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# Transformation

The following section includes the extra work required to convert the current working prototype into a complete and professional live website. The section contains detailed points with proper description which will highlight what and how much work is needed in order to achieve the goals.

1. Uniformity  
   The current prototype is 80% uniform which needs to go to a 100%. This can be achieved by adding details in all elements and components of the website. For example, adding a decent hover effect to navigation links throughout the website. Ensuring all buttons and links in the page have some interaction in them.
2. Content  
   There is currently very less content on the website. This should be changed and more content should be added to the website by adding more components or reusing existing ones to add more data, written material, images and even videos if needed. There should be various pages which show different sets or types of content on the website.
3. Functionality  
   In the working prototype, a limited set of functionalities are added. In real world scenario, there should be more functions, actions and processes which overall build the website. This includes adding complex search term for drinks. Category system in order to segregate the website’s products across various pages and merging them based on a certain set of rules. Adding filters to narrow down the search to target a specific set of products based on price, category, popularity and rating by customers.   
   Apart from that, a modern cart system where quantity can be updated in real time without having to remove the item from cart and adding again.
4. Coupon System  
   A coupon system should be integrated to the website which will allow the business to create various offers and provide them to the customers. A complex coupon system which will allow customers to have a flat discount or a percentage discount with various rules being added to the products and how a coupon can or can not be used on certain products.
5. Payment System  
   A professional website should not rely on traditional payment system of cash on product delivery. Instead, there should be a gateway which can be used by customers to pay directly during the checkout process. Various gateways should be integrated which allows customer to pay via different sources or services like Credit card, debit card, wire transfer or bank transfer.
6. Security  
   A professional website will have hundreds of thousands of customer data which needs to be taken care of. This includes name, email address, phone numbers, address, payment methods and order details. This is highly sensitive data and must be protected at all costs no matter what. Proper encryption policy should be placed to ensure integrity of the data.

# Reflection

While working on this project, I came across various concepts in programming, design and integration of the frontend and backend. I have learned some concepts from scratch and improved some of my existing knowledge on other aspects of programming which I will be defining in this section of the report. This reflection is divided into three parts on frontend, backend and database handling.

1. Frontend
   1. HTML  
      HTML is the markup required to lay out all the elements on a web page. We can also call it as the skeleton of a web page. We can add text, image, videos, audios, input fields, hyper links and a lot of components to a web page with the help of just HTML. I learned how to define an HTML body in order to make a decent flow of content and elements across a page.
   2. CSS  
      CSS is a stylesheet definition which is used to make the HTML elements look good. While building a website CSS can be skipped but in order to make the website look attractive, one must use CSS to add various types of effects to HTML elements. Some common CSS attributes are color, background, margin, padding, border, display, etc. These attributes can be linked to elements by direct the HTML tag name, class selector or ID selector. While working on this project, I learned a lot of new attributes in CSS such as hover, transition, transform, grid layout, pseudo elements, etc. I can also assume that my design skills have quite improved and gotten better.
2. Backend
   1. PHP  
      PHP is a scripting language which runs on the server side. It returns HTML to the browser which is shown to the end user. This HTML is used by the browser to layout elements on the screen. I learned that simply using HTML cannot build a dynamic website. One must use some sort of server-side scripting and return dynamic HTML depending on user input, for example. Performing an action like get drinks data and show it to the user. This can only be done using a server-side scripting language such as PHP. PHP does more than just that. It can be used to create and store session on the server side, create client-side cookies, validate data, perform checks on the data and much more. I have learned concepts such as creating a login, sign up functionality, a cart system to store user’s basket choices of products and checking out altogether.
3. Database Management System
   1. MySQL  
      MySQL is a database scripting language which is used a create and identify data tables where one can store the data used in the project. Any kind of data can be stored in this kind of system such as user data, product data, orders, etc. I learned how to perform CRUD (create, update and delete) operations on a project with the help of MySQL and PHP. PHP is used to read the data from the database and show it to the user based on the input and values. I used it to store user data, drinks data and order data.

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| --- | --- | --- |
| Coursework achievement grid | Exists: Yes/ No? | Provide requested information in this column. |
| Provide full URL (web address) of your home page on the server | Yes |  |
| There must be at least 3 web pages (list 3 filenames) | Yes | Index.php  Why.php  Store.php  Cart.php |
| Registration new account possible (On which page)? | Yes | Signup.php |
| Logging-in into site possible (On which page)? | Yes | Login.php |
| Is logging-in only successful for the correct password? | Yes |  |
| Is there indication/feedback that inform the logged-in status (Provide brief detail)? | Yes | There is a change in navigation menu which shows different links for logged in users |
| Are there any secure pages that can only be reachable once a user logged-in (List these pages)? | Yes | my-account.php |
| Can your application create a table row on the database? (How can I check?) | Yes | admin/add-product.php |
| Can your application read from the database? (How can I check?) | Yes | Index.php  Store.php  Cart.php  My-account.php  Admin/index.php  Admin/orders.php |
| Can your application update a database entry? (How can I check?) | Yes | admin/edit-product.php?d\_id=1 |
| Can your application delete a database table row? (How can I check?) | Yes | Admin/index.php |