

# **E-Complaint Support System**

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**This report is submitted in partial fulfillment of the requirements for the Bachelor of  
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## TESIS APPROVAL STATUS FORM

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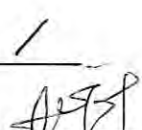
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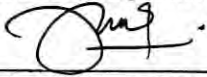
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## **DEDICATION**

I would like to dedicate my full appreciated to my beloved parents for their support and for my supervisor Pn Zahriah Othman for her commitments during PSM session. Thank you so much.

## ACKNOWLEDGEMENT

I am grateful of *Ilahi* because of this kindness that I got to complete my project excellently. First, I would like to thanks a lot to my PSM's supervisor, Pn Zahriah bt Othman for giving me a chance and always guiding and helping me when I faced any problem during my project. She always gives many ideas and never gives up helping me in order to manage my PSM II according to the progress until finish.

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## ABSTRACT

For PSM, the E-complaint Support System for Majlis Perbandaran Bentong has been chosen as a topic. The system is using web-based application. This system will focus about the complaint from the community of Bentong, such as the garbage, the services and others. The report will describe the progress from the introduction until the testing phase in order to manage the project. This system will replace the current system that MPB using now. All process that will evaluated in this report is from starting, register complainer until generating report. This system will involved two users, which are complainer and staff. The complainer is the community of Bentong, who want to make complaint and the staff are the workers responsible to the complaint made. After the system is successfully implemented, it will give the convenient to all especially the system user.

## ABSTRAK

Bagi meneruskan Sarjana Muda, sistem sokongan E-Aduan telah diambil sebagai topic utama. Sistem ini menggunakan aplikasi web. Sistem ini difokuskan kepada orang ramai di daerah Bentong yang telah menghadapi masalah, seperti sampah di tempat kediaman, servis dan sebagainya. Laporan ini akan menerangkan perjalanan progress dalam menguruskan projek. Sistem ini akan menggantikan system yang telah sedia ada dan digunakan di Majlis Perbandaran Bentong sekarang. Keseluruhan proses untuk system ini akan dijelaskan di dalam laporan bermula dengan pendaftaran pembuat komplek sehingga ujian terhadap sistem. Sistem ini melibatkan dua pengguna iaitu staff dan pembuat komplek, iaitu orang ramai yang ingin membuat komplek terhadap syarikat itu, setelah system dilaksanakan dengan jayanya, ini akan memudahkan orang ramai terutamanya kepada pengguna system.

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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Project Background**

Majlis Perbandaran Bentong always give a better services to their population fulfils the customer charter. Some of the customer charters are to give the municipality services skillfully, faster and quality to the customer or their population in Bentong by supervision system orderly and effective, responsive to requirement in a quality public facility, to assure that the small improvement to basic infrastructure quickly implement between 14 and 30 days.

Majlis Perbandaran Bentong has many things to handle. One of the things is handling the complaint from the community of Bentong. Usually they use the manual system to manage all the complaint, which is filing system. With this system, the staff will keep the data in a file. Therefore, the complainer who wants to make complaint to the company, will making the complaint manually. That is making the complaint by letter or filling the complaint form that is provided by the administration of the company. So, all of the information or complaint will be kept in file.

In order to implement the customer charter effectively, the administration of Majlis Perbandaran Bentong decide to follow the information technology with creating an alternative line as middle between Majlis Perbandaran Bentong and populations. Therefore, the community of Bentong will make the complaint via Internet.

E-complaint Support System will give better services. This system is complete with the information of every unit and production report from the unit to the administration. It also records every complaint that had been received whether is still in process or had been taken action by the unit.

So, it is hoping that the system can be able to help the Majlis Perbandaran Bentong to achieve the desire and customer charter, as the one of the public organization that is able to manage their area good and excellently.

## **1.2 Problem statement**

Based on the current system that is used in the company, there are some problems that have been faced by every unit: -

### **i) Traffic in accessing the hotline**

The complainer will make complaint with other task such as calling, sending the letter or come to MPB to complete the complaint form. So, if many complainers make complaint with calling, there have the traffic in accessing the hotline, because the phone is used for many works.

### **ii) Unmanageable Data**

All the data of complaint will be kept in a filing system or manual system. So, it is difficult to search data if there has many complaints from the community.

Besides that, the unit that responsible in handling the problem will late in taking action because the loss of data and others. If there have an addition data in certain time, may be erratum happen when the staffs record the data in the book. The complainer can't know the status of their complaint easily.

iii) **Distribute task manually**

With this system, the complaint must be received by the management first. The process will be taken so many times to take action and to know who is responsible in making the complaint.

iv) **Difficult to analyze the complainer**

There are many complaints that had been sent to the company. So, the staff will make the report of the complaint every month. With the manual system, data is difficult to analyze and report can't be well generated.

### **1.3 Objectives**

According to the current system that had been used in this company, some objectives had been provided to make the process of managing complaint easier. There are some objectives that will be use in order to develop the new system: -

i. **To reduce the traffic in accessing hotline**

Using the current system, there have many problems that they must faced, including not enough staff to handle the complaint. So, the new system will be developed to reduce the problem and to reduce the traffic in accessing.

ii. **To manage the data orderly**

By using the filing system, it will cause many problems in data management, such as data redundancy, difficult to search data and others. It will disturb the process

of taking action to the complaint. So, with the new system, the data can be manage orderly and better than using filing system.

iii. To distribute the task easily

With the new system, the data will be divided into the department or unit that responsible to the complaint. So, the staff will distribute the data easily than using the filing system.

iv. Ease to analyze the complaint

The system will produce the report of the complaint. It will make the responsible staff easy in analyzing the reports.

## 1.4 Scopes

This system is developed by focusing to some primary subject like: -

i) Functions of the system

- Register the complainer in order to make complaint using E-Complaint
- Sorting the data based on the department that will be responsible to the complaint.
- The complainer can check the status of their complaint
- Produce report based on step that had been taken to overcome problems and statistic report based on the complaint that had received
- This system has database to keep all the information that related to the complaint

ii) Specific platform

- System is develop with using the analysis and object orientation design
- System is develop with web-based application (using web-server, which is Apache server) using PHP language, macromedia dreamweaver application, and the system database will be implement using MYSQL



iii) **Specific user**

- **Complainer**

The complainer will use the system to make complaint for the company, based on the E-complaint

- **Staff**

Staffs use the system to check the complaint that had been sent from the complainer.

## **1.5 Project Significance**

In order to develop this system, there are a lot of things to be considered. One of the things is the importance of the project. With this system, the staff that responsible for this complaint, will make the report with more effective and impressively. They no need to use the manual process in order to make report of complaint. The system uses the decision support system. So, the administration can manage the complaint quickly and effectively. The unit that responsible to the complaint can manage and make task specialization to every staff in every unit orderly and enhance.

By using the new system that is going to be developed, it will use the data management system. With the system, the data will be managed better than using the filing system. It can avoid the data redundancy and the staff will analyze data easily with the report that had been produced.

## 1.6 Conclusion

From the first subtopic to the last subtopics of this chapter, it describes the information about the system that will be developed. With the new system, it will help the user to overcome many problems such as the making the effective report. The staffs do not need to use the manual system in order to make report; it is because the system will help the staff producing the report orderly. The complainer does not need to come to the company just only to make the complaint. They just have to surf the internet to make complaint to the company.

This chapter will lead to the second chapter that is the literature review and the project methodology. The preview and some information for this chapter will be explained soon. In the second chapter, it will explained about fact and finding, which is the research for passed project, case study and some information about the project methodology, the project requirement and project schedule and milestones.

## **CHAPTER II**

### **LITERATURE REVIEW AND PROJECT METHODOLOGY**

#### **2.1 Introduction**

Generally, the literature review is a process of searching, collecting, analyzing and drawing conclusion from all debates and issues raised in relevant body of literature. It includes the result of the research that had been got from the existing system or passed system. Actually, it can be completed through the process of searching, collecting, scanning, studying and analyzing the relevant sources such as books, journals, web pages & e-book, CD-ROMs/DVDs and others.

The project methodology is a way to use all available approaches, techniques and tools used to achieve predetermined objectives of the project. Briefly, this method can be approached using qualitative method, such as analysis of interview and quantitative method, such as forecasting, statistical and modeling, such as DBLC, SDLC, OOAD and others.

Actually, the methodology can be implemented using the DBLC (Database Life Cycle), SDLC (System Development Life Cycle), and others that approach the system investigation, analysis, design, implementation and maintenance and review. For completing the effective project method, there are some techniques that can be used,

such as Prototyping, Rapid Application Development (RAD); for example is Joint Application Development (JAD), CASE tools.

## **2.2 Fact and Finding**

According to the research and sources that had been got for this system and the example of passed system, below is the some information and explanation about the fact and the passed project that related to the propose system:

### **2.2.1 Approaches**

- Decision Support System.

The system that will be developed will use the Decision Support System. The Decision Support System are the specific class of computerized information system that supports business and organizational decision-making activities. The primary objectives of DSS is helping the decision makers compile useful information from raw, documents, personal knowledge, and/or business models to identify and overcome the problems and make decisions. (The brief History of DSS, D.J Power)

The decision support system will help the system to decide the result. Others, it will help the programmer of this system to manage the system well without to think about deciding the result of the process.

- Database design

One of the processes in the development of the database is the database design. Database design is the process of designing the real database that has been used for certain system. In database design, there have many processes. There will creating the conceptual design, which is making the ER diagram, normalization and others.

ER diagram is entity relationship diagram, which is designing the database relationship for the system. This tool will be elaborated in the conceptual and logical database design.

- Network

The system is online system. So, networking will be used. Generally, network is a device that connected to the communication link. Most networks use distributed processing, that is the task is separated among multiple computers. For this system, the topology that recommended using bus topology. A bus topology, in the other word is multipoint. One long cable acts as a backbone to link all the devices in a network.

For the network categories, there will use the WAN (wide Area Network) because this is the online services. This network is provides long-distance transmission of data, voice image and video information over large geographic areas that may comprise a country, a continent or even the whole world.(Data Communication and Networking, Behrouz A.Forouzan, 2003)

- Complaint process

Domain is the process of the system. First and foremost, the complainer will make the complaint and send the data to the administration of the company. Then,

when the data is received by the company, there must analyze and distributed the complaint under the correct department.

After the administration had known the department that responsible for the complaint, the data will be divided to the department in the company. Then, the department will examine the problem and find the way to overcome the problem. Lastly, they will take the action and complete the problem.

### **2.2.2 Case Study**

#### **E-complaint system for Majlis Perbandaran Pulau Pinang (MPPP)**

This source is from Majlis Perbandaran Pulau Pinang. The system of E-Complaint is the virtual complaint counter for both public and agent to make complaint and suggestion pertaining to local authority's function and responsibility. The processes are completing the form and submit it back online to local authority.

For conclusion, the system has not enough process, for example there have no button to check the status of the complaint. There also not use the decision support system.

#### **Citizen Pollution Complaint**

The system is about the complaint of citizen pollution. The example complaint is including open burning, dust, particles and industrial emission, open dumping, hazardous waste, stream/lake pollution, illegal discharges into waterways, issues affecting drinking water and agricultural problems.

The system is about filling the form of complaint pollution to the place. The function of the system is about the complaint of pollution and it more about the

observation of complaint services. The complainers have to fill the complaint form and answer some questions that had been given in the form.

For conclusion, this system is only exposing about the form of complaining. There is no use in the Decision Support System approach.

### **2.3 Project Methodology**

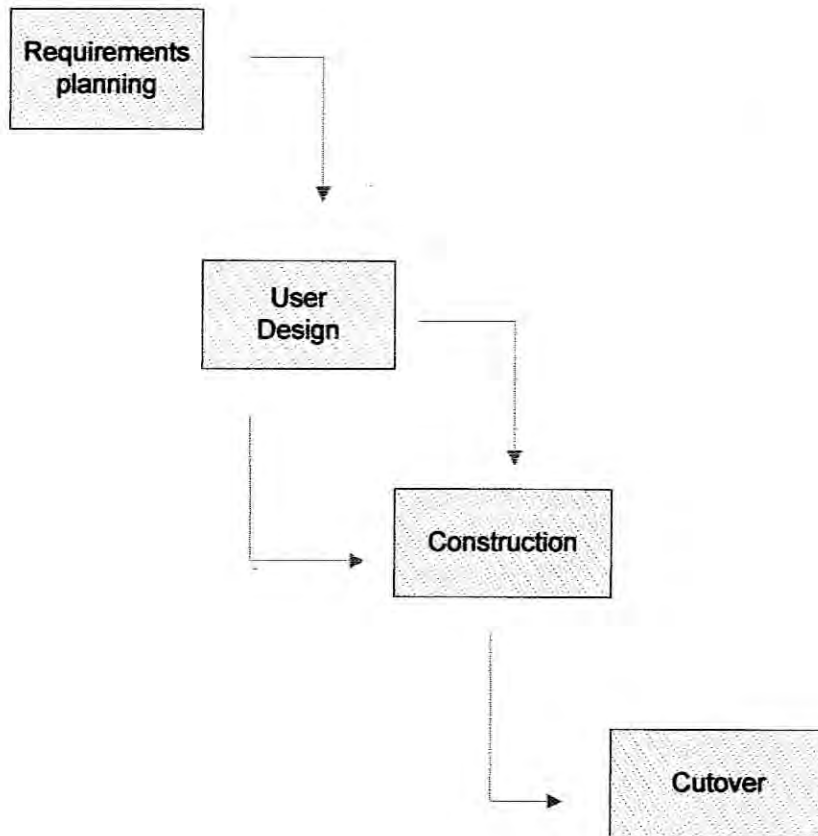
Project methodology is the way that will show the process of the project. The process will depend on the phase that will be the guideline in order to develop this system. The approach of methodology that had been used for this system is RAD (Rapid Application Development). The process will be implementing using the DBLC model (Database Life Cycle), which is available to database development process.

#### **i) Rapid Application Development(RAD)**

Based on the James Martin, in his book coining the term, wrote that Rapid Application Development is a development lifecycle designed to give much faster development and high-quality result than those achieved with the traditional lifecycle. It is designed to take the maximum advantage of powerful development software that has evolved recently.

According to the online knowledge, its define that Rapid Application Development as “a methodology that enables organizations to develop strategically important systems faster while reducing development cost and maintaining quality. This is achieved by using a series of proven application development techniques, within a well-defined methodology”. RAD compresses the step-by-step of conventional methods into an iterative process. The RAD approach thus includes developing and defining the data model, process model and prototype in parallel

using an iterative process. User requirements are defined, a solution is designed, solution is prototyped, the prototype is reviewed, user input is provided, and the process begins again. (James Martin)



**Figure 2.1: Martin RAD life cycle**

According to the Martin RAD life cycle, the structure of RAD life cycle is thus designed to ensure that developers build the systems that the user really needs. This life cycle, through the following four stages includes all of the activities and tasks required to scopes and define business requirement and design, develop and implement the application system that supports those requirements.