كلية الهندسة
College of Engineering
QATAR UNIVERSITY جامعة قطر

Arena 51 - Gaming E-commerce

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Web Project - Phase 1
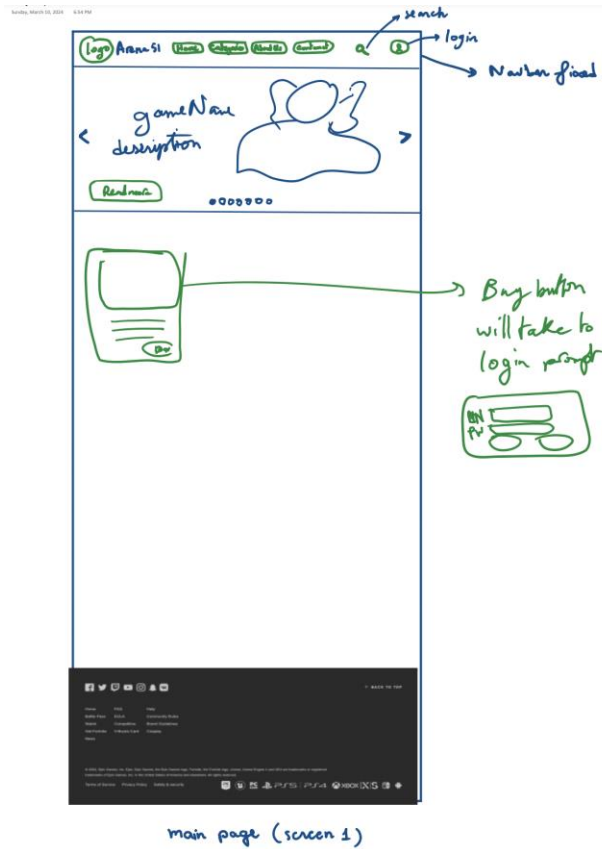
Github Repo link: Arena 51 github

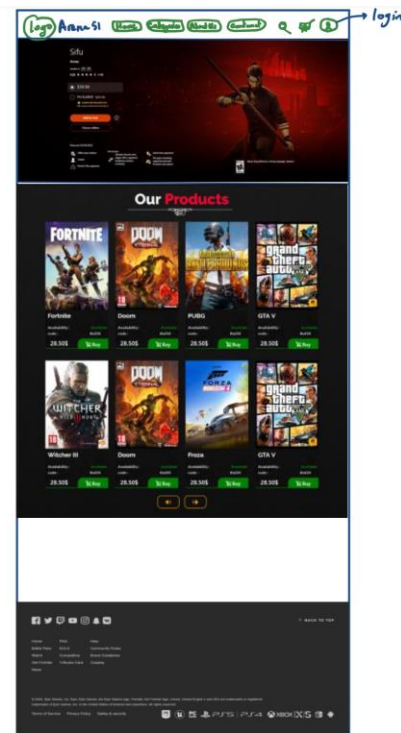**Instructor: Mucahid Kutlu**
Submission Date: 31-3-2024

Design the App Web UI and navigation.

You may design the UI wireframe (sketch) to decide the UI components and the layout either on paper or use a design tool such as https://www.figma.com
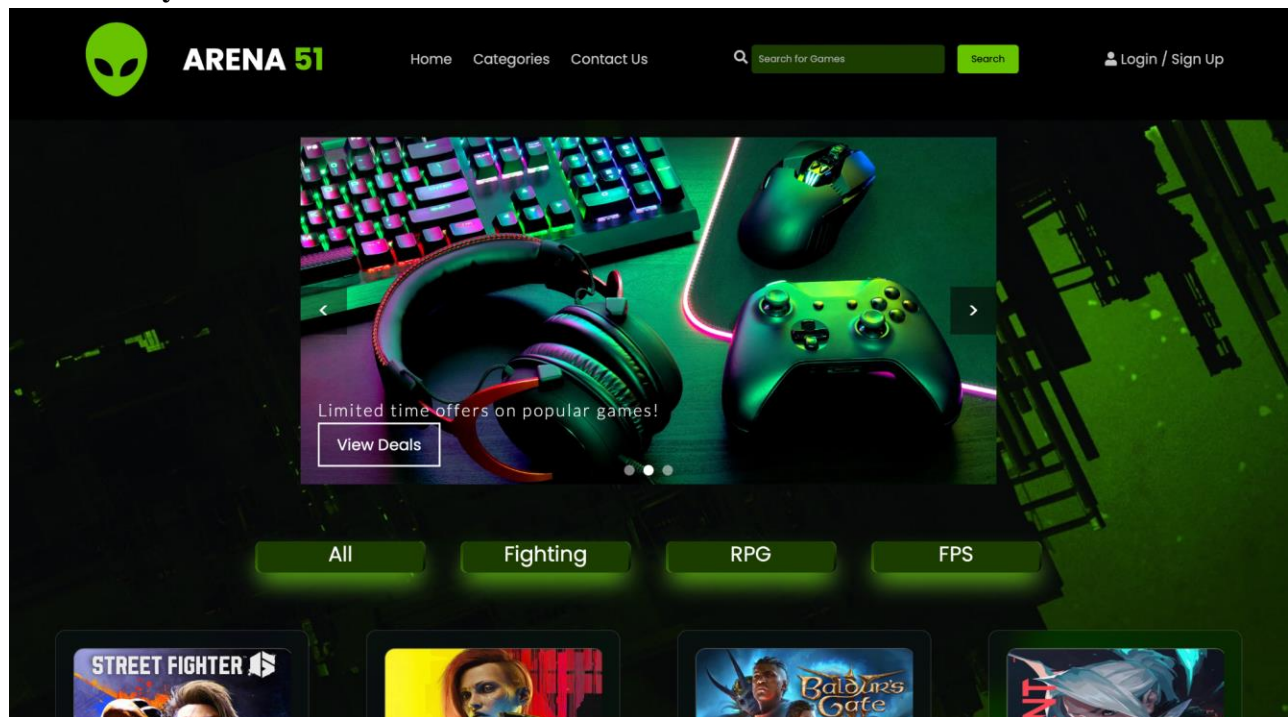

main page (screen 1)   login page (screen 2)

For each use case, implement the app UI and navigation using HTML, CSS and JavaScript. The pages should comply with Web user interface design best practices. Also remember that 'there is elegance in simplicity'. Each page should be responsive to support at least 2 layouts one for mobile and another for PC.

ARENA 51

Home

Categories

Contact Us

Search for Games

Search

Login / Sign Up

All

Fighting

RPG

FPS

STREET FIGHTER 6

Fighting game of the year 2024

DETAILS

BUY NOW

CYBERPUNK 2077

RPG game of the year 2024

DETAILS

BUY NOW

TEKKEN 8

best Sony PlayStation game award

DETAILS   BUY NOW

OVERWATCH 2

Winner Webby Award

DETAILS   BUY NOW

Design and implement the app navigation to allow the user to navigate from one page to another in an intuitive and user-friendly way to achieve the app use cases.

In our application, we aim to provide a seamless and intuitive experience for both buyers and sellers. In Use Case 1, we demonstrate the importance of secure authentication by showcasing scenarios where users attempt to log in. First, we illustrate that incorrect username-password combinations result in login failures, ensuring the integrity of user accounts. Then, we showcase successful login scenarios for both customers and sellers, highlighting the diverse user roles our platform accommodates. In Use Case 2, we explore the search functionality, demonstrating instances where no items are available, some items are available, and multiple searches yield different results. Use Cases 3 and 4 delve into the purchasing process, illustrating how attempting to purchase without authentication or lacking sufficient funds results in failures, while successful purchases seamlessly integrate into the user's purchase history. Finally, in Use Cases 5 and 6, we exhibit the seller's journey by uploading an item for sale, showcasing its visibility in search results and available item lists, and dynamically updating item quantity upon successful sale, ensuring a dynamic and responsive marketplace environment. Through these varied use cases, we aim to demonstrate the robustness and versatility of our platform in catering to the needs of both buyers and sellers, fostering a thriving and interconnected community of users.

For each use case, design and implement the Web API and the server-side data access repositories to read/write the app data from/to the data store. For phase 1, you can read/write to simple JSON files that you need to create and initialize with some sample data.

In this project, we developed a web application for an online gaming store called "Arena 51" using HTML, CSS, and JavaScript. Users can browse games, make purchases, and check their purchase history with this application. We implemented client-side data storage and retrieval using JavaScript's `localStorage` to ensure a smooth user experience. We were able to store user data, purchase history, and game data locally in the user's browser as a result. Relevant information, including game details, transaction history, and customer details, is serialized into JSON format and saved in the browser's `localStorage` when a user logs in or makes a purchase. By doing away with the requirement for a conventional web server and database, this method made the application lightweight and simple to set up. The application keeps user state and transaction history across sessions even in the absence of a server-side data store, giving users a responsive and consistent experience. We were able to show the adaptability and effectiveness of contemporary web development techniques by utilizing client-side storage, which provides a workable solution for small-scale web applications with modest data storage needs.

Application design documentation should include the Entities, Repositories and Web API class diagrams.

Game:

Attributes:

- name **(string): The name of the game.**
- image **(string): The URL of the game's image.**
- description **(string): Description of the game.**
- price **(number): Price of the game.**
- quantity **(number): Quantity available.**
- categories **(array of strings): Categories to which the game belongs.**

User:

Attributes:
- username **(string): Username of the buyer/seller**
- password **(string): Password of the buyer/seller**

PurchaseDetails:

Attributes:

- quantity **(number): Quantity of the purchased item.**
- phoneNumber **(string): Phone number of the buyer.**
- address **(string): Shipping address of the buyer.**
- zipCode **(string): Zip code of the shipping address.**

Seller:

Attributes:

- title **(string): The title of the game.**
- image **(string): The URL of the game's image.**
- description **(string): Description of the game.**
- price **(number): Price of the game.**
- quantity **(number): Quantity available.**
- category **(string): Category to which the game belongs.**

Visual Paradigm Standard(Qatar University)

User
- username
- password

Game
- name
- image
- description
- price
- quantity
- categories

Seller
- title
- description
- category
- price
- quantity
- image

Purchase
- quantity
- phoneNumber
- address
- zipCode

contactUs
- name
- email
- message
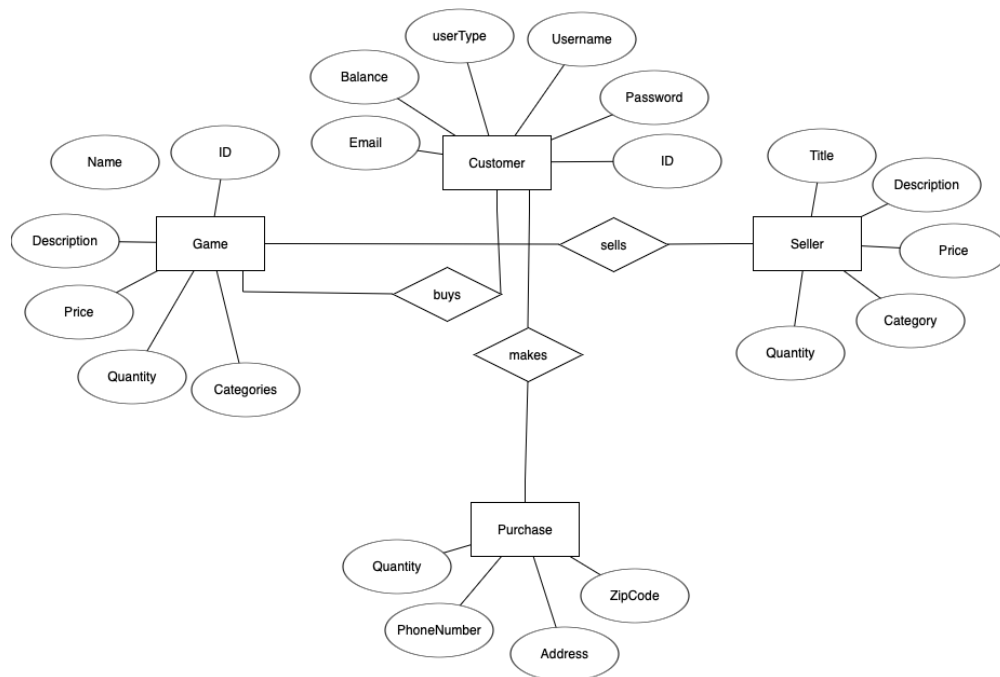
In the ecosystem where Users engage in Purchases, a pivotal relationship emerges between the User and PurchaseDetails classes. This connection underscores the essence of transactions, where Users, identified by their unique credentials, interact with the system to procure goods or services. Each Purchase, encapsulated within PurchaseDetails, serves as a tangible manifestation of this interaction, documenting essential transactional details such as quantity, shipping address, and contact information. Moreover, a symbiotic relationship unfolds between PurchaseDetails and the Game class, signifying the fundamental essence of commerce. Games, the commodities being transacted, are intricately linked to PurchaseDetails, delineating the specific product acquired during the transaction. Furthermore, an additional dimension is introduced with the presence of a Seller, enriching the marketplace ecosystem. Sellers, acting as purveyors of games, facilitate transactions by offering products for sale, thereby establishing a dynamic interplay between Buyers, Sellers, and the goods being transacted.

Document the app testing using screen shots illustrating the results of testing.

Login Use Case
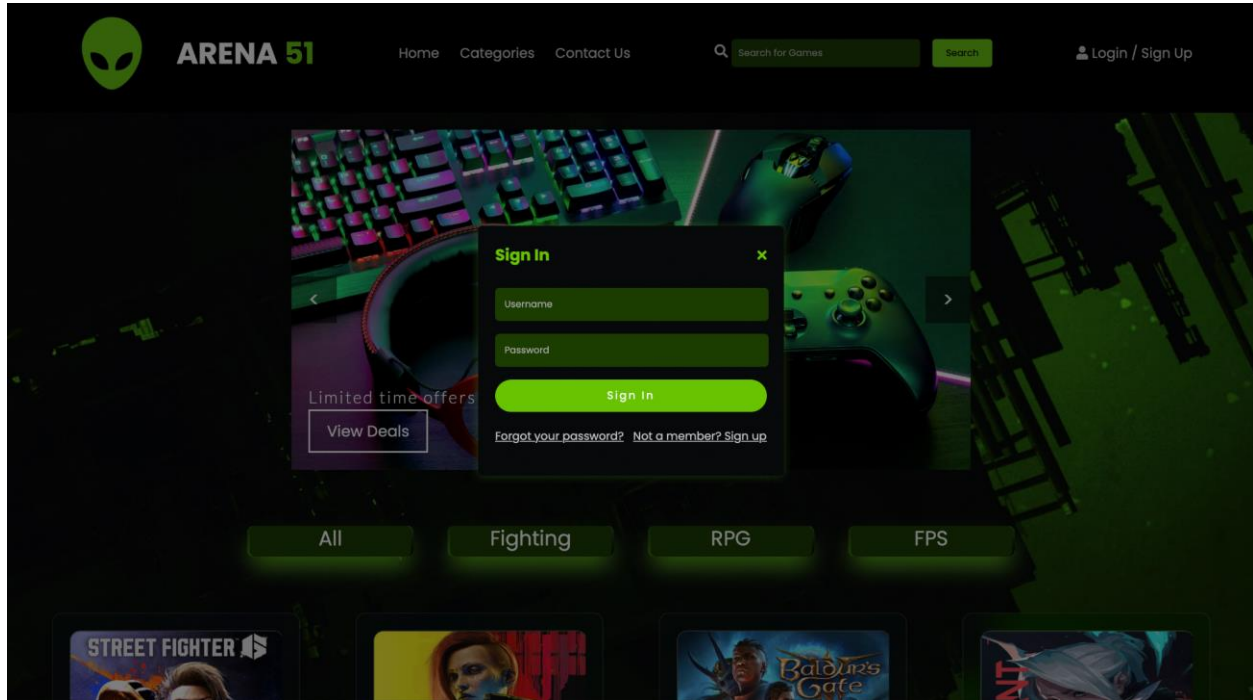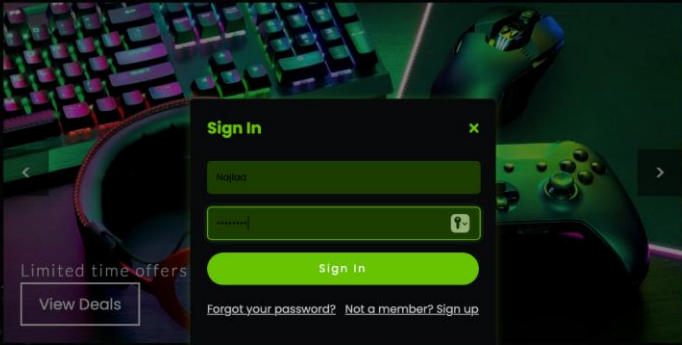
ARENA 51

Home   Categories   Contact Us

Search for Games   Search

Login / Sign Up

Sign In   ✕

Najlaa

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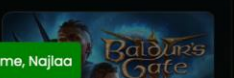
Sign In

Forgot your password?   Not a member? Sign up

Limited time offers

View Deals

All   Fighting   RPG   FPS

STREET FIGHTER   Login successful! Welcome, Najlaa   Baldur's Gate

ARENA 51

Home   Categories   Contact Us

Search for Games   Search

Najlaa   Logout
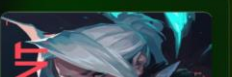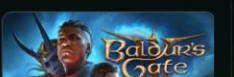
Limited time offers on popular games!

View Deals

All   Fighting   RPG   FPS

STREET FIGHTER   Baldur's Gate

Purchase Use Case

All   Fighting   RPG   FPS

STREET FIGHTER 6
Fighting game of the year 2024
DETAILS   BUY NOW

CYBERPUNK 2077
RPG game of the year 2024
DETAILS   BUY NOW

BALDUR GATE 3
Game of the year 2024
DETAILS   BUY NOW

VALORANT
5v5 character-based tactical
DETAILS   BUY NOW

PURCHASE DETAILS

Quantity:

1

Phone Number:

5555 5555

Shipping Address

Address:

Qatar

Zip Code:

0000

Confirm Purchase

One Item is bought. Redirection to Purchases History

PURCHASE HISTORY

Phone	Address	Zip Code	Item Name	Price	Quantity
5555 5555	Qatar	0000	Cyberpunk 2077	60 $	1

Seller Use Case

ARENA 51   Seller Home Page   Sell New Game   Contact Us   🔍 Search for Games   Search   Fatma 👤   Logout

GAMES YOU ARE SELLING

Sell New Game

⬆ Back to Top   Facebook Twitter Instagram   Internet Service Terms   Arena 51 Terms & Conditions   Cookie Policy   Support   En (US)   Ar North America ⬍

ARENA 51   Seller Home Page   Sell New Game   Contact Us   🔍 Search for Games   Search   Fatma 👤   Logout

GAMES YOU ARE SELLING

Sell New Game

⬆ Back to Top   Facebook Twitter Instagram   Internet Service Terms   Arena 51 Terms & Conditions   Cookie Policy   Support   En (US)   Ar North America ⬍

ARENA 51

Seller Home Page   Contact Us

Search for Games   Search

Fatma   Logout

Game Title

Overwatch

Description

video game

Category:

Fighting

Price

20

Quantity

1

Image

Great, your files are selected. Keep on.

UPLOAD GAME

ARENA 51

Seller Home Page   Contact Us

Search for Games   Search

Fatma   Logout

Game Title

Overwatch

Description

video game

Category:

Fighting

Price

20

Quantity

1

Image
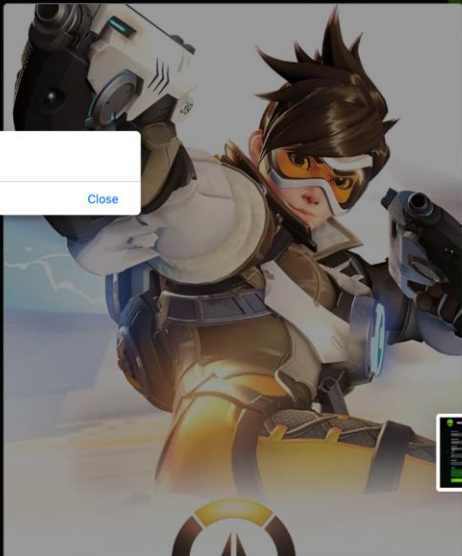
Great, your files are selected. Keep on.

UPLOAD GAME

New game added successfully!

Close