Pharmacy Portal For Skin Disease :

Subscribe Medicine Prescription

Based On User Symptoms

by

Anis Amirah Binti Arsad

Dissertation submitted in partial fulfilment of

the requirements for the

Bachelor of Technology (Hons)

(Business Information Systems)

SEPTEMBER 2011

Universiti Teknologi PETRONAS
Bandar Seri Iskandar
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Perak Darul Ridzuan

CERTIFICATION OF APPROVAL

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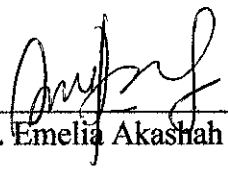
Approved by,



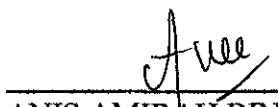
(Ms. Emelia Akashah Bt Patah Akhir)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK

SEPTEMBER 2011

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.



ANIS AMIRAH BINTI ARSAD

ABSTRACT

Skin disease has been discussed widely among online community lately. For searching information related about skin disease in Malaysia is still limit. No specific website about skin disease has developed and lack of sources to study. Therefore, concern on this issue and rising of skin disease population, this paper introduces a web based pharmacy portal specific for skin disease. Other than provide knowledge about skin disease, it will subscribe real-time medicine prescription based on user symptoms. Medicine prescription regularly will be produce by a doctor or pharmacist at medical center for the sick people. However entering into this modern era, the traditional way can be replace by merging technology element. As technology grows rapidly especially Internet everything can be done at end of finger. Following this revolution, the development of this portal will integrate multi-application tools and database to support the decision making. The main purpose of building this pharmacy portal for skin disease is to share health-related information and search the medicine for the user's skin problem. The portal will apply symptom investigator to generate the medicine prescription that will display the details of skin disease that affect the user and recommend medicine to cure the disease.

ACKNOWLEDGEMENT

In completing this final year project dissertation, I would like to take this opportunity to indicate my deepest gratitude to the following persons who helped me a lot in contributed towards completing my final year project (FYP).

Firstly and foremost, a special thanks to my supervisor, Ms Emelia Akashah. She helped me a lot during the progress of this project, continuous patience and supervision given throughout the final year. Without her time in spending her precious time to guide me and answer my doubts, this project would not accomplish successfully.

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CHAPTER 1

INTRODUCTION

1.1 Background

Skin disease was constantly discussed among online community in Malaysia since it is most common form of infections occurring in people of all ages especially young children and old people. Previously when people were affected skin disease their solution was to see doctor and would receive the medicine prescription before they could get their medicine. Thus, instead of getting medicine prescription manually at a clinic or pharmacy it can be done through online. Improvement of health care service, people can know a proper treatment and exact medicine for their disease immediately through online such as a web-portal. Portal is defined as a platform to display related information that user needs from different sources in a single window [1]. The operation of portal as a gateway for health sources could help user to get valuable and reliable information to secure their life [2]. However with extended expert technology the capability and usability of the portal can be improved.

Basically this project proposed a portal comprises of useful information about health, medicine and treatment to the user in the new way. Other than providing information, this portal also works as symptoms investigator to help people to search the suitable medicine for their skin illness in real-time. In order to get the result, the portal will use algorithm that show preferable medicine, suggestion treatment and what meal they should and shouldn't take based on list of question that the user needs to answer such as user's symptoms, period of pain and body condition.

1.2 Problem Statement

i. Shortage of health awareness among the people.

Due to people's behavior, many people prefer to keep their pain until their sickness turn out to be critical and difficult to recover. This situation happened because they lack of basic health knowledge.

For example when their skin is showing symptoms of skin disease such as itchy on whole arm they tend to let it few days by hoping it will heal by itself without taking medicines.

Other than that are they afraid to get modern medical treatment. They prefer to use traditional treatment such as wipe the gamat oil. Not every disease can be recovered through wipe gamat oil especially those involving internal organs. They need to know the suitable treatment for their disease.

ii. Lack of sufficient time for medical checkup.

Nowadays people are working hard making money till there is no time for them to relax and left their workplace. If they fall sick they often to take any panadol pills as their painkiller. It was an easy way for them to cure the pain without concern not every pain can be recovered by taking panadol pills.

iii. Lack of skin disease information resources

Skin disease is one of the regular diseases that occur among the society nowadays. However, its resources regarding to cure it still not much. Therefore, with the implementation of this pharmacy portal specialized for skin disease would add another sources of skin disease to the society through the internet.

1.3 Objectives

At the end, this project should be able to achieve the following objectives:

i. **Distribute related knowledge, tips and current news of skin disease.**

As a portal, the portal must contain valuable and reliable information as it related to user's health. The true source information can help to improve user's life and reduce amount of dangerous disease among the community.

ii. **To help the user search the medicine or cure for their skin disease.**

Besides providing information, the portal also has an application to help user search the medicine or cure for their disease. The user can easily know the location where the medicine is available without wasting their time to search to several places.

iii. **To analyze the user information and recommend medicine prescription based on list questions answered by users.**

Inside the portal also the user can check their symptoms using symptoms investigator. It is only a pre-check for the user about their health condition. Then the user needs to answer several easy questionnaires and when they finished, the symptom investigator will analyze or diagnose the information and produce the medical prescription.

1.4 Scope of study

The project research will emphasize on web-based development using language programming such as HTML, XHTML and PHP areas. Since the project is focusing on helping user by producing medicine prescription additional tools need to be applied in order to run the application. There are also linked to a database to keep user information and diagnose it to get the outcome.

Constructing the portal, the latest software will be using to create the features and graphical element to attract the viewer accessing this portal.

1.5 Relevancy of the Project

Even this project is creating a web site, this project will emphasize on the algorithm how to produce recommending list of medicine for skin disease patient.

The relevancy points of this project are:

i. This project is about to help skin disease patient to be alert and search suitable medicine near their place.
ii. The language programming and application of this project would be the latest software available in the internet.

1.6 Feasibility Analysis

1.6.1 Technical Feasibility

i. Familiarity with language programming such HTML or PHP: More familiar

ii. Familiarity with application such as search engine and graphic: Less familiar

iii. Project Size

- People: Anis Amirah Binti Arsad
- Timeframe: 28 weeks (February 2011 - September 2011)

1.6.2 Scope Feasibility

i. This project development study focuses on the aspects of the application and language programming.

ii. The study will be conducted and covered within the topics of how to build application and graphic and determine the suitable language programming other than using JAVA,HTML and PHP.

iii. The testing and implementation phases will follow in 'Final Year Project 2'. These indicate that the progression of development and deep studies including researches of the project must be done during 'Final Year Project 1' and the development must be delivered during 'Final Year Project 2'.

1.6.3 Organizational Feasibility

i. Project coordinator: Ms Emelia Akashah, the author's supervisor that responsible to monitor the progress of this project by providing consultation and monitoring the flow of this project.

ii. The end users of the system, the public user and skin disease patient are expected to appreciate the future benefits of Pharmacy Portal Specialized for Skin disease.

CHAPTER 2

LITERATURE REVIEW

2.1 Skin Disease Background

Most of our body part was covered by skin. Skin is the largest organ in human body. Many people experience a skin disease at some point in their lives and it is exposed most of the time causing the increasing risk of becoming diseased or damaged. As the skin is a highly visible organ, the patient can discover the skin disease symptoms early by apparent of changes on their skin.

Commonly in developing countries, the skin disease spread among young children and babies and their mothers and is related to close relationship, overcrowding, and shared sleeping areas [3]. If they were affected, usually the step taken is the patient will meet the dermatologist to overcome the problem.

Depending on the nature of the skin disease, a variety of symptoms may obvious. The skin may transform color or texture, or it may become hot, swollen, or creepy to the touch. Other than that, even the symptom not complex or small spot on the skin, skin cancer might be occurred. If a condition appears to be growing rapidly worse or it does not resolve within a week, an appointment to a dermatologist is highly advised to determine what is causing the disease, and how it can be treated [4][5][6].

To solve this problem, an inclusive portal for skin disease can be a big distribution in health area in helping people to be alert and take fast action to heal the skin disease by diagnosing their symptoms.

2.2 Health System

In the modern society equip by high technology it is necessary to develop and apply technologies to balance the lifestyle and empower the citizens [7]. Therefore a variety of approaches for knowledge acquirement from medical databases has been developed, and useful knowledge for diagnosis and treatment has been revealed [8].

In the future many people are predicted to manage their personal health electronically in reliable sources [9]. The system also must not only capable to manage health but also have the ability to demonstrate value [10]. It would be imagined to have health systems that support the idea that intelligent to doing a better job than others.

Since the information technologies progress rapidly, there are many new innovative applications could be applied in healthcare services. Among of the new concept that has been introduced is 'E-Health'[11].

2.3 E-Health

E-Health is defined as an application of information and communication technologies (ICT) using in health sector. In more specifics, an emerging field that combine medical informatics, public health and business, referring to health services and information delivered or enhanced thorough the Internet and related technologies [12],[13]. Therefore E-Health is expected to contribute a development of new ways of delivering health services and to impact on the society and structure of the health-care delivery system. This concept even to enable the user to access to the system quickly and it is easier to keep information accurate and updated [14].

Basically, E-Health can be narrowed into three broad categories which are delivery of care to patients by health-care professionals, education and sharing of health-related information and knowledge, and trading health products [7].

The first category covers systems for delivery of care to patients by healthcare professionals [15]. Areas that the systems covered are :

i. Hospital systems : Scheduling systems, hospital and patient administration systems, laboratory information system. This system typically is managing service network between the hospital and other health-care participant to exchange the clinical information and administrative data.

ii. Primary care systems : Information systems for general practitioners, pharmacists, and dentists for patient management, medical records and information exchange.

iii. Home care systems : Used to deliver care services via telecommunication or wireless to the patient at home. For example the systems are remote vital-signs monitoring systems that enable the patient to receive targeted treatment and medication without the need to visit an outpatient clinic especially for case like diabetes medicine.

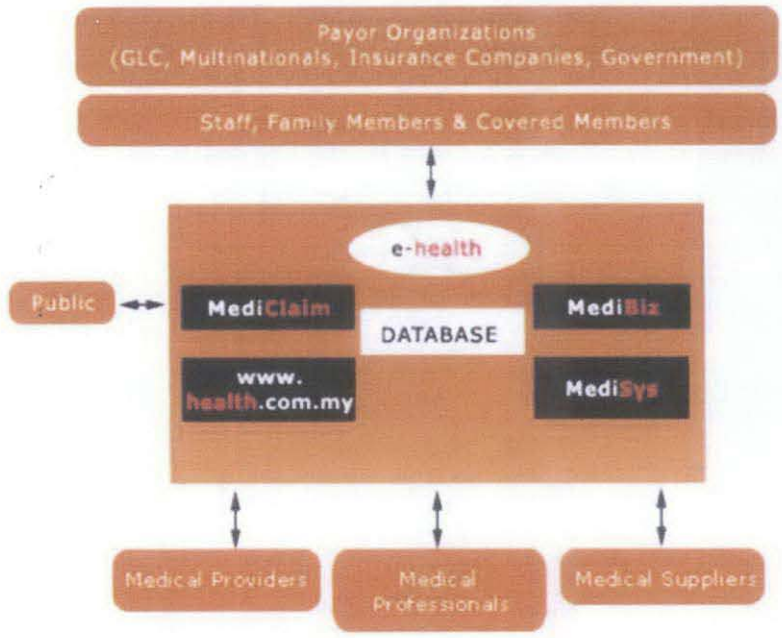


Figure 1: One of E-Health modules (www.netmyne.com.m)

2.4 Pharmacy Portal

Based on the second category in E-Health, it shows the primary care systems involved information exchanges. It could integrate education and sharing information health related information and knowledge inside web-portals , virtual hospitals, and Internet-based consultation services. Usually these systems are targeted for:

i. Medical consultation, search for the second opinion, search for health, disease or treatment-related information.
ii. Medical education and sharing of medical publications, preventive materials, and public health related information. Assuming internet as mechanism for spreading the information to the people, developing web-based technologies and health application can help the health system to expand the health care information more widely available to different audiences in a variety of contexts [16].

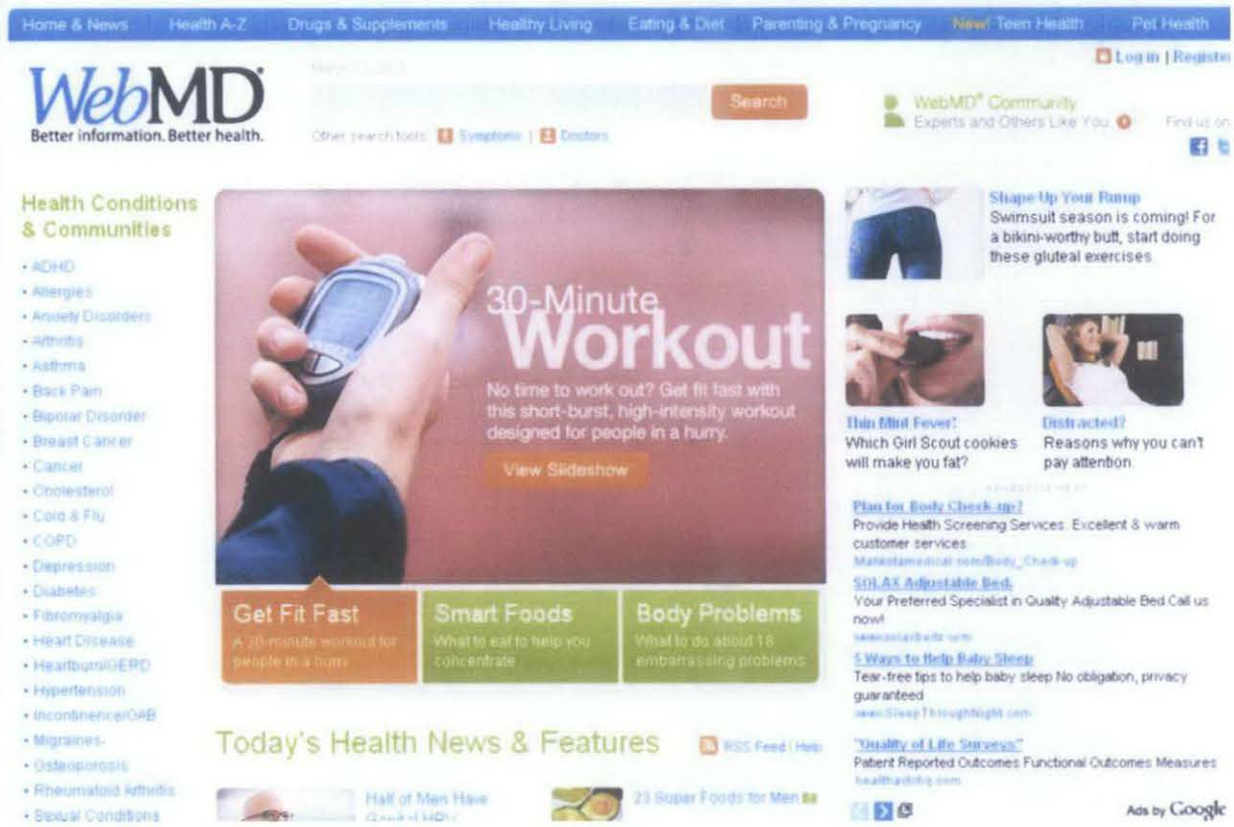


Figure 2: Sample of pharmacy portal for education and sharing information (www.webmd.com)

iii. To trade health related products. It is using same concept such as e-commerce or e-trading. The systems will sell medical products, health-related goods, pharmaceuticals, and medical devices that enable citizens to enter Internet shopping in an easy and secure way.

Figure 3 :Sample of pharmacy portal that trade health related product (*www.pharmacymalaysia.com*)

All these systems may help peoples to become informed and empowered through information and knowledge they are able to retrieve and access from the Internet sources. Furthermore, with a manufactured communication strategy for providing information regarding promotion and prevention of healthcare from e-health and promote the use of technology solutions it would improve individuals' behaviors by enhancing their interaction with technological features [17]. Thus by taking all these criteria in the pharmacy portal it would help the user to seek information, alert with disease news especially skin disease and purchase the suitable medicine for their skin disease.

2.4.1 Comparison Existing Pharmacy Portal

Portal Pharmacy	Pharmacy Malaysia	WebMD	P-Portal For Skin Disease
Selling Product	Yes	No	Yes
Provide Health Information	No	Yes	Yes
Multimedia content	Less interactive	Average interactive	High interactive
Specialized	General	General	Skin Disease
Features for medicine prescription	No	No	Yes

Table 1 : Comparison between the pharmacy portal in the internet

Based on the Figure 4, the table shows the elements consisted in the currently existing pharmacy portal. Basically, the pharmacy portal has no specialized on specific disease. The health portal usually shared the news or tips for all disease. They shared information about the symptom of the disease, how to cure the illness and sharing the good tips how to take a good care of health. Because of sharing the information and many news, sometimes the interface of the portal look less interactive where many things were put on the home page. However, there are certain pharmacy portal that would not provide health information. This pharmacy portal is focusing on selling medical product.

2.5 Overview Of The Proposed Pharmacy Portal For Skin Disease

From the comparison, this project will be highly focused on providing health information service and helping the user to search the suitable medicine for their skin problem. It even will support interesting multimedia content as mostly pharmacy portal looks cluttered and disorganized. It gives difficulties to the user to search what they need when they see loads of text descriptions. The P-Portal also would use pictures to illustrate the symptoms of skin disease. Therefore the user that affected by skin disease can has more understanding about their skin disease and become more attractive.

CHAPTER 3

METHODOLOGY

3.1 Research Methodology

In order to develop this project, a few sources have been used to find the related project information. The sources for gathering the data are:

i. Internet

This source contributes a lot of finding the relevant information related to this project. All the information can be obtained quickly and with no limits. Through internet the developer could search journals from the experts stored in the online resources such as IEEE, ACM Digital Library and ACS Online Journals.

ii. UTP Information Resource Centre (UTP IRC)

UTP IRC offers a lot of beneficial book to be a reference for their student to do research or reading material. The IRC help the project developer a lot to find the related topic with the project title. Among the topics chosen are about the health portal and how the portal can contribute to the community. This type of sources provides accurate and reliable information.

iii. Online Survey

Currently the project has been used survey approach for gather the necessary information. The purpose of the survey is to identify how relevant this pharmacy portal towards the user expectation.

List of survey questions will be distributed to the public user to know their internet usage, health information and associated information with medical care through online survey [21]. Below is the list of questionnaires.

A) Demographic – To gather general information from the user

1) Gender
   - o Female
   - o Male

2) Age
   - o Below 17
   - o 18 – 24
   - o 25 – 30
   - o Above 30

3) Occupation
   - o Executive
   - o Lecturer
   - o Engineer
   - o Doctor
   - o Businessman
   - o Government Staff
   - o Student
   - o Others_____

4) Have you experienced skin disease
   - o Yes
   - o No

B) GENERAL INFORMATION – to identify the regularity of browsing health website through internet

Questions	Never	Rarely	Sometimes	Very Often	Always

5) Regularity of surfing internet					
6) Regularity of accessing health website					

C) SKIN DISEASE INFORMATION

Questions	Nil	Slightly	Moderate	Quite a bit	Expert
7) Were you expert about the skin disease knowledge					
8) Were you know the skin disease symptoms					

Questions	Never	Rarely	Sometimes	Very Often	Always
9) Were you often affected by the skin disease					

10) What type of skin diseases have you experienced?

- o Chicken pox
- o Scabies / kurap
- o Acne / jerawat
- o Herpes / kayap
- o Eczema / alergi
- o Skin cancer
- o Others _____

D) MEDICAL CARE

Questions	Never	Rarely	Sometimes	Very Often	Always
11) How many times did you visit a physician (such as doctors, pharmacist)					
12) How many times you ask questions about the things					

you want to know and things you don't understand?					
13) How many times you discuss any personal problems that may be related to your illness?					

E) DESIRABLE TOWARDS PHARMACY PORTAL FOR SKIN DISEASE DEVELOPMENT

14) Did you notice the existence of pharmacy portal in the internet?
- o Yes
- o No

15) How did you notice about it?
- o People's suggestion
- o Surfing internet
- o Newspaper, books
- o Others _____

Questions	Possibly Not	Possibly	Probably	Very probably	Definitely
16) Did you interest if a pharmacy portal specialized for skin disease is created?					
1) The deliverable of the pharmacy portal for skin disease is recommending a list of medicine that could solve your skin disease. Will you confident with the result?					

3.2 Project Methodology

In developing a system, System Development Life Cycle (SDLC) is a common process faced by the developer project to meet the requirements. It consists of four main phases which are planning, analysis, design, and finally implementation. It covers many activities in order to achieve high quality system or exceed the requirements. There are many system development methods known today. Among the main methods are Waterfall, Prototyping and Throw-away prototyping.

For this project, Prototyping Methodology has been chosen to implement the SDLC. Basically, the analysis, design, and implementation phases performed at the same time, and all of the phases are performed repeatedly until the prototype system meets the requirements. The prototype will be tested by the user to get their response and based on their feedback the prototype will be alter again in order to fulfill their expectation.

Currently, this methodology is the best option for this project because the prototype can adapt any changes occurs during the development process and can be delivers quickly to the users.

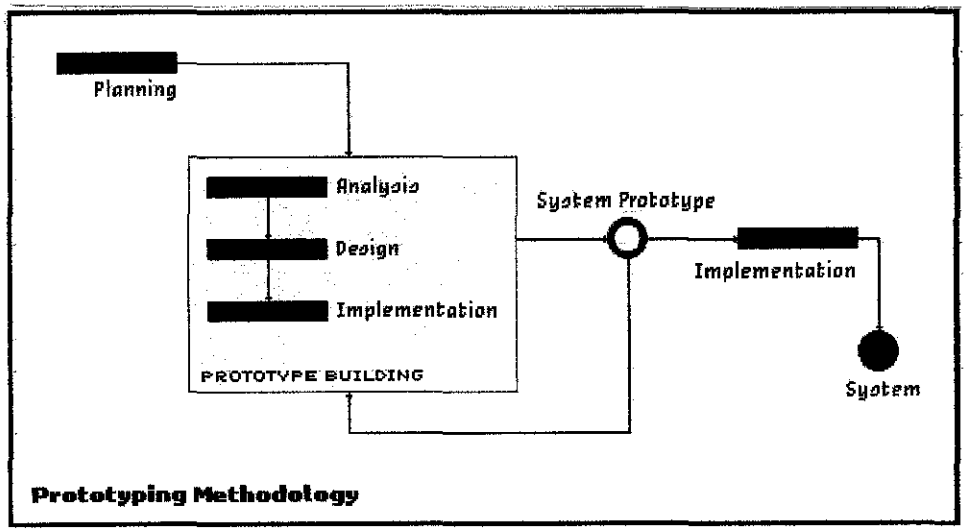


Figure 4: Prototyping Methodology

Based on the figure the process of the phases are :

i. Project Planing Stage

During the first stage, the project developer is conducting a bird's eye view on the entire project and establishes the basic project structure, evaluate feasibility and risks associated with the project. This phase also listing of high-level product requirements and identify project goals. At the end of this stage the outputs are project plan and schedule, with a detailed listing of scheduled activities for the upcoming requirements stage and gather all specifications or requirement of the product such as what the functionality of the portal and time schedule to develop the web portal.

On this stage, research and study on the existing pharmacy portal has been done to find the related information and compare the advantages and disadvantages of each portal in order to develop the new high quality pharmacy portal. The user requirements also have been obtained during this stage by distributing the questionnaire.

ii. Analyzing , Design and Implementation Stage

This stage is performed the analysis, design and implementation simultaneously. It is for build the prototype of this portal and will be repeatedly until the prototype meets the user requirement. Firstly analyzing the scope of the project development and documenting it. This stage aims at creating a clear and well defined requirement and assembles all the information achieved to start develop this project. Therefore as a result the requirement document and updated progress plan will be produced. As this portal is focus on pharmacy and medicine area a research will be conducting to collect all input related to those area such as types of skin disease symptoms and types of medicine from the pharmacist.

After analyzed, the project developer will describe the desired software features in detail, and generally draft use case diagrams, web portal layout, framework, architecture of portal, and a complete entity-relationship diagram in order to ensure the portal will design systematically and full organized.

After completing designing the project the process will move on to the implementation process whereby the project developer will develop the project based on the draft. Each features will be develop to according to its function for example develop the portal homepage, the symptom investigator, medicine database, treatment database and starting the HTML programming. The prototype of this stage will be delivering to the user to be testing and get their feedback and suggestion to improve the portal. The purpose of prototyping is to redo or amend the portal if any changes required until it gives satisfaction to the user.

iii. Implementation phase

At this phase, the final prototype portal will be chosen and all features verified are going to be executing for the completeness of the project. During the implementation the portal is expected to execute well and would contain all the features that meet the user expectations and requirements.

Gantt Chart

No	Tasks	Delivery	Start	End	Duration (Week)	Jan	FEB				MAC				APR				MAY
						Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
	Part A																		
1	Approval of proposal	Proposal	1/31/2011	2/7/2011	1														
2	Research and Analysis	Identify problem statement	2/12/2011	3/12/2011	1														
		Doing research about skin disease	2/12/2011	4/4/2011	6														
		Compare the availability of pharmacy portal existing in Malaysia	4/5/2011	4/16/2011	2														
		Distribute survey	4/18/2011	4/22/2011	1														
		Gather user requirement	4/23/2011	4/26/2011	1														
		Draft portal specification	4/23/2011	4/30/2011	1														
		Design Layout for Project	4/28/2011	4/30/2011	2														
		Analysis complete		5/1/2011															

No	Tasks	Delivery	Start	End	Duration (Week)	SEPT	OCT				NOV				DEC				JAN
						Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
	PART B																		
3	Development	Design functional specification	9/26/2011	10/7/2011	2														
		Develop the portal prototype	10/10/2011	11/30/2011	8														
		Get feedback from the user about the prototype	12/1/2011	12/10/2011	2														
		Development complete		12/10/2011															
4	Release the project	Release the project		12/30/2011	2														

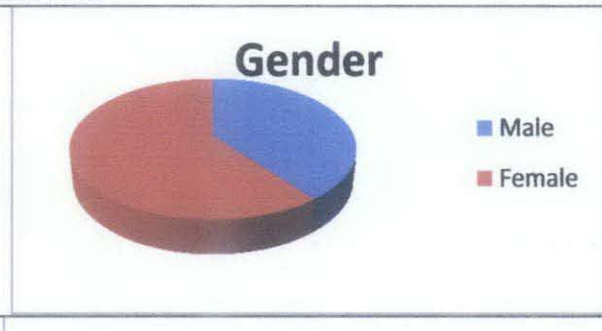
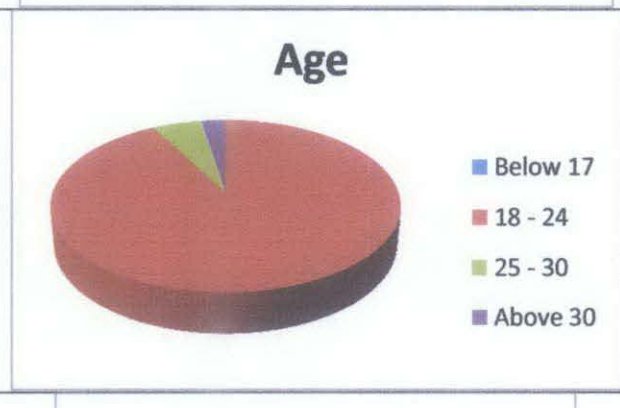
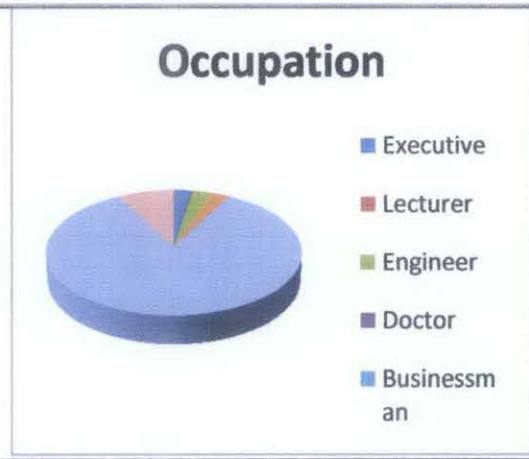
Gantt Chartt

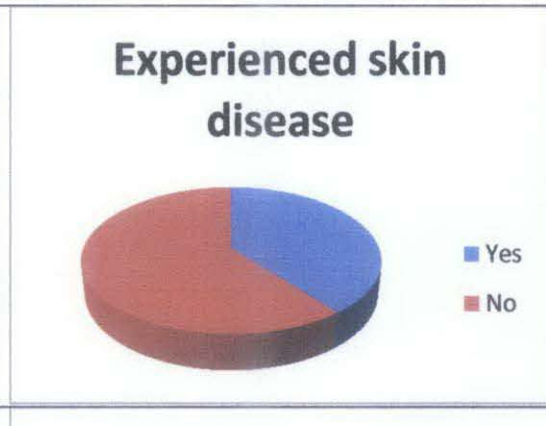
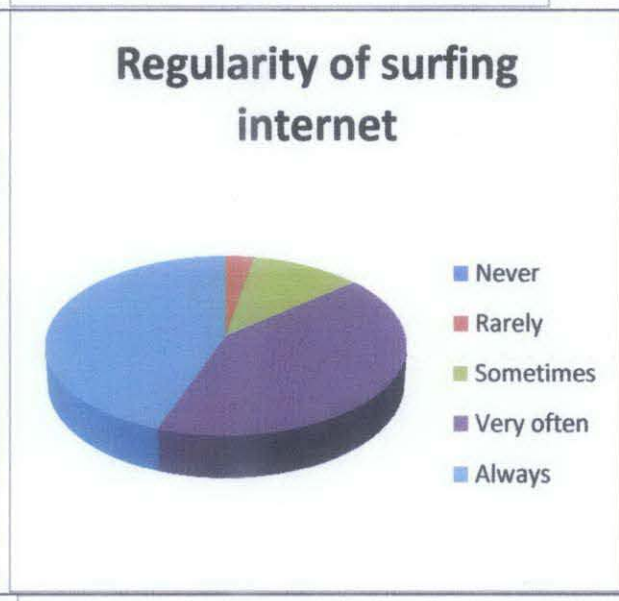
CHAPTER 4

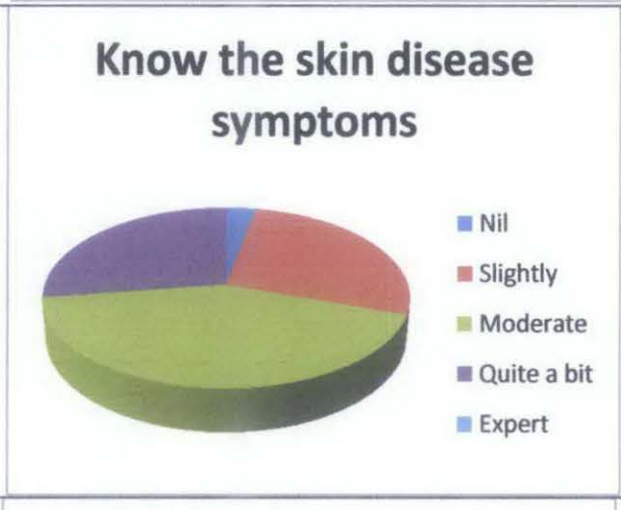
RESULT AND DISCUSSION

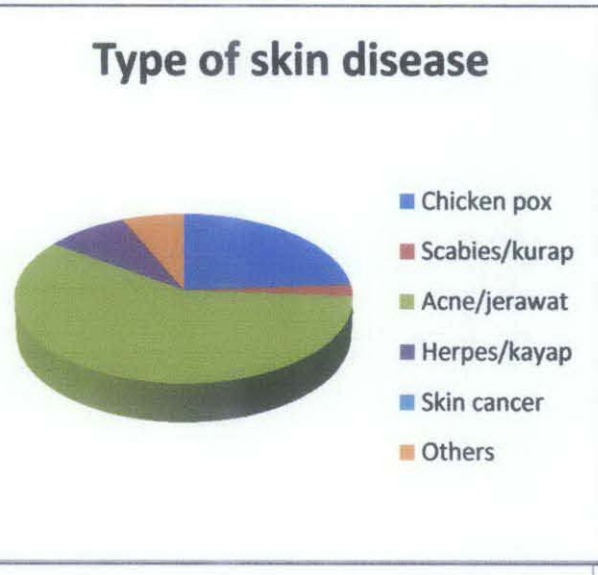
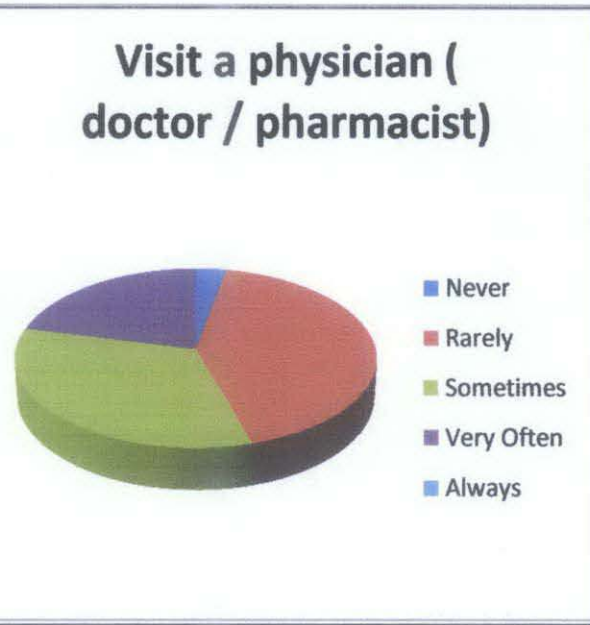
4.1 Analysis of Data Gathering

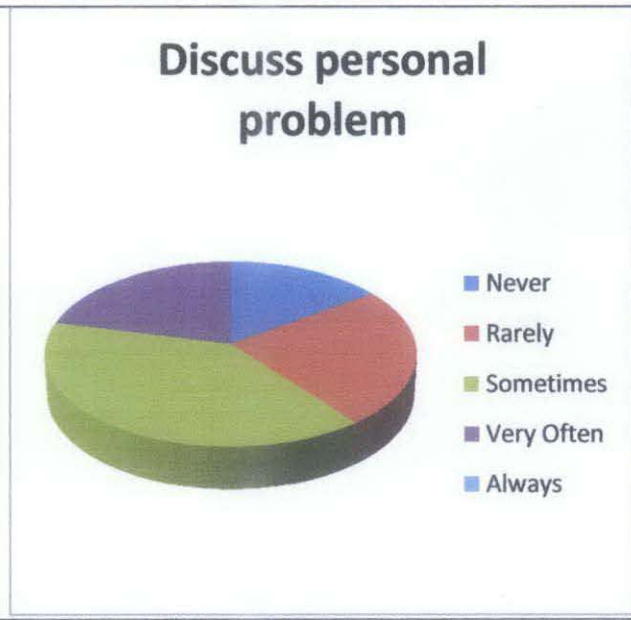
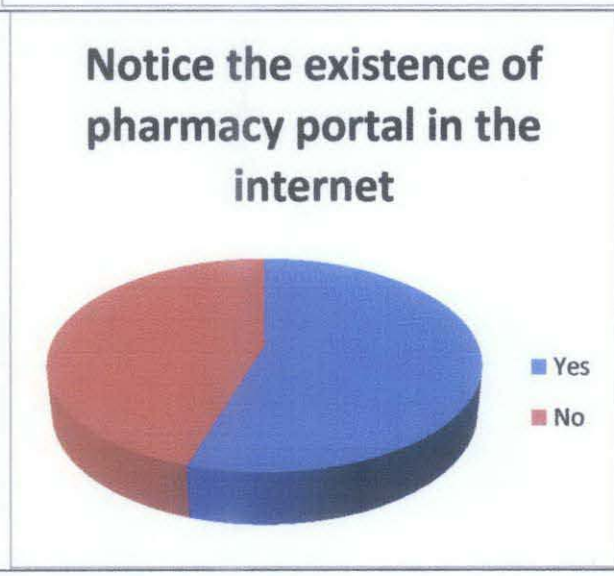
Result of questionnaire

QUESTIONS	RESULT
1) Gender Explanation: Majority of the user who answering this survey is female.	
2) Age Explanation: Majority of the age's user who answering this survey is between 18 – 24 years.	
3) Occupation Explanation: Student is the major user answering this survey followed by others, executive, engineer and government staff.	

4) Experienced skin disease Explanation : More than half of the user not experienced skin disease.	
5) Regularity of surfing internet Explanation : Mostly user always surfing internet in their daily life.	
6) Regularity of accessing health website Explanation: Mostly of the user had sometimes accessing the health website.	

7) Were you expert about the skin disease knowledge Explanation: More than half of the users have moderate knowledge about the skin disease.	
8) Did you know the skin disease symptoms? Explanation: Mostly of the user know moderately about the skin disease symptoms and none of them are expert.	
9) Were you often affected by the skin disease? Explanation: Mostly of the user have been affected by the skin disease and only a few never been affected.	

10) What type of skin diseases have you experienced? Explanation: Majority of the user have experience skin disease which is acne followed by chicken pox, herpes, and scabies. Other than that is fungal infection and alergic.	
11) How many times did you visit a physician (such as doctors, pharmacist)? Explanation: Majority of the user do sometimes visit a physician for make a medical check up.	
12) How many times you ask questions about the things you want to know and things you don't understand? Explanation : Mostly of the user sometimes ask questions about the things they want to know and things they don't understand.	

13) How many times you discuss any personal problems that may be related to your illness? Explanation : The users mostly sometimes discuss any personal problems that may be related to their illness with the physician.	
14) Did you notice the existence of pharmacy portal in the internet? Explanation : Majority of the user recognize the existence of pharmacy portal in the internet	

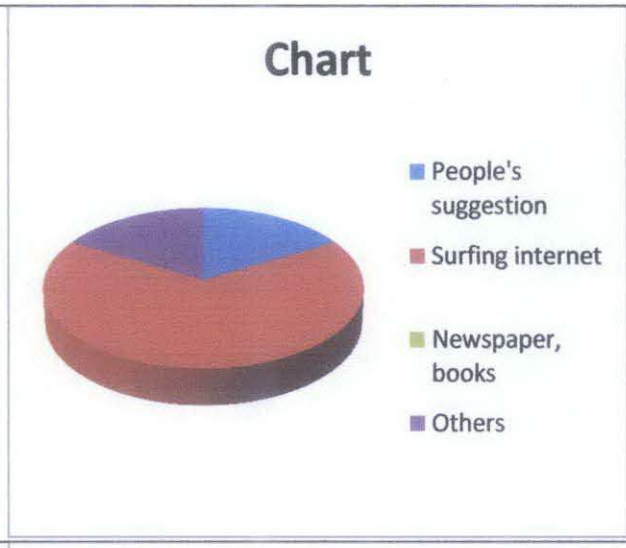
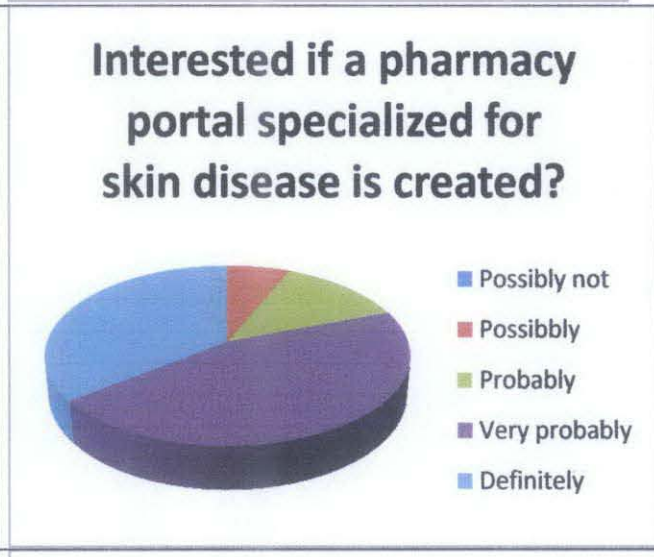
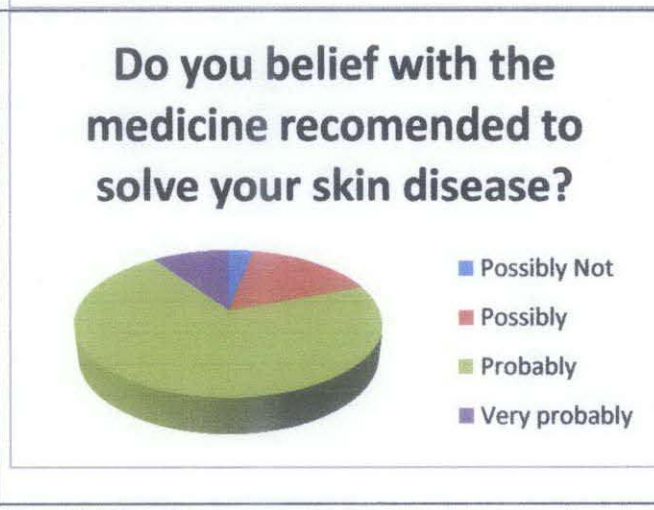
15) How did you notice about it? Explanation: More than 50% of the user notice of the existence of the pharmacy portal through surfing internet.	
16) Do you interest if a pharmacy portal specialized for skin disease is created? Explanation: Majority of the user definitely and very probably interested if a pharmacy portal specialized for skin disease is created.	
17) The deliverable of the pharmacy portal for skin disease is recommending a list of medicine that could solve your skin disease. Will you belief with the result? Explanation: Majority of the user probably confident with the recommending a list of medicine from the pharmacy portal for skin disease.	

Figure 5: Result of online survey

Based on the survey result, majority of group people that answered this survey is come from the student community followed by professional workers. Mostly of the user have experienced skin disease such as chicken pox and acne and over fifty percent stated that they often affected by the skin disease. For medical care, the total amounts of the user that often visit a physician are 50%:50%. They are certain group that often visits the physician and another half very rarely visits the physician. When they meeting the physician, more than half are sometimes ask questions about the things they want to know and not understand and share their personal problems that may be related to their illness. It is meet the objectives of this project that to distribute related knowledge, tips and current news of skin disease.

Because of that, the development of pharmacy portal specialized for skin disease is relevant since the percentage of user often affected by the skin disease is quite high and they rarely visit the physician. Here, this project can play as a reference source for the public user to gain news and reliable information about the skin disease. It is mutual with the objective of this pharmacy portal by help the user search the medicine or cure for their skin disease.

Apart of that, more than fifty percent interested if a pharmacy portal specialized for skin disease is created and would confident with the result of this project by analyze the user information and recommend medicine prescription based on list questions answered by users.

As a conclusion, throughout this survey this project achieve its objectives and relevant to be developed for helping the peoples or patients of skin disease to cure and alert with the illness. This project would provide a new way of providing source for skin disease information and raises the awareness of the public user.

4.3 Project Prototype

Develop a prototype helps the developer to explain the concept of project visually to the users. The prototype is consists the important elements that would be tested by the users to attain their feedbacks. It gives the users a chance to actually experience the navigation, working, forms, reporting and various other aspects of the web visually before actual database development begins.

The prototype is showed on images below:

i. Home page

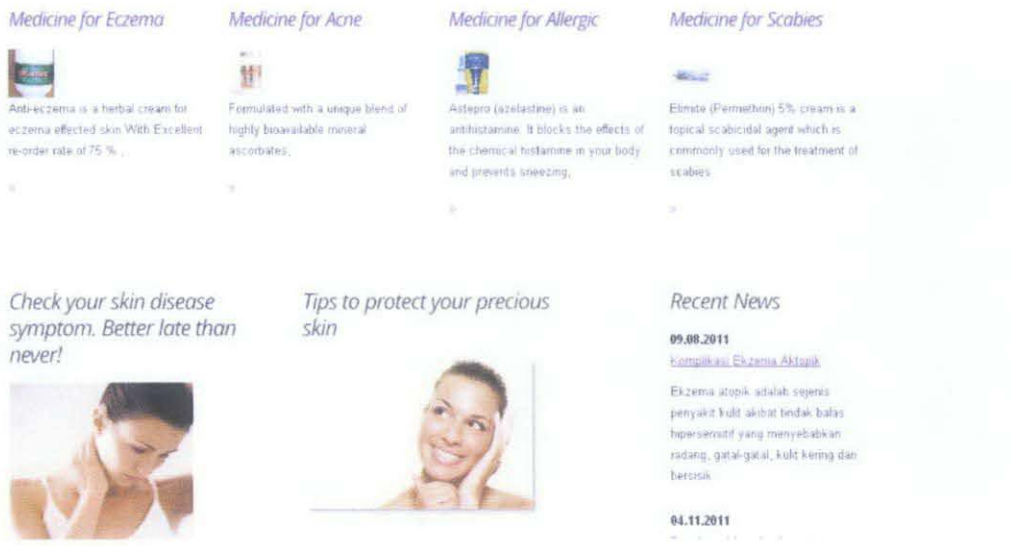
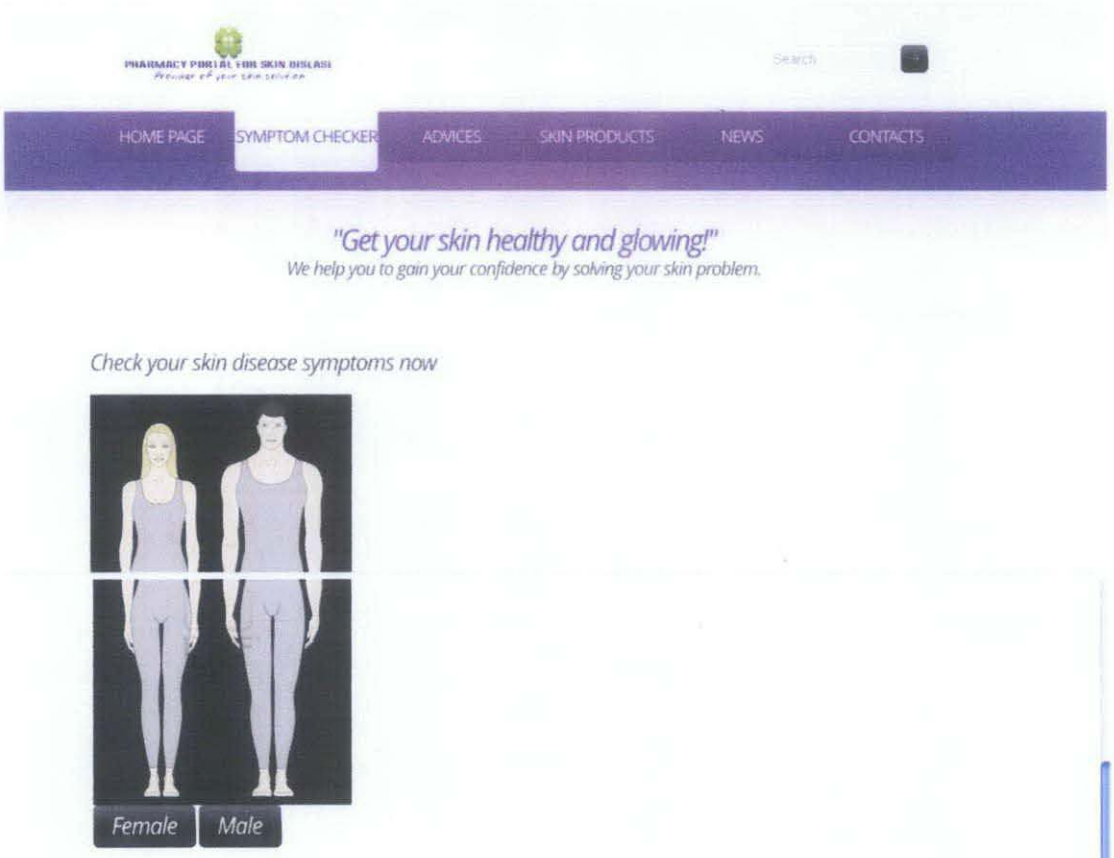
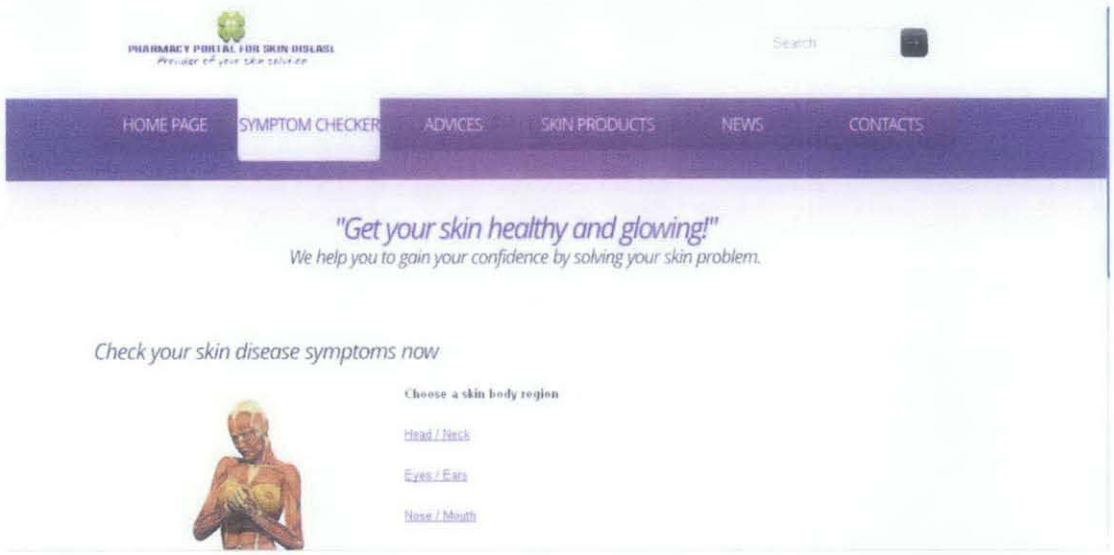


Figure 8 : Screen shot of Home page P-Pharmacy for Skin Disease

The homepage of website would display the menus and content in the portal such as skin medicine, symptom checker and recent news related to skin disease. It shows a big picture the function of the pharmacy portal for skin disease provides to the user. The user can choose directly what they are preferred from this front page without click need to click on single menu link to check the content of the page.

ii. Symptom Checker page





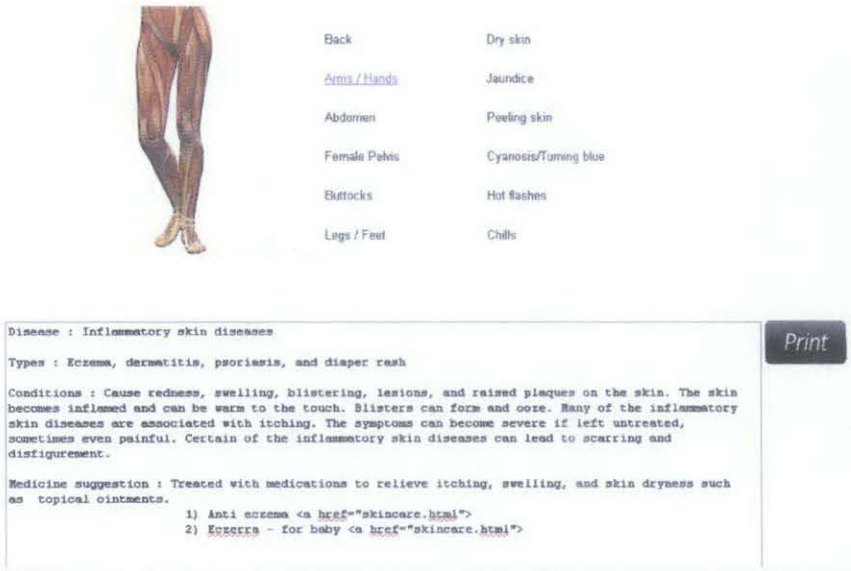


Figure 9 : Screen shot of Symptom Checker page P-Pharmacy for Skin Disease

The function of this symptom checker page is to help the user to identify the type of skin disease that affect their body base on symptom or sign of disease which appear on the skin. Besides diagnose the user symptoms it will show the recommendation treatment or suitable medicine to cure their skin disease. However, it is not a substitute for professional medical advice but it is intended for informational purposes only. If the user would like to buy the medicine recommended from the symptom checker, the user is advised to ask the doctor or pharmacist to get more detail to avoid bad effect for their health.

iii. Advices page

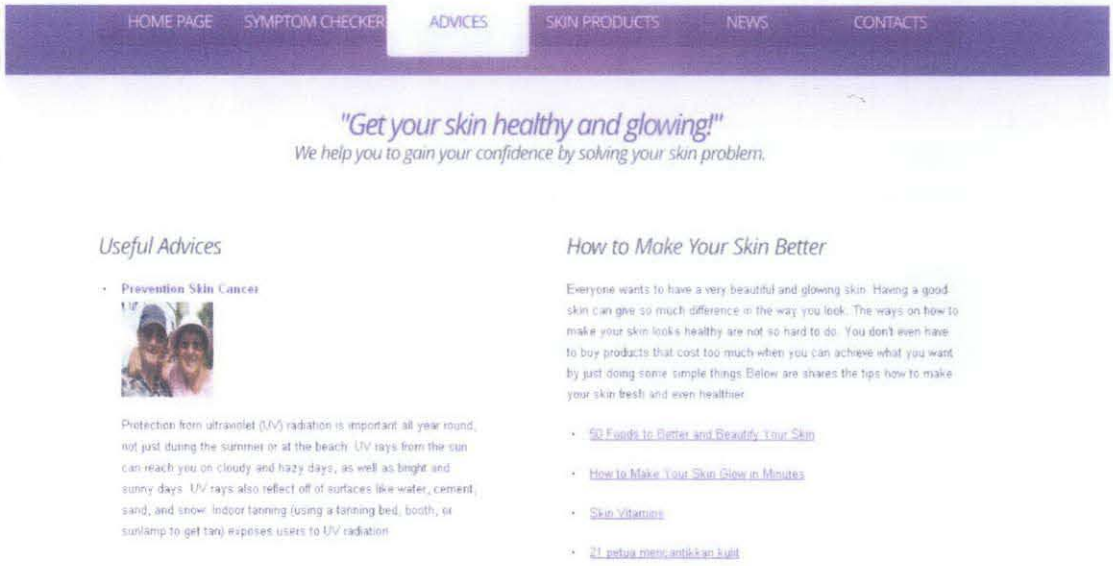


Figure 10 : Screen shot of Advices page P-Pharmacy for Skin Disease

The purpose of this advices page is to distribute and share the useful tips for the user to apply on their skin to get more healthy and glowing. The information of the tips is monitor by the admin of this website. The tips are planned to cover either from traditional tips or modern tips. It will update frequently in order to inform the user about the latest treatment or cure to solve their skin problems.

iv. Skin products page

Figure 11 : Screen shot of Skin Products page P-Pharmacy for Skin Disease

Browsing this page, the user can see list of medicines has been arranged according to the specific skin disease categories. The layout makes it is easier for the user to find the medicine needed. The user also can know new medicine available on the market. This page purposely to help the user buy the medicine online if their medicine stocks finished or they do not have time to go to the pharmacy.

v. News page

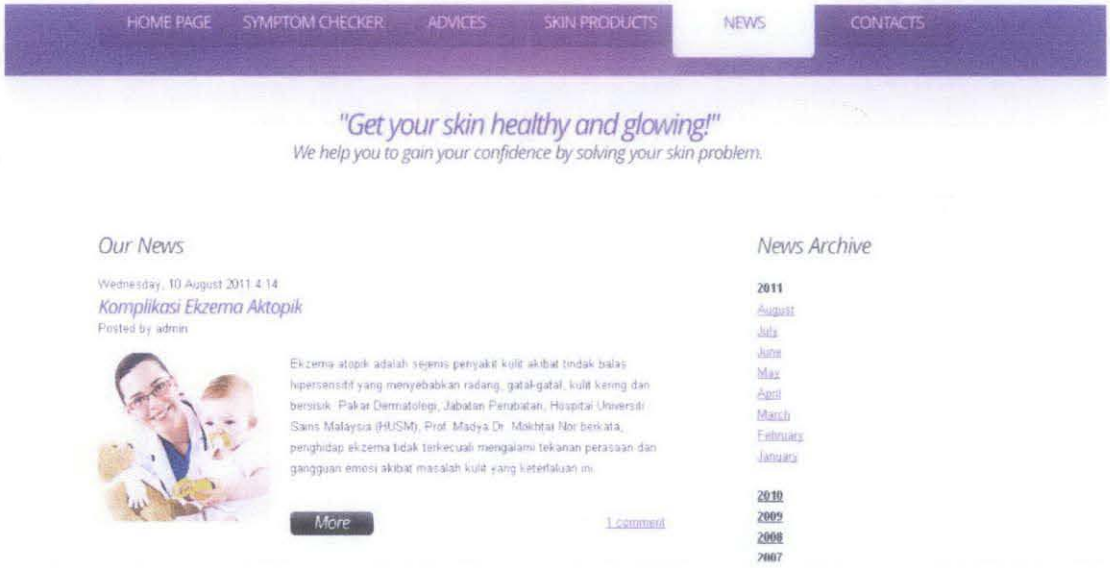


Figure 12 : Screen shot of Home page P-Pharmacy for Skin Disease

On the news page, the user is exposed to the latest news regarding of any skin disease among community or new treatment for cure the skin disease around Malaysia. With the exposure of current news, the user may distribute news and alert with their surroundings. Thus, early prevention can be taken to avoid from getting skin disease.

vii. Contacts page

Figure 13 : Screen shot of Home page P-Pharmacy for Skin Disease

Throughout this page, the user can send email to ask ay query regarding of skin disease either about skin problems, tips or medicine. The function of this page is to create two-way communication between the user and the admin. Perhaps in future the admin plan to cooperate with the dermatologist to share opinions and advices that gives benefit to the user.

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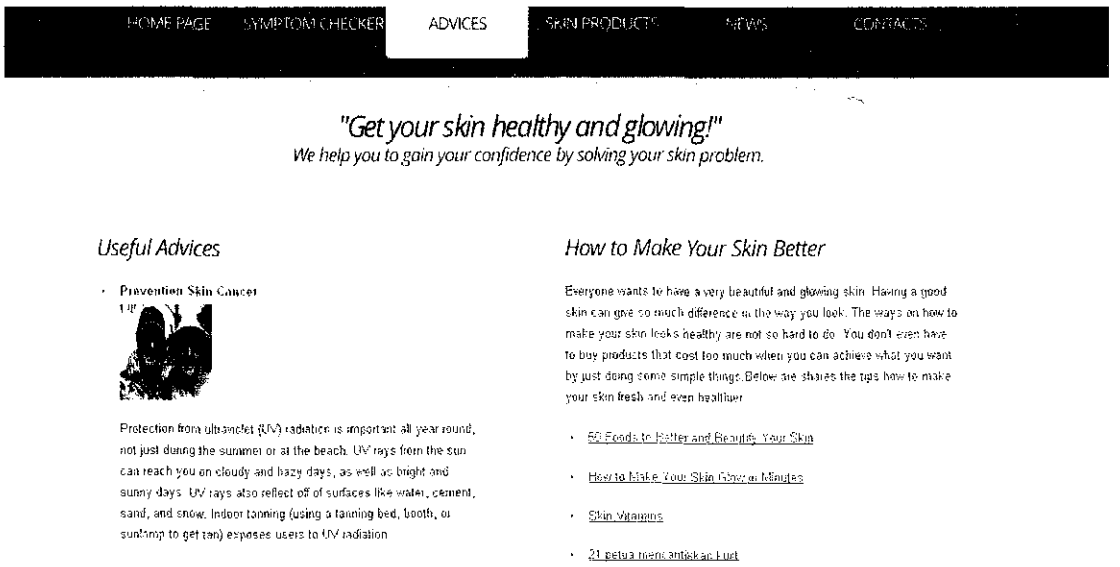

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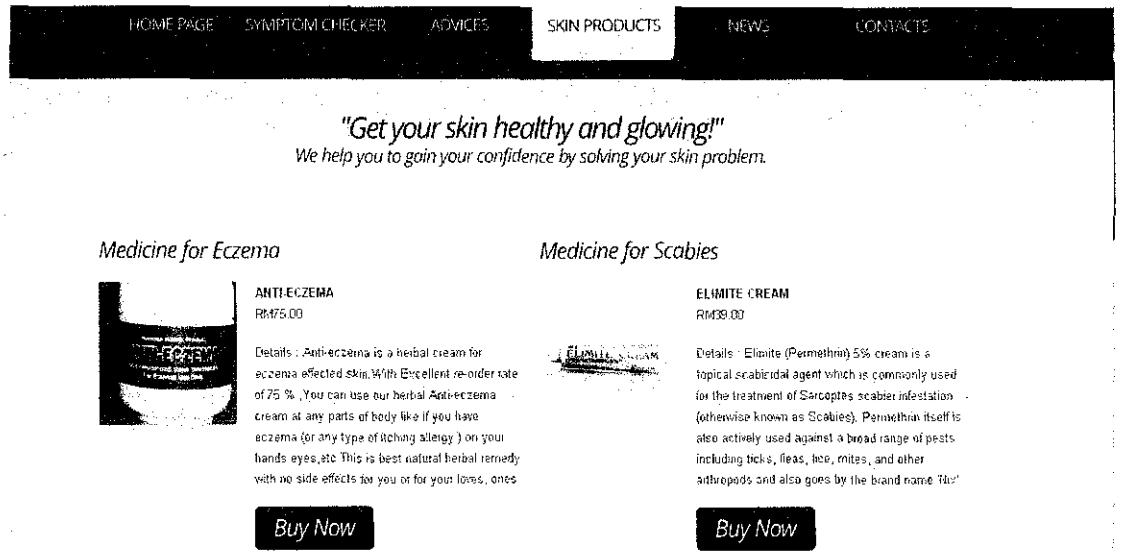

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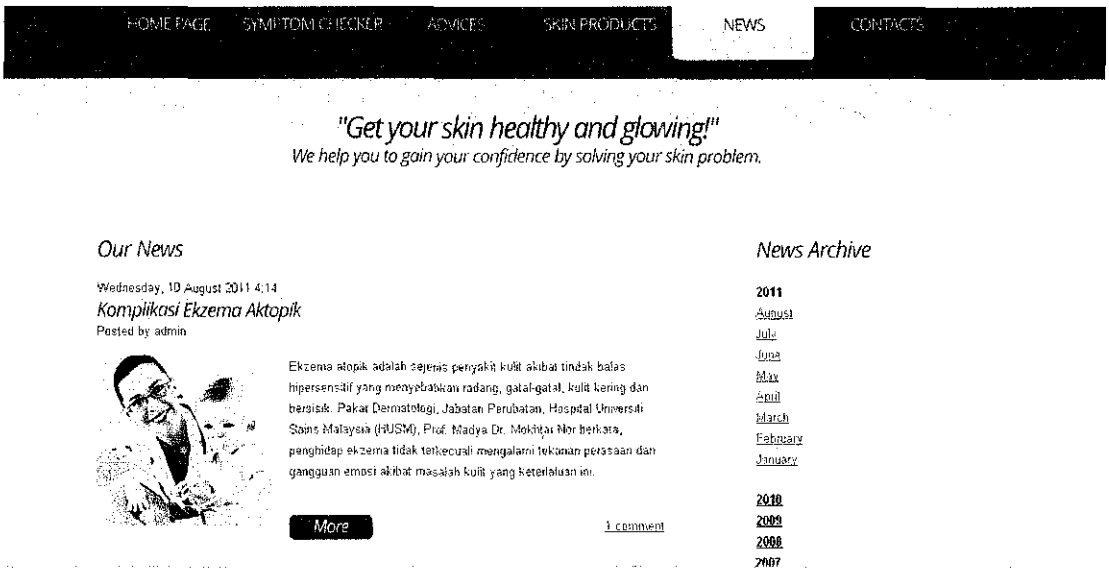

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CONCLUSION

As a conclusion, a portal is useful to become one of alternative for the people to retrieve health-related information and even to order pharmaceutical products today. The enhancement of traditional pharmacy portal will be benefits a lot to the users and patient because its improving access to effective healthcare system by reducing barriers created, such as location or disability. These are the main point of creating this portal in order to achieve the objective to increase the awareness among all people either adolescence or adults. This project certainly would be helpful whereby the component and features created are certainly met the users expectation and user friendly. In future, this project will improve with more function such as chat box and better interface. The developer also would plan to collaborate with any dermatologist in order to give an advice or consult the skin disease patient in this pharmacy portal. With further research this project could use other method to analyze user's symptom by diagnosing the symptom based on image.

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