1. Introduction

Does the fast-paced lifestyle bother you for a long time? Have you ever been frustrated to have no time to go shopping after exhausting works? Perhaps you would like to try our mobile application that we designed to provide comfort and convenience for situations like this, allowing you to wind down and relax without having to go out for shopping after long day work.

1.1 Overview

Nowadays web has become an essential tool for people in daily lives. In addition, mobile phone is quite portable means to reach the Internet, thus increasing the number of mobile phone users. Therefore, mobile application has become the mainstream of Web App development. Due to the fast-paced lifestyle, many nearly have no time to go shopping after tired work, which means there are much less customers in brick-and-mortar stores. In order to solve this type of problem, a variety of shopping mobile applications like Amazon, Taobao appear. With the app, customers are able to go shopping during the commute time without being required to visit a brick-and-mortar store. Vendors could add their inventory and present the details of products directly by posting images or textual description online, which means they could reduce money for rent.

This project “XXXXX” aims at establishing a mobile platform for customers to buy mobile phones from a wide range of brands. Vendors showcases their merchandise in a manner that is user-friendly and facilitates purchases by potential customers. Furthermore, this application provides brilliant services which could show details of every purchase orders.

1.2. Objectives

The main objective of this project is to create a user-friendly mobile app for online shopping which allows the vender to sell their products to customers. Similarly, customer can also make purchases more conveniently. For those logged in as a vendor, this app allows them to maintain product catalogs. For example, they can browse the product catalog, edit some attributes of the product, and add new products. They can also list purchase orders by different status and have the ability to ship, hold or cancel a purchase order in the purchase order processing page. On the other hand, customers can conveniently browse and filter the products and add the products to their own shopping cart. They can also click on a specific product and view detailed information about that product. After placing an order, the customer can check the order processing status on the order page. And this app allows customers and vendors to manage their own accounts securely, such as registering accounts, logging in and logging out.

So far, we have briefly introduced our mobile shopping app in the Introduction, and the structure of this report is as follows: Chapter 2 introduces the background and related work of our work. Chapter 3 presents the system design of our design approach. Chapter 4 shows the implementation of our system architecture and module design. Chapter 5 displays the result of our project outcome and discussion. Chapter 6 summarizes our entire project and future work.

6. Conclusion and Future Work

In conclusion, we’ve developed a user-friendly mobile online shopping mall application based on Java (Spring Boot back-end) and JavaScript (Vue.js front-end).

We’ve developed a mobile specific graphical user interface by exploiting UI component libraries for mobile web apps, so that the customers can browse the products and make purchases in this App easily through their mobile phones. For the same app, we’ve implemented vendors’ mode which is a different view. Thus, the vendors can post and edit products to be sold as well. Purchase orders are maintained in the MySQL database. Customer and vendors are able to view and manipulate purchase orders conveniently. In addition, authentication modules are added for more secure account management.

Based on the design and implementation elaborated above, our mobile application offers a convenient, efficient, and user-friendly solution for both recreational and practical consumption.

Traditional Web Apps and native Apps can be merged to some extent. They are called Progressive Web Apps (PWAs). Since our project uses Android Web View, most of functionalities are based on Web. It is not available offline and it requires users' installation in order to be used. However, we can extend our app to a PWA: make it an installable Web App. So that, the users can use our Web App normally without network connection [1]. Moreover, the user is able to access our App both with installation from the App Store or downloaded browser [2]. So that the performance and functionality will increase while keeping the accessibility and reliability unaffected.

# References

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| [1] | "What are Progressive Web Apps?," [Online]. Available: https://web.dev/i18n/en/what-are-pwas/. |
| [2] | "Overview of Progressive Web Apps (PWAs)," [Online]. Available: https://learn.microsoft.com/en-us/microsoft-edge/progressive-web-apps-chromium/. |