# E-LESTARI HOSTEL MANAGEMENT SYSTEM

CHANG WEI HONG

UNIVERSITY TEKNIKAL MALAYSIA MELAKA

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|---|---|
| CHANG WEI HONG<br>No 20 Kampung Man Lok,<br>Kuala Sungai Baru,<br>78200 Melaka.<br>Tarikh: 21 August 2014 | Ms.INTAN ERMAHANI BT. A.JALIL<br><br><br><br>Tarikh: 21 August 2014 |

# E-LESTARI HOSTEL MANAGEMENT SYSTEM

CHANG WEI HONG

The report is submitted in partial fulfillment of the requirement for the
Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITY TEKNIKAL MALAYSIA MELAKA
2014

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Is written by me and is my own effort and that no part has been plagiarized without citation.

STUDENT : _____ DATE : _____

(CHANG WEI HONG)

SUPERVISOR : _____ DATE : _____

(Ms.INTAN ERMAHANI BT. A.JALIL)

**DEDICATION**

This report is dedicated to my parents, Mr.Chang Seong Kow and Mrs.Er Kek for their fully support.

To my supervisor, Ms.INTAN ERMAHANI BT. A.JALIL and all my friends, for making it all worthwhile and have provided encouragement and guidance all the way during the completion of the report.

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# ABSTRACT

E-Lestari System is a system that develops to change manual system into computerized system that used in hostel office in Higher Education Institute (IPT). This system is developed in website and can be access within 24 hours. It can be apply by student who stayed in Lestari hostel. Through this system, user will be able to record all information about that was made into single database. For student, they could only do the complaints, update the complaint if they want to update, and check complaint status by using their matrix number. For staff, they can view the complaint report and also update the status complaint, search complaint by date and can update the complaint from it and view the complaint report. Staff also can view and approve the registration from the system. In addition, there are many inventions of smartphones in this era of science and technology. In the market, smartphones are getting cheaper and cheaper now and users can access to a website once they have internet access. Thus, almost everyone owns a smartphones. Smartphones bring a lot of benefits, they helps the human being to contact each other wherever and whenever they are. It is very convenient to bring along too. Thus, the aim of the project is to develop a web-based and mobile application that will help students and staffs in hostel management.

# ABSTRAK

E-Lestari Sistem adalah sistem yang dibangunkan untuk menukar sistem manual kepada sistem berkomputer yang digunakan di pejabat asrama di Institut Pengajian Tinggi (IPT). Sistem ini dibangunkan dalam laman web dan boleh diakses dalam masa 24 jam. Ia boleh digunakan oleh pelajar yang tinggal di asrama Lestari. Melalui sistem ini, pengguna dapat merekodkan semua maklumat yang telah dibuat ke dalam pangkalan data tunggal. Bagi pelajar, mereka boleh melakukan aduan, mengemaskini aduan itu jika mereka mahu untuk mengemaskini dan menyemak status aduan dengan menggunakan nombor matriks mereka. Untuk kakitangan, mereka boleh melihat laporan aduan dan juga mengemaskini status aduan itu, memeriksa aduan mengikut tarikh dan boleh mengemaskini aduan itu daripadanya dan melihat laporan aduan. Kakitangan juga boleh melihat dan meluluskan pendaftaran alat elektrik dari sistem. Di samping itu, terdapat banyak ciptaan telefon pintar dalam era sains dan teknologi. Dalam pasaran, telefon pintar semakin murah dan pengguna boleh mengakses ke laman web sekali mereka mempunyai akses internet. Oleh itu, hampir semua orang memiliki telefon pintar. Telefon pintar membawa banyak faedah, mereka membantu manusia untuk menghubungi satu sama lain di mana-mana dan bila-bila masa sahaja. Ia adalah sangat mudah untuk membawa bersama-sama juga. Oleh itu, tujuan projek ini adalah untuk membangunkan satu aplikasi berasaskan web dan telefon pintar mudah alih yang akan membantu pelajar dan staf dalam pengurusan asrama.

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# CHAPTER I

# INTRODUCTION

## 1.1 Project Background

Nowadays, many information systems are having developed rapidly. Those information system developed on the purpose to overcome the problems that faced by manual method and it is also can ease up the user to do their daily work. Development of computer-based system and android mobile application provides more benefits and influences that can shape and create the work culture more systematic and can change the administrative structure of an organization to be more quickly and effectively. The use of web-based application and android mobile application is not a new thing in the world of Information Technology nowadays.

Hence, I would like to propose the idea of E-Lestari System. E-Lestari System is a system that develops to change manual system used in hostel office in Higher Education Institute (IPT). It can be apply by student who stayed in Lestari hostel. Through this system, user will be able to record all information about and complaint that was made into single database. Besides, they also can use this system to register their electrical equipment in their hostel. Every data can be search, add, update and also delete. For student, they could only do the complaints, update the complaint if they want to update, and check complaint status by using their matrix number. They also can do the registration of their electrical equipment and they can add and update their registration. For staff, they can view the complaint report and also update the status complaint, search complaint by date and can update the complaint from it and view the complaint report. Staff also can view and approve the registration from the system. Additionally E-Lestari System is easier to use. The

staff don’t need to save all the registration and complaint information by manual process. The system also can save a lot of information and it will be easy to search the information.

## 1.2 Problem Statements

1. Students don’t have enough time to go to the office to make complaint and do the registration of their electrical equipment.
2. Student who make complaint by using the manual system, they have to write in manual book and often overlooked noticed made by the staff
3. Using the manual system is not efficient because it can be overlooked in the manual system (book of complaint) and the staff often missed some noticed.

## 1.3 Objectives

1. To enable students to make complaint and register electrical equipment at hostel.
2. To save time for students to make a complaint and register electrical equipment.
3. To develop and change the manual to the computerize system.

## 1.4 Scope

This project will be used by two users, namely students who stayed in hostel and office hostel staff. For students, they can complaint about the damage that they suffered and register electrical equipment at the hostel by using this system. In addition, the system is developed for office use in learning and school dormitories. Students also can make a complaint, review complaints about faulty equipment at the hostel, check the status of complaints through a search based on the number of room,

whether damage has been repaired or are in the process. . They also can make the registration of electrical equipment. If the students are not doing the electrical equipment registration they will get refund from hostel management. For safety, students need to enter the matrix number and password to use this system. This system of recording the complaint made by student's who stayed in hostel.

For office hostel staff, they need to respond to any complaints made by students about the damage and also they have to approve the electrical equipment's registration in the E-Lestari System. As for the hostel office staff, not only can view and search to check the status of the complaint, but staff can use this system where staff can completely change the records in the database.

## 1.5 Project Significance

1. Reduced monthly costs for paper to record all information
2. Save the time to manage all information.
3. Can save a lot of information.
4. Reduce the use of paper.
5. Less of using manually in order to make any complaint.
6. Can have consistent of data as the computer-managed activities are more efficient, effective and systematic.

## 1.6 Expected Output

This E-Lestari system is expected to produce computer-managed system to manage all information. This system can save a lot of information in database and reduce the use of paper. This system help to reduce monthly cost for paper used to record all information. Other than that, this system can have consistent of data as the computer-managed activities are more efficient, effective and systematic. Not only that, this system is operated 24 hour so student can do their complaint or other function anytime and anywhere.

## 1.7 Conclusion

This E-Lestari System developed based on the weaknesses that were identified from the manual system E-Lestari System which can be included as a form of complaint information management where all information in the complaint and forwarded mail will reach the hostel management. The management is entrusted would then be dealing with the complaint management process.

Compared to manual systems, computer-managed activities are more efficient, effective and systematic. Through this system, the reporting can facilitate the involved without the constraints. Meanwhile, the college management can improve the quality of work that each complaint will be forwarded as soon as possible

# CHAPTER II

# LITERATURE REVIEW AND PROJECT METHODOLOGY

## 2.1 Introduction

This E-Lestari system is a Web-based system that created to help staff reduce their workload and reduce the time taken to complete a task. This system changed from office hour to 24 hours operating. It can save all information effectively and efficiently. Besides that, it provided notices function, this will show latest information and notices to student and staff.

## 2.2 Fact and Finding

### 2.2.1 Domains

E-Lestari system is a web-based system created for University manages their hostel efficiency. This system can be uses by student to register electrical equipment, manage their own profile, make complaint about their hostel condition and view latest notice through this system. Besides that, staff can manages student profile, room, and electrical equipment by using this system. In additions, staff can view all the complaints made by student and solve those problem. Staff also can post notice in this system and reduce paper used to print those notice and paste on notice board. Lastly, this system can be uses to generate annual report about the complaint made by student and focus on the problem.

Android is an operating system based on the Linux kernel, and designed primarily for touchscreen mobile devices such as smartphone and tablet computers. Initially, it is developed by Android, Inc., which Google backed financially and later bought in 2005. Android had been widely used by many devices and the price for android's product also cheaper compare to iOS which is a mobile operating system developed by Apple Inc. and that is the reason why I choose android to do this project. An android application is created to help staff and student in University can manage and do their job more efficiently and easily.

### 2.2.2 Case Study of Existing System

Below is the existing system we can find in online and the limitation of the system.

1. HOSTEL MANAGEMENT SOFTWARE

- Maintain account
- Admission of Students
- Maintain Deposit collections
- Registration

2. College Hostel Management Software

- Building information
- Room information
- Student information
- Maintenance Repairs (not a proposed function for student, for saving data purpose.)

**Our Strength**

E-Lestari system provided a 24 hours complaint function for students. So student can use that function to make complaint about their house problem to management. The complaint will be asked to respond unless the problem is solved.on other hand,

decision support system is provided for staff to do maintenance more efficiency and effectively.

## 2.3 Project Methodology

E-Lestari System will use Object Oriented Analysis and Design (OOAD) for systems analysis and application design. OOAD is a method to design and build large programs with a long lifetime. It is closer to the way problems appear in life(physical and non-physical).It also provides formal methods, techniques and tools to control design, development and maintenance.

This prevailing software development methodology involves three aspects:

i. Object-Oriented Analysis (OOA)

ii. Object-Oriented Design (OOD)

iii. Object-Oriented Programming (OOP)

In *Object-Oriented Analysis (OOA)*, it looks at the problem domain which means it aim to produce a conceptual model of information that exist in the area being analyzed. It does not consider any implementation constraints that might exist, such as concurrency, distribution, persistence, or how the system is to be built. Analysis must do before design. The source of the analysis is written in use cases, UML diagrams that can be used to illustrate the statements.

*Object-oriented design (OOD)* transforms the conceptual model produced in object-oriented analysis to take account of the constraints imposed by the chosen architecture and any non-functional technological or environmental constraints, such as transaction throughput, response time, run-time platform, development environment, or programming language. The concepts in the analysis model are mapped onto implementation classes and interfaces. The result is a model of the solution domain, a detailed description of how the system is to be built.

*Object-oriented programming (OOP)* is a type of programming in which programmers define not only the data type of a data structure, but also the types of operations that can be applied to the data structure. In this way, the data structure becomes an object that includes both data and functions.

Besides that, there are three principals of objects, encapsulation, inheritance, and polymorphism are the foundation for object-oriented systems development. To understand and express the essential and interesting features of an application in the complex real world, an object-oriented model is built around objects. An object encapsulates both data and behavior, implying that analysts can use the object-oriented approach for both data modeling and process modeling.

## 2.4 Project Requirement

### 2.4.1 Software Requirement

1. Eclipse – To develop the system.
2. Star UML – To draw use case for the system.
3. Microsoft office 2010 – To produce the paper documentation.
4. Microsoft office project 2010 – To create the project schedule and milestones.

### 2.4.2 Hardware Requirement

1. Laptop
2. Printer