PopTarts Project Summary

1. Data Description - We will store Steam data from the provided dataset in our database. The original dataset has 78 columns; we will split the data into multiple relational tables linked by the game name, including tables for game genre, game price, and platform support. Additionally, we will store user data, including a table with basic user information and a table with purchases. We will also store reviews that users can make on purchases they have made. Finally, we will store fake inventory data for each game. We intend to start off with some randomized number of copies for each item which can be decreased when games are purchased or increased by the admin role when there are inventory restocks. Each time a user makes a purchase of a game, we will decrease the inventory value by 1. For the game data, we will store a main table with a productId along with the price, discount if applicable, and the current inventory. Secondly, we will store a table that has more detailed information on the product, such as name, tech requirements, and description. Additionally, we will store a table that has the platforms supported by the game and store a table that has the genre of the game. For the user data, we will store a user's login information and username, along with a user ID to match with purchases. We will additionally store a separate table with the user ID, username, and password for log-in security. For the purchases data, we will store a table for the bill with a bill ID, customer ID, and total price of the games that the customer purchased. We will also store a table for the bill items with a bill ID, bill items ID, product ID, number of items purchased, and purchasePrice. For the user's cart, we will store a table with cart items that contains a customer ID, item number, product ID, and count. For the reviews table, we will store the purchase ID along with attributes such as rating and review text.
2. Basic Functions - Our web application functions as a basic e-commerce platform. The main page will display a list of games that users are able to purchase, along with the game price and the number of games in the inventory. Users will be able to click on a game to see a more detailed description of it, including genre and which platforms are supported. Users will be able to search for games that fit a specific genre, can be played on a specific platform, have a specific price, or any combination of those criteria. Users will have the ability to log in. Additionally, users will be able to see their profile, which will include a purchase history. Finally, users will be able to make a fake purchase of a game, which will update their purchase history and the site's inventory count for the game.
3. Creative Components
    a. Admin View: The first creative component that we brainstormed to improve the functionality and usefulness of our web application is having an admin

view and a user view. This will allow business owners, the target market of the open-source aspect of our application, to log in as administrative users and edit the setup of the database to best fit their needs.

b. Recommendation function: A creative component that can improve the functionality of the application is the recommendation system. A recommendation system uses user data, such as previous purchases and browsing history, to suggest new games that the user may be interested in. This can be achieved by analyzing the user's purchase history, the games they have played, and their favorite genres. Based on this information, the recommendation system can generate a list of games that are similar to ones the user has already enjoyed, or it can suggest games that are popular among users with similar interests.One approach could be to use SQL queries to analyze the data stored in the user and game tables and make suggestions based on the relationships between the data.
c. Wishlist: Another creative function is wishlist. This allows users to save games they are interested in but haven't purchased yet. The wishlist can be displayed on the user's profile page and can be accessed easily. To implement this feature, we can create a new database table to store the user's wishlist. The table can contain columns for the user ID, the game name, and the date the game was added to the wishlist. To add a game to the wishlist, the user simply clicks on a button next to the game's page, and the game is added to the cart. The wishlist can be displayed on the user's profile page and can be accessed easily.

4. Project Title - E-commerce and Inventory Management Application - Gamestock
5. Project Summary - The project aims to create an e-commerce website that specializes in selling games. The website will have a user-friendly interface and allow customers to browse and purchase games:
    i. <u>Inventory Management</u>:
        1. The website will keep track of inventory levels of the games. It will automatically update the availability of games based on the stock levels. The inventory management system will also be used to keep track of sales and generate reports on the performance of different products.
    ii. <u>Features</u>:
        1. User-friendly interface for browsing and purchasing Steam games.
        2. Real-time inventory management system.
        3. Option for customers to add games to their wishlist and receive notifications when they become available.

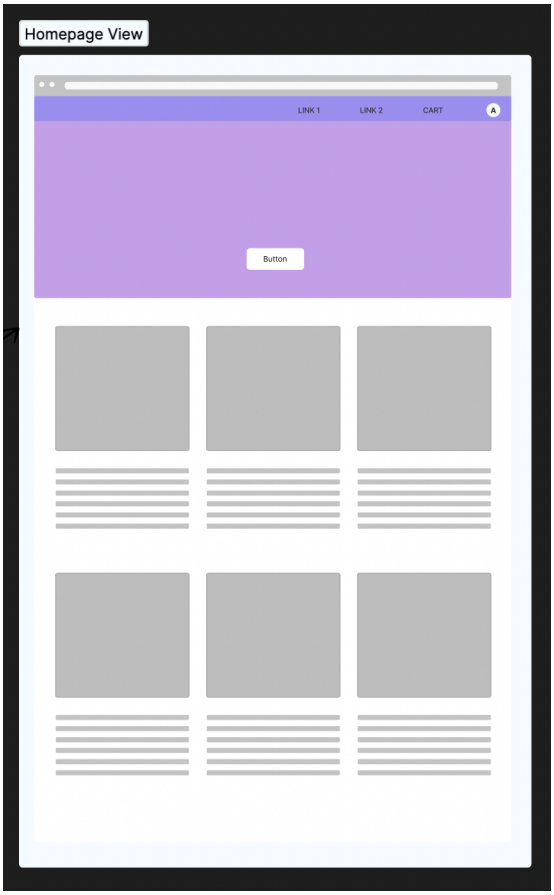
4. Ability to search for specific games and filter games based on genre/platform/price.
5. Ability to view past purchases and profile information

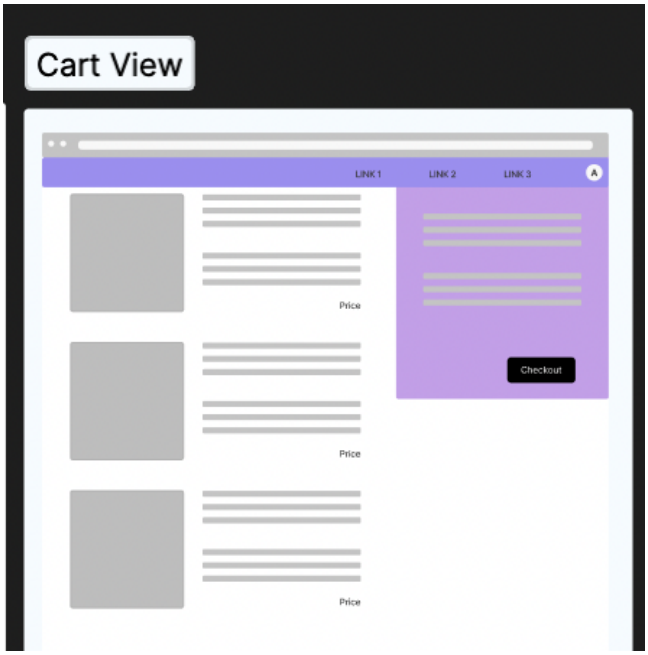
iii. Target Audience:

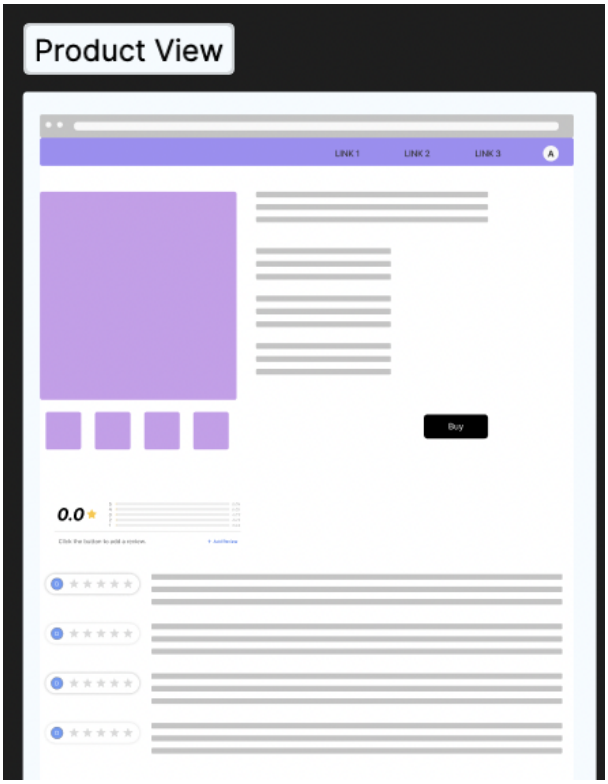
1. The website will target Steam gamers who are interested in purchasing games. It will provide a convenient and accessible platform for customers to research and purchase their favorite games.
2. The open-source aspect of our project will target small businesses and aim to provide them with an opportunity to set up an e-commerce website for their own products.

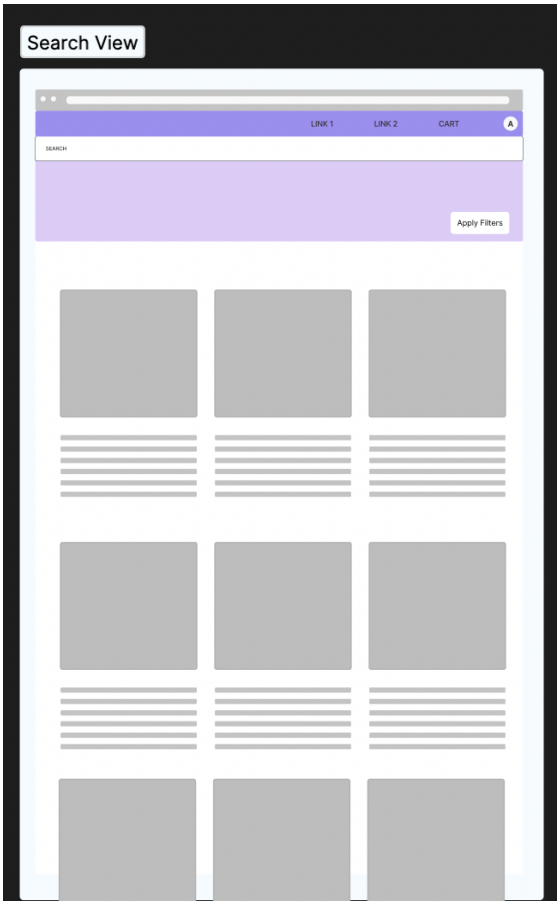
6. Description - We want to create a database of the Steam game data, allow users to make purchases of games in the system, and allow users to search for specific games or filter by game genre, game price, or what platforms the game can be played on. Although our web application will be created to store the game data, we want to include ways to generalize the database for the storage of any product so that small business owners can create their own e-commerce site using our platform. For this purpose, the “purchases” on our web application will not actually purchase the game, but they will be reflected in our site’s inventory records. In real-world implementation, businesses would be able to actually sell the products, but as we don’t actually own the Steam games to sell, there will not be real monetary purchases in our implementation. Small businesses often have a difficult time creating an online store without spending money and relinquishing control to another company; we want to provide an open-source option that anyone can access and customize to best fit their needs.
7. Usefulness - Our chosen application is useful because we are planning to make our code open-source and available as a template for business owners who want to create an e-commerce website for their business. We will include ways for other creators to customize the database for their needs. There are many similar websites out there; for example, Walmart and Amazon. However, ours is useful in a unique way because it allows other businesses to use our template to create their own web application. Additionally, users could utilize our application to plan out their game purchases, including price, availability, and variety of games.
8. Realness - We will be using Steam game data from the list of provided datasets for extra credit. We will also be using user data, both manual and auto-generated, to test out the functionalities of our web application and our ability to correctly store it. We will continually add user data as we test our application.

9. Functionality
    a. UI Mockup






Product View
LINK 1
LINK 2
LINK 3
Buy
0.0


Search View
LINK 1
LINK 2
CART
SEARCH
Apply Filters

b. Work Distribution
    i. Sam - Product page and cart
    ii. Deeya - Admin data handling and setup
    iii. Frank - User data handling and profile
    iv. Rahul - Product page and cart
    v. We will all work together on the front-end aspects of the project, with Sam and Deeya focusing more heavily on the web design components.