E-DocPh

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS LAPORAN

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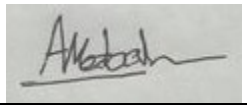

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This report is submitted in partial fulfillment of the requirements for the Bachelor of [Computer Science (Software Development)] with Honours.

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2021

DECLARATION

I hereby declare that this project report entitled

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I hereby declare that I have read this project report and found

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Dr. Kasturi Kanchymalay

DEDICATION

In the name of almighty Allah, the most merciful and most gracious. I thank my lord for all the strength, protection, guidance and health.

I would like to thank from depth of my heart to my beloved parents who are my strength, my inspiration my heroes and every other person who helped on this journey.

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ABSTRACT

Online pharmacy industry is increasing day by day. Pharmacy is a place where we can find medicines and other medical components. As a matter of fact, online pharmacy is a part of telemedicine. Whether it is pandemic or normal days we need medication. By uprising e-pharmacy industry, now we have a service that will take care of daily-to-daily medication related needs. In this project I am working to build a online pharmacy web application named E-DocPh. This web application can be used by three different users who are doctors, admins and customers (patient). In past year we saw corona pandemic. Millions of people were affected and still getting affected. In these hard situations we could not go outside even if we were in emergency. This web application will be a solution for that kind of emergency problems. People can buy medication online and medicines will be delivered on their doorstep. This application will solve the problem of taking medicine without prescription as well as using them as drugs. This is because, every time patients wants to buy medicines, they will have upload a prescription image which will be authorized by a doctor. Therefore, problems like won't be happen by using this web application. This project will be designed with couple of programming languages. Front-end will be developed by HTML, CSS and JavaScript whereas back-end programming will be done by Django3 which is a framework of python and JavaScript. SQLite3 will be used as database for the project. The system will be designed as three different modules. Admin module is to monitor and maintain the system. Doctor module is for doctor to approve orders that were ordered by patients. Lastly, patient module which is e-commerce site where patient can buy medical related stuffs.

ABSTRAK

Industri farmasi dalam talian semakin meningkat dari hari ke hari. Farmasi adalah tempat di mana kita dapat mencari ubat-ubatan dan komponen perubatan lain. Sebenarnya farmasi dalam talian adalah sebahagian daripada telemedicine. Sama ada pandemik atau hari biasa kita memerlukan ubat. Dengan membangkitkan industri e-farmasi, sekarang kami memiliki layanan yang akan mengurus keperluan yang berkaitan dengan ubat setiap hari. Dalam projek ini saya berusaha untuk membina aplikasi web farmasi dalam talian bernama E-DocPh. Aplikasi web ini dapat digunakan oleh tiga pengguna berbeza iaitu doktor, pentadbir dan pelanggan (pesakit). Pada tahun lalu kami melihat wabak korona. Berjuta-juta orang terjejas dan masih terjejas. Dalam keadaan sukar ini kita tidak boleh keluar walaupun kita berada dalam keadaan kecemasan. Aplikasi web ini akan menjadi penyelesaian untuk masalah kecemasan seperti itu. Orang ramai boleh membeli ubat secara dalam talian dan ubat-ubatan akan dihantar di depan pintu rumah mereka. Aplikasi ini akan menyelesaikan masalah pengambilan ubat tanpa resep serta menggunakannya sebagai ubat. Ini kerana, setiap kali pesakit ingin membeli ubat, mereka akan memuat naik gambar preskripsi yang akan mendapat kebenaran daripada doktor. Oleh itu, masalah seperti tidak akan berlaku dengan menggunakan aplikasi web ini. Projek ini akan dirancang dengan beberapa bahasa pengaturcaraan. Front-end akan dikembangkan oleh HTML, CSS dan JavaScript sedangkan pengaturcaraan back-end akan dilakukan oleh Django3 yang merupakan kerangka python dan JavaScript. SQLite3 akan digunakan sebagai pangkalan data untuk projek tersebut. Sistem ini akan dirancang sebagai tiga modul yang berbeza. Modul pentadbir adalah untuk memantau dan menyelenggara sistem. Modul doktor adalah untuk doktor meluluskan pesanan yang dipesan oleh pesakit. Terakhir, modul pesakit yang merupakan laman web e-commerce di mana pesakit boleh membeli barang berkaitan perubatan.

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LIST OF ABBREVIATIONS

FYP	----------	Final Year Project
E-DocPh	----------	Electronic Doctor & Pharmacy
SDLC	----------	Software Development Life Cycle
IEEE	----------	Institute of Electrical and Electronics Engineers
T.D	----------	Test Data
DFD	----------	Data Flow Diagram
ERD	----------	Entity Relationship Diagram
P.D.D	----------	Physical Database Design

CHAPTER 1. INTRODUCTION

1. Introduction

Today, organizations have a broad data-supported knowledge base on the desires, expectations, routines and even emotional states of their consumers (D. H. Lee, 2018). In order to create in value opportunities and organizational innovation the main drivers are advance digital technology(S. M. Lee & Lee, 2020) . Pharmaceutical marketing is a broad term that covers a wide range of topics. It's been a huge platform for consumers to get services regarding all type of medical tonics and related objects.

General and specific awareness of marketing and business practices related to the product/service in the fields of pharmacy, counseling, and health enhancement Patients', and purchasers' wellbeing, with profits going to the society and organizations that offer the product/service of economy and healthcare (Ignjatović & Stanić, 2019).

With respect to patient-related outcomes, satisfaction, perceived information exchange, interpersonal relationship building, and perceived shared decision making showed no significant differences between face-to-face and screen-to-screen consultations (Tates, Antheunis, Kanters, Nieboer, & Gerritse, 2017). This system will be used by people who are in need of medicine related items. However, in this process of getting this service, consumers need to get a doctor's authorization for security purposes.

In a research of Interactive Telemedicine Flodgren G. et al found no difference in mortality between participants with heart failure receiving care through telemedicine, compared to those receiving health care without telemedicine. The results of the studies differed for admissions to hospital, from a relative decrease of 64% to an increase of 60% (Flodgren, Rachas, Farmer, Inzitari, & Shepperd, 2015).

Disease-specific quality of life was slightly improved for heart failure participants receiving telemedicine as compared to those receiving usual care only. Thus, online consultancy is not worse or far better than normal way. It's almost same. However, it improves time efficiency, it is more flexible and according to some research better works than normal way. Although this system is not going to make any arrangement to provide consultation to the consumers. Even though system is going to arrange a process in order to contact doctors with consumer. This way consumers can talk about their problems and get consultation about which tonics or related objects they can order from the system on their health basis.

The goal of E-DocPh is to overcome such problems like distance, pandemic situation and bad quality. This will also handle security matters. Sometime people misuse such systems to get drugs and use it anyway whether they need it or not. There are some drug issues as well out there. People has a intention to buy drugs and use it in order to get high. These are extremely dangerous for the society. Remembering that, E-DocPh has made it so secure as no one can buy any tonics that can be harmful to consumers.

On the other hand, we can think of this recent pandemic. It was horrible to get outside to go to a doctor or pharmacy for medicine. This is because, it was risky at time same time breaking rules. This system can handle everything during such pandemic. Patient doesn't have to get out from their home but still they will get best service and advice they can possibly get. This system will be easy to use, flexible, comfortable and time efficient.

1.2 Problem Statement

➢ **Time Consuming:** It is time consuming to get outside and buy medicines. In addition it's not flexible to get outside and buy medicine from pharmacy store.

➢ **Safety Issue:** It is not safe to go outside for medicine in the event of any pandemic. Even if cause can be critical and emergency. One thing is always matters that when we are going outside, we are actually letting our guard down to corona virus. Therefore, there is always a risk.

➢ **Security Issue:** It is not secure to buy some of medicines that can be used as drugs. Sometimes people just buy drugs and get high. There is another type of consumers who just buy tonics because they think they need it to play home doctor. This is really a serious issue. By doing this every year a lot of people faces serious troubles. As Mahmood Karimy et al (Karimy, Rezaee-Momtaz, Tavousi, Montazeri, & Araban, 2019) found that in Iran maximum of women does self-medication in their family which leads to serious issues.

➢ **Quality issue:** Previously there was many studies on how consumers get bad quality medicines which causes them a lot of troubles. Roger Bate et al. (Bate, Ginger, Jin, Mathur, & Attaran, 2016) found that there are manufacturing companies that produce bad quality medicines which is really health concerning for consumers. Some pharmacies do not check the quality of medicines which leads consumers getting poor quality medicines. These phenomena can create casualties.

1.3 Objectives

- To build a system that will help patient to get facilities easily by professionals.
- To assess doctors to provide health service.
- To ensure patient good service satisfaction.
- To secure all the purchases and make sure not causing society bleed.

1.4 Scope

Modules to be developed:

- **Registration :** allows admins, patients and doctors to register in the system. They will be able to use the system with their own account by doing this.
- **Authentication :** to authenticate three different types of users.
- **Cart :** This will allow patients to save their desired items to be stored as targeted to purchase later.
- **Payment :** to allow patients pay for their purchased items bill.
- **Pharmacy window :** all the items to be sale added by the admins will show here. This window will allow patients to choose and search for their respective medicine or related stuffs.

- **Doctor Module:** this will allow doctors to accept or reject order that patients made. Doctor can see patient's uploaded prescription image or can call them directly in order to accept or reject the order.

- **Email automation:** By this module users can get their order confirmation or rejection messages from the system. This module will be also responsible for reset password if user forgot their password.

- **Admin module:** admin can monitor the system from here. Admins can see the database and attributes of it in here.

- **Create, update and delete module:** admins can create, update and delete items in the database.

Target users:

- Pharmacy authority as admins
- Doctors
- People as Patients

1.5 Project significance

- ➢ This will help pharmacy authority to be in business even in pandemic time. This will be a automatic system so in order to maintain the system labor is not necessary. Only few developers can maintain the system fine. This will help pharmacy authority to maintain the data and manage it.
- ➢ Helps doctors to provide healthcare from anywhere.
- ➢ Helps consumers to get quality-full medication and related stuffs. Consumers can also get doctor's authorization before taking any medicine.

1.6 Expected Output

In presence of modern technology, it is our bonanza that we are making our possible needs automatic which is making our life easier. By using this proposed system people will be able to get their needs.

It will be a risk free, hopefully a bug-free web application that will help all the people who needs good pharmaceutical products. This system will be easy to use flexible and comfortable.

All the purchases will be authorized by doctors. Admins will be able to monitor the whole system from this web application. Pharmaceutical business will be running running high with help of this website even though pandemic has stopped everything.

1.7 **Conclusion**

In short, E-DocPh is a web application that will provide a lot of services to different types of users. Admins can maintain their business by this application. People as Patients can get their needed items through this website's store module. Patients can get doctor authorized items. It will be secure and quality-full items.

Doctors can provide healthcare anywhere anytime using telemedicine technique. This system provides a module for doctors.

The reason of developing this web application is to provide healthcare to people in any situation with quality-full work.

CHAPTER 2. LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter contains information and necessary components to describe the work of previous systems and publications that took place before initialization of this project. In addition project methodology and other related topics will be included in chapter.

Previously, there were systems built for the same objectives or less where experts fulfilled their objectives however there were some lacking. In this chapter I will discuss further regarding mentioned projects and their lacking. This chapter will also include the findings and techniques used by other personnel in the similar type of system or research.

Onward methodology will be discussed such as processes to make the system, flow of the total project work, requirements and analysis and time management for the whole project.

2.2 Fact and findings (based on topic)

2.2.1 Domain

Domain of E-DocPh is information, communication and technology (ICT) in Web application. This web application will be a example of e-commerce in medical services. Advancing technology in e-commerce and web application requires services that are easier and comfortable. This challenge has been taken while developing E-DocPh to fulfill such criteria.

2.2.2 Existing System

E-pharmacy industry will provide a huge contribution for the growth of online medicine services. p. Kumari et al. (Nandal & Research Scholar, 2017) a system developed with xampp and other frameworks to develop a website server test. By using PHP and xampp the system had to make a server friendly system that in future it would not be dificult to modify the code.

According to Atisha S. Patil et al.(Nandal & Research Scholar, 2017) A system that can authenticate medicines if the consumer is taking it in need or not before purchasing. The reason is there are some medicine which can be dangerous to use without consulting doctor. Worst scenario, some of the medicines can be used as drugs. In order to prevent this type of phenomena it is very appreciable to come up with such method.

To make a server and user-friendly website they started by using CSS, HTML, PHP, JavaScript to make web Pages. As database they used mysql and xampp. Every web page had their own unique title and description, tags and so on. By using this