UMP SUMMONS SYSTEM

MOHAMAD AFIQ BIN ABDULLAH

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FACULTY OF COMPUTER SYSTEM AND SOFTWARE ENGINEERING

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ABSTRACT

Currently, summons management in University Malaysia Pahang (UMP) is being done manually. The process flow of the current systems required enforcer to write summons to offenders in this case, students. The offenders then need to pay summons issued to them to treasurer department. However, this manual system does not allow offenders to check their summons regularly, hence offenders need to wait until the semester end, in order to ensure whether they have any outstanding summons or not. The proposed UMP Summons System also known as USS introduces three type of user. First, the enforcer, who have the permission to issues summons to the offenders through their android mobile system. From there, students are able to check every summons issued to them via USS web-based application to confirm if they have any summons recorded. Followed by treasure who have authorization to check whether students have paid their summons or not. In general, USS is a web-based system where some part of it is integrated with android application (Enforcer scope). For database part, USS used MySQL database to record every data required. USS incorporates RAD methodology for its development and implementation process. Afterwards, USS went through vigorous testing which includes unit testing, functionality test as well as user acceptance test. Testing results confirmed USS fulfill functionality demanded and satisfy user's expectations.

ABSTRAK

Sebelum ini, pengurusan saman dalam Universiti Malaysia Pahang telah dilakukan secara manual. Aliran system yang sedia ada adalah penguatkuasa menulis saman kepada pesalah (pelajar), pesalah perlu membayar saman di jabatan bendahari. Tetapi sistem yang sedia ada ini tidak kemudahan untuk menyemak saman, biasanya pelajar boleh menyemaknya pada akhir pembelajaran. UMP Summons System dikenali sebagai USS, menyediakan tiga jenis pengguna. Penguatkuasa yang boleh menyaman pesalah dengan menggunakan sistem android, pelajar boleh menyemak saman melalui web jika mereka mempunyai apa-apa saman dan bendahari boleh menyemak sama ada pelajar telah membayar atau tidak membayar saman mereka lagi. Sistem ini menggunakan sistem berasaskan web dan mengintegrasikan dengan sistem aplikasi android (Penguatkuasa sahaja). Untuk sebahagian pangkalan data, sistem ini digunakan MySQL sebagai pangkalan data. Projek ini menggunakan kaedah RAD untuk melaksanakan proses pembangunan. Sistem ini telah diuji dengan ujian unit, ujian fungsi, dan pengguna ujian penerimaan. Keputusan menunjukkan fungsi sistem itu diluluskan yang pengguna berpuas hati dengan sistem.

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LIST OF ABBREVIATION

ABBREVIATION	TITLE
UMP	Universiti Malaysia Pahang
USS	UMP Summons System
PHP	Hypertext Preprocessor
SRS	Software Requirements Specification
ERD	Entity Relationship Diagram
SDD	Software Design Documentation
IC	Identification Card
MPK	Majlis Perbandaran Kuantan
MPSNS	Majlis Perbandaran Seremban Negeri Sembilan
KUKTEM	Kolej Universiti Kejuruteraan & Teknologi Malaysia

PART 1

1.1 Introduction

Universiti Malaysia Pahang formerly known as KUKTEM. Then UMP was established on 16 February 2002 as a public technical university by the Malaysian Government. On 8 October 2006, the Malaysian Government agreed to rename KUKTEM to Universiti Malaysia Pahang because of the words 'university college' tended to give the impression to the public as a "lower standard" compared to other universities in Malaysia such as Universiti Malaya and Universiti Teknologi Petronas. UMP has temporary campus is located in gambang and other one is located in pekan, which is under construction.

This project focused on summons for any students or staff. To manage peoples in UMP which is more than two thousand, would be difficult if the summons system still using manual way such as fill the summon form and give it to the offenders. This manual way will trigger faults, miss communication, duplicate data and data loss. This manual way can will not becoming a problem if peoples in UMP less than fifty.

With USS some of the major problems will be cleared when this system being used. USS will manage all sort of data that might consisted of personal information and other private data. This data can be used for tracking offenders and make they paid their summons. Summons data will not be cleared until treasurer confirmed that offenders already pay their penalty.

1.1.1 Problem Statement

Malaysia's population increasing from year to year, this hypothesis also can be used for demand in education. Based on that hypothesis we can conclude, there will be an increasing number of students every year. Because of student's number increase, there also will be an increasing offense in University. In order to manage those offenders, there will be lots of work for enforcer to complete. Manual process can handle this type of system, but manual process will be so much problem when comes to lots of record. It is difficult for human to filter each record just to find certain name. We can say some people can do it nicely but it requires times to finish those work. Human also have several of limitations for example forgotten, making mistake, record redundant and overlooked. This manual also didn't something to proof the offenders is wrong. So the offenders will overcome their fault by anyway they could. From this problem, UMP Summons System will satisfy all type of problems.

1.1.2 Objective

The objective of UMP Summons Systems is to help UMP manage their summons procedure. The example of feature will be included is, payment, provide evidence and summons checking. This system will assist enforcer to summons students, help students check their summons and help treasurer to manage financial regarding to summons.

The main objectives of this system are as follow:

a) To manage summons data.
b) To provide summons evidence with picture.
c) Bring part of this system to mobile phone. Easy for enforcer to bring handheld system anywhere he might go.

1.2.1 Current System at Universiti Malaysia Pahang

Currently UMP used manual system to do all the process. First of all summons will be write by enforcer. For example if the enforcer saw student parked not at the parking area, then the enforcer will write down summons ticket and give to the student. And the copy of the summons ticket will be manage by security department. If students want to pay summons, they will need to bring the ticket to the treasurer department for payment. If the students forgot to pay summons, at the end of the semester they will need to check whether summons have been paid or not at the security department. If the summons still not be settled then they cannot take out their academic transcript until they settled their summons.

1.2.2 Existing System Summons System

MyEG

MyEG was incorporated in Malaysia as a private limited company on 17 February 2000 as I.T. Marvel Sdn Bhd. Subsequently, the Company changed its name to My E.G. Dot Com Sdn Bhd before assuming the present name on 13 October 2001. On 13 April 2005, the Company changed its status to a public company and assumed its present name, My E.G. Services Berhad, in conjunction with its listing on the MESDAQ Market.

The purposed of MyEG is an online government transactional services that used to serve online payment and summons checking around Malaysia. Due to growth of Malaysia population around 29.24 million in 2012, MyEG upgrade their server to serve the growth of Malaysia population. Currently MyEG have updated their system for checking jpj and aes summons.

ekompaun(MPK)

ekompaun is a system that have been developed by Majlis Perbandaran Pahang. This system is purposed for checking vehicle summons. If the offenders in Pahang state want to check whether they have being sued by the MPK, they can enter their vehicle registration number then simply press enter to see the result. ekompaun usually being used by residence in state of Pahang. This system only can be generated within 2 works day and this summons system only for vehicle summons.

ekompaun(MPSNS)

Same as ekompaun(MPK) , ekompaun(MPNS) is for vehicle compound checking in Negeri Sembilan. This system also serves the residence in Negeri Sembilan for checking summons by using their car registration number as unique id. The residences in Negeri Sembilan easily type their car registration number and simply press enter to see whether their vehicles have being sued. This system usually used by Negeri Sembilan residence.

1.3 Existing System Function and Its Limitation

Function/details	MyEG	ekompaun(MPK)	ekompaun(MPSNS)
User can check vehicle summons information	User can simply key in his vehicle registration number and press enter.	User can simply key in his vehicle registration number and press enter.	User can simply key in his vehicle registration number and press enter.
Online Summons Payment	User need to log in to the system and click ‘Check and Pay RTD Summons’	-	-

Table 1: Function and Limitation of Existing Systems

Table 1 shows function and limitation of existing systems, only MyEG have online payment services but ekompaun(MPK) and ekompaun(MPSNS) only have service for summons checking. Currently, Malaysia Police used manual summons system to sue the offenders. Malaysia police currently used summons ticket by manually write down the vehicle registration and offenders identification. But not for MPK officers, currently they used device that can easily to bring to any other places. So the officers can easily sue any offender’s vehicle by using that device and the summon ticket will be printed out by that device. The limitation of MyEG system that the police officers does not have device that can be bring to sue offenders. For the ekompaun(MPK) and ekompaun(MPSNS) system, these two system does not have any payment online.

1.4 Method of approach

The software development methodology of this project is Rapid application development (R.A.D).

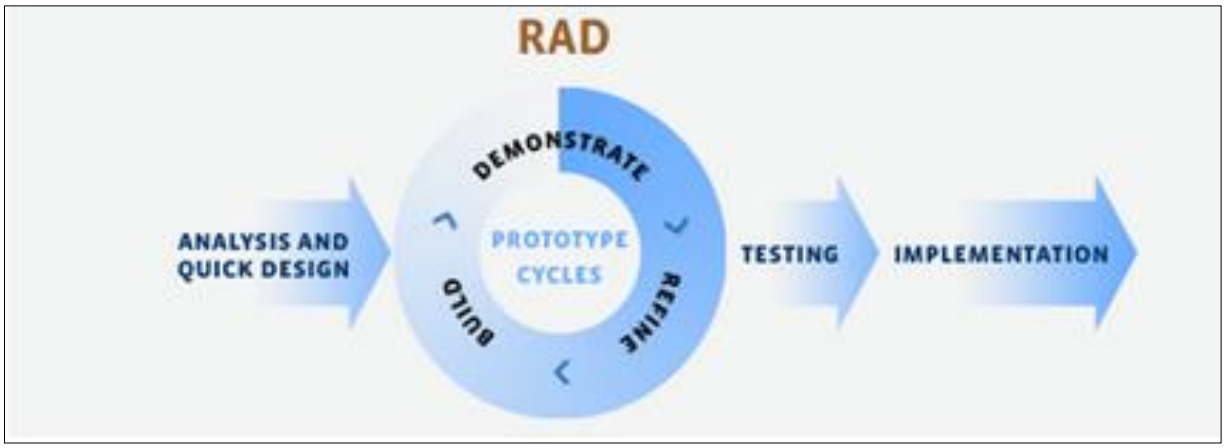


Figure 1: The process of RAD

Rapid application development (R.A.D) compressing the analysis, design, build and test phases into a series of short, iterative development cycles.This method can let software to be written much faster, and makes it easier to change requirements. By using this method it can reduce the time of development.

1.5 Project Scope

This systems is developed by using web based and android application. The main function of this system is:

The user of the system and their role:

- Admin:
    a) Manage student information (Create, Update and Delete).
    b) Manage treasurer information (Create, Update and Delete).
    c) Manage enforcer information (Create, Update and Delete).

- Treasurer department:
    d) Manage student payment.
    e) Give receipt of payment to student.
    f) Check whether student already paid or not.

- Enforcer:
    a) Summons student using mobile android.
    b) Take picture as evidence of student fault.

- Student
    a) Check their summons information.

The uses of software:

- Adobe Dreamweaver CS6
- MySQL Database
- PHP languages
- Apache
- PhpMyadmin
- IBM Worklight

The uses of hardware:

- Laptop
- Mobile phone
- Wireless Router

1.6 Project Limitation

The limitation of this system internet access, the user need to have internet connection so they can access the systems to the fullest. The major limit goes to enforcer, first of all enforcer need to have mobile phone with android operating system so that they can install the apps. This will cost security department to buy mobile phone for each of the security members. Also that internet connection is the main problem after that, UMP itself need to have budget on Wi-Fi to cover all over UMP. So it easy for security member to access it and used the connection for summons purposes. If UMP does not have any budget on this, enforcer might use data plan as their connection to established summons's server. This might be monthly payment for each of security members.

Limitation on the system itself, this system may need higher disk storage capacity. Because of this system providing file upload (picture) on the server, this will be the reason of disk storage should be high. The picture that being captured, depend on the pixel of the camera. If camera pixel is higher, then the size of the picture will be bigger. This limitation indeed will face it points when from time to time, summons's server keep saving picture for the evidence.

Another limitation of this system is user cannot make online payment via credit card. This system will be upgrade from time to time to fulfill this limitation.

Hence, from the above limitation. USS did not touch with those limitation, but in future USS will be enhance by future work so that the system will be close to perfection.

PART 2

2.0 Report Body

2.1 User Requirement

Universiti Malaysia PAHANG

Fakulti Sistem Komputer & Kejuruteraan Perisian
Faculty of Computer Systems & Software Engineering

RUJ. KAMI *(OUR REF.)* :
RUJ. TUAN *(YOUR REF.)* :

UMP.12.02/13.11/01/08 ( ) 12 November 2013

KEPADA SESIAPA YANG BERKENAAN

Tuan/Puan,

TAJUK	:	**UMP SUMMONS SYSTEM**
NAMA PELAJAR	:	**MOHAMAD AFIQ BIN ABDULLAH**
KAD PENGENALAN	:	**890702-03-5361**
TAHUN/PROGRAM	:	**3/IJAZAH SARJANA MUDA SAINS KOMPUTER (KEJURUTERAAN PERISIAN) DENGAN KEPUJIAN**

Adalah dengan hormatnya dimaklumkan bahawa pelajar di atas ialah pelajar berdaftar Fakulti Sistem Komputer & Kejuruteraan Perisian, Universiti Malaysia Pahang.

2. Sukacita kiranya pihak tuan/puan dapat memberikan kebenaran bertulis serta data dan maklumat yang berkaitan untuk pelajar menyiapkan projek berkenaan. Untuk makluman tuan/puan, projek ini ialah satu keperluan bagi kandungan kursus berkaitan.

Sekian, segala kerjasama dan perhatian tuan/puan didahului dengan ucapan ribuan terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan tugas,

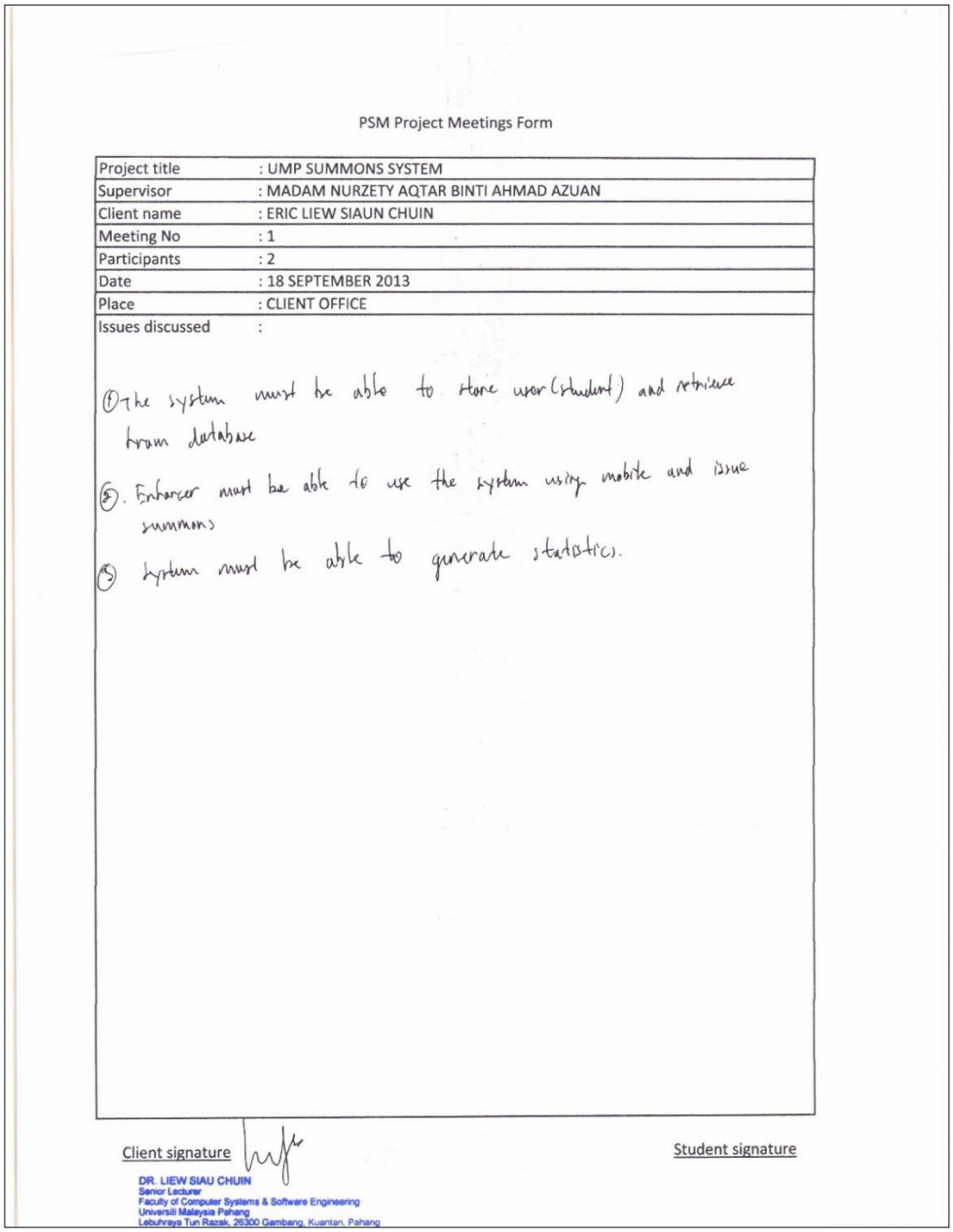
DR. MOHAMAD FADLI ZOLKIPLI
Timbalan Dekan (Akademik & Hal Ehwal Pembangunan Pelajar)
Fakulti Sistem Komputer & Kejuruteraan Perisian
Universiti Malaysia Pahang
☎ 609-5492467/2113
🖷 609-5492144
Eastma'13

Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang Kuantan, Pahang Darul Makmur

www.ump.edu.my

Figure 2: Permission Letter

In this phase, to achieve user requirements I set up interview with my client. In order to make interview as formal interview, I attached permission letter as shown as Figure 2, this letter is given by Faculty of Computer Systems & Software Engineering in University Malaysia Pahang. By this letter I have permission to meet with the client, furthermore this letter is to show to client that I as a student from FSKKP.



PSM Project Meetings Form

Project title	: UMP SUMMONS SYSTEM
Supervisor	: MADAM NURZETY AQTAR BINTI AHMAD AZUAN
Client name	: ERIC LIEW SIAUN CHUIN
Meeting No	: 1
Participants	: 2
Date	: 18 SEPTEMBER 2013
Place	: CLIENT OFFICE
Issues discussed	:

(1) The system must be able to store user (student) and retrieve from database

(2). Enforcer must be able to use the system using mobile and issue summons

(3) System must be able to generate statistics.

Client signature

DR. LIEW SIAU CHUIN
Senior Lecturer
Faculty of Computer Systems & Software Engineering
Universiti Malaysia Pahang
Lebuhraya Tun Razak, 26300 Gambang, Kuantan, Pahang

Student signature

Figure 3: User requirement form

The date of interview session was on 18 SEPTEMBER 2013 at 10:00 AM. The interview session being held at client office. During the interview session we have discussed about requirement of the systems. Like most of the interview sessions, we covers the functions, task and parts of the systems should be included Figure ***. Show the user requirement form that being used for client to clarify all the requirement, functions, parts and task needed to make USS. This form was filled during the interview session.

2.2 Software Requirement Specification (SRS)

2.2.1 Definition, Acronyms And Abbreviation

Below are technical terms that being used in document.

Database	A modern relational database used for storing data
Users	Those who use the UMP Summons System.
Use Case	Outwardly visible and testable system behavior
Use Case Diagram	Is a visual representation of actors and use cases together with any additional definitions and specifications
Activity Diagram	Graphically represent the flow of events of a use case and shows transitions between actions
Sequence Diagram	Captures interactions between objects needed to execute a use case or part of it and shows the sequencing of events (messages) between collaborating objects

Table 2: Technical Terms