UNIVERSITI TEKNIKAL MALAYSIA MELAKA

DESIGNING A WEB-SITE OF PROBRAND CLOTHING LINE

This report is submitted in accordance with the requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor of Computer Engineering Technology (Computer System) with Honours.

by

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Tajuk: DESIGNING A WEB-SITE OF PROBRAND CLOTHING LINE

Sesi Pengajian: 2019

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DECLARATION

I hereby, declared this report entitled DESIGNING A WEB-SITE OF PROBRAND
CLOTHING LINE is the results of my own research except as cited in references.

Signature: …………………………………
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ABSTRACT

The objectives of this report were to identify important components required to design an e-commerce website and design an e-commerce website which provided a platform for users to design their own shirts. Past research emphasized that there are important components that should be done to create a functional website such as the ease of navigation, the atmospheric or colourful website's theme, website's layout design and quality of the content. In designing a website, the waterfall approach was chosen as the design used when the outcome of one phase acts as the input for the next phase sequentially. Several tests were done to test the effectiveness and performance of a newly designed e-commerce website whether it met users' expectations. The results showed there were correlations observed with the past findings which proved that the elements were indeed very important in seeking users' satisfaction. On this basis, it is recommended that this website provides security certifications to assure safety for customers to involve in making any transaction through any payment gateway in this website. Further work is recommended to ensure adequate security is provided for the website.

ABSTRAK

Objektif laporan ini adalah untuk mengenal pasti komponen penting yang diperlukan untuk mereka bentuk laman web e-dagang yang menyediakan platform untuk pengguna untuk mereka bentuk kemeja mereka sendiri. Penyelidikan yang lalu menekankan bahawa terdapat komponen penting yang perlu dilakukan untuk membuat laman web seperti kemudahan navigasi, laman web bertema atmosfera atau berwarna-warni, reka bentuk susun atur laman web dan kualiti kandungan. Dalam merancang laman web, pendekatan 'waterfall' dipilih sebagai reka bentuk yang digunakan apabila hasil satu fasa berfungsi menjadi input untuk fasa seterusnya secara berurutan. Beberapa ujian telah dilakukan untuk menguji keberkesanan dan prestasi laman web e-dagang yang baru direka sama ada ia memenuhi jangkaan pengguna. Keputusan menunjukkan terdapat korelasi yang dilihat dengan penyelidikan masa lalu yang membuktikan bahawa unsur-unsur itu sangat penting dalam mencari kepuasan pengguna. Atas dasar ini, adalah disyorkan bahawa laman web ini menyediakan pensijilan keselamatan untuk memastikan keselamatan pelanggan terlibat dalam membuat sebarang transaksi melalui mana-mana gerbang pembayaran di laman web ini. Kerja lebih lanjut disarankan untuk memastikan keselamatan yang mencukupi disediakan untuk pengguna laman web.

DEDICATION

This project is dedicated to my parents who have never failed to give me financial and moral support, for giving all my needs during the time I developed my system and for teaching me that even a largest task can be accomplished if it is done one step at a time.

This thesis is dedicated to my supervisor, Mr Ahmad Sayuthi bin Mohamad Shokri, which without his continued support and counsel, I could not have completed this thesis.

I dedicate this project to all my friends who have been giving me moral support throughout this project and I am blessed to have them beside me and without their guide, I could not have completed this project.

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1.0 Introduction

There are shreds of evidence that the success of retail stores is no longer all about physical due to the increasing demand by the customer about retailers that are now offering online store interfaces. Online shopping is an expanding technology area. With the expansion of online shopping, there is a wealth of new market footprint opportunities for stores that can adequately meet the requirements of the offshore market demand and its services. Establishing an online store allows retailers to grow their market and reach out to consumers who may not visit the physical store. The convenience of shopping online is the consumers' main attraction.

1.1 Background

Recently, studies have shown that from time to time and place to place the trend of online shoppers varies according to specific products or services. The current trend of online shopping in developed and developing countries are also attracting researchers as well as getting to know customers' behaviour (Lee et al., 2017). The root cause behind the various trends and recommendations need to be analysed to overcome these shortcomings. These recommendations will help online sellers understand the trends and behaviours of their customers, which will help the retailers to improve the number of their sales and increase customer satisfaction. As shown in Figure 1.1.1, the dominance of electronics, fashion, and books in buyers' online shopping carts is a bigger concern. These three

categories represent a staggering 89% of online shopping. These categories are bringing in volumes and driving their growth thus far.
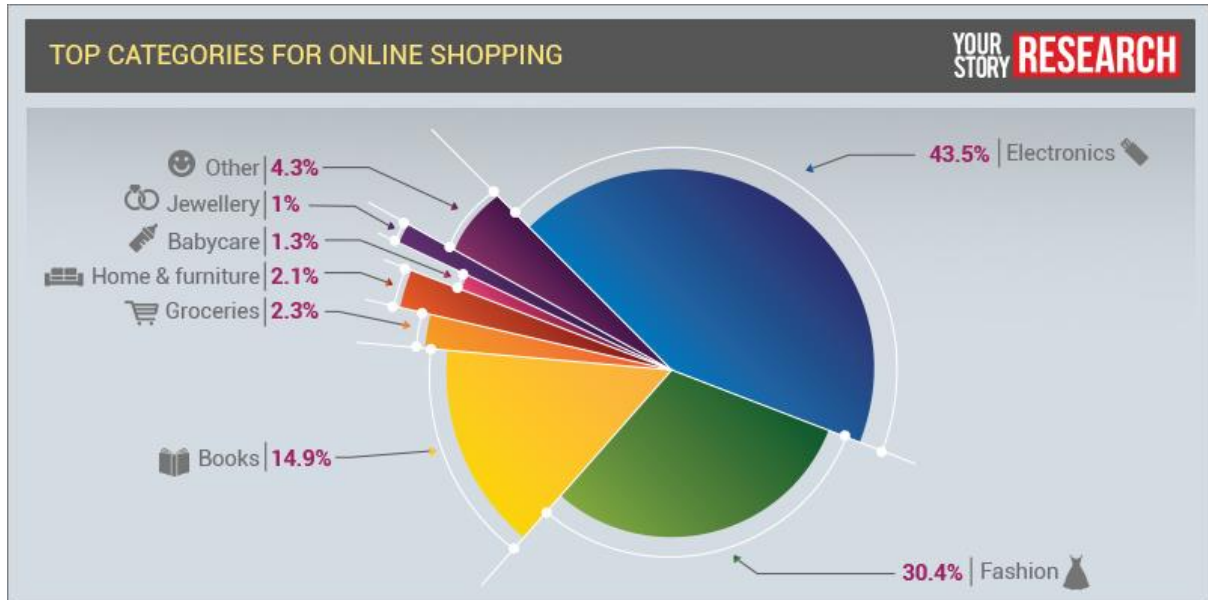
Figure 1.1.1: The Chart of Top Categories for Online Shopping (www.yourstory.com)

1.2 Problem Statement

Nowadays, shopping at the brick-and-mortar store is slightly inconvenient for both customers and retailers. It mostly influences both retailers and customers in terms of cost because retailers need to think about rental expenditure whereas customers need to have money for their shopping trips. Furthermore, customers often will spend more time at the brick-and-mortar store to search for the desired items and if the items they require are already sold out, their time is wasted. Moreover, the brick-and-mortar store may not be able to open 24 hours. Customers will also face difficulties in order to prepare suitable transport for them to pick up items they have ordered in bulks. For example, when the customer buys in bulk, they will have to rent a lorry to pick up their items and this will be costly.

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1.3 Objectives

The objectives of this study were:

i. To identify the important component required in existing clothing customized websites.

ii. To design a website for clothing gears based on the combination of existing clothing line website components.

1.4 Scope

Based on the objectives, the scope of this project is established. The important components are listed out to fully understand the function of this system. The components are specifically sketched in the model provided. The clothing customized website is designed using certain Programming Language software such as PHP, HTML, CSS, and Java and by using Database Management System such as MySQL. This website will allow users to create their own customized shirts. Lastly, an Android Application is created to provide an option for the user to design their shirt only through smartphones.

1.5 Organization

This project is based around the advancement of technology to ease customers to shop online using web-based and Android application. There are five chapters that are composed in this report. In chapter one, the issues are introduced briefly and the objectives and scopes are identified in this chapter. In chapter two, the literature review of the previous related study is analyzed. Hence, the comparison of development in this technology will be further discussed in this chapter. In chapter three, each of the components and the methods used to implement this project will be clearly portrayed and

presented. Next, in chapter four, the results regarding the outcomes and the project analysis will be recorded and discussed. Finally, the conclusion and the recommendation regarding the improvement of this project will be presented in chapter five.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The aim of this chapter is to study the previous research that have been done significantly related to online shopping websites. Meanwhile, this chapter will discuss the validity of past researches. It will explore the website features and mobile applications regarding their strengths and weaknesses also with respect to their classifications and flaws. By conducting the contradictions of the methods and results for the past research, great philosophies will be achieved for the fulfilment of this project.

2.1 Related Works

2.1.1 Development of Online Shopping Websites

The exceptional increment in web-based shopping occurs in the most recent ten decades because of globalization. The reasons online transactions for shopping are utilized by some people is because it is less expensive, and the shop is open 24 hours and others. Nonetheless, some other people are unhappy to make online transaction, because they are unable to see the items around them, and there is also an absence of trust, etc. Kumari and Mishra, (2015) found that in developed countries, online shopping appears to be more popular rather than in the developing countries. Older people are usually the massive consumers for the electronic product because they realize the usefulness of new technology and they tend to learn to use it. By giving them the proper guide on websites, they are now the biggest consumers who use online shopping websites.

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2.1.1.1 PayPal for Online Payment Service

The use of credit cards is the most favorable in developing countries because older people are already familiar with its feature while the debit card is popular among younger generations in developed countries because debit card usage is now becoming one of the trends for a payment method (Kumari and Mishra, 2015). The use of online payment method such as PayPal is quite familiar in developed countries because of its favorable payment method and it offers insurance on the client payment and the cash can be discounted if there are any issues with the dealer, yet this depends on the seller's terms and conditions.

Figure 2.1.1.1.1: The Flow of PayPal Process (www.rishabhsoft.com)

A single payment is a perfect payment procedure because it can execute only a single payment at any moment. Through this payment process, sellers can get quick payment from a client's PayPal record or payment card. For this payment process, the application can acknowledge sellers' PayPal and Visa payments.

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For Android application, there are procedures for payment gateway using PayPal. Firstly, permissions are added to AndroidManifest.xml file. Then, SDK service and activities are declared in AndroidManifest.xml file. After that, the PayPal configuration object is created. After the activity is created, the PayPal Service begins and ends upon elimination. Then, the payment is created and payment intent is launched. ActivityResult() is implemented and the receipt of payment is sent to servers for validation, as well as any other business transactions that require processing, such as fulfillment. After this period, the payment has been completed as well as the user has been charged. It is important to save the proof of payment and try again later if the servers are unreachable. This process is only valid for a single payment. If users are looking to pay for multiple payments, then users have to customize the program using the PayPal SDK.

2.1.1.2 Revolution of Online Marketplace (eBay)

Currently, online marketplaces are one of the most thriving retail forces with an enormous impact on the global economy. As a result, eBay, with its visibility worldwide as one of the largest online retailers, is a suitable platform for sellers to promote their products and services. In addition, eBay proves its integrity by providing feedback on products and sellers. This feedback is important information that helps build the reputation of sellers (Silva *et al.*, 2018).

Figure 2.1.1.2.1: eBay Websites Navigation (www.ebay.com)

The example of a high rising product is a smartphone. While eBay allows any product to be sold, the current study focuses on smartphone sales, which are sophisticated communication devices with computer capabilities. As the market of the smartphone is considered as one of the most relevant in the information technology field and the highest gross selling in eBay websites, it proves how online websites could be trusted even though it includes selling important and expensive technology.

2.1.2 Websites Layout Design

Basically, the construction consists of a web atmospheric perceptual evaluation and online environmental indications. Kawaf and Tagg, (2017) stated that most web elements are essential or critical in websites and that advanced atmospheres such as catwalk videos are no longer an extravagance in online fashion shopping. This implies a level of expectation that service providers, including online fashion retailers, must meet. Furthermore, a remarkable emerging theme in this group of constructs is the suggestion that the ultimate role of web atmospherics is to bring the online fashion shopping

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experience closer to the real-life experience. For example, one suggested that if the construction is closer to real life even if the user cannot feel or touch it, differentiates between web features that provide an experience that is as close as possible to in-store shopping where items are viewed, touched, and tested, and those that do not provide this experience.

2.1.2.1 i-Shop Model Design

A fully functional e-commerce website should be able to set up or extend to a more brilliant model by joining data mining to comprehend client purchasing habits and characteristics to foresee future patterns. Kumar and Shawkat (2017) have used a free CMS framework and built up the site utilizing the MYSQL database and PHP programming language. The model is called i-Shop. The CMS system is free so it is convenient for people to use it without paying.

It includes the Registration Module which enables clients to enroll on the I-shop site so as to utilize it. Next, it includes the Products Browse and Products Search Module that is available to permit the clients to access to browse for the site of their desired products. The Shopping Cart Module which is important to enable clients to utilize the site in their favored currency and to finalize their list of product they want to purchase. Another module required in a smart model is the Shipping and Billing Module which enables the merchant to manage the shipping charges. The Payment Module is also available to provide numerous methods that permit the client to make payment. The Admin User Management, Admin Catalogue Management, and Admin Order Management Module permit the administrator of the i-shop model to manage, control and observe the overall general site in a consistent way. The smarter online shopping model will affect the overall

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behavior of the customers thus increase the popularity and acceptance of the websites (Kumar and Shawkat, 2017).
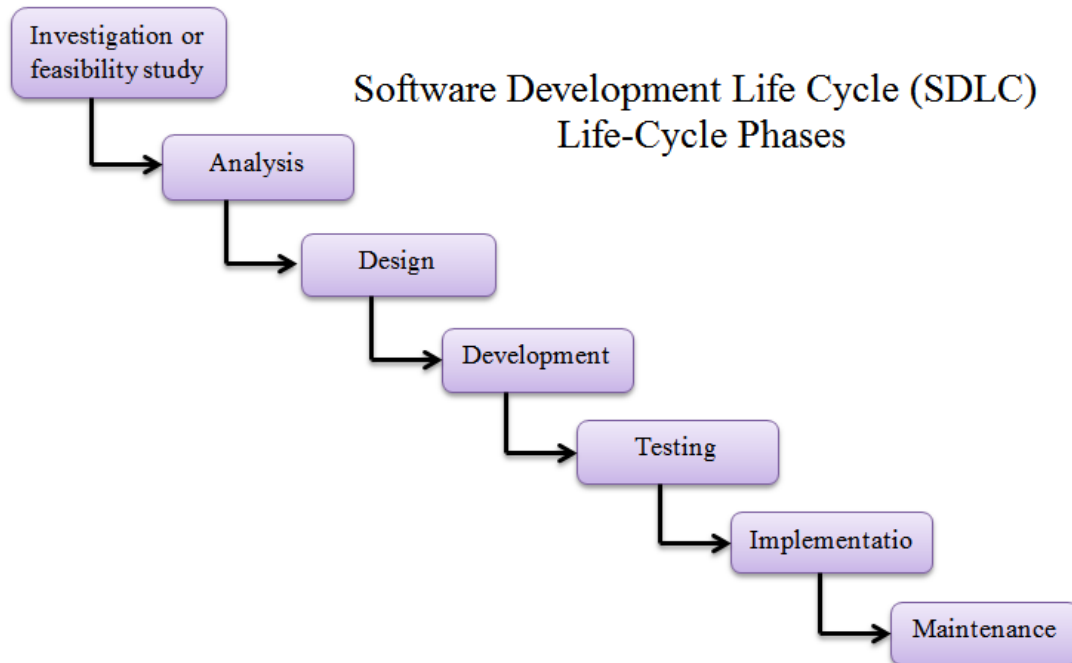

Figure 2.1.2.1.1: The Software Development Life Cycle (SDLC) for i-Shop Smart Model (www.softwaretestingandistqb.com)

In addition, web architecture and technique issues ought to be founded on inspirations and satisfiers for online customers. For instance, online customers generally do not expect or need to contact the administration except if they have questions or issues with customer service. They only anticipate moderately rapid answers in about 24 hours responsive to their individual issues. In addition, this model has few appealing choices, for example, customers can go to the economic mode or brand mode to rapidly attain the orders. This system would generate all client's data, products, and their daily transactions.

Computational Intelligence Theory can also be used to extract information through "big data". "Big data" is a key concept now encountered by almost everyone. It is

extremely large data sets that can be computationally analyzed to reveal patterns, trends, and associations, particularly with respect to human behavior and interactions. However, a vast number of businesses in the e-commerce world have not yet fully immersed themselves in using this big data to provide key insights and generate profitable adjustments.

Figure 2.1.2.1.2: The Field of Big Data Technology (www.rhipe.com)

2.1.3 Flow of Online Shopping Websites

There are various ways to inspect and improve efficiency, one of that is called the Data Flow Diagram (DFD). A data flow diagram (DFD) will make the work easier, whether to improve an existing process or implement a new one. However, it is quite intimidating to start a new one if the DFD were never created before. The DFD of the context level describes the entire system. The zero level DFD describes the entire system operating user module.
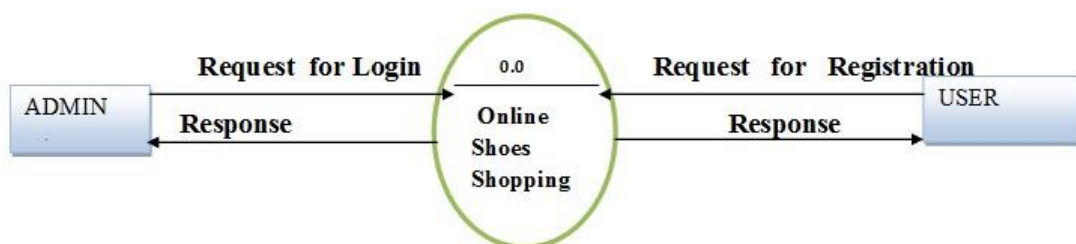

Figure 2.1.3.1: Zero Level DFD (www.visual-paradigm.com)

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