

Faculty of Applied Sciences  
Bachelor of Science in Computing

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| Mobile Online Shopping App | |
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| Group Number: | 6 |
| Student ID: | P2010411  P2010556  P2010562 |
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| Student Name: | Jing Yu Long, Grant  Liu Run Rong, Polo  Chen Ling Xiao, Veronica |
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# 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 work? You may want to try the mobile application that we designed to provide comfort and convenience for situations like this, allowing you to wind down without having to go out shopping after a long day of work.

## 1.1 Overview

The Web has become an essential tool for people in their daily lives. In addition, the mobile phone is quite portable means to reach the Internet, thus increasing the number of mobile phone users. Therefore, the mobile application has become the mainstream of Web App development. Due to the fast-paced lifestyle, many nearly have insufficient time to go shopping after tired work, so brick-and-mortar stores have fewer customers. In order to solve this type of problem, a variety of shopping mobile applications like Amazon [1] and Taobao [2] appear. With the App, customers can shop during their leisure time without visiting a brick-and-mortar store. Vendors could add their inventory and present the details of products directly by posting images or textual descriptions online, which means they could reduce money for rent.

This project, "Niubility" aims to establish a mobile platform for customers to buy mobile phones from various brands. Vendors showcase their merchandise in a user-friendly manner and facilitate purchases by potential customers. Furthermore, this application provides brilliant services which could show details of every purchase order.

## 1.2. Objectives

The main objective of this project is to create an intuitive mobile App for online shopping that allows vendors to sell their products to customers. Similarly, customers 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 product attributes, and add new products. They can also list purchase orders by different status and ship, hold or cancel them on the purchase order processing page.

For the customer side, customers can conveniently browse and filter the products and add them to their shopping cart. They can also click on a specific product and view detailed information. After placing an order, the customer can check the order processing status on the order page. Moreover, this App allows customers and vendors to manage their accounts securely, such as registering, 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 have developed a user-friendly mobile online shopping mall application based on Java (Spring Boot as back-end) and JavaScript (Vue.js as front-end).

We have developed a mobile-specific graphical user interface by exploiting UI component libraries for the mobile web App so that customers can browse the products and make purchases in this App easily through their mobile phones. We have implemented the vendors' mode for the same App, which is a different view. Thus, the vendors can also post and edit products on stock. Purchase orders are maintained in the MySQL database. Customers and vendors can view and manipulate purchase orders conveniently. In addition, authentication modules are added for more secure account management.

Based on the above design and implementation, our mobile application offers a convenient, efficient, and user-friendly solution for 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 functionalities are based on the 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 usually without a network connection [3]. Moreover, the user can access our App with installation from the App Store or a downloaded browser [4].So that the performance and functionality will increase while keeping the accessibility and reliability unaffected.

# References

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