

UI/UX Mobile Application Design OF VM'S Softdrinks Distributor

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Abstract: VM's Softdrink Distributor was a prototype system that was designed to allow customers to easily order and pay for their favorite soft drinks from a VM's soft drink distributor. The app provided a user-friendly interface for browsing the available drinks and selecting a preferred payment method. Once the order is placed, the app sends a notification to the VM's soft drink distributor to prepare the order, which will then be delivered to the customer. The app also included features such as a history of past orders and the ability to save favorite drinks for easy reordering. By providing a convenient and efficient way for customers to order soft drinks, VM's Softdrink Distributor Prototype can help the owner of VM's soft drink distributor to increase sales and improve the overall customer experience. The prototype system will be developed using FIGMA and Adobe Photoshop for design enhancement.

Keywords: UI/UX Mobile Applications, Ordering System, Prototype, Distributor

1 INTRODUCTION

Online Food Ordering System improved the method of taking orders from customers. The online food ordering system sets up a food menu online and customers can easily place their order as per their wish. Also with a food menu, customers can easily track the orders. This system also provided a feedback system in which users can rate the food items. (Adithya R, Abhishek Singh, et.al, 2017). [1]

VM Soft drinks distributor was a small business of Vener Sawa-an, Vern's Auntie. Small businesses like VM Soft drinks distributor may face intense competition from larger, more established businesses for a variety of reasons. Larger businesses may have more resources, such as financial resources and a larger marketing budget, which they can use to their advantage to dominate the market. They may also have established relationships with suppliers and customers, and may have a stronger brand recognition, which can make it difficult for small businesses to compete. The researcher chose to use a prototype to develop this system.

In today's fast-paced world, the use of Mobile UI/UX application design can greatly improve the efficiency of trucking services, even for small businesses like VMs Distributor who only have one truck to deliver their orders.

By using a mobile application, VMs Distributor can streamline their delivery process and enhance their customer's experience. The application can provide a simple and intuitive interface for customers to place their orders, track their delivery status, and receive real-time updates on the estimated time of arrival (ETA).

Although GPS trucking is not necessary for VMs Distributor due to their small coverage area, the mobile application can still provide the status of the orders. In addition, the application can also include a feedback system, allowing customers to rate their delivery experience and provide valuable insights for VMs Distributor to improve their services.

The proposed VM Soft Drinks Distributor aims to simplify the consumers' ordering and payment processes by providing a user-friendly interface. It can make it simple for consumers to browse through and choose from the available options since they are using a manual system for transactions and payments. The system is simple and intuitive, allowing users to quickly and effectively use it without any instructions. Additionally, the app provides cash on delivery and installment payment options to customers. However, it is limited by the absence of actual transactions or databases, and is only a UI/UX design

1.1 Statement of the Problem

The VM's store delivery app helped promote the store with the interaction between its customers, and this app addressed the following:

1. In what way can the seller innovate its mode of transaction.
2. Can the system benefit the seller by lessening paper receipts and just rely on digital records?
3. How can the system be established for the store to improve interaction between customers and the seller?

1.2 Significance of the study

The findings of the study will benefit to the following:

The Customer - They are the consumer and the main beneficiaries of this study. The findings of the study provided them adequate information about the products and system.

Merchant- This study was beneficial to the merchant about understanding the selling process. All gathered information helped provide possible solutions to the problems and will improve the business operations.

The Future Researcher- This will benefit the future researchers in making their research. This will serve as their guide.

1.3 Scope and Limitation

VM Soft Drinks Distributor Delivery App aims to simplify the consumer's ordering and payment processes and make it simple for them to browse through and choose from the available options since they are still using a manual system in their transactions and payments. The process begins with creating an account, which requires the user to enter their full name, address, and phone number. They can sign in and view the product after creating an account. If the product is unavailable, it will display 'out of stock'. Once customers have decided on a product, they can add it to their shopping cart. They may also change the items in their cart. Once the buyer has made their final decision, they may add the items to their cart and proceed to payment. Cash on delivery (COD) and installment payment options will be shown. When the installment is approved, it will proceed to delivery, and the transaction will be completed.

However, this system is only restricted by the absence of actual transactions or databases.

1.5 Definition of Terms

FIGMA. Figma is a web-based design and prototyping tool used for creating user interfaces, mobile apps, and web applications. It is a collaborative design tool that allows multiple designers to work on the same project simultaneously, making it a popular choice for remote teams. Figma offers features such as vector editing tools, team collaboration features, and version control to facilitate the design process. It is also known for its ease of use and cloud-based accessibility, allowing designers to work from anywhere with an internet connection.

Prototype. an early version of a product used to test and evaluate the design and functionality before investing significant resources into the final product.

2 REVIEW OF RELATED LITERATURE AND STUDIES

E-commerce implementation in supporting business services strategy by Purba et al (2020) stated that with the increase in sales through the internet, ecommerce started to become a thing because of technology and its convenience. With the development of technology being fast, businesses

started to take advantage of technology turning them into a benefit in responding to the needs of every existing and incoming customers and clients. The contribution of information technology to society takes an important role in helping business owners with their problems, which are being taken care of. [2]

Abeabe P. et al (2022) showed that e-commerce in the Philippines also plays an important role nowadays, especially during the pandemic. "E-commerce is being used not only to buy products online, but also to sell and check products over the internet". E-commerce make's life of an individual easy, serving a wide range of products and services on their fingertips. Which is also being used for people to Start-up for some small business. [3].

MANSUR, Daduk Merdika, et.al, (2019) States that "technology in the digital era is oriented to the fundamental aspects and is essential for creative industries in the digital world" as techno grows and gets more into the algorithm close to human beings liking and consumer based. The orientation of philosophy of tech acceptances can be used to market strategy and innovate to achieve a highly competitive advantage in the future.[4]

Musei Clinton (2016) States that the study emphasizes the role of technology in improving business operations and customer experiences and provides a valuable case study for businesses seeking to implement similar systems. Overall, this project work has the potential to contribute to the broader field of online food ordering and management systems.[5]

Chi-Fang Liu, Chien-Ho Lin (2020) Stated that the majority of studies on online shopping have provided evidence of its benefits and implications, but few have examined the unique nature of online food shopping. This comprehensive review highlights the significant themes in current literature and proposes future research directions, including customer and business perspectives, future predictions, mobile app ordering implications, and emerging technologies. The review and propositions are important for both researchers and online food stores as online shopping becomes increasingly popular worldwide. [6]

The changing behavior of city-based consumers is said to be the reason for the rise of online food delivery services. (Chai Lau.T , ng.D)(j2019) [7]

The convenience of the food market has become increasingly reliant on the growth of e-commerce in this country. As technology continues to rapidly develop, businesses must leverage it in order to reap the benefits for their operations. (J T Purba)(2020) [8]

Instrument/Evaluation Tool

ISO 14195:2003 is a standard that provides guidelines for evaluating the usability of multimedia

products, such as software applications, websites, and other digital products. The standard provides a framework for conducting a systematic and comprehensive evaluation of the usability of multimedia products, with a focus on ensuring that the products are accessible, user-friendly, and effective for their intended users.

As an evaluation tool, ISO 14195:2003 can be used by designers, developers, and evaluators to assess the usability of multimedia products. The standard provides a set of criteria and guidelines that can be used to measure the usability of a product, including factors such as accessibility, multimedia content, interactivity, content organization, technical functionality, and design aesthetics. The results of the evaluation can be used to identify areas for improvement and to inform design and development decisions to enhance the overall user experience. The questionnaire can be answered by a Likert scale to indicate their level of agreement or disagreement using a numerical rating. 1 (Strongly Disagree) to 5 (Strongly Agree) which was to be used to acquire the goals of the evaluation.

3 METHODOLOGIES

This chapter will discuss the methodology used in designing and developing the prototype system, describe the techniques in gathering the data, instruments used, and analysis.

3.1 Research Instrument

The researchers prepared an assessment form that follows the guidelines of ISO 14195:2003 which is the standard for evaluating multimedia products. Following the presentation of the UI Design, each respondent was given a form and asked to rate the system. The instrument includes various categories/characteristics that the UI Design must have. These are the criterion and foundation for its relevance. Following that, the evaluation forms are gathered, and the results are summarized by the researchers.

3.2 Multimedia Development Methodology

The Multimedia Development Life Cycle was used to create the prototype project, which is different from other approaches due to its incorporation of multimedia components, providing a unique quality. An interactive multimedia development is needed to improve user interaction and experience in applications.

Initialization. The researchers aim to identify the required interface which helps determine the accessibility of the application. Designing, conceptualizing, gathering data are made.

Blueprint Design. In this stage the structure of the prototype is being developed and it shows the process of placing orders, how to create an account, select mode of payment, status of

the order. Flowchart will be the guide of the researchers when making the system; this is the structure of the whole system.

Assets Preparation. During this phase, the researchers gathered images for the project from VM Soft Drinks Distributor existing products images and its variants were gathered.

Product Development. In this stage all data and concepts that the researchers gathered are being implemented into a functional prototype to show visualization on the user's interface which Figma is being used in making the prototype.

Testing and Validation. The prototype created by the researchers will undergo testing and evaluation by IT professionals to ensure and fix any known issues on the prototype.

4 PRESENTATION, DISCUSSION AND INTERPRETATION OF DATA

This chapter discusses the project potentials and boundaries and the result from the project evaluation by various evaluators who verified and assessed the prototype system.

4.1 Project Capabilities and Limitations

The following are the capabilities of the system:

1. VM Soft Drinks Distributor Delivery App simplifies the consumers ordering and payment processes.
2. It can make it simple for the consumers to browse through and choose from the available options since they are using a manual system transaction and payments.
3. VM Soft Drinks Distributor Delivery app is a user-friendly system.
4. The system is simple and intuitive, you can use it quickly and effectively without any instructions.

The following are the limitations of the system:

1. This system is only a UI UX design.
2. This system is only restricted by the absence of actual transactions or databases.

4.2 Project Evaluation Result

The prototype system's performance was assessed in terms of the Usability, User Centered Design, Visual Design, Content, and Interactivity of UI Design.

The researcher conducted the evaluation to National University Baliuag Professors, and representatives from the target client.

The researchers utilized a Likert scale to collect data.

The following is the interpretation for the range of mean scores for students' integrative and instrumental motivation:

Scale	Description	Range
1	Excellent	4.51 – 5.00
2	Very Good	3.51 – 4.50
3	Good	2.51 – 3.50
4	Fair	1.51 – 2.50
5	Poor	1.00 – 1.50

Table 1: Mean range interpretation scale

INDICATORS	MEAN	DESCRIPTIVE RATING
A. NAVIGATION		
1. The prototype was accessible to users with disabilities.	4.40	Very Good
2. There were alternative ways for users to access information (e.g., for users with visual impairments)	4.70	Excellent
3. The prototype complied with accessibility standards (e.g., for users with visual impairments)	4.50	Very Good
B. VISUAL DESIGN		
1. The prototype was easy to navigate through.	4.40	Very Good
2. The visual design was consistent throughout the prototype.	4.30	Excellent
3. The visual elements (text, images, icons, etc.) were clear and legible.	4.20	Very Good

4. The color scheme was easy on the eyes.	4.40	Excellent
C. INTERACTION		
1. The interactive elements (buttons, links, etc.) were easy to use.	4.60	Excellent
2. It was clear what the user needed to do to complete a task.	4.30	Excellent
3. The prototype provided appropriate feedback to the user.	4.60	Excellent
D. INFORMATION ARCHITECTURE		
1. The information was well-organized and easy to find.	4.90	Excellent
2. It was easy to understand the hierarchy of information in the prototype.	4.40	Very Good
3. The prototype provided the right amount of information without overwhelming the user.	3.60	Very Good
E. ACCESSIBILITY		
1. The prototype was accessible to users with disabilities	4.00	Very Good
2. There were alternative ways for users to access information (e.g., for users with visual impairments)	4.00	Very Good

3. The prototype complied with accessibility standards (e.g., for users with visual impairments)	4.20	Very Good
F. USER TESTING		
1. Users found the application easy to use.	4.60	Excellent
2. Users were able to place order efficiently	4.30	Very Good
3. No significant usability issues were found	3.80	Very Good
OVERALL	4.38	Very Good

Table 2: Overall mean range computation.

The table 2 shows the mean range overall computation for the mobile application prototype's, which produced a Very Good mean range interpretation.

5 SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

The evaluations findings which were used to determine the system's performance capability are as follows. The Navigation of mobile application prototype produced an excellent mean range interpretation. The system's visual design in terms of easy navigation, visual design, visual elements, and color scheme was rated excellent. Mobile application prototype's Interaction was rated excellence in mean range interpretation. In terms of information architecture, the system was rated very good for its well-organized information, easy to understand hierarchy and providing the right amount of information. The system's accessibility concerning the accessibility of users with disabilities, alternative ways to access information, accessibility standards was rated very good. The user testing of the mobile application prototype was rated very good in mean range interpretation.

5.2 Conclusion

In consideration to the objectives of the study and the results of testing and evaluation carried out, the following conclusions were delivered.

1. Providing an e-commerce platform for VM's store helped customers order from their homes without having to go to the physical store.
2. Improved customer experience by making the process of placing orders a lot easier.
3. Provides interactive elements that can be used easily without any instructions.

5.3 RECOMMENDATIONS

Based on the conclusion and the result of the survey, the following recommendations are that the VM's Soft drinks Distributor application should have a daily limit for accepting and delivering orders. The tracking feature of the app should be complete and detailed. The app's color scheme should be improved into more light and remove copyrightable material and other unnecessary elements. VM's Soft drinks Distributor application should have minimal designs of product buttons in the administrator website. The font size of the description of the product should be accurate. Last revise the company logo.

SOME INTERFACES



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