

Vapor Game Store

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Website URL: <http://flip2.engr.oregonstate.edu:19023/>

Summary

Vapor is a gaming platform that distributes video games online to millions of users worldwide. For our database project, we chose the online gaming store called Vapor as our topic. The platform has over 70 thousand games available and has a large user base of millions of daily active players. Regarding data volume, Vapor processes an estimated 100,000 transactions a day, including purchases, downloads, and other user activities. The platform generates an estimated monthly revenue of \$50 million. This database is designed to handle a high volume of transactions efficiently and also provides support for managing customer information, transactions, product information, and sales data.

Through the adjustments and actions based on our colleague's feedback, our group was able to further develop our database project called Vapor Game Store. We made updates on both our outlines and ERD from nomenclatures and relationships to adding CRUDs and UI dropdowns. Upon these adjustments, our database became more consistent with the overall project requirements for this class.

In conclusion, from the initial version of our project to this final version, we realized how much we learned throughout the course, such as how to create DB tables and apply the CRUD methods to specific pages, and how to use the phpAdmin platform or command lines when applying to MySQL code.

Online Game Store

Team 65: Priscilla Xavier, Ryan Divino

a.) Overview

This is the database of Vapor Game Store, a digital game distribution service. Vapor is a gaming platform that distributes video games online to millions of users worldwide. The platform has over 70 thousand games available and has a large user base of millions of daily active players. In terms of data volume, Vapor processes an estimated 100,000 transactions a day, including purchases, downloads, and other user activities. The platform generates an estimated monthly revenue of \$50 million. The database is designed to handle a high volume of transactions efficiently and also provides support for managing customer information, transactions, product information, and sales data.

b.) Database Outline

Customers: records details of customers using the platform.

- customer_id: int, auto_increment, not NULL, PK
- email: varchar(50), not NULL
- password: varchar(50), not NULL
- phone: varchar(15)

Relationships:

1:M with UserPayments

1:M with Orders

Products: records product details (games, software, DLC, etc.)

- product_id: int, auto_increment, not NULL, PK
- title: varchar(50), not NULL
- description: varchar(255), not NULL
- genre: varchar(50), not NULL
- release_date: datetime, not NULL
- price: decimal(19,2)
- discount_id: int, FK

Relationships:

1:M with Discounts

1:M with OrderDetails

Discounts: records discounts and sale duration

- discount_id: int, auto_increment, not NULL, PK
- discount_name: varchar(50), not NULL
- percent: decimal(5,2), not NULL
- duration: varchar(50), not NULL
- active: bool, not NULL

Relationships:

1:M with Products

Orders: records customer id and total price of order

- order_id: int, auto_increment, not NULL, PK
- customer_id: int, FK
- total: decimal(19,2), NOT NULL

Relationships:

1:M Customers

1:M OrderDetails

OrderDetails: records orders and products (Intersection table)

- orderdetails_id: int, auto_increment, NOT NULL, PK
- order_id: int, FK
- product_id: int, FK

Relationships:

1:M with Products

1:M with Orders

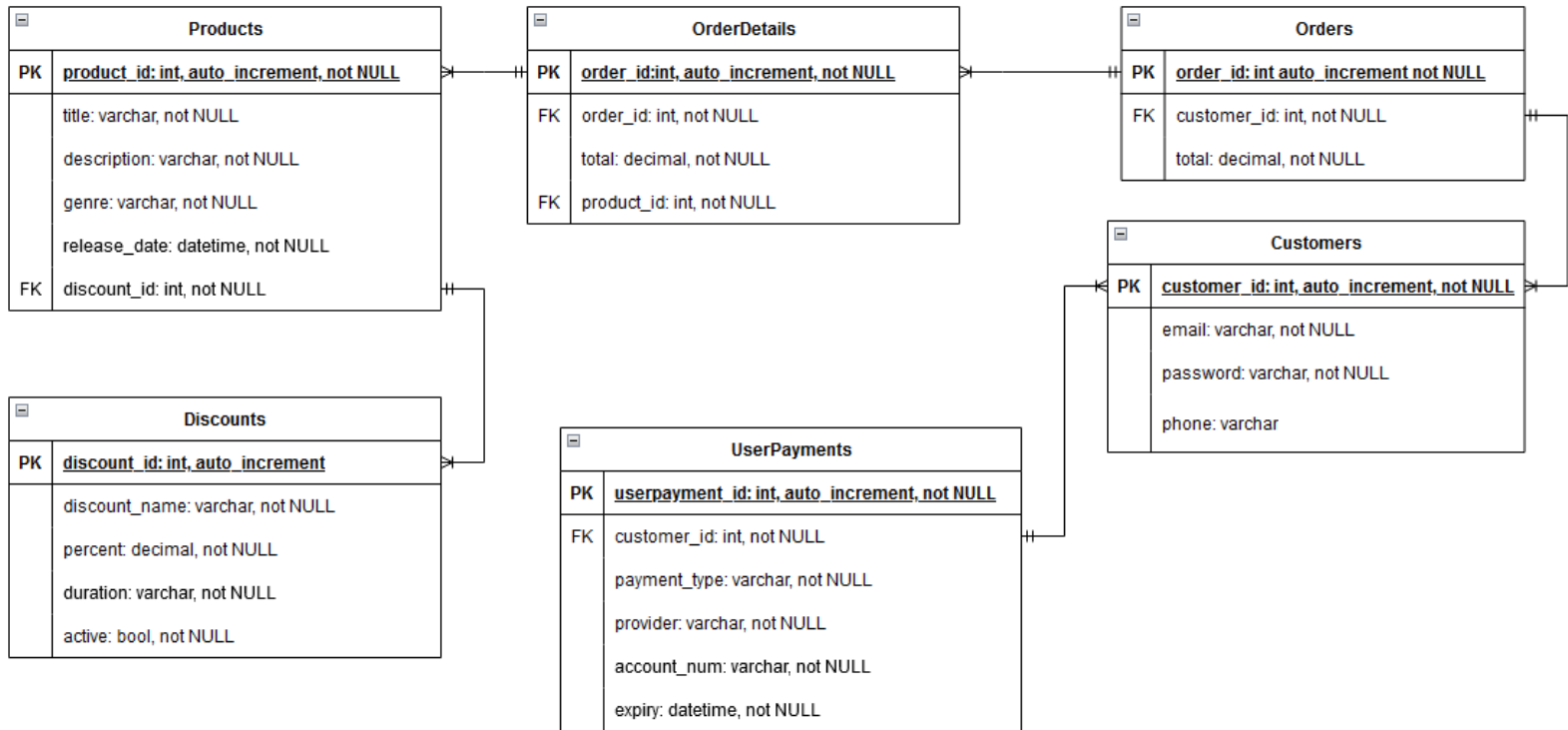
UserPayments: records customer payment and credit card information

- userpayment_id: int, auto_increment, not NULL, PK
- customer_id: int, not NULL, FK
- payment_type: varchar(50), not NULL
- provider: varchar(50), not NULL
- account_num: varchar(20), not NULL
- expiry: datetime, not NULL

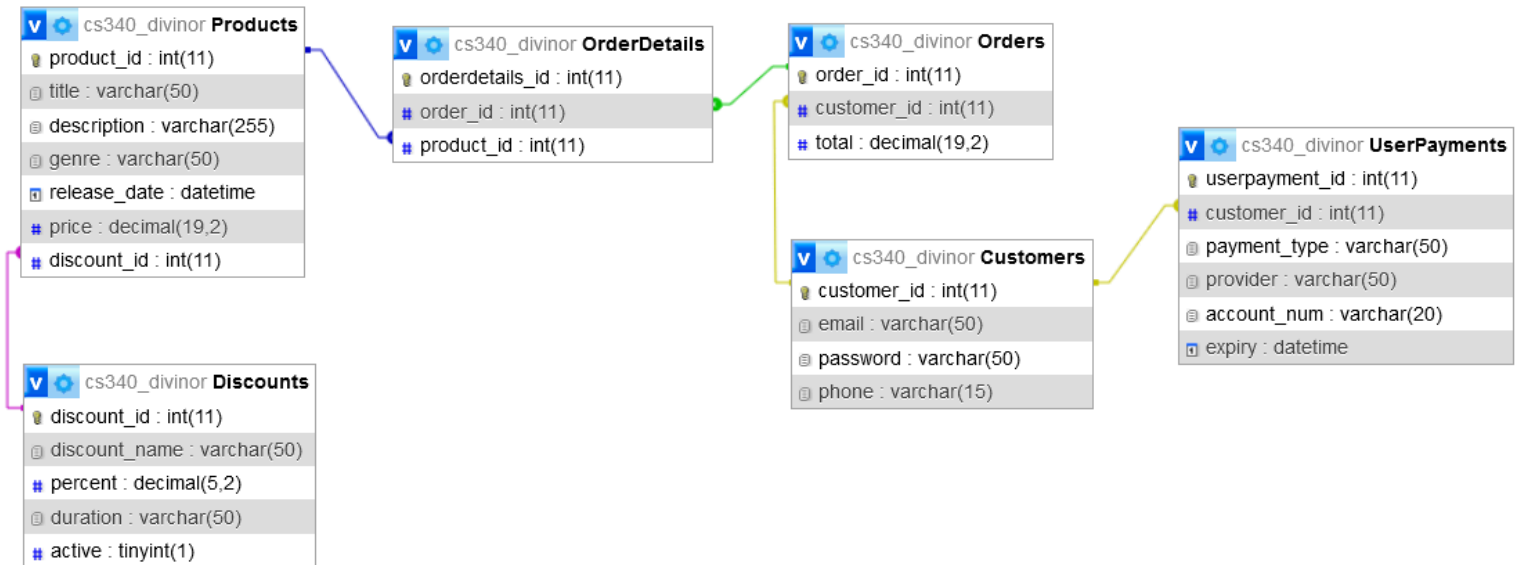
Relationships:

1:M with Customers

c.) Entity-Relationship Diagram (ERD):



d.) Schema



e.) Example Data

| Customers | | | |
|-------------|--|-------------|--------------|
| customer_id | email | password | phone |
| 1 | john@gmail.com | pass123 | 123-456-7890 |
| 2 | sarah@outlook.com | password456 | 987-654-3210 |
| 3 | mike@gmail.com | mypass789 | 111-222-3333 |
| 4 | emily@school.com | hunter2 | NULL |
| 5 | david@gmail.com | qwerty123 | 555-555-5555 |

| Discounts | | | | |
|-------------|---------------|------------------|-------------------|--------|
| discount_id | discount_name | discount_percent | discount_duration | active |
| 1 | Black Friday | 0.35 | 14 days | FALSE |
| 2 | Winter Sale | 0.20 | 14 days | FALSE |
| 3 | Spring Sale | 0.50 | 7 days | FALSE |
| 4 | Launch Sale | 0.10 | 7 days | TRUE |
| 5 | RPG Fest | 0.30 | 14 days | TRUE |

| Products | | | | | | |
|------------|-----------------|--|---------------|--------------|----------|-------------|
| product_id | title | description | genre | release_date | price | discount_id |
| 1 | Buddyworld | Open world creature-collector game. | Adventure | 1/18/2024 | \$ 29.99 | 4 |
| 2 | Sundew Valley | Pixel farming-simulator RPG game. | Farming Sim | 2/26/2016 | \$ 14.99 | NULL |
| 3 | Baldur's Door 3 | RPG game set in Dungeons & Dragons universe. | RPG | 8/3/2023 | \$ 59.99 | 5 |
| 4 | ELDERLY RING | Difficult fantasy-action RPG game | Souls-like | 2/24/2022 | \$ 59.99 | NULL |
| 5 | Summit Legends | MMO Battle-Royale FPS game | Battle Royale | 11/4/2020 | \$ - | NULL |

Orders

| order_id | customer_id | total | |
|----------|-------------|-------|-------|
| 1 | 1 | \$ | 41.99 |
| 2 | 2 | \$ | - |
| 3 | 3 | \$ | 14.99 |
| 4 | 4 | \$ | 26.99 |
| 5 | 5 | \$ | 59.99 |

OrderDetails

| orderdetails_id | order_id | product_id |
|-----------------|----------|------------|
| 1 | 1 | 3 |
| 2 | 2 | 5 |
| 3 | 3 | 2 |
| 4 | 4 | 1 |
| 5 | 5 | 4 |

UserPayments

| userpayment_id | customer_id | payment_type | provider | account_number | expiry |
|----------------|-------------|--------------|------------------|------------------|-----------|
| 1 | 1 | Credit Card | American Express | 1234567890123450 | 2/1/2026 |
| 2 | 2 | PayPal | PayPal Inc. | 9876543210123450 | 6/1/2029 |
| 3 | 3 | Credit Card | Visa | 5555666677778880 | 9/1/2027 |
| 4 | 4 | Debit Card | MasterCard | 1111222233334440 | 4/1/2025 |
| 5 | 5 | Credit Card | Discover | 4444333322221110 | 11/1/2029 |