

Project Deliverable 2 – Documentation and Coding

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2.1 Introduction

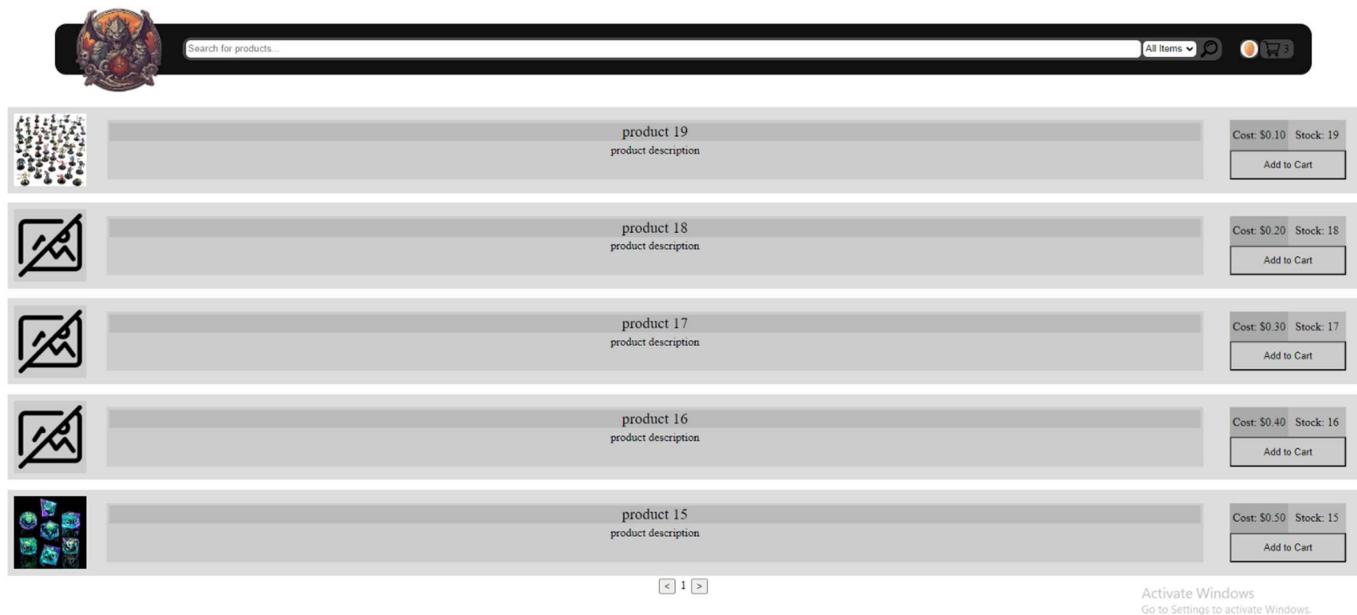
This project has been the bane of my existence the last few weeks. I sincerely hope that whoever wrote this project specification reconsiders their career path, or at the very least comes to the realization that their module is not the only module in this degree, as the project specification was ridiculously broad, and lacking specificity. The requirement for an introduction in the second deliverable when I already crafted God-tier lore in my first deliverable is a needless attempt to flesh out an already bloated project. I lost months, maybe even years of my lifespan over this project. I now have less hair than I did at the start. I am more than willing to throw away 2 marks over this introduction, and I'm sure it's not even close to the only marks I'll lose for this nonsense project.

2.2 Prototyping

Literally why do we need two prototypes? Does Eduvos encourage, nay, require their students to get it wrong the first time? What am I saying, I've come to expect mediocrity from Eduvos at this point. Their website is so broken I'm convinced one of their graduates wrote it.

a. Prototype 1.

Desktop Store:



Desktop Registration:

Register:

Name:

Email:

Cellphone:

Address:

Username:

Password:

Retype Password:

Remember me

Already have an Account? [Login](#)

Activate Windows
Go to Settings to activate Windows.

Desktop Login:



Login:

Username:

Password:

Remember me

New to DD&D? [Register](#)

Activate Windows
Go to Settings to activate Windows.

Desktop Cart:

The screenshot shows a desktop application window for a shopping cart. At the top, there's a header bar with a logo, a search bar labeled "Search for products.", and a navigation bar with "All Items" and a shopping cart icon showing 3 items. Below the header, there are three product items listed:

- product 19**
product description
Cost: \$0.10 Quantity: 2
Total Cost: \$0.20
- product 18**
product description
Cost: \$0.20 Quantity: 6
Total Cost: \$1.20
- product 16**
product description
Cost: \$0.40 Quantity: 5
Total Cost: \$2.00

At the bottom of the window, there's a "Checkout" button and a note about activating Windows.

Desktop Landing Page:

The screenshot shows a desktop application window for a landing page. At the top, there's a header bar with a logo, a search bar labeled "Search for products.", and a navigation bar with "All Items" and a shopping cart icon showing 3 items. Below the header, there's a section titled "Account Information:" containing a table of account details:

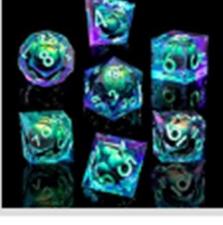
Name	Egg Meister
Email	krohnusmelavea0@gmail.com
Cellphone	
Address	15 Nunya Business Ave, Johannesburg
Username	EggMeister
Password	*****

Below the table is a "Deactivate Account" button. At the bottom of the window, there's a note about activating Windows.

Mobile Store:



Search for products... [All Items](#) 

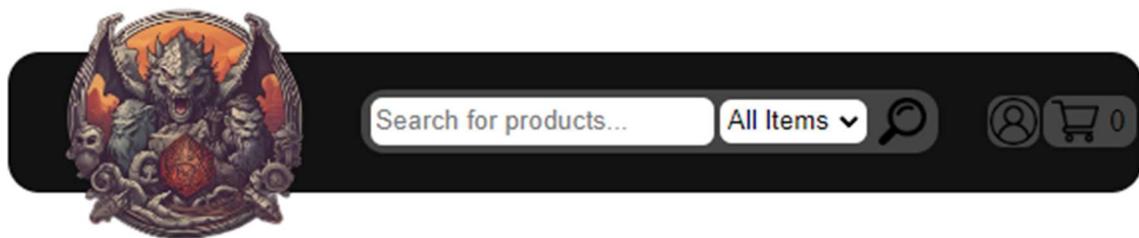
	<p>product 19 product description</p>	Cost: \$0.10 Stock: 19	Add to Cart
	<p>product 18 product description</p>	Cost: \$0.20 Stock: 18	Add to Cart
	<p>product 17 product description</p>	Cost: \$0.30 Stock: 17	Add to Cart
	<p>product 16 product description</p>	Cost: \$0.40 Stock: 16	Add to Cart
	<p>product 15 product description</p>	Cost: \$0.50 Stock: 15	Add to Cart

< 1 >

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Mobile Login:



Login:

Username:

Password:

Remember me

New to DD&D? [Register](#)

Mobile Registration:

Register:

Name:

Email:

Cellphone:

Address:

Username:

Password:

Retype Password:

Remember me

Already have an Account? [Login](#)

Mobile Cart:



Search for products... All Items 

	product 19 product description	Cost: \$0.10	Quantity: <input type="text" value="2"/>
		Total Cost: \$0.20	
	product 18 product description	Cost: \$0.20	Quantity: <input type="text" value="6"/>
		Total Cost: \$1.20	
	product 16 product description	Cost: \$0.40	Quantity: <input type="text" value="5"/>
		Total Cost: \$2.00	

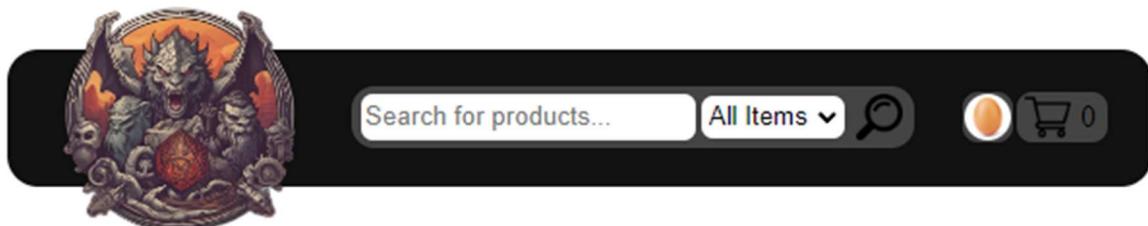
Mobile Account Info:

The screenshot shows a mobile application interface. At the top is a dark header bar featuring a circular logo with a dragon-like creature on the left, a search bar with placeholder text "Search for products...", a dropdown menu labeled "All Items", a magnifying glass icon, and a user icon with a notification badge showing the number "3". Below the header is a large, semi-transparent button with rounded corners containing the text "Account Information:" in a large, serif font. Underneath this button is a table with a light gray border and alternating row colors. The table contains the following data:

Name	Egg Meister
Email	krohnusmelavea0@gmail.com
Cellphone	
Address	15 Nunya Business Ave, Johannesburg
Username	EggMeister
Password	*****

At the bottom of the table area is a rectangular button with a thin white border containing the text "Deactivate Account" in a small, sans-serif font.

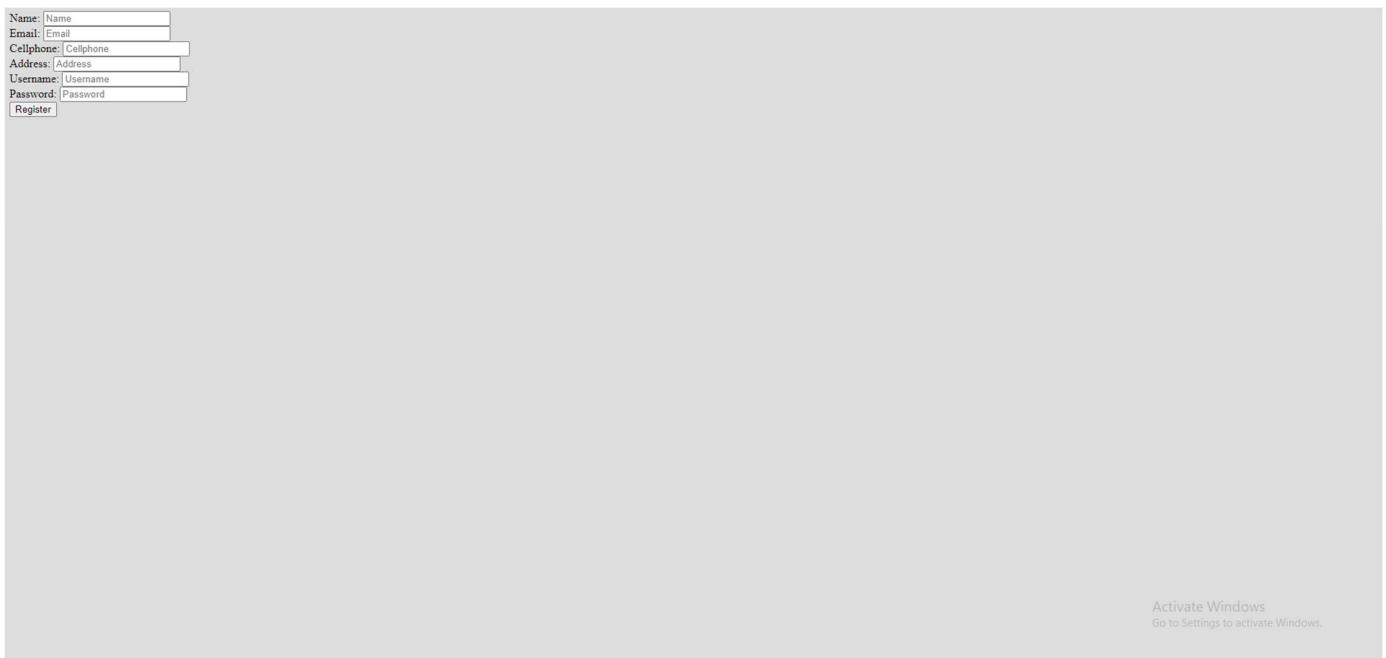
Mobile Landing Page:



ddnd.crabdance.com

b. Prototype 2.

Desktop Registration:



A screenshot of a desktop registration form. At the top left, there are six input fields with labels: Name, Email, Cellphone, Address, Username, and Password. Below these fields is a 'Register' button. In the bottom right corner of the form area, there is a small message: 'Activate Windows Go to Settings to activate Windows.'

Name: Name

Email: Email

Cellphone: Cellphone

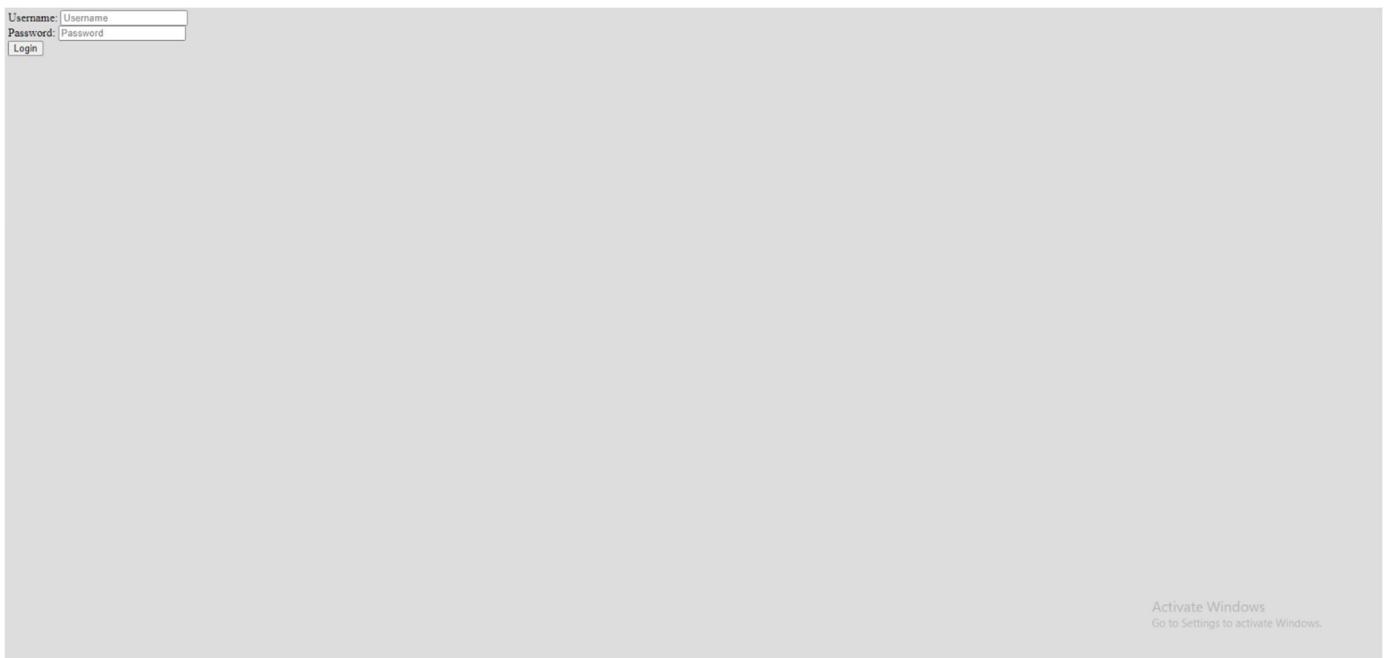
Address: Address

Username: Username

Password: Password

Activate Windows
Go to Settings to activate Windows.

Desktop Login:



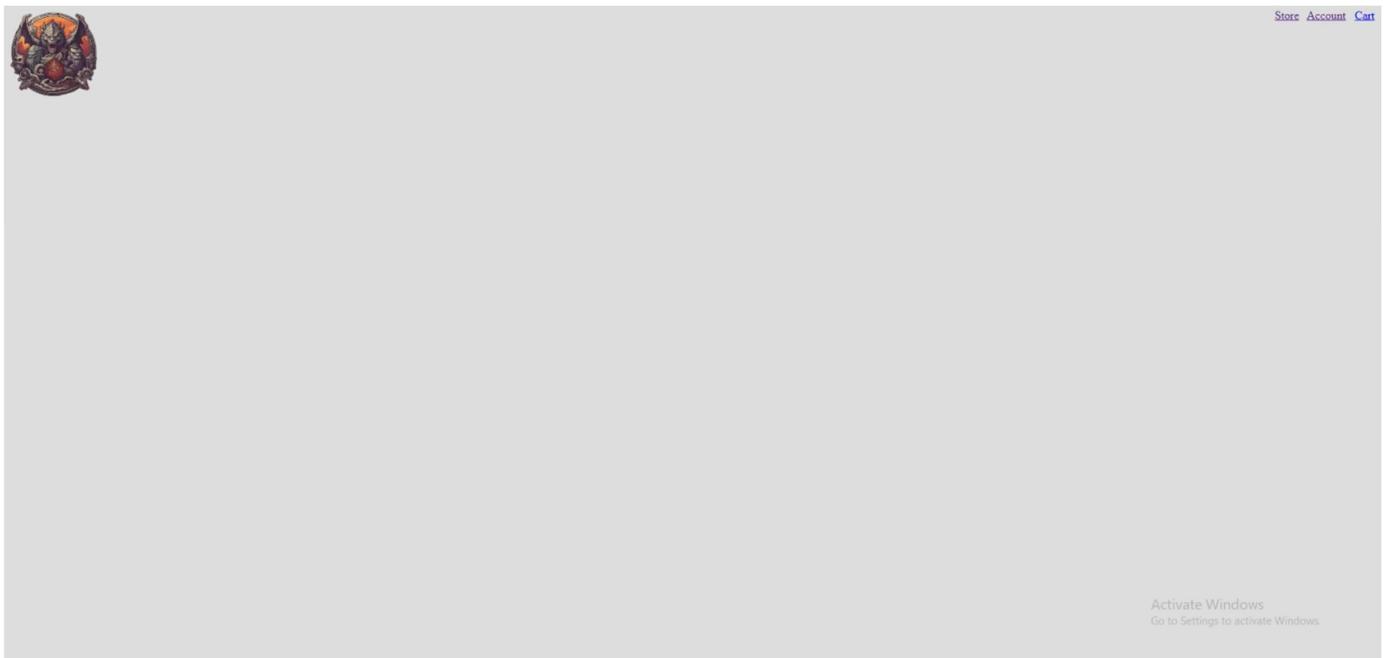
A screenshot of a desktop login form. At the top left, there are two input fields with labels: Username and Password. Below these fields is a 'Login' button. In the bottom right corner of the form area, there is a small message: 'Activate Windows Go to Settings to activate Windows.'

Username: Username

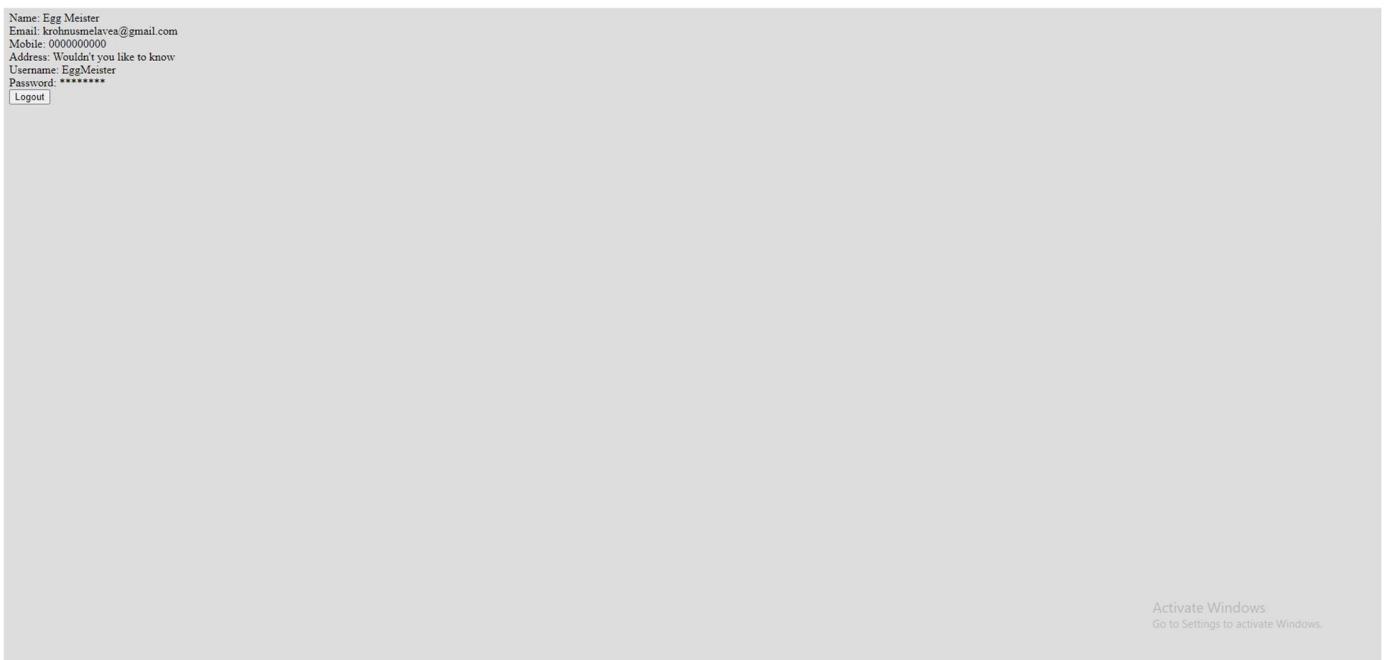
Password: Password

Activate Windows
Go to Settings to activate Windows.

Desktop Landing Page:



Desktop Account Information:

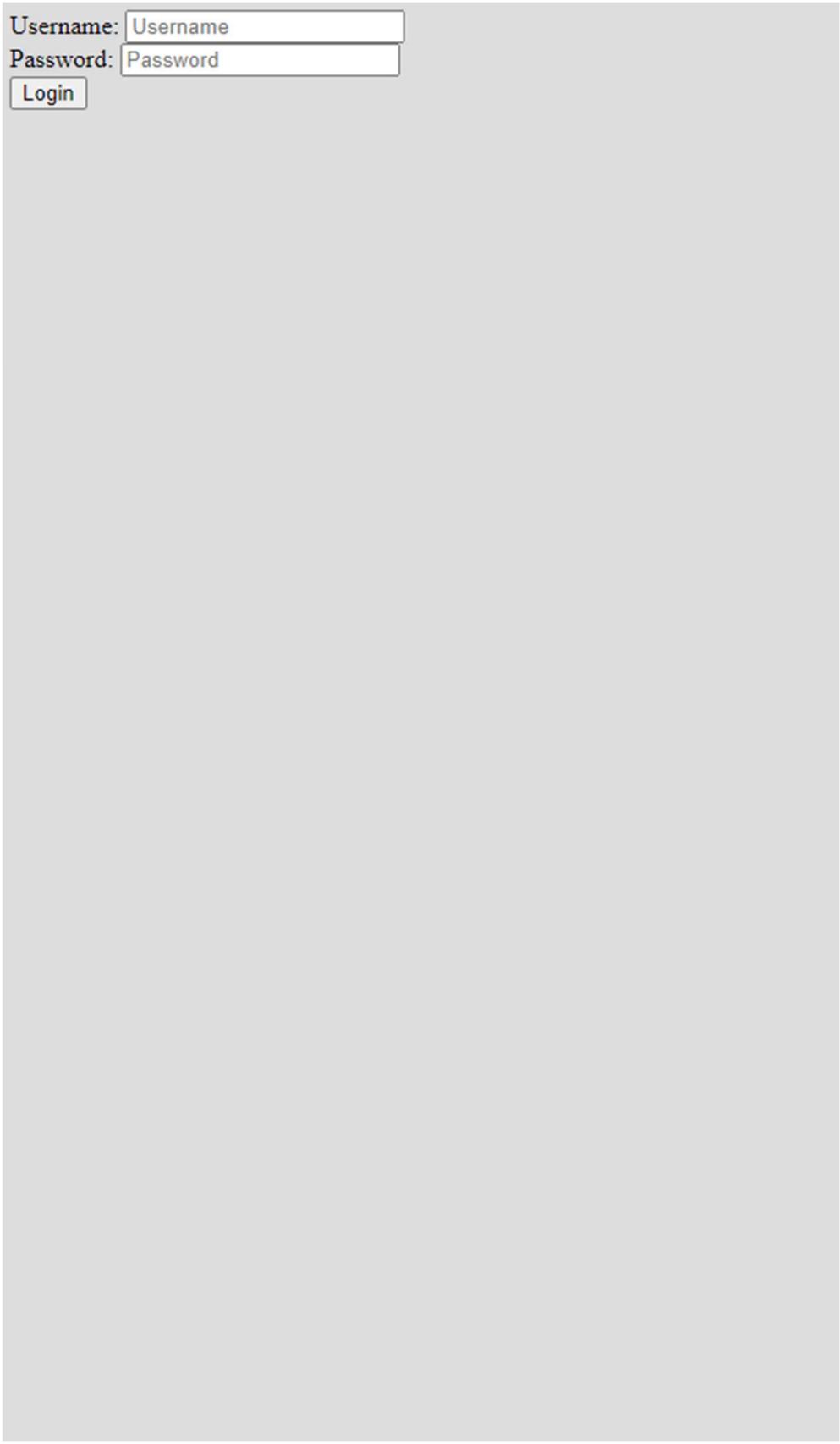


Fdsafdsa

Mobile Registration:

Name:	<input type="text" value="Name"/>
Email:	<input type="text" value="Email"/>
Cellphone:	<input type="text" value="Cellphone"/>
Address:	<input type="text" value="Address"/>
Username:	<input type="text" value="Username"/>
Password:	<input type="text" value="Password"/>
<input type="button" value="Register"/>	

Mobile Login:

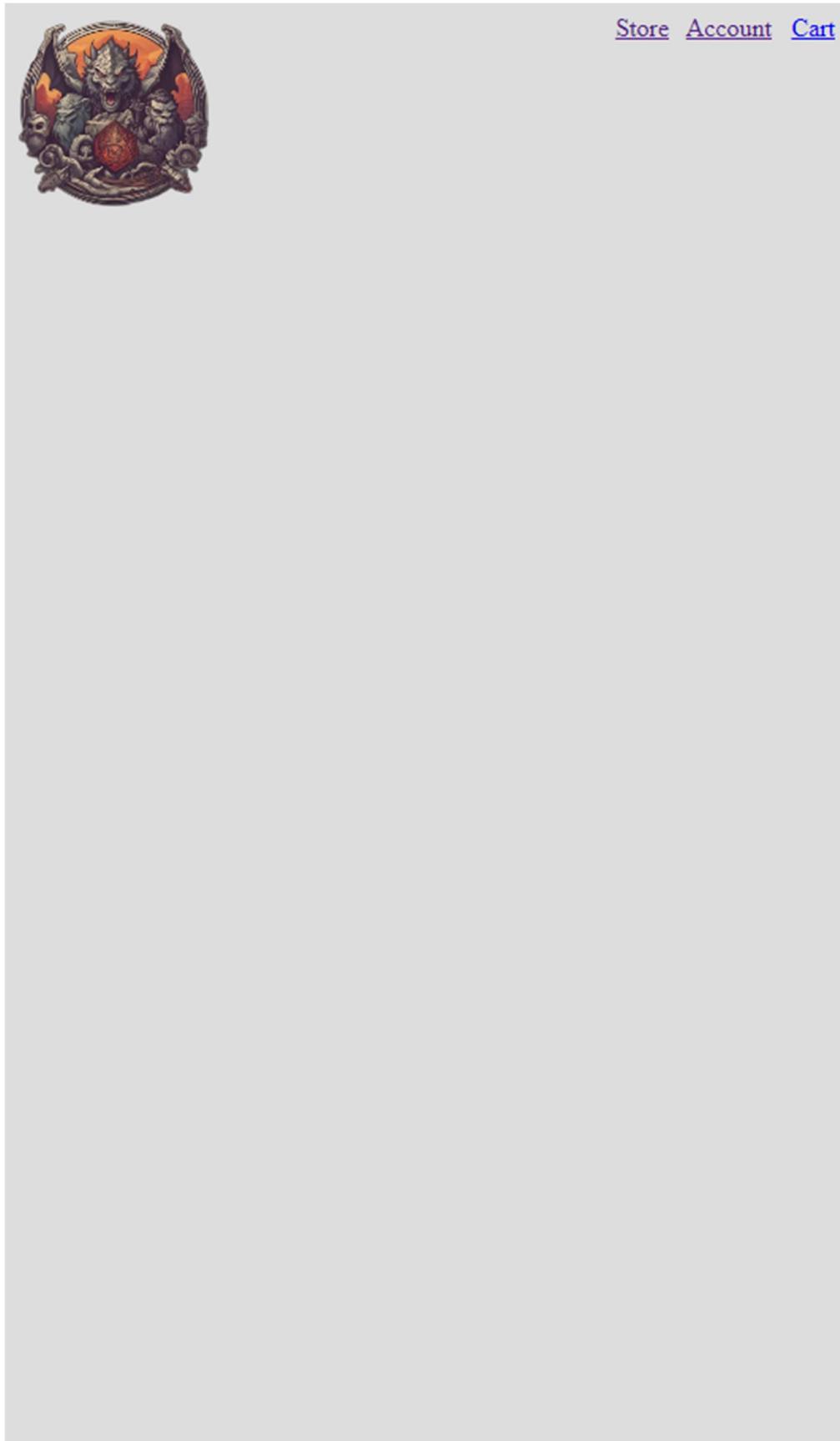


A large, light gray rectangular placeholder area occupies the majority of the page below the title. It contains a smaller, darker gray rectangular box in the top-left corner that serves as a template for a mobile login form.

Username:

Password:

Mobile Landing Page:



Mobile Account Information:

Name: Egg Meister
Email: krohnusmelavea@gmail.com
Mobile: 0000000000
Address: Wouldn't you like to know
Username: EggMeister
Password: *****

[Logout](#)

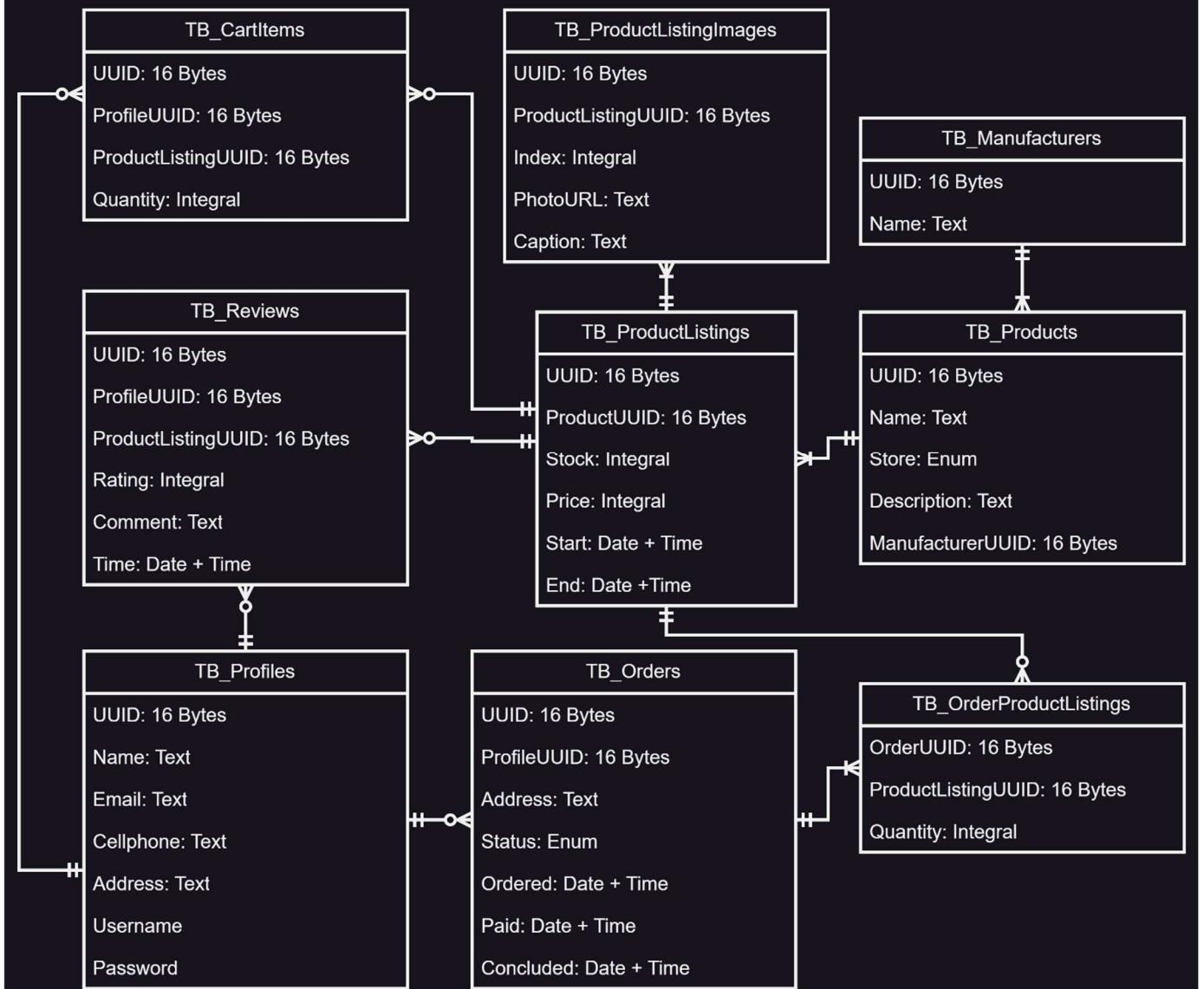
2.3 Designing

a. Class Responsibility Collaborator (CRC) cards

DB_DDnD_CRC							
Reviews		Product Listing Images		Products		Orders	
Responsibilities	Collaborators	Responsibilities	Collaborators	Responsibilities	Collaborators	Responsibilities	Collaborators
Know which profile posted it	Profiles	Know its index within the array		Know its name		Know which profile ordered the items	Profiles
Know which product listing the review is on	Product Listings	Know its URL		Know whether its store is physical or virtual		Know which product listings are in the order	Products Listings
Know the rating		Know its caption		Know its description		Know how much of each product listing was ordered	
Know the comment		Know which product listing it belongs to	Product Listings	Know which manufacturer created it	Manufacturers	Know the address of the order, if applicable	
Know the datetime of the comment				Know which product listings it has	Product Listings	Know the current status of the order	
Cart Items		Profiles		Product Listings		Orders	
Responsibilities	Collaborators	Responsibilities	Collaborators	Responsibilities	Collaborators	Responsibilities	Collaborators
Know which profile it belongs to	Profiles	Know its name		Know the price		Know the datetime of the order	
Know which product listing it refers to	Product Listings	Know its Email		Know the stock level		Know the datetime of the payment	
Know how much of the product listing it refers to		Know its cellphone number		Know when the product listing went live		Know the datetime of the delivery / pickup	
		Know its address					
		Know its username					
		Know its password					
		Know its orders	Orders				
Manufacturers		Products		Product Listing Images			
Responsibilities	Collaborators	Responsibilities	Collaborators	Responsibilities	Collaborators		
Know its Name		Know which products it created	Products	Know which product the listing refers to	Products		
				Know which product listing images belong to it	Product Listing Images		

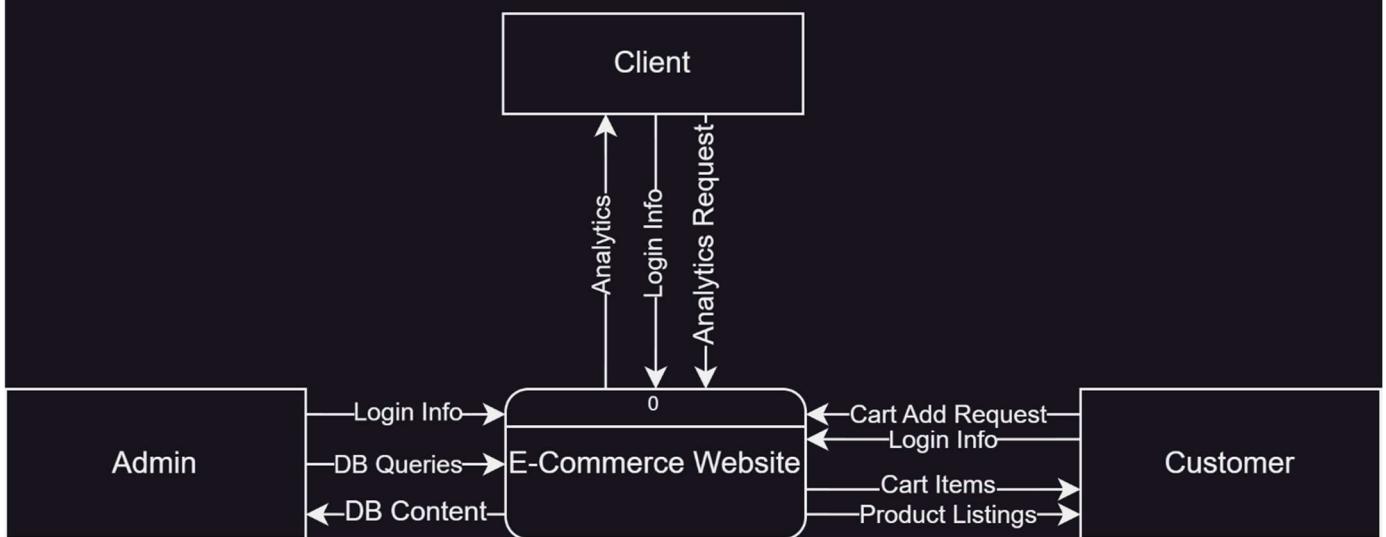
b. Enhanced Entity Relationship Diagram (EERD)

DB_DDNDEERD

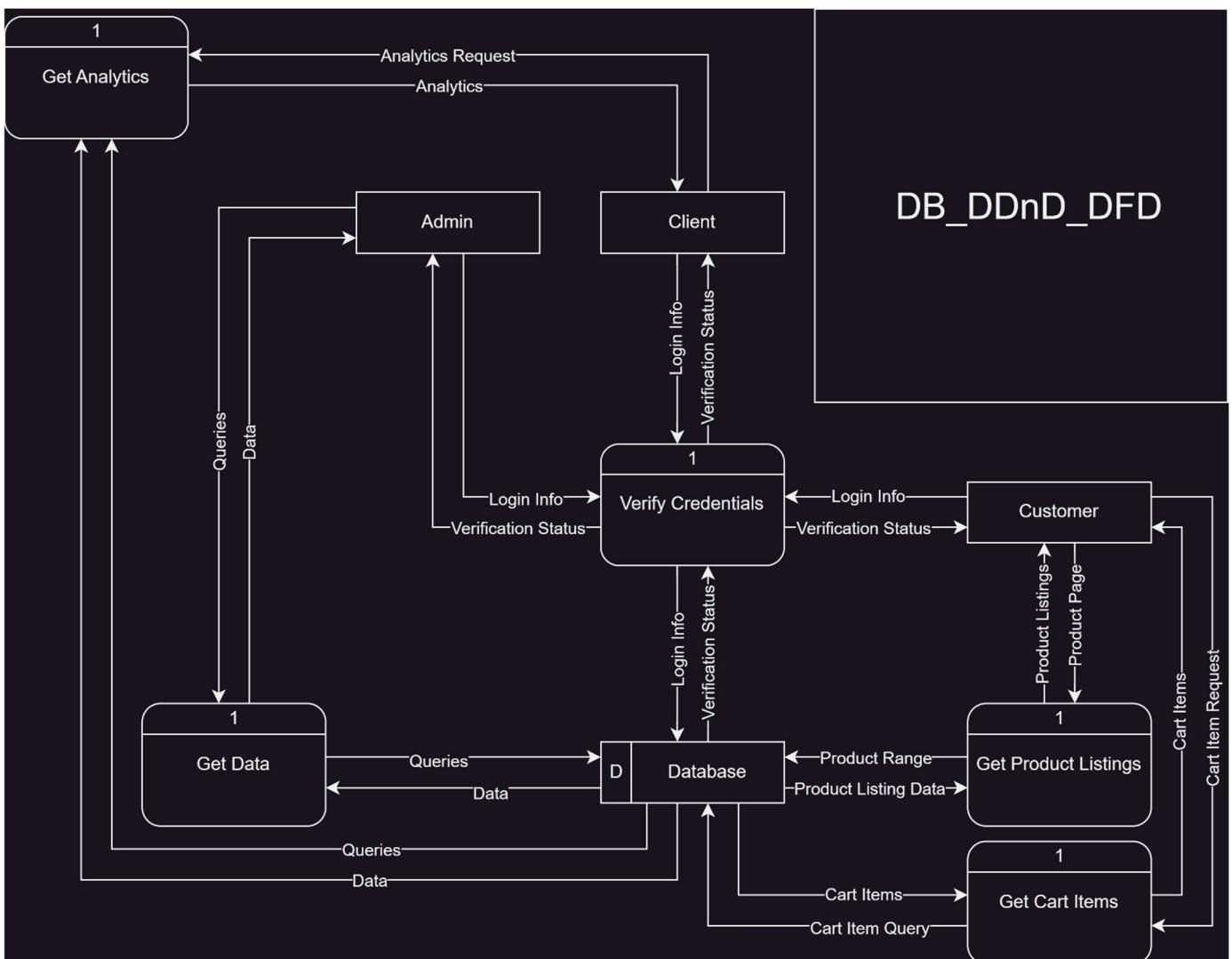


c. Context Diagram

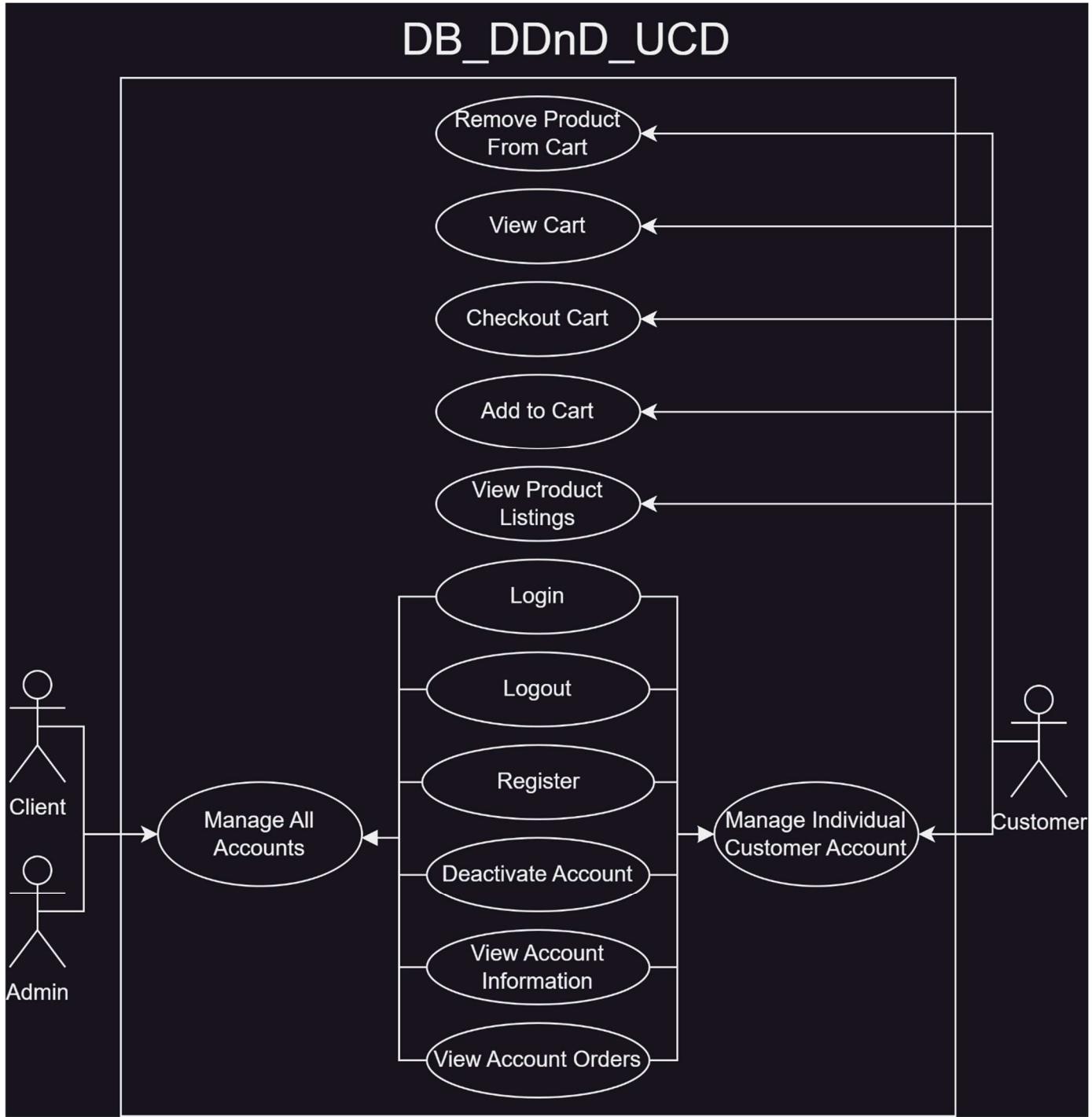
DB_DDnD_CTX



d. Data Flow Diagram (DFD)



e. Use Case Diagram



f. Database Design

Have no idea what you meant by this, so here's the schema:

```

CREATE TABLE TB_Profiles (
    vUUID      BINARY(16) NOT NULL,
    sName      TEXT        NOT NULL,
    sEmail     TEXT        NOT NULL,
    sCellphone TEXT        NULL,
    sAddress   TEXT        NOT NULL,
    sUsername  TEXT        NOT NULL,
    sPassword  TEXT        NOT NULL,
)

```

```

CONSTRAINT TB_Profiles_PK PRIMARY KEY (vUUID)
);
CREATE TABLE TB_Manufacturers (
    vUUID BINARY(16) NOT NULL,
    sName TEXT NOT NULL,
    CONSTRAINT TB_Manufacturers_PK PRIMARY KEY (vUUID)
);
CREATE TABLE TB_Products (
    vUUID BINARY(16) NOT NULL,
    vManufacturerUUID BINARY(16) NOT NULL,
    sName TEXT NOT NULL,
    iStore INTEGER NOT NULL,
    sDescription TEXT NOT NULL,
    CONSTRAINT TB_Products_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_Products_Manufacturer_FK FOREIGN KEY (vManufacturerUUID) REFERENCES
TB_Manufacturers(vUUID)
);
CREATE TABLE TB_ProductListings (
    vUUID BINARY(16) NOT NULL,
    vProductUUID BINARY(16) NOT NULL,
    iStock INTEGER NOT NULL,
    iPrice INTEGER NOT NULL,
    dtStart TIMESTAMP NOT NULL,
    dtEnd TIMESTAMP NULL,
    CONSTRAINT TB_ProductListings_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_ProductListings_Product_FK FOREIGN KEY (vProductUUID) REFERENCES
TB_Products(vUUID)
);
CREATE TABLE TB_CartItems (
    vUUID BINARY(16) NOT NULL,
    vProfileUUID BINARY(16) NOT NULL,
    vProductListingUUID BINARY(16) NOT NULL,
    iQuantity INTEGER NOT NULL,
    CONSTRAINT TB_CartItems_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_CartItems_Profile_FK FOREIGN KEY (vProfileUUID) REFERENCES
TB_Profiles(vUUID),
    CONSTRAINT TB_CartItems_ProductListing_FK FOREIGN KEY (vProductListingUUID) REFERENCES
TB_ProductListings(vUUID)

```

```

);

CREATE TABLE TB_ProductListingImages (
    vUUID          BINARY(16) NOT NULL,
    vProductListingUUID BINARY(16) NOT NULL,
    iIndex          INTEGER    NOT NULL,
    sPhotoURL       TEXT      NOT NULL,
    sCaption         TEXT      NULL,
    CONSTRAINT TB_ProductListingImages_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_ProductListingImages_ProductListing_FK FOREIGN KEY (vProductListingUUID)
    REFERENCES TB_ProductListings(vUUID)
);
CREATE TABLE TB_Reviews (
    vUUID          BINARY(16) NOT NULL,
    vProfileUUID     BINARY(16) NOT NULL,
    vProductListingUUID BINARY(16) NOT NULL,
    iRating          INTEGER    NOT NULL,
    sComment         TEXT      NULL,
    dtTime           TIMESTAMP NOT NULL,
    CONSTRAINT TB_Reviews_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_Reviews_Profile_FK FOREIGN KEY (vProfileUUID) REFERENCES
    TB_Profiles(vUUID),
    CONSTRAINT TB_Reviews_ProductListing_FK FOREIGN KEY (vProductListingUUID) REFERENCES
    TB_ProductListings(vUUID)
);
CREATE TABLE TB_Orders (
    vUUID          BINARY(16) NOT NULL,
    vProfileUUID     BINARY(16) NOT NULL,
    sAddress         TEXT      NOT NULL,
    iStatus          INTEGER    NOT NULL,
    dtOrdered        TIMESTAMP NOT NULL,
    dtPaid            TIMESTAMP NULL,
    dtConcluded      TIMESTAMP NULL,
    CONSTRAINT TB_Orders_PK PRIMARY KEY (vUUID),
    CONSTRAINT TB_Orders_Profile_FK FOREIGN KEY (vProfileUUID) REFERENCES TB_Profiles(vUUID)
);
CREATE TABLE TB_OrderProductListings (
    vOrderUUID        BINARY(16) NOT NULL,
    vProductListingUUID BINARY(16) NOT NULL,
    iQuantity         INTEGER    NOT NULL,

```

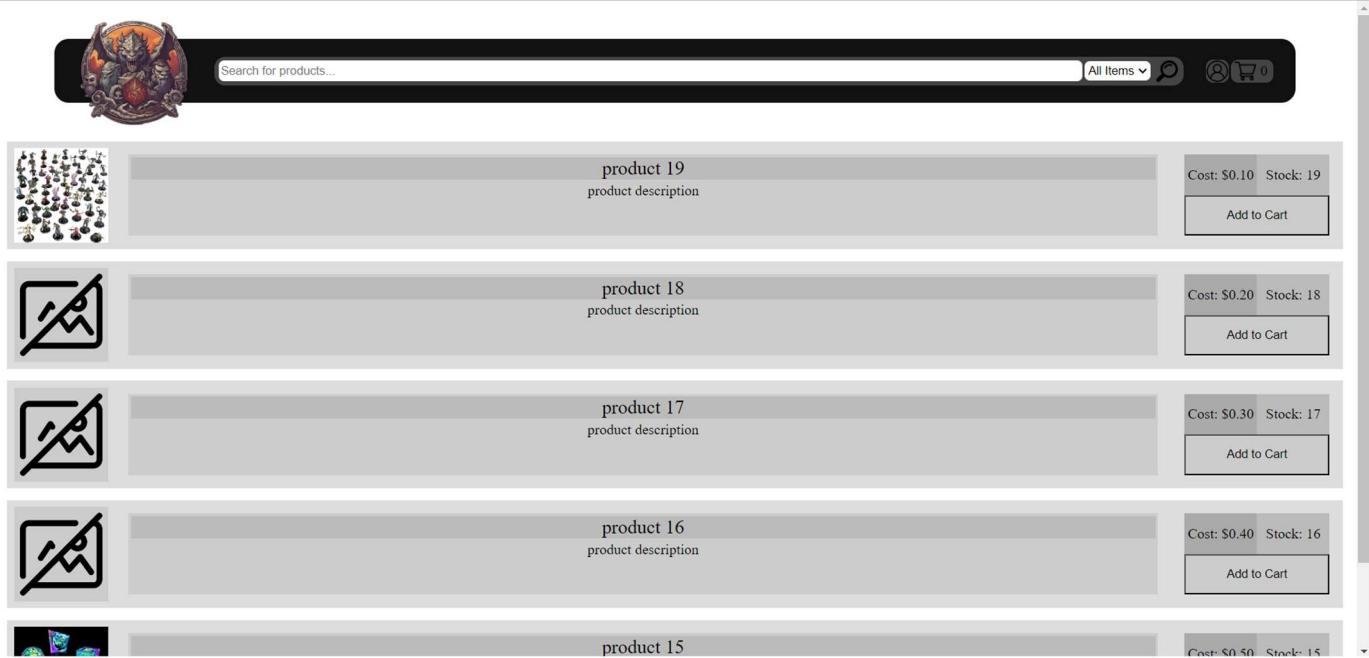
```

CONSTRAINT TB_OrderProductListings_PK PRIMARY KEY (vOrderUUID, vProductListingUUID),
CONSTRAINT TB_OrderProductListings_Order_FK FOREIGN KEY (vOrderUUID) REFERENCES
TB_Orders(vUUID),
CONSTRAINT TB_OrderProductListings_ProductListing_FK FOREIGN KEY (vProductListingUUID)
REFERENCES TB_ProductListings(vUUID)
);

```

2.4 Coding

a. Screenshots



The screenshot shows a web application interface. At the top, there is a header bar with a logo on the left, a search bar containing "Search for products...", and a navigation bar with "All Items" and a magnifying glass icon. To the right of the search bar is a user icon and a shopping cart icon showing "0". Below the header is a section titled "Account Information:" containing a table with the following data:

Name	Egg Meister
Email	krohnusmelavea0@gmail.com
Cellphone	
Address	15 Nunya Business Ave, Johannesburg
Username	EggMeister
Password	*****

At the bottom of this section is a button labeled "Deactivate Account".

b. Sample PHP Code

`maybe_create_mysql_connection.php`

```
<?php

function maybe_create_mysql_connection($mysql_connection = null) {
    if ($mysql_connection == null) {
        $mysql_connection = new mysqli("localhost", "root", null, "DB_DDnD", null, null);
        if ($mysql_connection->connect_errno) {
            return array("mysql_connection" => $mysql_connection, "created" => false, "success" => false);
        }
        return array("mysql_connection" => $mysql_connection, "created" => true, "success" => true);
    }
    return array("mysql_connection" => $mysql_connection, "created" => false, "success" => true);
}

?>
```

`add_item_to_cart.php`

```

<?php

require_once("server_scripts/debug_log.php");

$add_item_to_cart_query_template = file_get_contents("${_SERVER[DOCUMENT_ROOT]}/db/query_templates/add_item_to_cart.sql");
$get_cart_item_uuid_query_template = file_get_contents("${_SERVER[DOCUMENT_ROOT]}/db/query_templates/get_cart_item_uuid.sql");
$add_new_item_to_cart_query_template = file_get_contents("${_SERVER[DOCUMENT_ROOT]}/db/query_templates/add_new_item_to_cart.sql");
function add_item_to_cart($account_uuid, $product_listing_uuid, $quantity, $mysql_connection = null) {
    global $add_item_to_cart_query_template;
    global $get_cart_item_uuid_query_template;
    global $add_new_item_to_cart_query_template;

    $mysql_connection_received = true;
    if ($mysql_connection == null) {
        $mysql_connection = new mysqli("localhost", "root", null, "DB_DDnD", null, null);
        if ($mysql_connection->connect_errno) return 1;
        $mysql_connection_received = false;
    }

    $get_cart_item_uuid_query = sprintf($get_cart_item_uuid_query_template, $account_uuid, $product_listing_uuid);
    $mysql_result = mysqli_query($mysql_connection, $get_cart_item_uuid_query);
    if ($mysql_result->num_rows) {
        $mysql_result->free_result();
        $mysql_query = sprintf($add_item_to_cart_query_template, $quantity, $account_uuid, $product_listing_uuid);
    } else {
        $mysql_query = sprintf($add_new_item_to_cart_query_template, bin2hex(openssl_random_pseudo_bytes(16)), $account_uuid,
        $product_listing_uuid, $quantity);
    }
    $mysql_result = mysqli_query($mysql_connection, $mysql_query);

    if (!$mysql_connection_received) $mysql_connection->close();

    if (!$mysql_result) return 0;
    return 1;
}

?>

```

deactivate_account.php

```

<?php

require_once("server_scripts/maybe_create_mysql_connection.php");
require_once("server_scripts/maybe_destroy_mysql_connection.php");

$deactivate_account_query_template = file_get_contents("${_SERVER[DOCUMENT_ROOT]}/db/query_templates/deactivate_account.sql");
function deactivate_account($account_uuid, $mysql_connection = null) {
    global $deactivate_account_query_template;

    ["mysql_connection" => $mysql_connection, "created" => $mysql_connection_created, "success" => $mysql_connection_created_success] =
    maybe_create_mysql_connection($mysql_connection);
    if (!$mysql_connection_created_success) {
        return array("status" => 1);
    }

    $mysql_result = mysqli_query($mysql_connection, sprintf($deactivate_account_query_template, $account_uuid));
    if (!$mysql_result) {
        return array("status" => 1);
    }

    maybe_destroy_mysql_connection($mysql_connection, $mysql_connection_created);
    return array("status" => 0);
}

?>

```

c. Sample HTML Code

register/index.php

```
<!DOCTYPE html>
```

```

<html>
  <head>
    <title>DD&D</title>
    <link rel="stylesheet" href="style.css">
    <link rel="stylesheet" href="/navigation_bar.css">
    <script src="/navigation_bar.js"></script>
    <script src="script.js"></script>
  </head>

  <body>
    <?php include("client_generators/navigation_bar.php"); ?>

    <div id="register-form">
      <h1 id="register-form-head">Register:</h1>
      <b><p1 class="register-form-label">Name:</p1></b><br>
      <div class="register-input"><input id="name-input" class="register-form-input"
placeholder="Name" onkeypress="name_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Email:</p1></b><br>
      <div class="register-input"><input id="email-input" class="register-form-input"
placeholder="email@provider.com" onkeypress="email_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Cellphone:</p1></b><br>
      <div class="register-input"><input id="cellphone-input" class="register-form-input"
placeholder="" onkeypress="cellphone_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Address:</p1></b><br>
      <div class="register-input"><input id="address-input" class="register-form-input"
placeholder="42 Somewhereington Ave, Someplacia"
onkeypress="address_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Username:</p1></b><br>
      <div class="register-input"><input id="username-input" class="register-form-input"
placeholder="Username" onkeypress="username_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Password:</p1></b><br>
      <div class="register-input"><input id="password-input" class="register-form-input"
type="password" placeholder="Password"
onkeypress="password_input_onkeypress(event)"></div>
      <br>
      <b><p1 class="register-form-label">Retype Password:</p1></b><br>
      <div class="register-input"><input id="retyped-password-input" class="register-form-
input" type="password" placeholder="Password"
onkeypress="retyped_password_input_onkeypress(event)"></div>
      <br>
      <br><br>
      <div id="register-button-container"><button id="register-button"
onclick="register_button_onclick(event)">Register</button></div>
      <label id="remember-me-label"><input id="remember-me-checkbox" type="checkbox"
checked="checked">Remember me</label><br>
    </div>
  </body>

```

```

<br><br>

<label id="register-label">
    Already have an Account?&nbsp;<a href="/login">Login</a>
</label>
</div>
</body>
</html>

```

login/index.php

```

<!DOCTYPE html>

<html>
    <head>
        <title>DD&D</title>
        <link rel="stylesheet" href="style.css">
        <link rel="stylesheet" href="/navigation_bar.css">
        <script src="/navigation_bar.js"></script>
        <script src="script.js"></script>
    </head>

    <body>
        <?php include("client_generators/navigation_bar.php"); ?>

        <div id="login-form">
            <h1 id="login-form-head">Login:</h1>
            <b><p class="login-form-label">Username:</p></b><br>
            <div class="login-input"><input id="username-input" class="login-form-input" placeholder="Username" onkeypress="username_input_onkeypress(event)"></div>
            <br>
            <b><p class="login-form-label">Password:</p></b><br>
            <div class="login-input"><input id="password-input" class="login-form-input" type="password" placeholder="Password" onkeypress="password_input_onkeypress(event)"></div>
            <br><br><br>
            <div id="login-button-container"><button id="login-button" onclick="login_button_onclick(event)">Login</button></div>
            <label id="remember-me-label"><input id="remember-me-checkbox" type="checkbox" checked="checked">Remember me</label><br>
            <br><br>

            <label id="register-label">
                New to DD&D?&nbsp;<a href="/register">Register</a>
            </label>
        </div>
    </body>
</html>

```

d. Sample JavaScript Code

login/script.js

```

function username_input_onkeypress(event) {
}

function password_input_onkeypress(event) {
}

function login_button_onclick(event) {
  const xhr = new XMLHttpRequest();
  xhr.open("POST", "/client_scripts/verify_credentials.php");
  xhr.setRequestHeader("content-type", "application/json; charset=UTF-8");
  const body = JSON.stringify({
    sUsername: document.getElementById("username-input").value,
    sPassword: document.getElementById("password-input").value
  });
  xhr.onload = () => {
    console.log(xhr.responseText);
    const response = JSON.parse(xhr.responseText);
    if (response['status'] == 0) {
      window.location.replace("/");
    }
  }
  xhr.send(body);
}

```

cart/script.js

```

function checkout_button_onclick() {

}

function cart_item_oninput(event) {
  if (event.srcElement.value == "") return;
  const quantity = parseInt(event.srcElement.value);
  if (quantity == 0) return;
  set_cart_item_quantity(event.srcElement.id.split("-").at(-1), quantity);
}

function set_cart_item_quantity(product_listing_uuid, quantity) {
  const xhr = new XMLHttpRequest();
  xhr.open("POST", "/client_scripts/set_cart_item_quantity.php");
  xhr.setRequestHeader("content-type", "application/json; charset=UTF-8");
  const body = JSON.stringify({
    product_listing_uuid: product_listing_uuid,
    quantity: (quantity == NaN) ? 1 : quantity
  });
  xhr.onload = () => {
    console.log(xhr.responseText);
    const response = JSON.parse(xhr.responseText);
    if (response['status'] == 2) {
      window.location.replace("/login");
    } else {

```

```

let quantity_element = document.getElementById("cart-item-quantity-input-" +
product_listing_uuid);
quantity_element.value = quantity;
let grandparent = quantity_element.parentNode.parentNode;
const price_element = grandparent.getElementsByClassName("cart-item-
price")[0].getElementsByTagName("label")[0];
const price = parseFloat(price_element.textContent.split("$")[1]);
let total_price_element = grandparent.getElementsByClassName("cart-item-total-
price")[0].getElementsByTagName("label")[0].textContent = "Total Cost: $" + (price *
quantity).toFixed(2);
}
}
xhr.send(body);
}

document.addEventListener("DOMContentLoaded", function() {
for (let cart_item_element of document.getElementsByClassName("cart-item-quantity-
input")) {
cart_item_element.addEventListener("input", cart_item_oninput);
}
});

```

e. Sample CSS Code

store/product_listing.css

```

.product-listing {
display: flex;
height: 90%;

margin: 0.5%;

background-color: #dddddd;
}

.product-listing-header {
flex-grow: 0;
background-color: #cccccc;
margin: 0.5%;

}
.product-listing-header .product-listing-image {
height: 100%;

}
.product-listing-body {
flex-grow: 1;
background-color: #cccccc;

margin: 1%;

}
.product-listing-title {
display: flex;

```

```
justify-content: center;

margin: 0.25%;

font-size: 16pt;

background-color: #bbbbbb;
}

.product-listing-description {
display: flex;
justify-content: center;
font-size: 12pt;
}

.product-listing-footer {
display: grid;

justify-content: center;

grid-template-columns: repeat(2, 50%);
grid-template-rows: repeat(2, 50%);

padding: 1%;

}

.product-listing-price {
display: flex;

grid-column: 1 / span 1;
grid-row: 1 / span 1;

justify-content: center;
align-items: center;
white-space: nowrap;

padding-left: 5pt;
padding-right: 5pt;

background-color: #aaaaaa;
}

.product-listing-stock {
display: flex;

grid-column: 0 / span 1;
grid-row: 1 / span 1;

justify-content: center;
align-items: center;

background-color: #bbbbbb;

padding-left: 5pt;
```

```
padding-right: 5pt;  
}  
.product-listing-add-cart {  
grid-column: 1 / span 2;  
grid-row: 0 / span 1;  
background-color: #cccccc;  
}
```

navigation_bar.css

```
#navigation-bar-container {  
display: flex;  
position: relative;  
align-items: center;  
/* justify-content: space-between; */  
left: 4%;  
width: 92%;  
}  
#navigation-bar-container::before {  
content: '';  
position: absolute;  
width: 100%;  
height: 50%;  
left: 0%;  
top: 25%;  
z-index: -1;  
border-radius: 16px;  
background-color: #111111;  
}  
#logo {  
flex-grow: 0;  
width: 128px;  
height: 128px;  
margin-left: 25px;  
margin-top: 10px;  
margin-right: 25px;  
}  
#search-container {  
display: flex;  
position: relative;  
align-items: center;  
  
flex-grow: 1;  
height: 24pt;  
background-color: #444444;  
border-radius: 12px;  
}  
#search-input {  
flex-grow: 1;  
height: 16pt;  
border-radius: 6px;
```

```
border: none;
margin-left: 4pt;
margin-right: 1pt;
}
#store-selection {
flex-grow: 0;
height: 16pt;
border-radius: 6px;
border: none;
margin-left: 1pt;
margin-right: 4pt;
}
#search-button {
display: flex;
flex-grow: 0;
position: relative;
justify-content: center;
align-items: center;
border-radius: 8px;
margin-right: 5px;
background-color: #444444;
cursor: pointer;
}
#search-button-magnifier {
width: 24px;
height: 24px;
align-items: center;
margin: 1px;
}
#navigation-bar{
display: flex;
flex-grow: 0;
position: relative;
align-items: center;
justify-content: space-between;
margin-left: 25px;
margin-right: 25px;
}
#account {
display: flex;
flex-grow: 0;
position: relative;
align-items: center;
justify-content: center;
border-radius: 8px;
background-color: #444444;
margin-right: 1px;
}
#pfp {
width: 24px;
```

```

height: 24px;
align-items: center;
margin: 1px;
border-radius: 50%;
}
#cart-container {
flex-grow: 0;
display: flex;
position: relative;
align-items: center;
border-radius: 8px;
background-color: #444444;
cursor: pointer;
margin-left: 1px;
}
#cart {
width: 24px;
height: 24px;
margin: 1px;
margin-left: 4px;
}
#cart-count {
margin-left: 4px;
margin-right: 6px;
}

```

f. Sample MySQL Table Screenshots

Zoom in if you can't see.

TB_Profiles:

vUUID	sName	sEmail	sCellphone	sAddress	sUsername
sPassword					
0x338BU298963EU9A989666B524C59A0191 James Hammond thebeescheese@gmail.com NULL 19 Brown Pants Boulevard, Hexington Park, London JamesHammo	nd				
0x8992CD9FCUW11828FD06B64C6DCFF88 Richard Clarkson crashandburn@gmail.com NULL 32 Royal Ass (The donkey, not the orifice, naturally) Lane, Whales RichardCla	rksn				
0xDBB5F92219194DBFB8C4ABF2AA65BF2B Egg Meister krohnusmelavea@gmail.com NULL 15 Nunya Business Ave, Johannesburg EggMeister	password				
0xE1E6271U94U304UFCBACC68E1CB969F11 Jeremy May b***hf***r@gmail.com (beachforger@gmail.com, obviously) NULL 2 Clumpy Drive, East Anglea JeremyMay	password				

TB_Products

vUUID	vManufacturerUUID	sName	iStore	sDescription
0x02F9D80964984496A50629ACB160ECA6	0xEBC0F0B132914E81A654C93BD3611BFF	product 0	0	product description
0x035B306ABE244BBFAD16BC252A5D724C	0xEBC0F0B132914E81A654C93BD3611BFF	product 1	0	product description
0x169066638EAA4FB9B23D0AD89CD015A6	0xEBC0F0B132914E81A654C93BD3611BFF	product 2	0	product description
0x16EA503B29E24BFC49749DA15D51122	0xEBC0F0B132914E81A654C93BD3611BFF	product 3	0	product description
0x27868D9691FA46DAD4F3F6B227D0E09	0xEBC0F0B132914E81A654C93BD3611BFF	product 4	0	product description
0x27FD38AE8F474C96B77A755D4AD7D1B0	0x02DACE1216F42248DD9D338983D1FE3	product 5	0	product description
0x36EE4A2A13C24F80A4BF4F71EC299C47	0x02DACE1216F42248DD9D338983D1FE3	product 6	0	product description
0x584BC574F1FA433F90B2D1FABFA6B032	0x02DACE1216F42248DD9D338983D1FE3	product 7	0	product description
0x63CB7D930EDA431095FAACDE7A638AF4	0x02DACE1216F42248DD9D338983D1FE3	product 8	0	product description
0x877E48F40303451192EB363894841EB6	0x02DACE1216F42248DD9D338983D1FE3	product 9	0	product description
0x8FD2F4353186497685B021D89BEBBB15	0xEBC0F0B132914E81A654C93BD3611BFF	product 10	1	product description
0x974DC3CBFBA34F0D80A3FFAA3EDAE63	0xEBC0F0B132914E81A654C93BD3611BFF	product 11	1	product description
0x978C4B4F72414C5FB4ED65E3A699104	0xEBC0F0B132914E81A654C93BD3611BFF	product 12	1	product description
0x9A06A3D87FA340ED9F9C860CD2BE1A46	0xEBC0F0B132914E81A654C93BD3611BFF	product 13	1	product description
0xAD908A47C2ED4EA395AD078BD280EE89	0xEBC0F0B132914E81A654C93BD3611BFF	product 14	1	product description
0xCE586142EFB4F43C88F9508727F00E6D7	0x02DACE1216F42248DD9D338983D1FE3	product 15	1	product description
0xE18D0E88DB3442AB477B65CBC5FA3D	0x02DACE1216F42248DD9D338983D1FE3	product 16	1	product description
0xE5014DF7D0984D019CD5F39476A1759C	0x02DACE1216F42248DD9D338983D1FE3	product 17	1	product description
0xE630E14A3BD540829AE43A6BC50A892	0x02DACE1216F42248DD9D338983D1FE3	product 18	1	product description
0xF4CE5996EA24DB295582885A9CBBFAA	0x02DACE1216F42248DD9D338983D1FE3	product 19	1	product description

20 rows in set (0.00 sec)

TB_ProductListings

vUUID	vProductUUID	iStock	iPrice	dtStart	dtEnd
0x28FE190FB30F4D0EAF805C89C77ACBF8	0x8FD2F4353186497685B021D89BEBBB15	10	100	2024-06-07 07:27:39	NULL
0x3E6A95783B3440E0A61FC2C07A5D7773	0xF4CE5996EA24DB295582885A9CBBFAA	19	10	2024-06-07 07:27:39	NULL
0x46EA70F462E488F8BDBCE3D04E253790	0xE630E14A3BD540829AE43A6BC50A892	18	20	2024-06-07 07:27:39	NULL
0x50DBC6D54A6B4307A89945DD6057B327	0x978C4B4F72414C5FB4ED65E3A699104	12	80	2024-06-07 07:27:39	NULL
0x51B072009A3F4D42AC625FEDCBA435CF	0x63CB7D930EDA431095FAACDE7A638AF4	8	120	2024-06-07 07:27:39	NULL
0x69A9D7E39C554F15AD503688F8A8089B7	0x02F9D80964984490A50629ACB160ECA6	0	200	2024-06-07 07:27:39	NULL
0x71B51D158BAC4CE5ABA0DB8279C90F3F	0xCE586142EFB4F43C88F9508727F00E6D7	15	50	2024-06-07 07:27:39	NULL
0x7AA152B4A9B2449187F130D219949A69	0x877E48F40303451192EB363894841EB6	9	110	2024-06-07 07:27:39	NULL
0x7B3522BEFD7A48098CDB909FFD332A1B	0x169066638EAA4FB9B23D0AD89CD015A6	2	180	2024-06-07 07:27:39	NULL
0x88B1EF516F9C429B9A611560A5B8CB69	0x36EE4A2A13C24F80A4BF4F71EC299C47	6	140	2024-06-07 07:27:39	NULL
0x89A3532DFCC042F4FA52BCFE75F879008	0x27868D9691FA46DAAD4F3F6B227D0E09	4	160	2024-06-07 07:27:39	NULL
0x8DF3B92DA11248109A5A43D88A92F960	0x9A06A3D87FA340ED9F9C860CD2BE1A46	13	70	2024-06-07 07:27:39	NULL
0x8E0891EED4D6407C8E70725A5A2989F	0xE18D0EC88DB3442AB477B65CBC5FA3D	16	40	2024-06-07 07:27:39	NULL
0x923A20E6A36E42C3A2163F3786ED1F7D	0x27FD38AE8F474C96B77A755D4AD7D1B0	5	150	2024-06-07 07:27:39	NULL
0x92B7E05AA2724758896D06B854433E66	0xAD908A47C2ED4EA395AD078BD280EE89	14	60	2024-06-07 07:27:39	NULL
0x9664C538DA4C4F0890DE2562884EE5C9	0x974DC3CBFBA34F0D80A3FFAA3EDAE63	11	90	2024-06-07 07:27:39	NULL
0xD32D5A7D8C7842C38A2BFA62C207A6C6	0x16EA503B29E24BFC49749DA15D51122	3	170	2024-06-07 07:27:39	NULL
0xDED81D365B9A41B83A9DBC854320166	0xE5014DF7D0984D019CD5F39476A1759C	17	30	2024-06-07 07:27:39	NULL
0xEFBC854007840758EE7F3A342131FE6	0x584BC574F1FA433F90B2D1FAFBFA6B032	7	130	2024-06-07 07:27:39	NULL
0xFC2B7514FD6B449299635194685B2F5D	0x035B306ABE244BBFAD16BC252A5D724C	1	190	2024-06-07 07:27:39	NULL

20 rows in set (0.00 sec)

TB_ProductListingImages

vUUID	vProductListingUUID	iIndex	sPhotoURL	sCaption
0x09E2B3398A674B56B8F832AABD55680E	0xD32D5A7D8C7842C38A2BF4A62C207A6C6	0	/db/products/d32d5a7d8c7842c38a2bf4a62c207a6c6/image.png	
0x14450EBBCFDD40069FE7327E10C33E0F	0x8DF3B92DAA11248109A5A43D88A92F960	0	/db/products/8df3b92da11248109a5a43d88a92f960/image.png	
0x2328A12773DA4F6E861A8A212C6CAU3C	0xEFBECC854007840758EE7F3A342131FE6	0	/db/products/efbec854007840758ee7f3a342131fe6/image.png	
0x2582B8A2586A43EE9726A96938E32949	0x46EA70F462EF488F8BDCE3D04E253790	0	/db/products/46ea70f462ef488f8bdce3d04e253790/image.png	
0x3B07E892B0E4F928ACEA698E1C8F809	0x9664C538DA4C4F08990DE2562884EE5C9	0	/db/products/9664c538da4c4f08990de2562884ee5c9/image.png	
0x459296869E0742D2B52337BD92049BFA	0x36EA95783B3440E0A61FC2C07A5D7773	0	/db/products/36ea95783b3440e0a61fc2c07a5d7773/image.png	
0x50122689C09C452D0C6623FB9F1A004	0x71B51D158BAC4CE5ABA0DB8279C90F3F	0	/db/products/71b51d158bac4ce5aba0db8279c90f3f/image.png	
0x628700F0CA60481596B94601DC2F830C	0x7B3522BEFD7A48098ACB909FFD332A1B	0	/db/products/7b3522befd7a48098acb909ffd332a1b/image.png	
0x7C7F48E582ED42C2A9C7B07F5E9EC7EB	0x69A90D7E39C554F15AD503688FA808987	0	/db/products/69a90d7e39c554f15ad503688fa808987/image.png	
0x7EC126699414465EB0BAE50506E49B8	0x89A3532DFCC042FFA52BCF7E5F879908	0	/db/products/89a3532dfcc042ffa52bcf7e5f879908/image.png	
0x90E7CCAC006D4B71BDEF612802E40130	0x28FE190FB30F4D0EAF808C89C77ACBF8	0	/db/products/28fe190fb30f4d0eaf808c89c77acb8f/image.png	
0xA5FC8C0E72164603AD2F0291F29D9CD6	0x8E0891EED4D6407C8E70725AA5A2989F	0	/db/products/8e0891eed4d6407c8e70725aa5a2989f/image.png	
0xB0D65C0200854847A0091B637191C326	0xDED81D365B9A4A1B3A9DB854320166	0	/db/products/ded81d365b9a4a1b3a9db854320166/image.png	
0xB30C96AE06243E8B34EA28C8063AF67	0x7AA152B4A9B2449187F130D219949A69	0	/db/products/7aa152b4a9b2449187f130d219949a69/image.png	
0xB9B4EAA75E564878AB43198D0C93B24C	0x51B072009A3F4D42AC625FEDCBA435CF	0	/db/products/51b072009a3f4d42ac625fedcba435cf/image.png	
0xD2AB0A1235664C3A97D1789ED8A7B0DA	0x92B7E05A27274758896D06BB54433E66	0	/db/products/92b7e05a27274758896d06bb54433e66/image.png	
0xDA262808F7134CE4ADE817C014E9A83	0x88B1EF516F9C429B9A611560A5B8CB69	0	/db/products/88b1ef516f9c429b9a611560a5b8cb69/image.png	
0xDCB6E063A4U34F778B111B280C6B65C	0xFC2B7514FD6B449299635194685B2F5D	0	/db/products/fc2b7514fd6b449299635194685b2f5d/image.png	
0xFE429183D5A04622A4F46F49878D8E1E3	0x923A20E6A36E42C3A2163F3786ED1F7D	0	/db/products/923a20e6a36e42c3a2163f3786ed1f7d/image.png	
0xFFD70E329B0B42288C3BF66883FDA63D	0x50DBC6D54A6B4307A89945DD6057B327	0	/db/products/50dbc6d54a6b4307a89945dd6057b327/image.png	

TB_Manufacturers

vUUID	sName
0x02DACE1216F42248DD9D338983D1FE3	Frungo
0xEBC0F0B132914E81A654C93BD3611BFF	Bungo
2 rows in set (0.00 sec)	

TB_CartItems

vUUID	vProfileUUID	vProductListingUUID	iQuantity
0x283BCF210B45F79EADBE4210D6B96AD3	0xDBB5F92219194DBFB0C4ABF2AA65BF2B	0x46EA70F462EF488F8BDCE3D04E253790	6
0x7D994F65C6BBBA1EC36E5734685ECC22	0xDBB5F92219194DBFB0C4ABF2AA65BF2B	0x8E0891EED4D6407C8E70725AA5A2989F	5
0xB57D8790DFFFF7D60713D15A43ED64E4	0xDBB5F92219194DBFB0C4ABF2AA65BF2B	0x3E6A95783B3440E0A61FC207A5D7773	2
3 rows in set (0.00 sec)			

2.5 Conclusion

For better or for worse, this has been a... transformative experience in my life, as I've come to realize that academia is a dying industry.

BTW, I'm colour blind so I hope my website being grey isn't a problem. Wouldn't want Eduvos discriminating against students with disabilities, would we?

2.6 Sign-off

rc

Richard Clarkson

jh

James Hammond

jm

Jeremy May

ddw

Daniel de Waal

Date: 10/06/2024