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| **PE075DS (13) Report on Front-end Web Development Project 前端網站開發人員證書 - 網站開發專案** |

**Topic: eCommerce Website Project – Glasses online Shop**

**Project Team Members**

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| Heung Chee Leung Ivan | 香志良 | (6) |
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1. **Project Requirement**

**Project: eCommerce Website with Front-end Capabilities**

* To plan, design, and develop a business website of 15 pages or more, and implement front-end functions.
* All data needs to be connected to the server to get it from the database.
* This website must be developed using application technologies such as HTML, CSS, JavaScript and React.js to ensure proper functioning.

1. **Project Objective**

* Project Objective – to construct a website which is user-friendly, responsive, reliable; enhance customer experience; ensure maintainability, scalability for future growth and continuous improvement

1. **Project Planning**

*Project requirement: 專案開發需要遵循軟件工程的基本原則，包括程式碼的可讀性、重用性、擴展性和可維護性等。*

* Major Project Phases –
  + Design – website architecture, structure, webpages, screen flow
  + Development – coding and integration
  + Testing
  + Deployment
* Development Tools -
  + HTML - use Visual Studio code to support HTML coding on webpages
  + CSS - use CSS and Bootstrap to set style, formatting and responsive design of webpages
  + JavaScript - use JavaScript to support data extraction and interactive elements of webpages

1. **Project Description**

*Project requirement: 專案主題介紹 (例如開發原因、面對的困難、如何克服及感想等等)*

**Why develop Glasses online Shop? What are the trends and Benefits?**

* The pandemic accelerated online shopping, with more consumers turning to eCommerce for eyewear purchases.
* The convenience of online shopping has revolutionized the way we purchase goods, including glasses.
* One of the biggest advantages of buying glasses online is convenience. You can shop at any time, from anywhere, without the need to visit a physical store. This is particularly beneficial for busy individuals who may not have the time to schedule an appointment or for those living in remote areas where access to optical stores is limited. Online shopping also allows you to browse a vast selection of frames and compare prices across multiple retailers in just a few minutes.
* When it comes to price, online retailers often have the advantage. Lower overhead costs mean that online stores can offer glasses at significantly reduced price, some of them also frequently run promotions and discounts. Additionally, online platforms often offer a wider range of prices, from high-end designer frames to more affordable alternatives.
* Some online retailers are increasingly offering customizable options, allowing customers to select colors, styles, and lenses tailored to their preferences.

**Our eCommerce Project – Glasses online Shop**

* The project is to design and construct an eCommerce website with essential features for online shopping on glasses, e.g. product catalog, shopping cart.
* Our team has encountered some difficulties during this project since there are few online shops of glasses (and sunglasses), and we would like to design our own project website differentiate from them. Through working as a team, we have conducted lots of researches, discussions and brainstorming in constructing our eCommerce website.
* While this is our first website project, we felt team work and information sharing can overcome all those difficulties.

1. **Website High-level Design**

* To be Added > Website High-level Diagram
* Diagrams to illustrate the website architecture, including frontend, backend, and database layers.
* ……
* *Project requirement: 前端網站的架構圖( 用圖表呈現整體架構)*

1. **Webpages Design and Development**

* To be Added > Webpages, Screen Flow
* List of key pages (e.g., Home, Product Catalog, Shopping Cart, Checkout) and their purposes
* …..
* *Project requirement: 每一個版面的重點/ 說明/ 功能/ 程式*

1. **Screen Capture**

* To be Added > Webpages Screen Capture and descriptions
* ……
* *Project requirement: 完整的屏幕截圖*

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| --- | --- |
| Screen Capture 01  Add Picture and descriptions | Screen Capture 02  Add Picture and descriptions |
| Screen Capture 03  Add Picture and descriptions | Screen Capture 04  Add Picture and descriptions |
| **……** | **……** |
| **……** | **……** |
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1. **Testing and**

**Testing**

* Specify testing methods adopted, e.g. unit test, number of testers ….
* ……
* *Project requirement: 開發過程中需要進行測試和優化，確保網站的性能和安全性。*

1. **Deployment**

**Deployment**

* Cloud-based platform planned to be used for deployment including: 1. Digital Ocean; 2. Heroku; 3. AWS. This project task is still under planning.
* ……

1. **Conclusion**

* This eCommerce project on Glasses online Store successfully deliver a responsive, user friendly, and interactive shopping experience. Future work will include integrating payment gateways and expanding product categories. With continuous improvements, the website can further increase sales and customer satisfaction.