SHORP

(Systematic Hub for Online Retailer Program)

by

Muhammad Aqmal Bin Mohd Noor

Dissertation submitted in partial fulfillment of

the requirements for the

Bachelor of Technology (Hons)

(Business Information Systems)

MAY 2014

Universiti Teknologi PETRONAS

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CERTIFICATION OF APPROVAL

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A project dissertation submitted to the
Business Information System Programme
Universiti Teknologi PETRONAS
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(BUSINESS INFORMATION SYSTEMS)

Approved by,

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TRONOH, PERAK
May 2014

ACKNOWLEDGEMENTS

I would like to express my gratitude and appreciation to all those who gave me the possibility to complete this report. A special thanks to our final year project Coordinator, Ms Penny Goh Kim Nee, whose help, stimulating suggestions and encouragement, helped me to coordinate my project especially in writing this report.

I would also like to acknowledge with much appreciation the crucial role of My Supervisor, Dr. Rohiza Bt Ahmad, who gave the help and support and the necessary material to complete this project. I would to appreciate the guidance given by other supervisor as well as the panels especially in our project presentation that has improved our presentation skills by their comment and tips.

Last but not least, special thanks go to my classmates who help me and gave suggestion about the projects

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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MUHAMMAD AQMAL BIN MOHD NOOR

ABSTRACT

The purpose of developing an online shop building, "SHORP" is to accommodate first-time businessman or retailer without basic knowledge in IT, especially in the rural area to build their own website, as well as an online store to market their products nationwide within a few clicks. The problems that were analysed in building and creating this program are such that not many people understand how to build a proper online shop, most retailers must add third-party program to add shopping cart to their websites thus making them pay more, users without basic skill cannot build and maintain their own website, even though with website, users don't know where and how to market their products and most website creators don't provide inventory system for the products sold in the websites. However, the main scope of this project is to help new business, especially from the rural area to build their own desired online shop and market them for the whole nation. Users can easily sign up, select their choice of theme and change according to their preferences in the setting and they will get an online shop in an instant. Users can process their business, accept orders, check inventory, and manage products easily even without knowing much about web designing. The methodology used for this project is Incremental, which has the frame work of both linear and iterative, which is ideal to building this the project.

ACKNOWLEDGEMENTS

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TABLE OF CONTECTS

CHAPTER: 1
INTRODUCTION

1. INTRODUCTION

The project is titled as SHORP (Systematic Hub for Online Retailer Program), which operates with new businesses and their users to create a systematic online shop to market their products, as well as creating a market system for the products through basic online shop features such as shopping cart, inventories, delivery updates and many more. The program is built both for the user-side and the administrator-side to help seller and well as buyer in operating this business. This project in mainly focused on the new business owners or small business especially from rural area without proper class or exposure to web design in details to build an online shop for their products without hassle within a few clicks by filling up a few forms. The reason why this project is very crucial is because it provides a self-construct website for users without much work. Once user sign up for this program, they can start building their own dream online shop even if they don't know anything about designing or creating a website before. They can choose theme of their shop from the selection and start from it. They have freedom to customize it afterwards or change the concept of their online store from time to time at any time. Therefore, for these type of users, I figured out that this projects will help them to build online shop easily thus this project helping their business to grow.

1.1 Background

SHORP is basically providing the users with the aid of having a website without hiring a web-designer and third-party provider. This illustrates that all the process of creating the website are simplified and make available to the users only through filling up a few forms. This system is particularly more helpful, reliable, efficient and easy for the user to start their own business' website and the customers

to buy products from the shop owners. The web-interface will allow easy set-up of a shop, as well as easy process of payment method and delivery process and updates from the owners to their customers. They are able to not only build an online shop, but they will be able to manage the products and system according to the need. It will also provide a wider and better community for sellers to sell their products in wider range, even internationally. The website requires no help from the outsider once built; no third party program is required to complete the task of building a website.

1.2 Problem Statement

There are a few problems that were analysed while the requirements are gathered in order to create this project. The statements are shown below:

1. Creating an online shop is not an easy task and always requires basic, if not more knowledge in web-designing and IT. The cost to hire a web-designer to create an online shop is high especially for new and growing business and business from rural area.

2. If they know how to start a blog, for example, the still need third-party program or system to provide them with shopping cart feature, or the payment method feature and these will usually cost a lot.

3. For shops that were build using BlogSpot and such, there is no inventory for the products, and the owners have to do it manually

4. Interaction in between customers and sellers are slow as they need to contact one another before a purchase is made. Through a well-made online shop, customer can find anything they need on the website, and buy directly without going back and forth emailing or contacting the owners.

5. The owners cannot keep track of the products

6. There are no community services to market the products to bigger audience across the country.

1.2.1   Problem Identification

The problem was identified by visualising the business owners as they find it hard to market products and create their own business. The process of creating a website alone requires a lot of work and it takes time, if one possesses knowledge in it, but of does not, it can cost them thousands of money to have one built. The management of website by other provider needs constant supervision and constant check-ups on the user-interface to check if there are new orders and such. The problems identification involves the following questions:

1. How to help business owners with less or no knowledge in coding and web-building to build their own website?
2. What are the requirements of an online shop needed by online sellers in general?
3. What are the characteristics of a complete online shop?
4. What are the steps to be taken in order to ease the process of building a website for new users
5. What are other features needed to help the users while using SHORP?
6. What are the aspects and key features of SHORP that may help users in building their own website?
7. What can be done to help users from rural area or less customers to get more attention?
8. How can SHORP help in promoting online business?

1.2.2 Significant of the Project

A web-based online shop system can operate easily, with it being time saver for Admin as there is no need for manual process in managing sales. The interface built is user-friendly. It is more efficient and reliable. The data is formatted and easily approachable. It connects to the database which allows us to choose different type of queries, data report etc. It is private and confidential for both customers and owners

operations as users are not allowed to access system. The system also provides Automatic Notification to notify the user, if their purchase has been delivered or process or failed. Furthermore, Admin is able to manage the inventory items stored in database, through the interface.

1.3 Objective

To develop an easy option for business owners to create and build their own online shop without any help from outsiders and third-party systems. It also provides help, inventory as well as easy manageable website both for user and their customers. Last but not least, to help business to reach certain community and bigger range of customers and audience nationwide through community feature where they can reach more customers according to their needs and what customers are looking for.

Main Objectives of this project are:
1.   To help users with no skills in coding and web-designing
2.   To create a ready-made website suitable for all types of business
3.   To create a community online as a medium to promote business in bigger scale.
4.   To provide guidelines, help and assitance for users in order for them to be able to sell products online even for first timer users.

1.4 Scope of Study

SHORP involves both the user-side and the Admin-Side. Before the users can start using the program, there is a main page, they can choose to sign up or learn basic stuff on other pages provided on the website.SHORP involves all basic coding knowledge that most users do not have and combine them in one function. Ths will help users without or less knowledge in coding to build an online shop.

1.5 The Relevancy of the Project

This project will help new business or business owners to be able to create their own online shop and manage their products and keep track of the purchase process as well as market their products to wider range. This projects is relevant because it targeted users with low or no knowledge in coding.

1.6 Feasibility of the Project within the Scope and Time Frame.

The project is to be delivered with its functionality by its deadline. The scope of the project is aimed to be completed as the same deadline too. More details are provided below in Project Schedule.

1.6.1 Project Boundaries

To make sure that this project completes on time by its deadline, SHORP will be built to target only the local market in Malaysia. Other focus of going beyond Malaysian market are under the users' responsibilities. The community feature is open to everyone; it is up to the users to deal or create a deal if there are customers coming outside of Malaysia.

CHAPTER: 2
LITERATURE REVIEW AND/OR THEORY

Online technological capabilities: Zhu and Kraemer (2002) defined online technological capabilities as "routines, prior and emergent knowledge, analytic processes, and simple rules to turn IT into customer value". Differs with traditional markets, internet-enabled markets need additional, technology-related, capabilities. Berry and Brock (2004) found that top managers" internet experience is more influential in their use of the internet for internationalization than the more-studied international business experience, and Mostafa et al (2006) reported that this experience is related to managers" entrepreneurial orientation. Due to the fact that the sustainability of the competitive advantage from technology lies in the firm's ability to configure and leverage technological components in a rapid changing technological context, online technological capabilities are resource in the firms" context instead of the technology itself (Zhu and Kraemer, 2002). Morgan Thomas and Bridgewater (2004) found that firms that make a higher financial and managerial investment in technology are more successful in their use of internet-based export channels. Because of the diverse cross-cultural differences in attitudes and behaviours in doing business online (Lynch and Beck, 2001; Rothaermel et al., 2006), it is crucial to get to know the way to integrate technology with day-to-day operations (Loane et al., 2004; Moini and Tesar, 2005; Ramsay and Ibbotson, 2006) and marketing related activities (Lituchy and Rail, 2000; Moen et al., 2003; Nguyen and Barrett, 2006; Sinkovics and Penz, 2006) in order to access to benefits from increasing foreign markets" sales.

Online brand communities: An online brand community is an online "specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand" (Muniz and Guinn, 2001). Increasingly, individual buyers want to communicate with sellers (Schau et al., 2009) and these prospective buyers want online information about sellers" quality to lower their search costs (Chen et al., 2002), and online brand communities can provide positive

endorsements. Due to the fact that the internet can lowers switching costs for current buyers, they are easily disrupted by a new competitive entry (Moe and Yang, 2009), but brand communities can foster affective support which increases switching costs (Schau et al., 2009).

Web 2.0 and its impacts on international business and marketing

During the first half of the present decade the Internet entered a new evolutionary stage commonly referred to as Web 2.0 (Constantinides, 2010). This stage is characterized by the emergence and rapid expansion of online Peer-to-Peer applications which make access to the direct connectivity and interaction between individuals and the easy publication and editing of online content. Allowing customers to talk online about shopping and product experiences, publish product reviews and exchange shopping advices the Web 2.0 harness the collective knowledge and further undercut the impact of traditional media (Constantinides, 2010). Considerable controversy stems from the fact that Web 2.0 applications are by and large based on content generated by users often being anonymous and lacking qualitative credentials (Constantinides and Fountain, 2007). The user is vital factor for all categories of Web 2.0 applications, not only as a consumer but mainly as a content contributor (Constantinides and Fountain, 2007). These applications allow user participation in the form of content contribution and content editing. The term Web 2.0 has been introduced by O''Reilly (2005) and his definition is based on common elements characterizing the new generation of web applications. A year later, Musser and O''Reilly (2006) made a new attempt proposing a new definition for Web 2.0, still, a flaw exists which is its focus on trends, a vague notion by itself. So far there is no definition seems to be widely accepted and the issue is presently open to discussion. In this paper, the Web 2.0 (social media) will be defined as follows which a more comprehensive one is proposed by Constantinides and Fountain (2008):

Web 2.0: A collection of open-source, interactive and user-controlled online applications expanding the experiences, knowledge and market power of the users as

participants in business and social processes. Web 2.0 applications support the creation of informal users" networks facilitating the flow of ideas and knowledge by allowing the efficient generation, dissemination, sharing and editing/refining of informational content.

The impacts of Web 2.0

The growing importance of the Web 2.0 and the effects on consumers and organizations are issues frequently making headlines and increasingly attracting academic attention. The main focuses are the methods in which these applications contribute to customer behavioural change and new challenges facing strategists and marketers (Urban, 2003; McKinsey Quarterly, 2007). Web 2.0 (or social media) represents a healthy phenomenon, becoming the new source of consumer creativity, influence and empowerment (Gillin, 2007). The consequence of customer empowerment is that traditional media and old-style marketing are constantly losing ground as influencers of consumer behavior (Constantinides, E., & Fountain, S. J, 2007). Consumers do not trust traditional marketers as they used to: a recent study of Deloitte Touche USA reveals that 62 percent of the US consumers read consumer-generated online reviews and 98 percent of them find these reviews reliable enough; 80 percent of these consumers say that reading these reviews has affected their buying intentions (emarketer.com, 2007). Web 2.0 applications are not only in the form of information sourcing but also as forums of dialogue and confrontation of producers and vendors with their social, ethical and commercial responsibilities (Constantinides and Fountain, 2007). Web 2.0 (or Social Media) isaffecting the way people communicate, make decisions, socialize, learn, entertain themselves, interact with each other or even do their shopping (Constantinides and Fountain, 2007). Web 2.0, next to transforming peoples" individual and group behavior, has also affected the power structures in the marketplace, causing a substantial migration of market power from producers or vendors towards customers (Constantinides and Fountain, 2007). It has been suggested that by 2011 the Internet will become the US leading advertising medium surpassing newspaper advertising (Gillin, 2009), a development that will mark major shift of advertising budgets from traditional to online channels

worldwide. In a global survey conducted in 2007 McKinsey found that the popularity of Web 2.0-based applications is rising among businesses; while most companies surveyed have so far integrated a limited number of these applications into their business strategies the large majority

think that "investing in them is important for maintaining the company"s market position, either to provide a competitive edge or to match the competition and address customer demand" (McKinsey Survey on Internet Technologies, 2007). Web 2.0 presents businesses with new challenges but also new opportunities for getting and staying in touch with their market (Constantinides and Fountain, 2007).

The benefits of E-commerce (and Web 2.0) in international Business and marketing processes

E-commerce technology will lead to rapid internationalization of small and medium-sized companies by reducing the benefits of economies of scale, lowering the cost of advertising and enabling even small firms to reach dispersed markets (Quelch and Klein, 1996).

To customers (Janal, 1998):

☐ Convenience. Consumers can order goods 24 hours a day without wasting valuable time traveling to and from retail outlets.

☐ Information. Consumers can access a great deal of information about companies, products, competitors, and prices without leaving home.

☐ Fewer hassles. Consumers do not have to deal with difficult salespeople, open themselves to persuasive and emotional factors, or wait in long lines.

☐ Wider product selection and lower prices

To marketers, the benefits include (Avraham, 2001):

☐ Quick adjustment to market conditions. Companies can modify their marketing strategies by adjusting their product assortment, prices, distribution, and promotion to address different target groups in a timely and appropriate manner.

☐ Lower costs. E-companies avoid the expenses of maintaining bricks-and-mortar facilities and associated expenses on rent, insurance, and utilities. Digital catalogs, for example, are much cheaper than paper catalogs.

☐ Relationship building. E-companies can communicate with and learn from consumers and other e-companies. Customers can download free software and

information, which can lead to future sales.

☐ Audience sizing. E-companies can learn a great deal about the current and potential customers visiting their Web sites. Such information can aid in refining the marketing mix and adjusting marketing strategies. In specifically, the benefits of Web 2.0 as an international marketing tool can be concluded as follow:

☐ Cost advantages: reduced communication costs (Kumar, 2004), R&D costs (Brabham, 2008; Kohler et al., 2009) and advertising costs (Berthon et al., 2008)

☐ Enhanced customer loyalty (Auh et al., 2007, Nambisan and Nambisan, 2008)

☐ Efficient innovation and reduced risk of new product development (von Hippel,2006)

CHAPTER: 3
METHODOLOGY

3.1 Research Methodology

I. Journals

ii.Case Study

iii. Conference Papers

Iv. Books:

3.2 Project Methodology

The methodology chosen for my project is Incremental methodology. It is because this methodology consists of framework which has both combination linear and iterative occurrence amongst the phases of the methodology. To elaborate further, the designing and implementing & testing phase can be concurrently running. There are 7 main processes that occur in the methodology, as shown below:

1. Planning

|

2. Requirements

|

3. Analysis

|

4. Implementation

|

5. Deployment

|

6. Testing

|

7. Evaluation

Initial planning is a phase where the decision had to be made on what type of project to be selected and what will be the main content of the project. Once it was decided, the 1st phase, planning, refers to how the combining of the system planning and system analysis phase can be achieved. The purpose of the project, the target audience, the major contents, the project scope, constraints and system requirements, as well as key issues in the project are also analysed under the planning phase.

As the planning phase completed, the 2nd phase, Requirement, whereby, all the information was gathered into a site map form to be easily viewed. During the planning phase, I decided what type of technologies I will be using, the software, hardware, the interactive forms etc., all the data gathering, researching and readings also took place in this phase to clarify for a better requirement lists.

3rd phase, Analysis & Design, where all the requirements and site maps are analysed and the prototyping of the website takes place. I designed a number of prototypes to ensure the visibility, reliability and functionality of the interface. Below is the interface of User-side and Administrator. This phase is currently in process with the 4th phase, the implementation and the 5th phase, Testing. They work concurrently because the as one part or a module is developed, it needs to be tested and evaluated so that the programmer is able to make changes, amend or continue developing next module.

3.3 Key Milestones

Tasks/ Activities	Milestones
1. Data Gathering and Requirement a.Research on previous related materials b. Draft out System Requirement	Week :1 - 6 Week : 1 - 4 (Literature Review Draft) Week : 4 - 6 (Analyze requirement)
2. Analyzing a. Finalize Scope b. Develop Flow of each Module (Draft) c. Draft Mobile access interface Requirement	Week :7 - 11 Week: 7 Week: 8 Week: 9 - 11
3. Designing a. Interface of User-side & Admin-side	Week: 12 – 14
4. Implementation & Testing a.Debugging b. Validation c. Verification	Week: 1 - 7 (FYP)
5. Evaluation	Week: 1 –7
6. Deployment	Week: 8 – 9

3.4 Tools

Hardware:

a. A laptop

b. Broadband

c. Mouse

d. Keyboard

Software:

a. Adobe Dreamweaver Cs5

b. Adobe Photoshop Cs5

c. Adobe Device Central

d. Opera Mini Browser for mobile device

e Wampp server –MySQL server, Apache

f. Front end: Web browser, PHP and HTML (Code), Mobile Interface

g. Back End : SQL database ,Real-time Algorithm

CHAPTER 4:

4. RESULTS AND DISCUSSION

4.1 General Results

In general, this project created an easy option for users to create an online shop through SHORP. As the result, users can easily create a fully-functional online shop with SHORP even without any basic knowledge in coding nor web-creating and designing. Simply put, anyone can create an online shop with SHORP.

The result of this projects; the interface of SHORP seen from point view of the users can be seen at appendix 4.1

4.2 General Outcomes

The general outcomes of this project can be divided into two categories; Users, and buyers, while users are also known as the page admin and buyers and external party using the website created by users of SHORP.

4.2.1 Outcomes for buyers

As a user of SHORP, they can easily set up an online shop, manage products, check inventory and connect with customer all within one place. With hassle and problem with coding, SHORP provides them everything they need to control their business with one interface; dashboard.

4.2.2 Outcomes for customers

As customers to users of SHORP, the can easily view products, products details, select products and keep them in their shopping cart and finally make payment through various ways, manually, or through ATM transfer, credit card or PAYPAL.

4.3 Results

According to a survey (see Appendix 4.3) I did to a few business owners for a trial run of Shorp, 90% of the features needed that was listed for online shop are available on Shorp and 100% of them are satisfied with all the features available.

56% chose the inventory feature as the best feature in Shorp while another 44% agreed that Community feature is the best feature a sit helps to market their products in bigger scale.

4.3 Discussions

This project is able to solve the problems statements and satisfy the objectives of this project.

CHAPTER 5:

5. CONCLUSION AND RECOMMENDATION

To conclude the report, the research and development of the project has assisted me to analyse many different types of methods, procedures and techniques that have been used to accomplish similar type of concept as my project. However, my project is still unique and the scope and objective is distinctive. The schedule of the project as referring to the methodology and Gantt chart, the progress is on time and scope. However, it is recommended to finish before the date stated, so that any amendments or logic flow of the system could be changed. In addition to that, my system can be easily updated by adding in more modules to adapt certain environment as the programming language which is being used is reliable (PHP, HTML, SQL).

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[1]Duncan, Donna. 8 April 2014 "How to started a website"
<http://www.thesitewizard.com/gettingstarted/startwebsite.shtml >.

[2.] Tao Yi ."*The impacts of E-commence on international business and marketing:* "
15-09-2012

APPENDICES

## Appendix 4.1
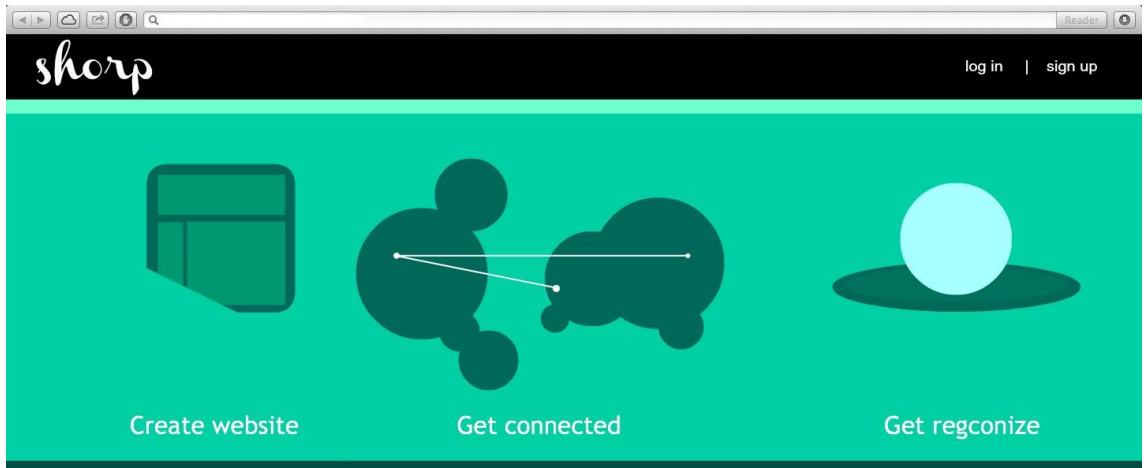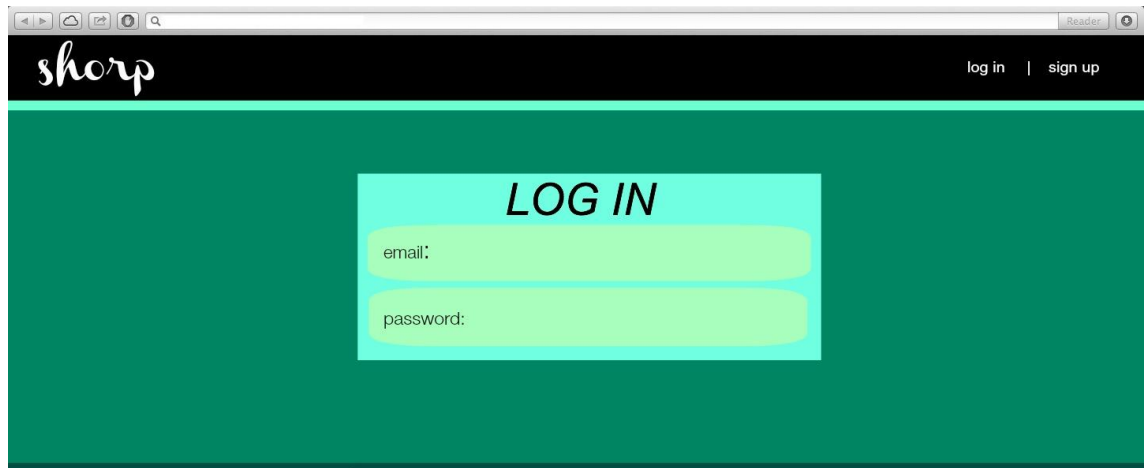
Appendix 4.2

Survey

Name:

Age:

Type of business:

Answer the following questions:

1. What are the features you are looking for, for your online shop?

2. After trying Shorp.org, does it suits your preferences and needs?

3. What are the features that help you the most?

4. Do you think Shorp.org is a user-friendly website?

5. If you can rate, please rate our "Community" feature.

6. How does our "Community" feature help to boost your sale and promote your products?

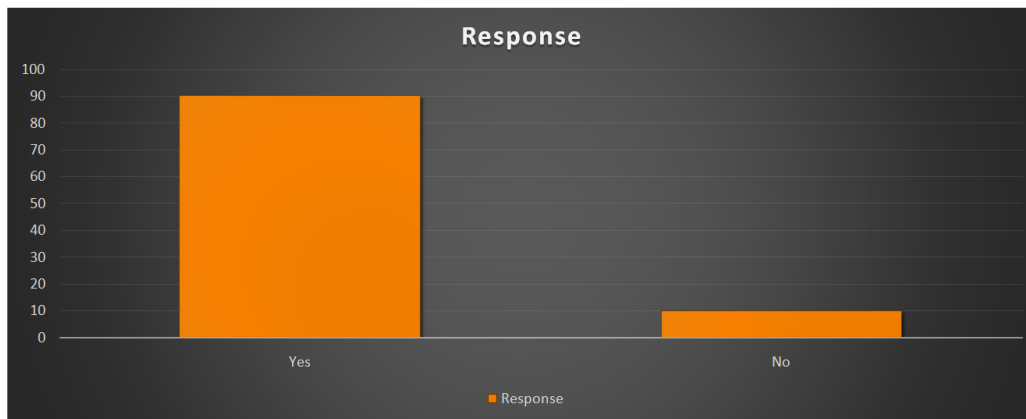7. What can be done to improve Shorp.org?

Survey Result:

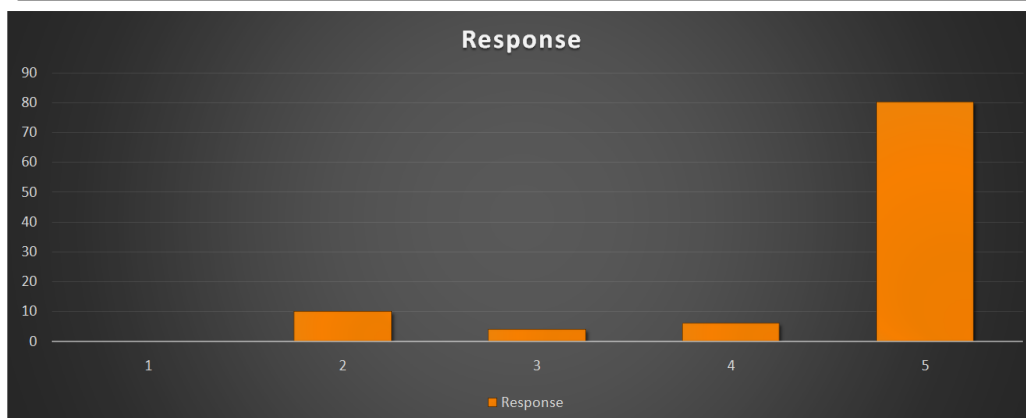## Do you have any business or planning to?
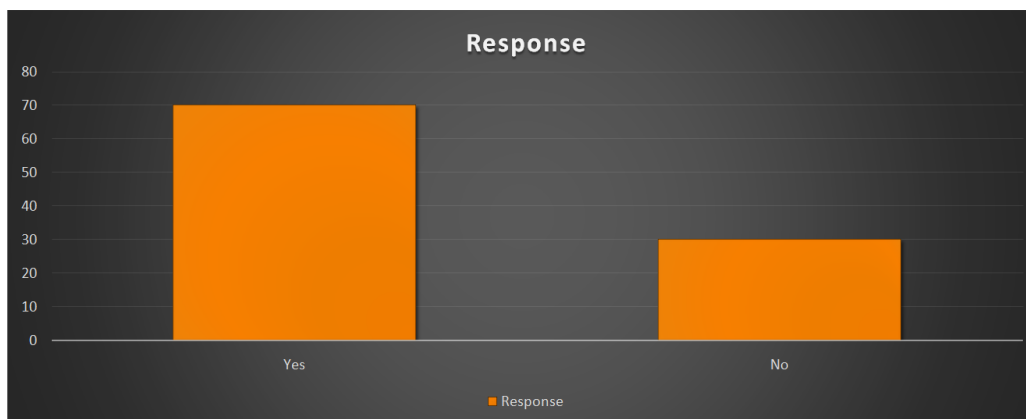
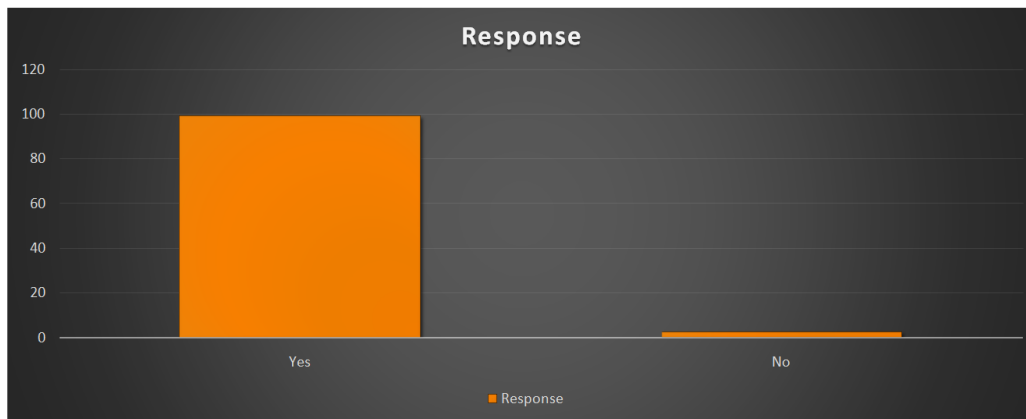## Do you have any knowledge on web designing?
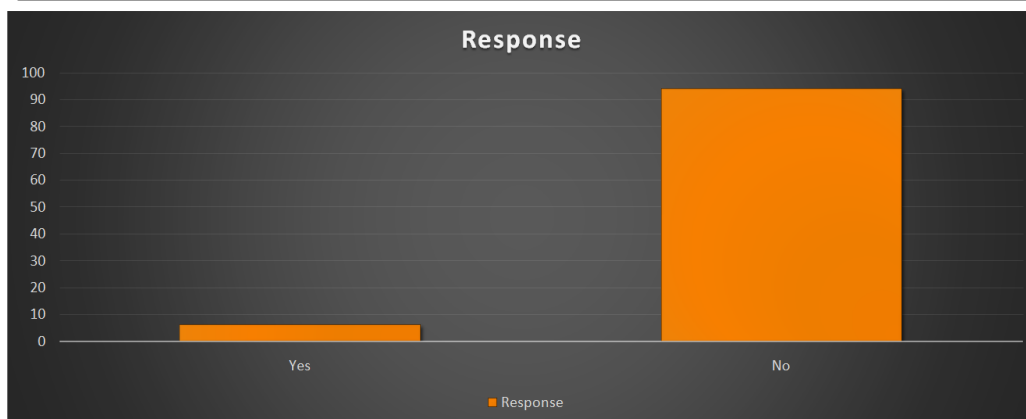
Do you think this platform help you in developing your website?

In rate of 1 to 5,please rate of the ease of use of this platform?

Assume this service is RM100 per year, would you buy it?

Do you think this platform will attract more customer and brand/product awareness