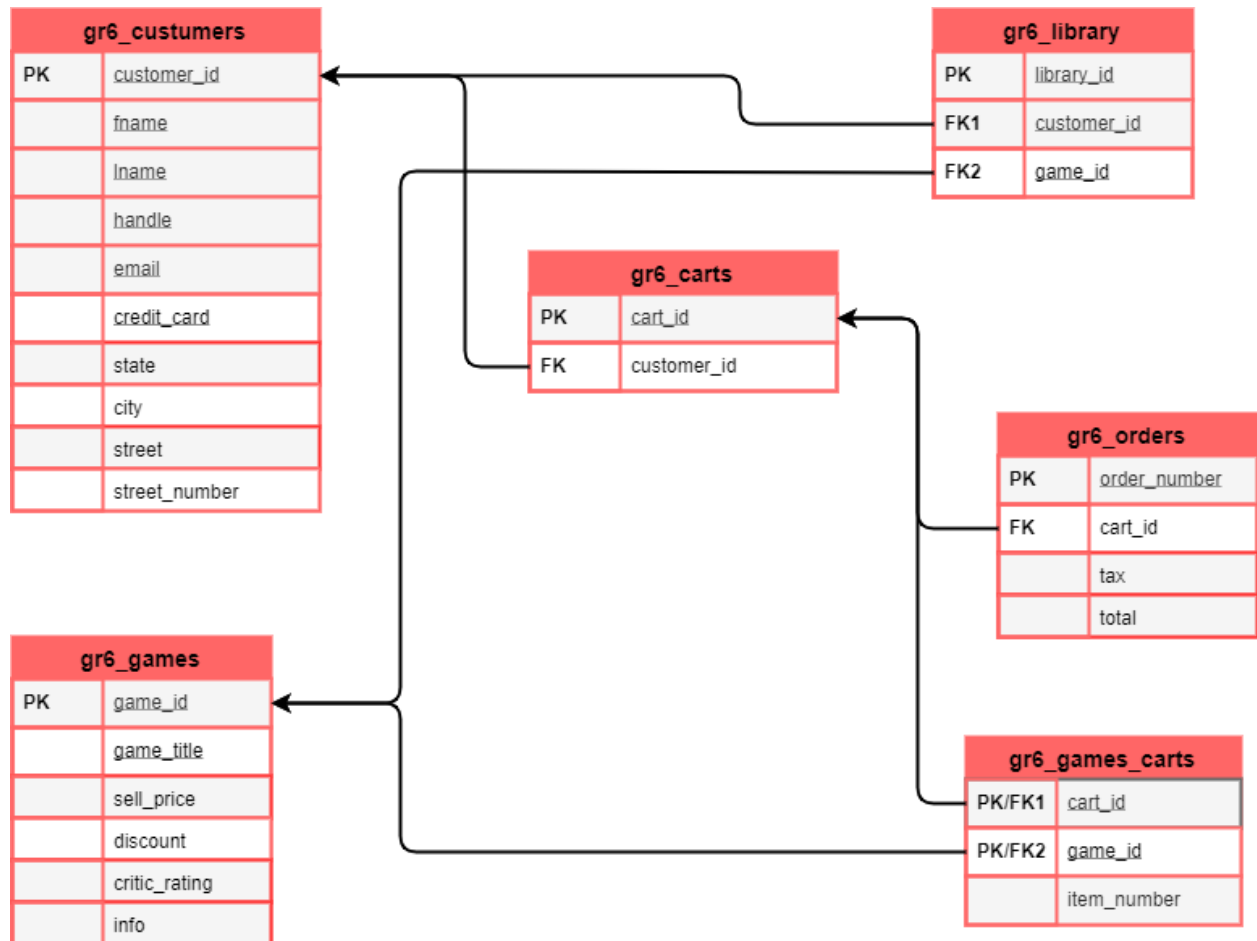   - tax (DECIMAL)

- **gr6_library - M:1 with gr6_customers (Will hold customer and game information such as Game ID, and Customer ID)**
    - library_id: PK (INT) AUTO INCREMENT
    - customer id: FK (INT) NULLABLE
    - game id: FK (INT) NULLABLE ON DELETE SET NULL

- **gr6_games_carts - 1:M with gr6_games and gr6_carts (Will also handle and include a Cart ID and Game ID like in gr6_carts but will also have item numbers and will be used to populate the "/carts" page)**
    - cart_id : PK/FK (INT)
    - game_id : PK/FK (INT) ON DELETE CASCADE
    - item_number (INT)

ER Diagram

gr6_customers
- customer_id
- fname
- lname
- handle
- credit_card
- state
- city
- street
- street_number

gr6_carts
- cart_id
- customer_id
- game_id
- item_number

gr6_orders
- order_number
- cart_id
- total
- tax

gr6_games
- game_id
- game_title
- sell_price
- discount
- critic_rating
- info

Schema

gr6_custumers

PK	customer_id
	fname
	lname
	handle
	email
	credit_card
	state
	city
	street
	street_number

gr6_library

PK	library_id
FK1	customer_id
FK2	game_id

gr6_carts

PK	cart_id
FK	customer_id

gr6_orders

PK	order_number
FK	cart_id
	tax
	total

gr6_games

PK	game_id
	game_title
	sell_price
	discount
	critic_rating
	info

gr6_games_carts

PK/FK1	cart_id
PK/FK2	game_id
	item_number

(SELECT/READ/UPDATE/DELETE/INSERT) Admin Page

Admin page

Add Game

| Game Title | Sell Price | Discount | Rating | Description |

Add

Update/Delete Game

		Game ID	Game Title	Price	Discount	Rating
	Update	1	Zelda	20.00	0.00	5
Delete	Update	2	Action Jackson	15.00	0.05	3
Delete	Update	3	Four Swords	3.00	0.00	2
Delete	Update	4	Bomberman	5.00	0.50	1
Delete	Update	14	E-Zero	20.00	0.10	1
Delete	Update	15	Pac Man	5.55	0.00	4
Delete	Update	17	Call Of Duty	50.00	0.00	1

Update/Delete Customer

		Cust ID	First Name	Last Name	Email	Handle	
Delete	Update	1	Jamie	Chaisson	Zomberder@mail.com	Zomberder	
Delete	Update	2	Casey	Levy	m@n.com	Orc Arms	
Delete	Update	3	T Rex	Dino	jurassic@meteor.com	Lizard	
Delete	Update	4	Sylver	Chaisson	awesome@mail.com	Awesome	
Delete	Update	5	Jim	Morrison	JM@g.com	The Kizard King	
Delete	Update	6	Katie	Morrison	JM@g.com	The Kizard Queen	
Delete	Update	7	Biff	Bifferson	JM@g.com	Blue	

Delete Game from Library

	ID	Customer Handle	ID	Game Title
Delete	4	Awesome	2	Action Jackson
Delete	4	Awesome	14	E-Zero
Delete	11	BadGuy	2	Action Jackson
Delete	11	BadGuy	3	Four Swords
Delete	12	Biff	3	Four Swords
Delete	7	Blue	3	Four Swords
Delete	7	Blue	1	Zelda
Delete	14	Drunk	14	E-Zero

Admin Page Contd.

Insert New Cart

For Whome are you making this cart?

[Add] [Zomberder ▼]

Open Carts

Cart ID	Customer Handle
25	hiccup
24	Zomberder
23	Blue
22	Drunk

Insert Game into cart

Which Cart / User do you wish to add which game too?

[Add] [25, hiccup ▼] [Zelda ▼]

Carts containing games

Cart ID	Sell Price
25	hiccup
23	Blue
22	Drunk
20	Orc Arms

Admin Add Order

Which Cart do you wish to turn to an order?

Carts which are not Orders

	Cart ID
[Add]	19
[Add]	22
[Add]	23

(INSERT) Create New Profile Page

(SELECT/READ/UPDATE/DELETE) User Profile Page - User logged in with options to Update or Delete

(SELECT/READ) Main Page/Game Page - User not logged in
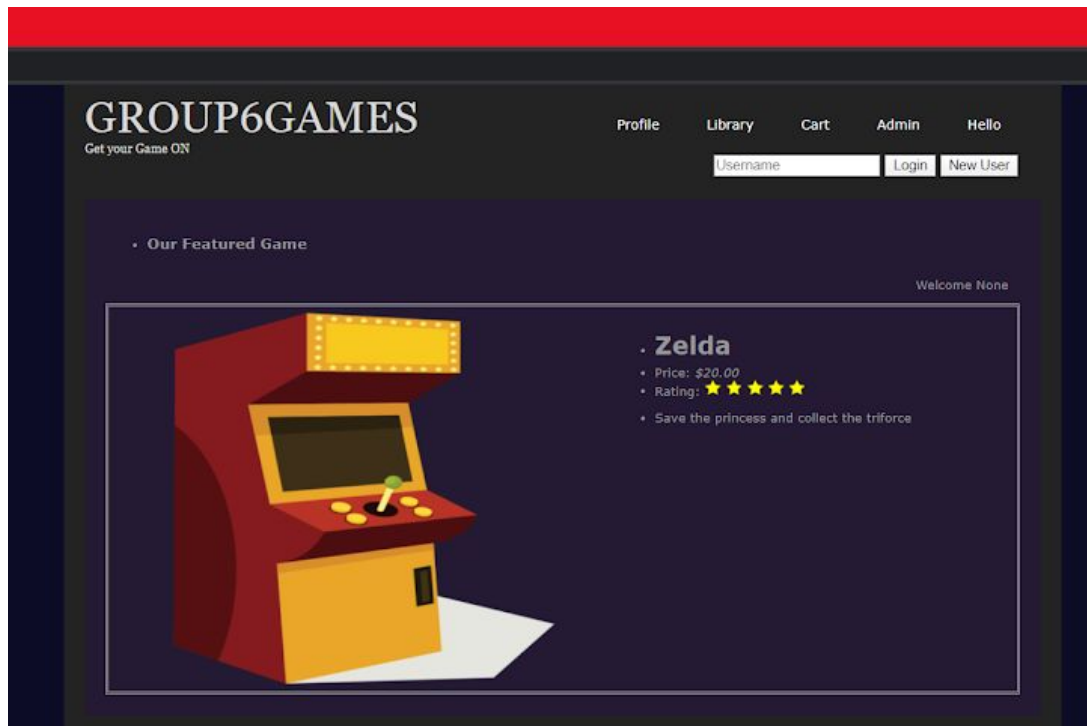
(SELECT/READ) Main Page/Game Page - User logged in, "Add to Cart" function included
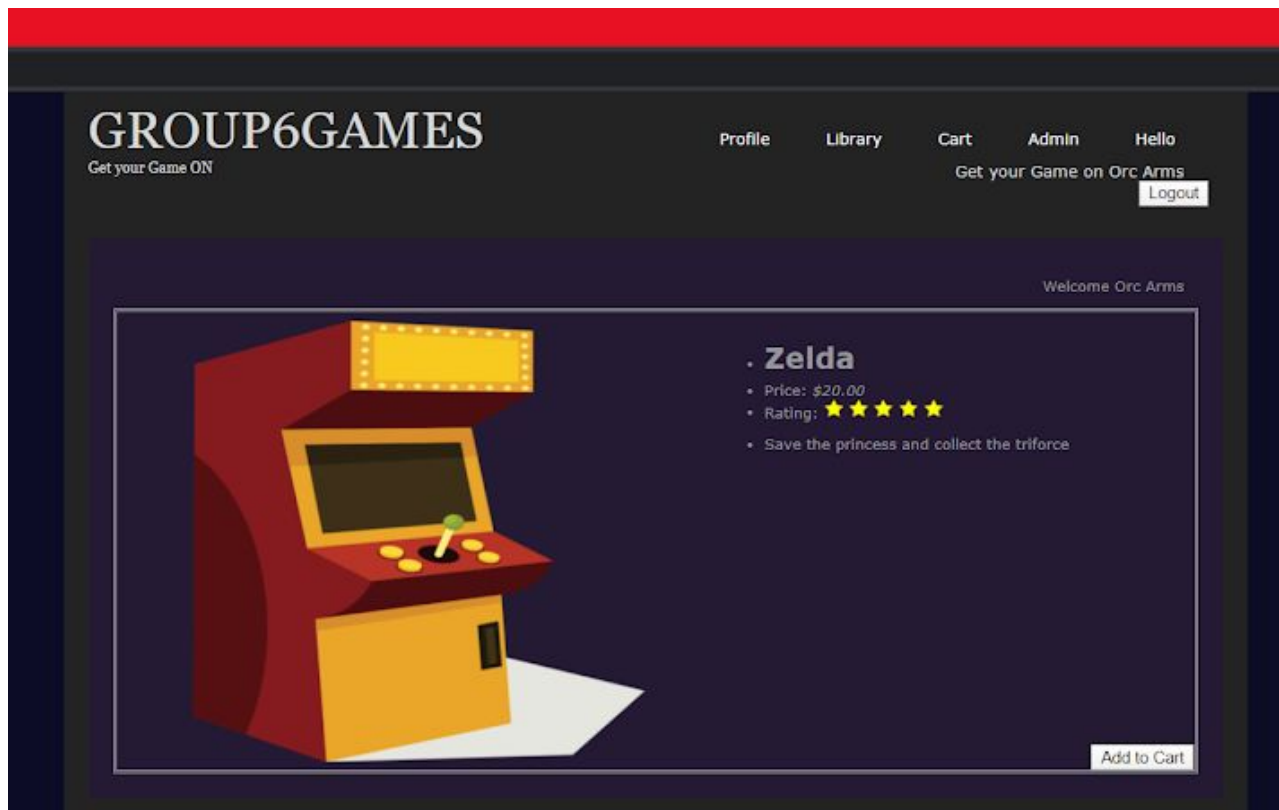
(SELECT/READ) User's Cart Page - With options to Remove or Purchase games

(SELECT/READ/INSERT) Order Page - Showing user's recent order and order history with tax and totals

(SELECT/READ) Search Page

(SELECT/READ) User's Library Page - Displaying all games purchased with option to Remove