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E-PRINT SYSTEM IN UNIMAS

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E-PRINT SYSTEM IN UNIMAS

NUR ALIA BINTI MOHD YUSOF

This project is submitted in partial fulfilment of the
requirements for the degree of
Bachelor of Computer Science and Information Technology

Faculty of Computer Science and Information Technology
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2019

SISTEM E-CETAK DI UNIMAS

NUR ALIA BINTI MOHD YUSOF

Projek ini merupakan salah satu keperluan untuk Ijazah
Sarjana Muda Sains Komputer dan Teknologi Maklumat

Fakulti Sains Komputer dan Teknologi Maklumat
UNIVERSITI MALAYSIA SARAWAK
2019

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ABSTRACT

As a university student, printing documents has become an important part of the entire academic life, whether it is for learning materials, reports, assignments, or thesis. However, the current problems faced by university students are they get through the hassle and time-consuming at printing services provided in Universiti Malaysia Sarawak (UNIMAS). Therefore, the E-Print System is proposed as a solution for this problem. This project aims to develop a web-based printing service for students in UNIMAS. This web-based printing service is designed for users to print out their documents and provide them with beneficial printing service without consuming much time. This project consists of six chapters; introduction, literature review, requirement analysis, and design, implementation, testing, conclusion, and future work. The chosen methodology to develop the E-Print System in UNIMAS is Waterfall Model. Limitations of existing systems are identified to come out with better solutions. Some background study is carried out to investigate how the current technology is used for printing document. Besides, the system is designed according to the result of requirement analysis. Several software tools are installed and configured in the development of the E-Print System, such as XAMPP and phpMyAdmin. Last but not least, the expected outcome of this project is to establish a functional web-based system for printing service in UNIMAS.

ABSTRAK

Sebagai pelajar universiti, mencetak dokumen telah menjadi sebahagian penting dari seluruh kehidupan akademik, sama ada untuk bahan pembelajaran, laporan, tugas atau tesis. Namun, masalah yang dihadapi oleh pelajar universiti kini adalah mereka mengalami kesusahan dan mengambil masa di perkhidmatan percetakan di Universiti Malaysia Sarawak (UNIMAS). Oleh itu, sistem E-Cetak dicadangkan sebagai penyelesaian untuk masalah ini. Projek ini bertujuan untuk membangunkan perkhidmatan percetakan berasaskan web untuk pelajar di UNIMAS. Aplikasi berasaskan web ini direka untuk pengguna mencetak dokumen mereka dan memberi mereka perkhidmatan percetakan yang bermanfaat tanpa menghabiskan banyak masa. Projek ini terdiri daripada enam bab; pengenalan, kajian kesusasteraan, analisis dan reka bentuk sistem, pelaksanaan, pengujian, kesimpulan dan masa depan kerja. Metodologi yang dipilih untuk membangunkan sistem E-Cetak di UNIMAS ialah “Waterfall Model”. Kelemahan sistem sedia ada dikenal pasti untuk memberi penyelesaian yang lebih baik. Beberapa kajian latar belakang dijalankan untuk menyiasat bagaimana teknologi sekarang digunakan untuk mencetak dokumen. Selain itu, sistem ini direka mengikut hasil analisa. Beberapa alat perisian dipasang and dikonfigurasi dalam membangunkan sistem E-Cetak seperti “XAMPP” dan “phpMyAdmin”. Akhir sekali, hasil yang diharapkan dari projek ini adalah dapat mewujudkan sistem berasaskan web untuk perkhidmatan percetakan di UNIMAS.

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CHAPTER 1

INTRODUCTION

1.0 Overview

Printer is defined as a tool that recognizes a computer's text and graphic output and transfers the information to paper typically to regular paper size sheets (Rouse, 2016). Apart from using the printer for one own need, there are also services that can be done, such as printing service. Print service is the production of printed or copied material from original in digital or hard copy format. According to Lister (2016), web-based printing defined as a software tool used to make printing easier on large networks such as at a university. It provides remote printing services to ensure convenient services and reduce the cost of time for users (Lu, Mao, Wang, & Tan, 2019).

A web-based application is a specific type of software that enables users to interact via a web browser interface with a remote server. It has seen an enormous increase in popularity, replacing desktop applications, and becoming a crucial tool for small and large enterprises worldwide. The web-based application represents active websites, which are server-based programs that serve user interaction and other functionalities (Divyaniyadav, Gupta, Singh, Kumar, & Sharma, 2018). Besides, the web-based application also allows the remote initiation and execution of information processing functions from a browser on a web server, application server, and database server (Bruno, Tam, & Thom, 2005). According to Herrero, Lucio, & Carmona (2011), web-based application activated in a web browser, and there is no need to install and update it.

Furthermore, web-based printing service known as a technology feature often used on a broad network, where is a user interface for selecting files from a computer and sending them to printers on a system (Lu, Mao, Wang, & Tan, 2019). If users have little time or are in a rush to prepare their papers, web-based printing service is a perfect resource for them. Generally, their orders handled quickly and efficiently. It is time-saving as users can access web-based printing services through the Internet, which saves a lot of time (Bhosale et al., 2018).

In Universiti Malaysia Sarawak (UNIMAS), printing has become an integral part of the entire academic life of university students. Printing documents are essential among university students, whether it is to print learning materials, assignments, projects, reports, or thesis. Most of them will use printing services at the Student Pavilion printing shop, minimart Kolej Dahlia, minimart Kolej Cempaka, or at their faculty.

E-Print System is a platform for users in UNIMAS to use a web-based printing service. This system provides printing details such as costs, quality, and a list of printing vendors around UNIMAS. This E-Print System in UNIMAS to be implemented as an excellent service for students and also printing vendors to add the upper of work and increase the business concern operation. Lastly, this project is an endeavour to improve the printing services in UNIMAS.

1.1 Problem Statement

Based on the survey that has been conducted to 30 respondents around Universiti Malaysia Sarawak (UNIMAS), most of them are facing problems with current printing services. Most of the students get through the hassles and time-consuming with printing services provided in UNIMAS, such as at the Student Pavilion printing shop, minimart Kolej Dahlia, and minimart Kolej Cempaka. According to the results of the survey, they agreed that it takes a long time for them to queue up to print their documents at printing services in UNIMAS. Time issues

occurred when the students need to queue up waiting others edit the documents at the computers when they are supposed to be printed. They also have to wait a long time at printing shops even when they want to print one page. This medium may lead to frustration among students, especially when they are in a rush.

Besides, most of the students do not know about the printing cost, quality, and the location of printing shops available in UNIMAS. It is because the printing price is different among the printing shops in UNIMAS. For example, the cost of black and white, colour, binding tape, binding comb, A4 paper, A3 paper, 70 gsm paper, 80 gsm paper, and laminate.

1.2 Objectives

The main objectives of this project are:

- To improve the current printing services in UNIMAS by using a web-based application.
- To provide a web-based application platform for users to use printing services in UNIMAS.
- To provide users options in choosing the printing vendors based on the information provided in the system namely cost, quality and location.

1.3 Scope

This project is mainly focused on users in UNIMAS, where the students utilized the web-based printing service to get their documents print out. This system will display the printing price and selection of printing vendors available in UNIMAS. The limitation identified for this system is it will be restricted for print documents only such as PDF, PowerPoint, and Words file format. It cannot print promotional products like business cards, brochures, flyers, and banners.

1.4 Brief Methodology

The methodology utilized in this project is the waterfall model, which is one of the examples of the Software Development Life Cycle (SDLC) models. This model required in each phase to be completed first entirely and required a review to determine if the project is according to the right path or not before proceeding into the next step (Dubey & Sujit Kumar, 2017). The waterfall model categories with five phases, which are the requirement phase, design phase, development phase, testing phase, and maintenance phase.

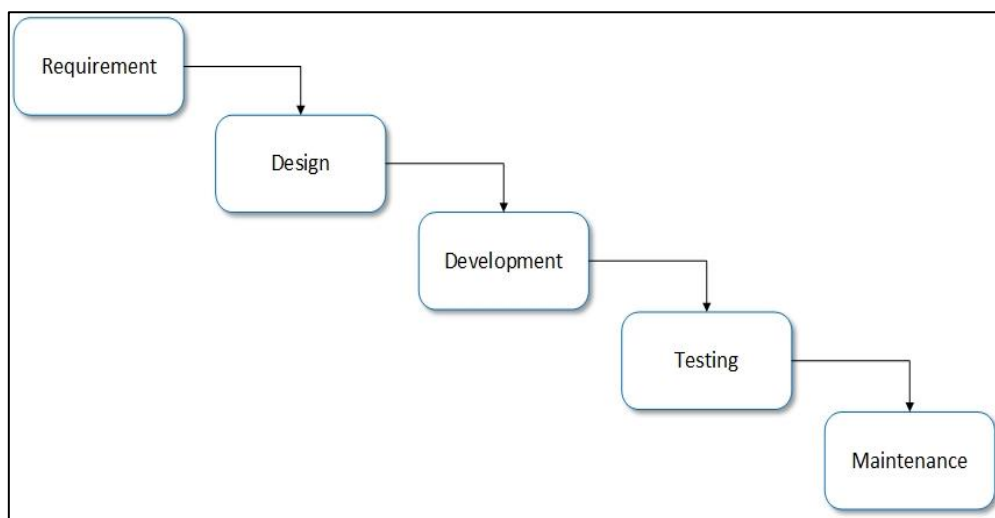


Figure 1.1 Waterfall Model

1.4.1 Requirement

For the first phase, all the problems, objectives, and expected outcomes are being identified and gathered to analysed before proceeding to the design phase. The research on a current and ongoing problem that is faced by users in UNIMAS to print out their documents and papers are being identified and analysed. During this phase, hardware and software requirements that need to complete the project also listed. The hardware required for this project is the laptop. The software requirement is XAMPP for the MySQL database. For instance, the programming languages utilized are HTML, PHP, JavaScript, and CSS.

1.4.2 Design

System design explained the design of the interface, system, and database. The data requirements from the previous phase use to provide a specific plan to build working the E-Print System prototype. A design able to helps in specifying project requirements and helps in determining overall system architecture.

1.4.3 Development

During this phase, the implementation and design of the E-Print System in UNIMAS are developed. The design is based on a defined requirement based on the previous phase. The web-based printing service is created using HTML, JavaScript, PHP, and CSS programming that connected to the MySQL database.

1.4.4 Testing

After the development phase finished, it needs to go through testing and reviewed to detect any errors or bugs in the system. The testing phase is to make sure that there is no problem occurred during the installation of the software. It will test the functionality and effectiveness of the E-Print System.

1.4.5 Maintenance

In this phase, this project will check through time. The modification process for the project to improve the performance takes place in this phase. This phase takes place to give a resolution towards errors and flaws found in the previous period.