CERTIFICATION OF APPROVAL

Online Hostel Defect Reporting System

by

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TRONOH, PERAK

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

ZULKIFLEY BIN OTHMAN

ABSTRACT

The main purpose of this study is to develop an intelligence system for Residential College Unit in Universiti Teknologi Petronas to enable all students to make a report of their hostel facilities problem via fully PHP web-based system. This documentation is concerned with the design, implementation and later on the evaluation of a Web-Based Hostel Defect Reporting System to make sure that this system can helps students to issue the facilities defects and Residential College management will accept and manipulate the report from their database server. This system is to be developed using fully PHP web-based performance supports system and developed especially to support the need of a flexible and mobile way of issuing the reports. The system can be accessed through the Internet and or the intranet, hoping that the students can improve their performance by using the system from their rooms and can get immediate feedback from the Residential College Unit about the problem issued. This system will make student life to be easier than before.

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CHAPTER 1

INTRODUCTION

This chapter contains brief information of the project which includes the background study of this project, problem statements that lead to the design of this project, its objectives as well as the project scope.

My incentive for developing this system was to reduce the administrative burden in collecting and manipulating the campus facilities problems. Preliminary evaluation suggests that this system will be reliable and favorably accepted by students and Residential College Unit

In realizing the project, the iterative methodology of Rapid Application Development concept will be used. This will allow the developer to re-evaluate the system over time in order to perform enhancements and corrections. The system design will take place during the design phase of the System Development Life Cycle

1.1   Background of Study

Web-Based Hostel Defect Reporting System will be in fully PHP web-based environment; where users can access it remotely from anywhere around UTP campus environment. Information technology (IT) can enable great improvements and as a key that enabling technology, offers strategic opportunities and long-term advantage. An essential element to IT implementation is ensuring that the right information is available at the right place and right time. IT has a proven track record in improving efficiency in many industries and organizations and will also impact on decision-making process.

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Improvements in technology and management depend on as much upon the internal environment of the technology-using by the Residential College department as it does upon the technology and policies used to manage it. However, they have little control over their environments. In seeking to improve their performance and quality of services, they can fully control the technologies they adopt and the practices they employ to manage their use.

1.2   Existing Residential College Management System

From the research and observation that have been made, the Residential College Unit is using the conventional methods and devices to apply their operations and management. They are using the communication tools and devices like computer, telephone and diskette to reach that purpose. The record of report is process by the hostel warden using docket form and these reports are submitted to the Residential College (RC) Executive to be endorsed by the RC executive. Using the same endorsed form given by the hostel warden, the Property Management & Maintenance Department (PMMD) executive will validate and assign the particular contractor to fix the problem and after all damage is fixed, the form is filled by the contractor indicates that problems are fixed. The form is return back to hostel warden and the hostel warden will go to the particular room that reported the problem and verify that everything is fixed. Basically all these procedures are being implemented in their daily activities that consist of:

1.2.1   Manual System

Staffs of Residential College Unit will collect the report that reported by the students manually by using report form and record all the details on paper. The students write the report in the log book that given few columns to be filled. Different village has their own style of collecting the reports. Most of them use lob book and they will collect the report everyday.

1.2.2 Information and Data Transfer

Any of report information or data which want to be transferred from one location to another will be done manually by using traditional forms, fax machine, telephone, or internet. For instance, the report information being transferred and derived were done through docket form. The docket form is being use from the start to the end. That is for the warden, contractor, PMMD and Residential College Executive unit whereby it involves some problems in doing their jobs.

1.3 Problem Statement

The use of certain conventional devices deemed is not relevant to certain circumstance. For instance, the form that is used to capture and process the report is carried along the process until the problem is fixed. The form could be loss as the process is conducted. Upon observation of management system and through interview session which conducted with residential college staff, several problems through careful consideration and discussion were narrowed down whereby based on their relativity to the project. This is a problem in the current management system.

1.3.1 Data Integration

Currently most students use log book to report the problem at each hostel and every Village in UTP has its own hostel warden with different style of fetching the problem. For example, warden placed the log book in every block of V4. After that he will collect the book everyday and manually fill the docket form with details from the log book. This takes time to fill in every report that has been written in that book moreover students sometime misused it and write fake reports. Means that student need spends time to make a report and get the status of the report. After that warden will bring the filled form to the RC Executive to be endorsed and then after it has been endorsed, the warden will pass the form again to the PMMD executive where PMMD will validate the form and assign the contractor. The same form will be use by the contractor for rectification works. After everything is fixed, then the form is remark and is given back to PMMD. PMMD will validate and give back to hostel

warden. The hostel warden will again use the form, go to each reported room and validate that the problem is fixed. Occasionally this process takes a week or even more. To be useful in management data must be accurate and current. It is also beneficial if it is recorded over sufficient time to demonstrate trends and increase the sampling size sufficiently to produce realistic averages. This data collection and analysis will function after a few months operation but may take years to produce enough historical information to project future trends.

1.3.2   Update of Report Status

This is the main problem by using the current method where the student needs to be updated about the status of the report. The rectification work may be delay due to manual process and this will cause student to make another report. Because of the process takes about a week of more, students may need the defect to be fixed as soon as possible. In the mean time they do not know about the status of their report. This problem tends to lead student to make a same report because student is not update with the status of the report. Eventually this situation will bring redundant workload to warden as well as the contractors where warden needs to go and check at every room each time report has been made. Meanwhile contractor that is solely depends on the form will just fix the given defects and make quotation based on those defects. Because this file is not store in one place, it is hard for student to track back the file.

1.4   Significant of Project

This project is designed to increase the effectiveness of method for manipulating report from students to the Residential College Unit department. Through this proposed system, it will cater the problems in reporting hostel problem that commonly using the conventional method that seem quite not relevant with the growth of sophisticated technology today. The approach that will be used is to replace the existing method of reporting that will contribute to the solution of time consuming. The interesting of this implemented technology in this system is to expose the Residential College department to the use of different technology in keeping and retrieving related data from database as well as to manage the proper

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management system. Due to that issue, it totally can help the Residential College and PMMD staffs to manage their duties implementation. Besides, it is potential to assist them in decision making process.

1.5 Objectives of Study

The objectives of this study are as follows:

- To solve the inefficient internal Residential College Unit management and weaknesses of application and conventional procedure with the current management system.
- To design a platform of reporting hosting problem system to improve the data availability and accessibility.
- To develop an online system to integrate data with hostel and PMMD

1.6 Scope of Study

The scope of study to be done in this project shall focus more on how to develop an online system to process the reports regarding hostel defects from student into the main server at Residential College unit. The study also will be made on how to provide a tangible mechanism in the event of coordination process and to track the progress update for the reports conducted. The system will automate the defect task to the Property Management and Maintenance Department (PMMD). The system also will perform as a monitoring system that will monitor and report the defect. This system is use for reporting defects in the hostel via online web-based where it will be use by hostel warden, student, RC Executive, and PMMD staff. Identifying all user roles that involved in the system also become as the main concern for this study. All findings will be based on the information which gathered from the Residential College Unit, students, articles, journals, reference books and the resources from internet. Basically the Web-Based Hostel Defect Reporting System is being modeled by using the Unified Modeling Language (UML) notation and related diagrams which developed by using the PHP application. Identifying all user roles that involved in the

system also become as the main concern for this study. The study has to be completed within a time frame of fourteen weeks at the end of which a final report will be submitted to the Final Year Project committee of Universiti Teknologi PETRONAS (UTP).

Chapter 2

Literature Review

A literature review was conducted to develop an understanding of the subject. The goal was to gain a comprehensive understanding of the Facilities Management (FM), functions, application, and issues about operations and maintenance of a building. Having once accomplished this, it was then made possible to consider what this study is all about. The literature that was reviewed consisted of white papers, journals, and other publications.

2.1   Facilities Management

In business, facility management is the management of buildings and services. The services are sometimes considered to be divided into "hard services" and "soft services." Hard services include such things as ensuring that a building's air conditioning is operating efficiently, reliably, safely and legally. Soft services include such things as ensuring that the building is cleaned properly and regularly or monitoring the performance of contractors (e.g. builders, electricians). The term "facility management" is similar to "property management" but often applied only to larger and/or commercial properties where the management and operation is more complex. Some or all of these aspects can be maintained by data-rich computer programs. [2][5]

It is the role of facility management to ensure that everything is available and operating properly for building occupants to do their work. The facility manager generally has the most influence upon the quality of life within a facility. Facility management may range from the small scale (e.g. single small building custodial services) to the large scale (such as Johnson Controls' operation of Chrysler

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manufacturing) or even on an international scale (e.g. global service provision to a multinational corporation). Some facility management companies (e.g. Regus) have grown to simply provide environments which other organizations may rent on demand in order to do business in a "hotel" environment. [2]

Facilities management concerns people and places. People are generally the single biggest cost centre for any business on organization and its single biggest asset. Keeping people happy and enabling them to be productive in their daily activities is not only critical in gaining and retaining a strong workforce, but also in delivering overall business prosperity and growth. It is important that facilities are well designed, efficiently managed and used to their best advantage, it is more important that they support core business goals by enabling people to be their most productive. Improvement in worker productivity can lead to financial gains that outweigh facility operating costs such as energy, cleaning, maintenance and the like. Technology is another major cost centre. It involves communication and information equipment and its support, software tools and data management. Notwithstanding technology needs, facilities are not necessarily confined to buildings. It is preferable to consider facilities as infrastructure that support people, either individually or collectively, to realize their goals. Examples of facilities include a cruise ship, theatre staging, a mining town, a hydro-electric generator, an orbiting space station. All require ongoing management if they are to remain aligned with their intended support function. [3]

2.2 Technological Drivers That Influence the Evolution of Facilities Management

It is important to understand the driver of technology and the effect on the people who are using it. Research indicates that 80% of technology system implementation flaw in the technology or that the systems purchased are not appropriate but because in implementation the system scant regard is given to the people who are expected to use the systems. A full understanding of these relationships requires an understanding of change management. While that is beyond the scope here it is worth noting that

technology is a part of the facility infrastructure along with the social, organizational and physical element. It is enabling tool.

This view can be summarized, in the context of FM, as follows:

- FM technology enables strategic decision making to be supported by statistically significant information derived from real data
- FM technology supports the day-to-day operation of a facility by providing relevant and real time data to FM professionals
- The implementation of technology systems impacts on all aspects of the organization
- The capabilities afforded by using FM technology are only achieved if integrated with strategic and change management issues
- FM technology has extended the value loop to include organizational customers through web interfacing – this has meant that the FM community now includes stakeholders with different requirements, and in that sense technology is both a stimulus for the development of new organizational cultures and a facilitator of those cultures. [3]

All this is academic, however, if the way that information is managed is not considered. FM can cover a wide range of activities and perhaps that is the difficulty in defining the discipline, but if we classify what we manage as 'assets' and 'resources' to deliver support services, the challenge of understanding and applying new technologies in our discipline becomes easier. Technologies that were 'proposed' just a few years ago, are now internationally embraced, and while we might have believed it would be possible to communicate with live video link to our laptop or PC, we could not have guessed that the enabling software, let alone the online time, would be 'free'. [4] [5]

2.3   Facilities Management Process

Facilities management is the application of the total quality techniques to improve quality, add value and reduce the risks involved in occupying buildings and delivering reliable support services. Such an approach is required to provide and sustains an operational environment to meet the strategic needs of an organization. An ambience of quality can ensure that core business processes are well integrated and supported in an operational environment – the workplace. The process is cyclical and relates needs to a result that can be tested against user satisfaction with the service:

- Space – adapted to changing needs and effectively utilized
- Environment – to create healthy and sustainable working environments
- Information technology – to support effective communications
- Support services – to provide quality services to satisfy users
- Infrastructure – to provide appropriate capability and reliability

Organizations should have a clear strategy and well developed policies for facilities management embodied in a facilities plan, and should establish a single point of responsibility. The way in which facilities are organized in relation to central functions and to other operating units will determine the extent to which facilities support strategic needs. Value is added to an organization at the workplace through the provision of services in the most efficient and effective way: by the development and management of quality managed systems, through the establishment of guidelines and service levels and, at the policy level, through the development of strategy and a framework within which to deliver services. [2][5]

The facilities planning process identifies user needs and agrees service levels as the basic for designing the service. Effective planning of facilities will ensure that they are 'work-shaped' and support work processes. The services that are required can then be defined, specified and delivered. Quality systems ensure that all services are delivered to the required quality, provide value for money and minimize risks to the organization. [5]

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2.4 System Design in Details

2.4.1 System Compatibility and Portability

Web-Based Hostel Defect Reporting System has a natural advantage in the using in cross-platform, after adopted a large number of PHP components in the design and implement. When choosing develop environment, adopt Apache with excellent performance and middleware technology as application server, have laid the foundation for distributed deployment in the future; Dividing the implement levels and modules clearly in the system, has guaranteed to software reusing furthest, have given full play to the utility of module technology; All above ensure the portability of this system.

2.5 Software Agent

Software agent is a piece of software that acts for a user or other program in a relationship of agency [20]. Such "action on behalf of" implies the authority to decide when (and if) action is appropriate. The idea is that agents are not strictly invoked for a task, but activate themselves. The software agent can be classified in different ways. The most popular classifications are by application type and characteristics. There are three application types; Organizational and personal agents, private and public agents and software agents and intelligent systems.

Organizational agents execute tasks on behalf of a business process or computer application. Personal agents perform tasks on behalf of individual users. For example, corporate use of agent monitoring software is becoming a key component in the drive to cut support costs and increase computer productivity. Intelligent agents can search through e-mail messages for certain key words. Depending on what key words are contained in a message, the agent automatically sends out answers based on frequently asked questions (FAQs) files. A company can use such an agent to help customers obtain answer to their question quickly for example www.egain.com and www.brightware.com. Another example of an organizational intelligent agent is an automatic e-mail sorting system. When a new message comes in, it is automatically

routed to the right file and folder. Personal agents are very powerful. They allow users to go directly to the information they want on the Internet. Busy people do not have the time of desire for extended browsing through the internet, and so the agent can help in browsing. [22]

The idea is to embed a software agent in the system that has intelligence where it is able to accept the user's statement of goals or reports and carry out the tasks delegated to it. The agents has the characteristic of agency where agency is the degree of autonomy and authority vested in the agent, and can be measured, at least qualitatively, by the nature of the interaction between the agent and other entities in the system. At minimum, an agent represents a user in some way. A more advanced agent can interact with other entities, such as data, applications, or services. The agents also should have the mobility where mobility is the degree to which the agents themselves travel through the network. The system only needs an agent that is static, either residing on the client machine or initiated at the server. [22]

Chapter 3

Methodology

3.1 Research

To collect information regarding this project, the followings approach were taken:

- Literature reviews – Finding out about suitable tools, system and architecture to incorporate the ideas proposed to the suitable development approaches

- Gather information regarding current Residential College management system by performing an interview with Residential College Unit staffs and searching through an internet search engines and other available material as an articles and some references textbooks. Interview is conduct with hostel warden, PMMD staff, and student. Information is gathered from journal, books, and technical papers. These materials tell about the use of facilities management in organization.

3.2 Development Methodology

Waterfall model is chosen as the methodology. Why I choose this model because the Waterfall model at each of every phase is cascading from one another. It is widely used for practical systems development. As shown in Figure 1 the phases of waterfall model are followed closely to ensure a systematic approach to system development achieved. The core main phases are planning, requirement analysis, system design, system prototyping and also testing and evaluation.
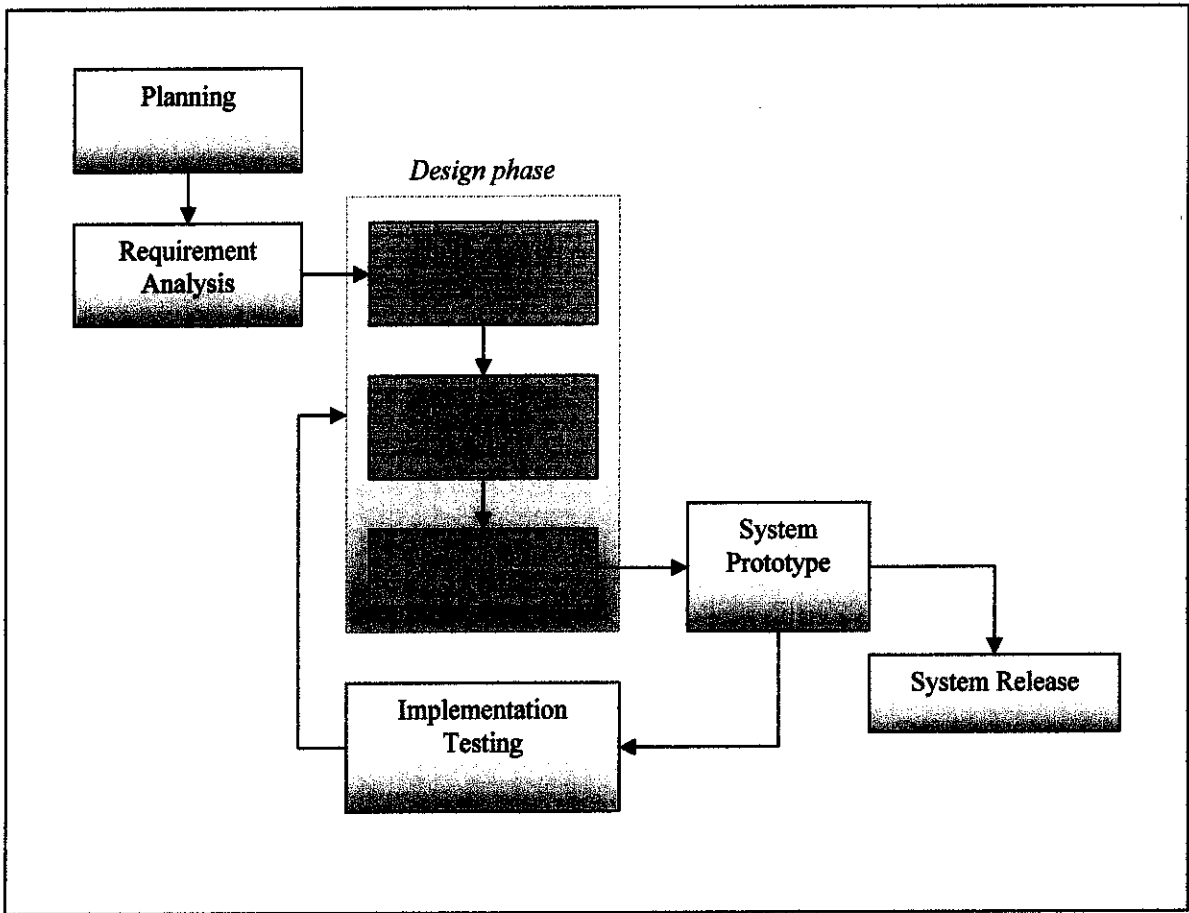
Figure 1: Project Life Cycle Model

As supported by Dennis et. al (2002), the basic idea behind iterative enhancement is to develop a software system incrementally, allowing developer to take advantage of what was being learned during the development earlier, incremental, deliverable versions of the system. Key steps in the process were to start with a simple implementation of a subset of the software requirements and iteratively enhance the evolving sequence of versions until the full system is implemented. At each iteration phase, design modifications are made and new functional capabilities are added. [1]

3.2.1 Planning

In the planning stage, brainstorming about this project was done. The main objective of the system was outlined and how the system should be presented was determined at this stage. The system concept was developed to describe how the system will operate once it is implemented. Therefore, research for this

project will be on the planning phase first. The research is to assess on the impact of the system to the users while doing their daily routine or activities. Moreover, it is important to ensure that the system will provide the required capability on-time and within cost budget, project resources, schedules and tools. Through this step, I had clearly stated and defined the problems, opportunities and directives towards the development of the proposed system. The outcome of this task are problem statements, objectives as well as significant of the system being develop. The project plan should be initiated and it describes how the system will be developed and the list of tasks should be executed throughout the system development life cycle. The planning of this project is to be outline very carefully as it will determine whether the product will be able to be deliver at the end of the time frame given.

3.2.2 Analysis

For the analysis phase, research was done to find out more about the case being studied which is the campus facilities management system. Some researches were done in determining the feasibility of using Php5 and Macromedia Dreamweaver technology to develop the proposed system. During this stage, problem statements of the current system are collected to ensure the proposed system shall be able to overcome the limitation in the current practice of coordination process. All possible findings concerning the project are carefully reviewed to ensure the best solution is proposed. Data flow diagram is draw as shown in Figure 2 to illustrate the workflow of the system.
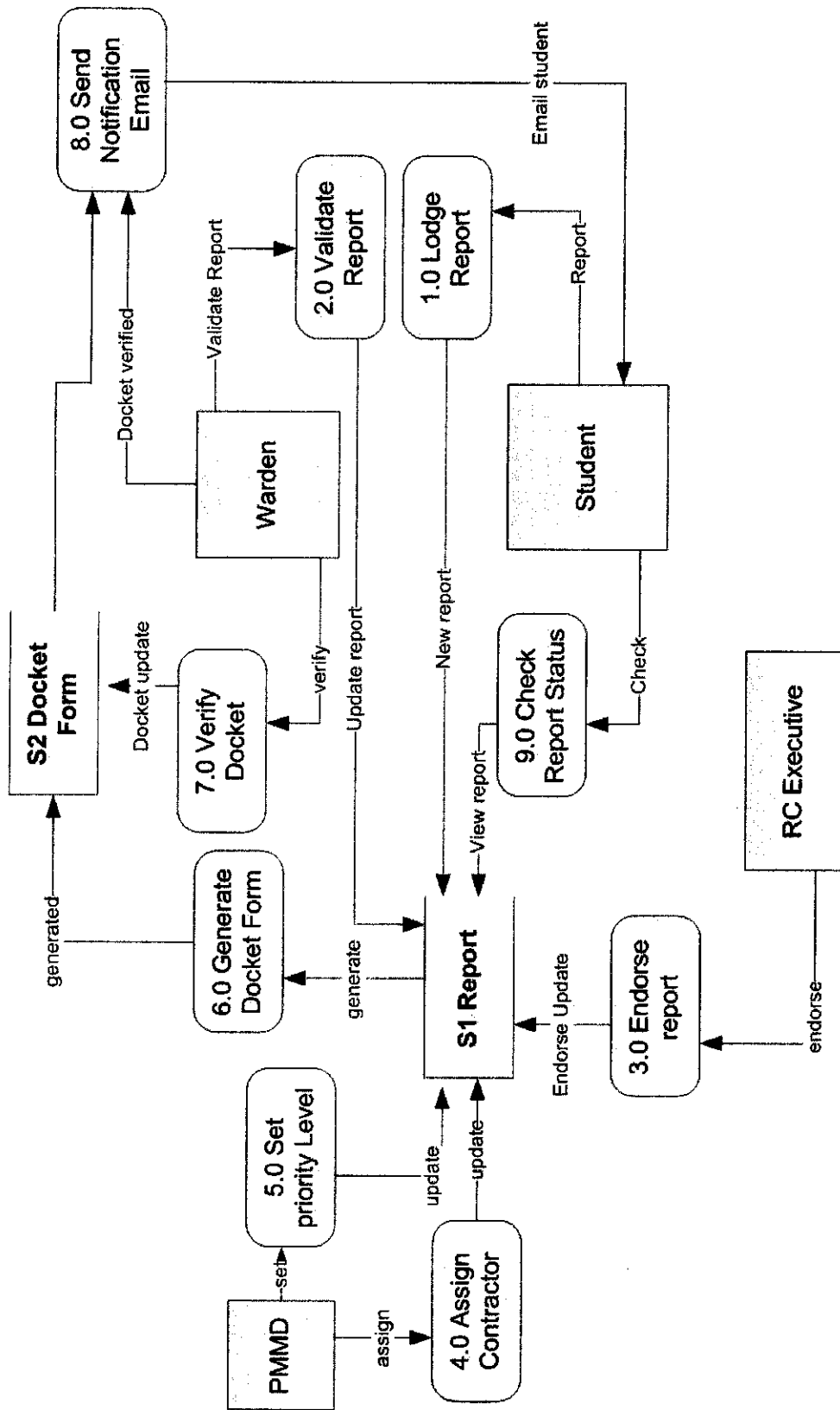
Figure 2: Data Flow Diagram of System

3.2.2.1 Key Features

Submit reports online

The students have mobility to issue a report from anyplace. They do not have to go to residential college office to lodge the report.

Each defect is delegated into each department at once

Each report will be classified by the agent and automatically delegated into each of department.

Student can view the status of the report from the system

Students can log on into the system and view the status of their report without having spent some time to go again to the residential college office to ask for the status.

Email notification is sent once defect is fixed

After the defect is fixed, the system will automatically send the particular defect details and new status to each of the issuer.

3.2.3 Design

Design phase is also considered as one of the most challenging part in Software Development Life Cycle phase. In this phase, the design of the system must be carefully developed. This is to ensure that user's interactivity with the systems meet user's expectation. Every feature included will be reviewed and the functionality enhancement will be made during this phase. This phase is to transform the requirement statements from the requirement analysis and definition phase into design specifications for construction purpose. It involves identifying and describing the basis software system abstractions to ensure completeness, usability, reliability, performance and quality of product. Hardware or software requirements will be determined in this phase. The system architecture will be produced on the whole.

In this phase, the data models and process models that were initially created during requirements and definition phase were analyzed in detail. System users were involved in this activity to help address data and process issues. The key inputs to the tasks were the facts, recommendations and opinions that were solicited from various sources.

3.2.3.1 System Architecture Design
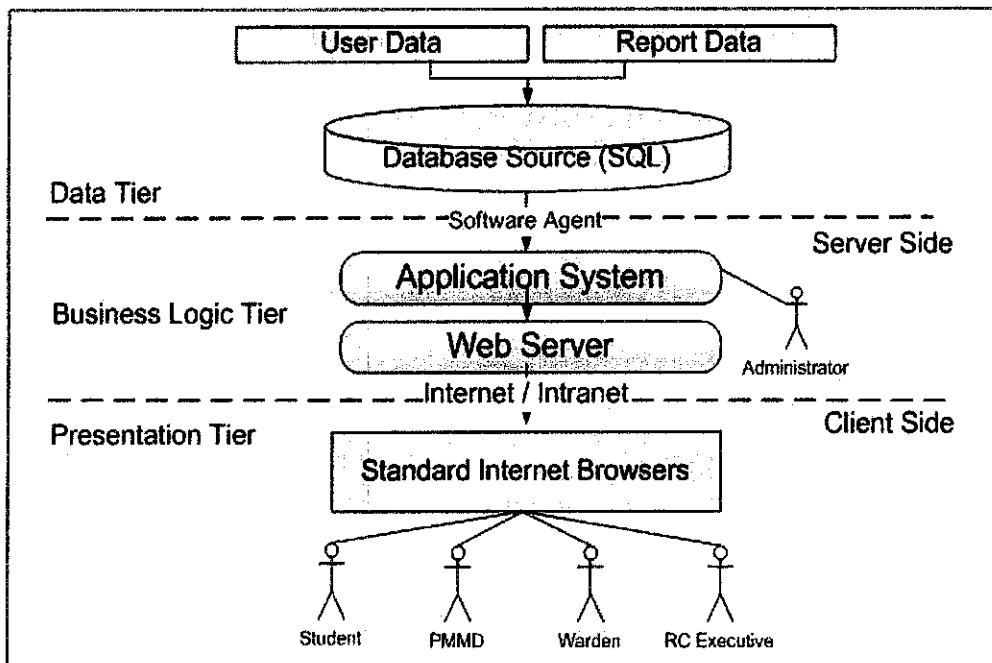
Figure 3: Architecture of Web-Based Hostel Defect Reporting System

As shown in the Figure 3, The Web-Based Hostel Defect Reporting Systems is divided into five major modules, administration modules, student module, PMMD module and hostel warden module and Residential College module. All of these modules can be accessed through the Internet and Intranet, which makes a web browser as the medium between users and the system. Data tier provides the user and report data store in database. Business logic tier is used to receive and process user request from component Application System and web server. Presentation tier provides users with interface to access, report defect, update records. Figure 3 shows the environment for the system. There are five main categories of users in the system, which are administrator, hostel warden,

PMMD executive and student and RC Executive. Each has their level of access to the system. The administrator can update existing data and add new data to the system but only an authorized user can do this. For example, a student can only access the student's module and the same thing happens in warden's modules. User can change their password and personal detail. This activity involves modeling the files and databases that store all the appropriate organization's data that is going to be used and also set up organizational structure purposely to manage the information resource. The system is designed in an easy and user-friendly format so that the student can use it easily. Students will log in into the system using student id and fill in some forms and warden will receive the reports. The warden will perform the next action by informing the maintenance and the maintenance will assign the contractor in charge of what and where to do. In the mean time student will get update on the status of their report via email. As soon as the problem was solved by the contractors, warden will update the database and update the student again via email.

3.2.3.2 Object Orientation and UML

The techniques and notations involved will be based on Unified Modeling Language (UML). The Web-Based Hostel Defect Reporting System will be developed and modeled using UML notation and diagrams. These diagrams include:

- Class diagrams
- Use case diagram

3.2.3.3 Use Case Diagrams

Online Defect Reporting System

- Login
- Logout
- Successful access
- Update Profile
- Report Defect
- Access Failure
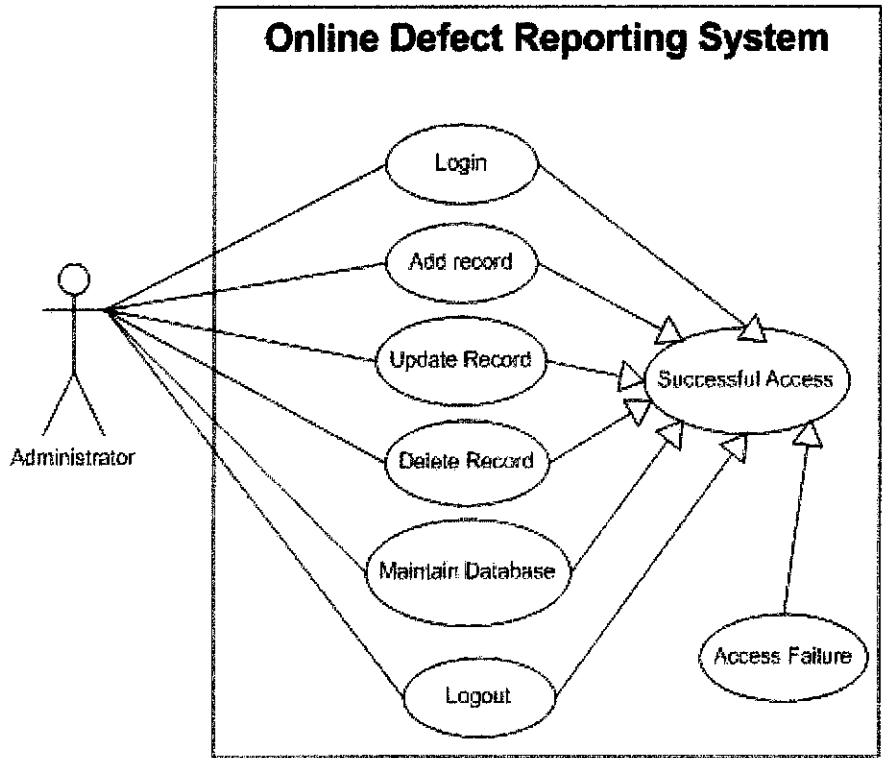- Check Report Status
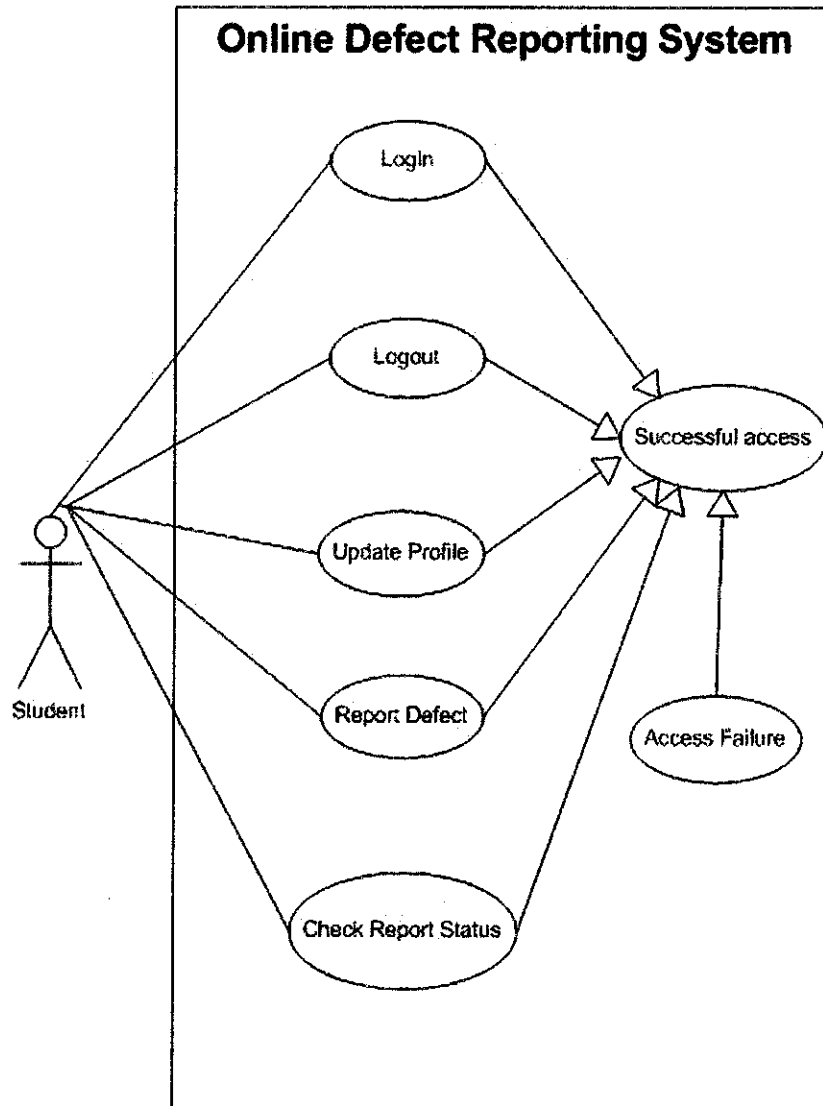
Student

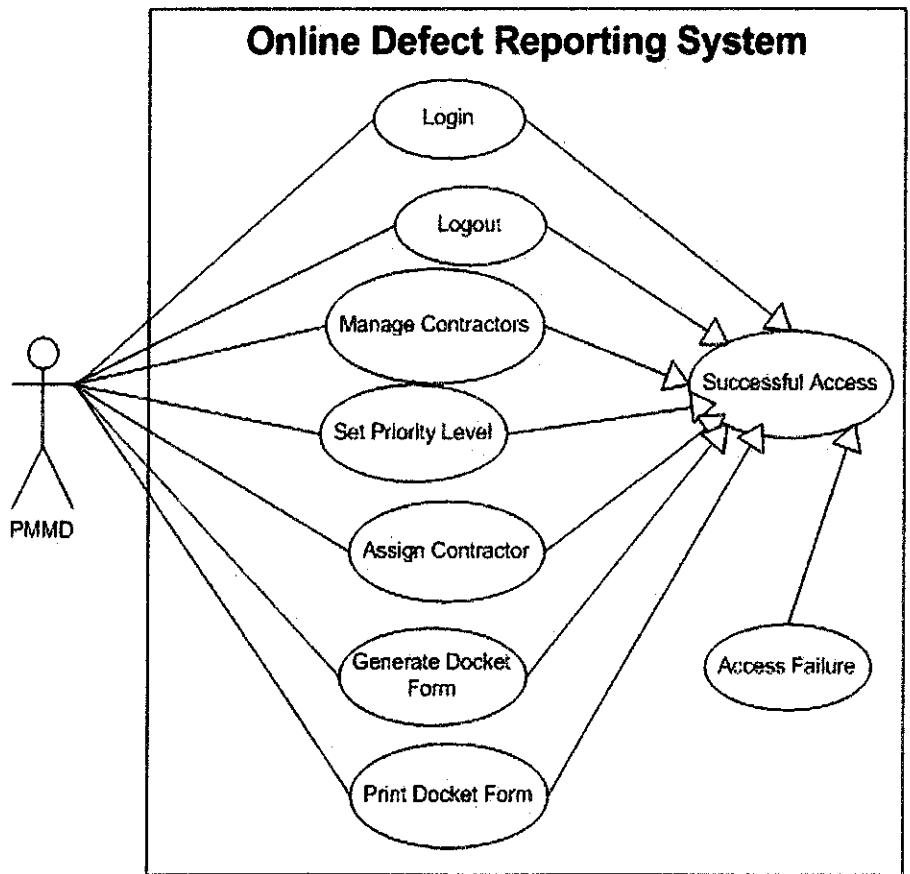**Figure 4: Use Case Diagram for Student**
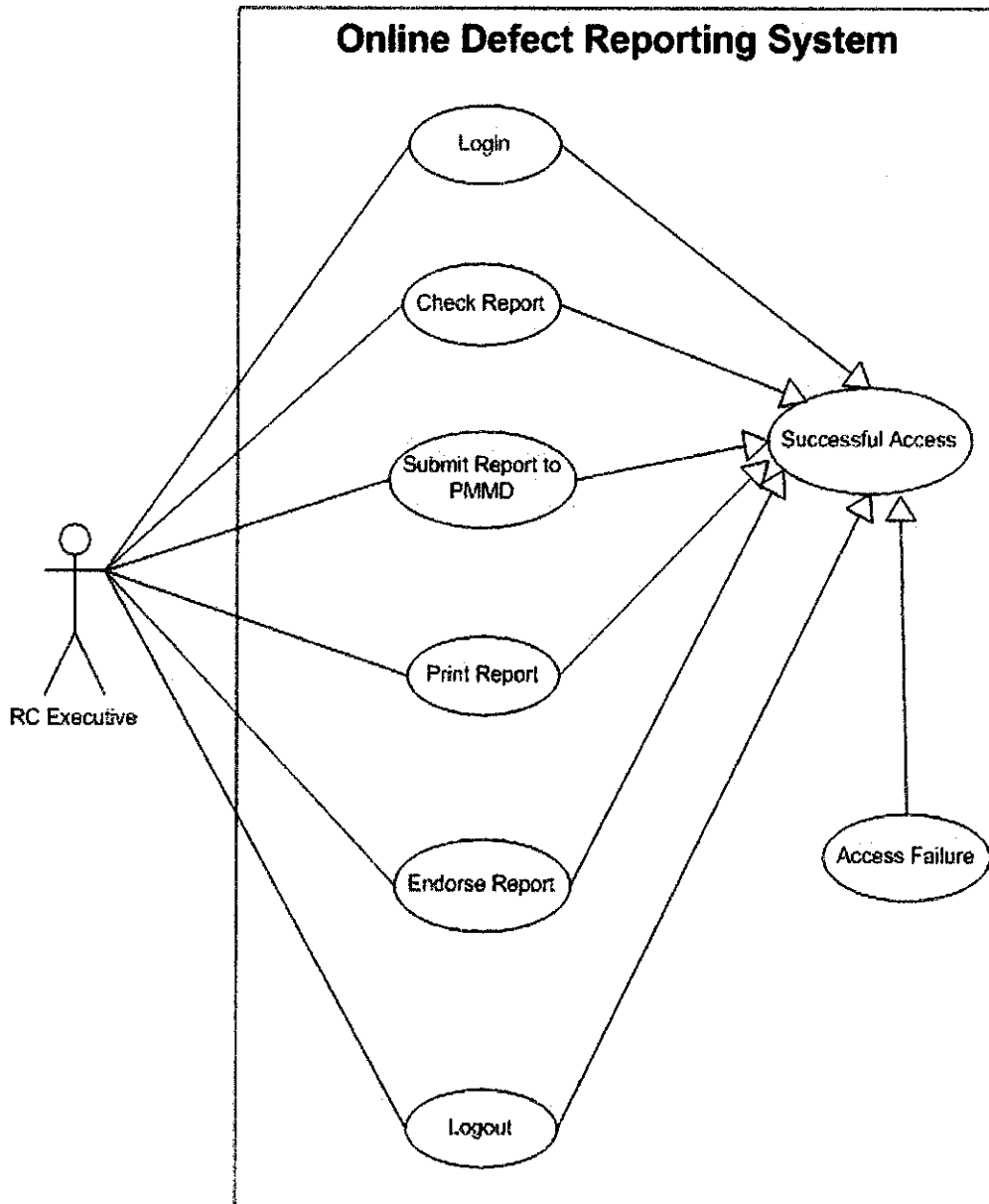
Figure 5: Use Case Diagram for RC Executive
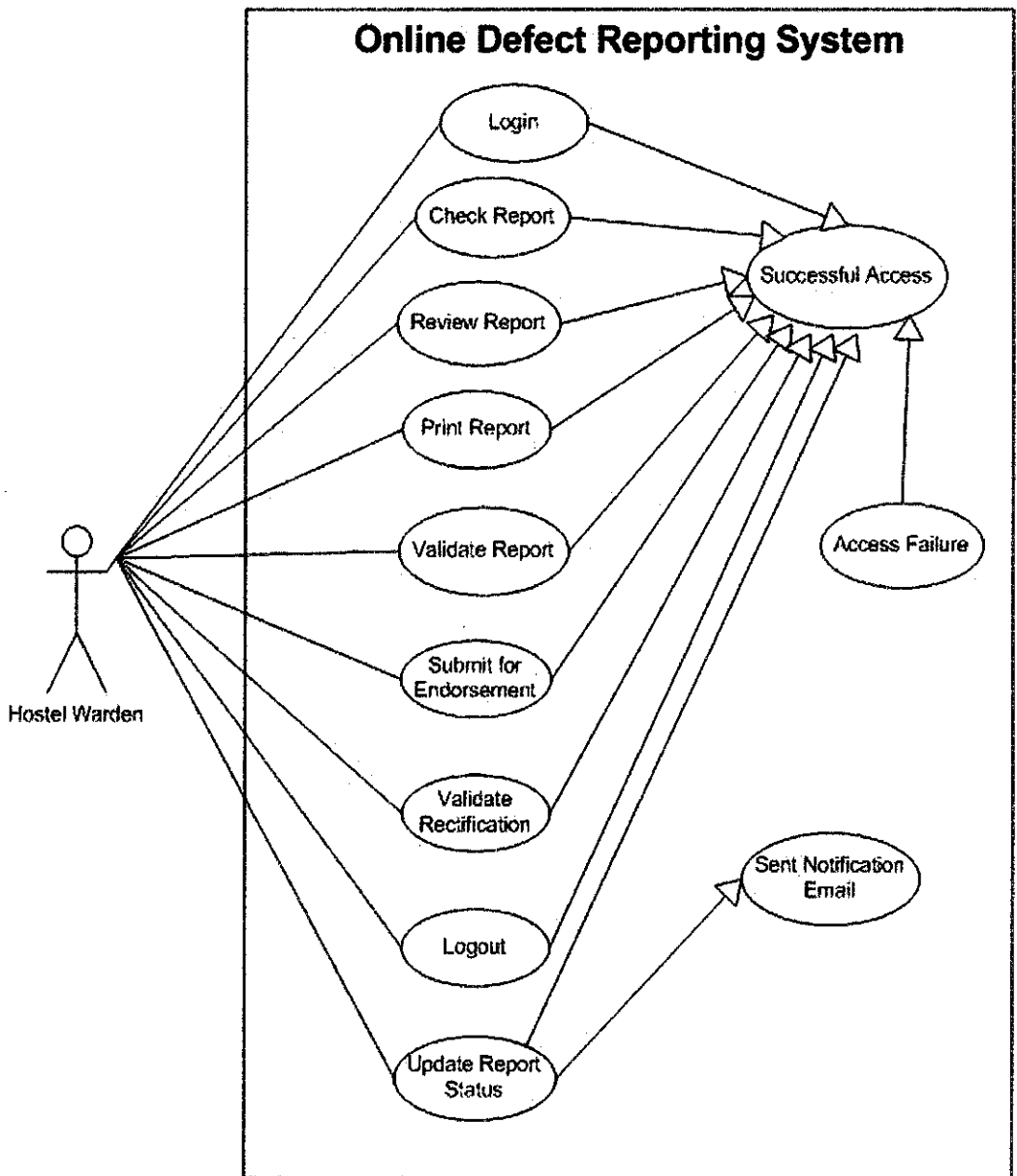
Figure 6: Use Case Diagram for Warden

Figure 7: Use Case Diagram for Administrator

Figure 8: Use Case Diagram for PMMD

3.2.3.4 Class Diagrams

The classes to be used to develop the system were identified based on the data perspective. This is due to the data has a dominant characteristic of the CASS system. The initial classes for the system are:

- Student
- Property Management & Maintenance Department (PMMD) Executive
- Contractor
- Report
- Warden
- Docket Form
- Residential College Executive (RC)
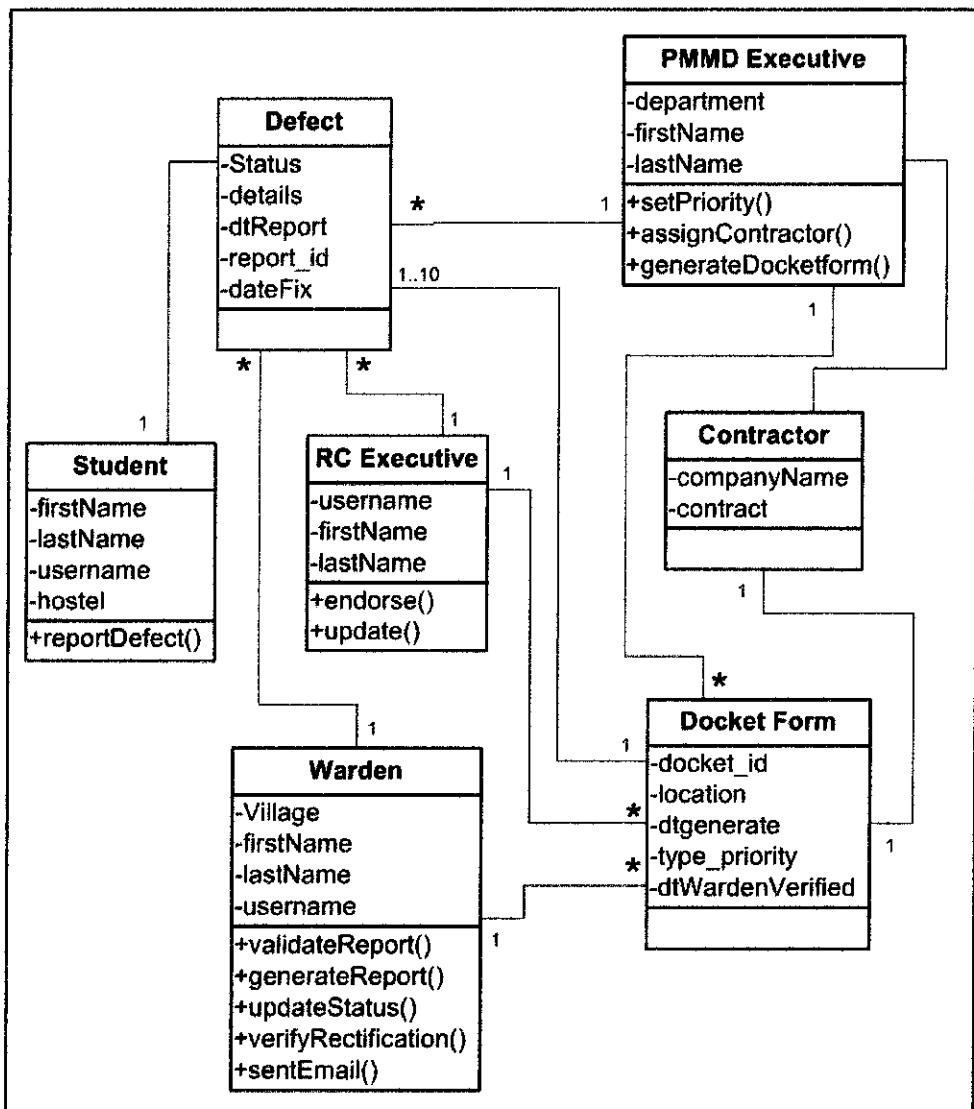
Figure 9: Class Diagrams

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3.2.4 Implementation

This is the phase where the installation of proposed system takes place. After the installation, the prototype of the proposed system is constructed. The system is built and later tested to ensure it performs in conformance with the system objectives. For this system, test will be focusing more on the functionality assessment of the developed system. The random testing which involve small group of test user will be conducted to validate the functionality of the system and it is important to ensure the system developed is free from the bug or errors. In system testing and evaluation, individual program units or programs that have been integrated into a complete system will be tested to avoid any possibilities of system failure. Testing will be conducted during this phase. Testing must not be deferred until after the entire program has been written.

3.2.4.1 Design Findings
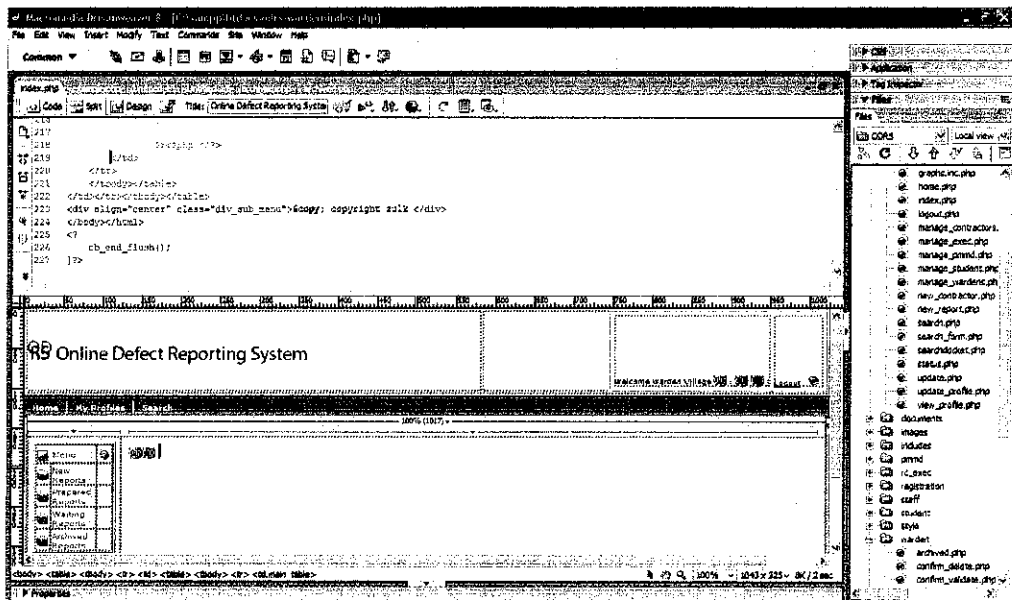
Figure 10: Design Web Interface Using Macromedia Dreamweaver 8

Figure 11: Create PHP, Software Agent, Database Connection

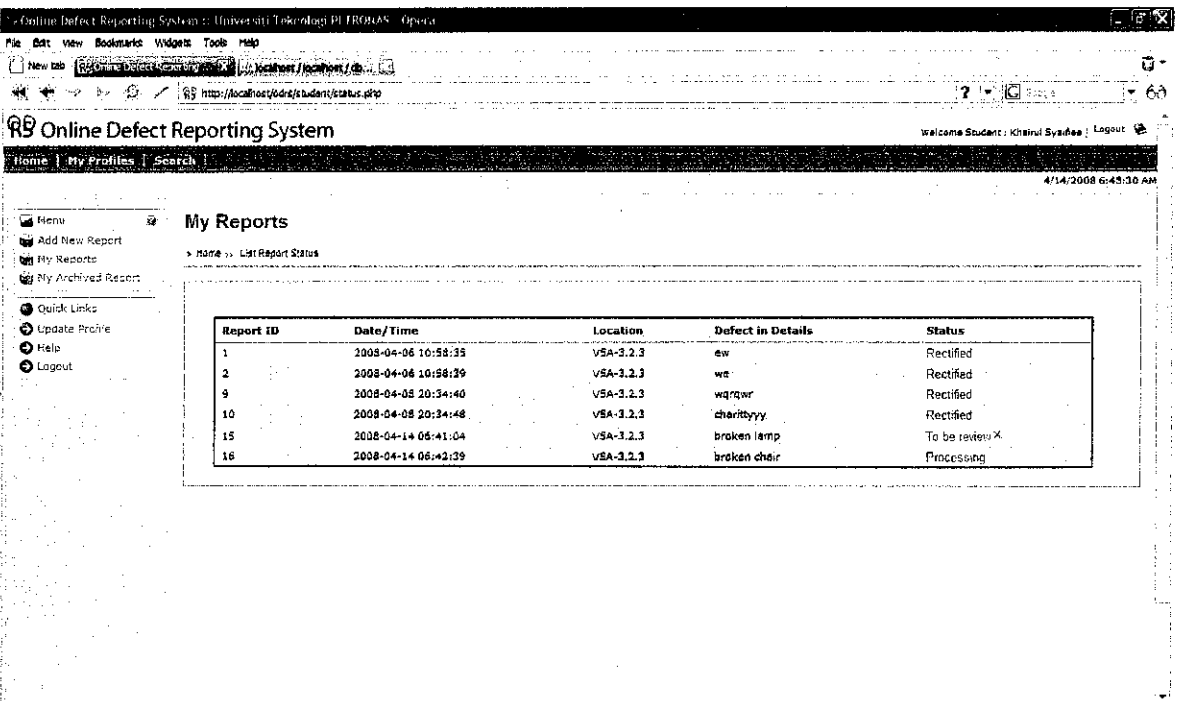**Figure 12: Database interface using PHPMyAdmin for table db_odrs**
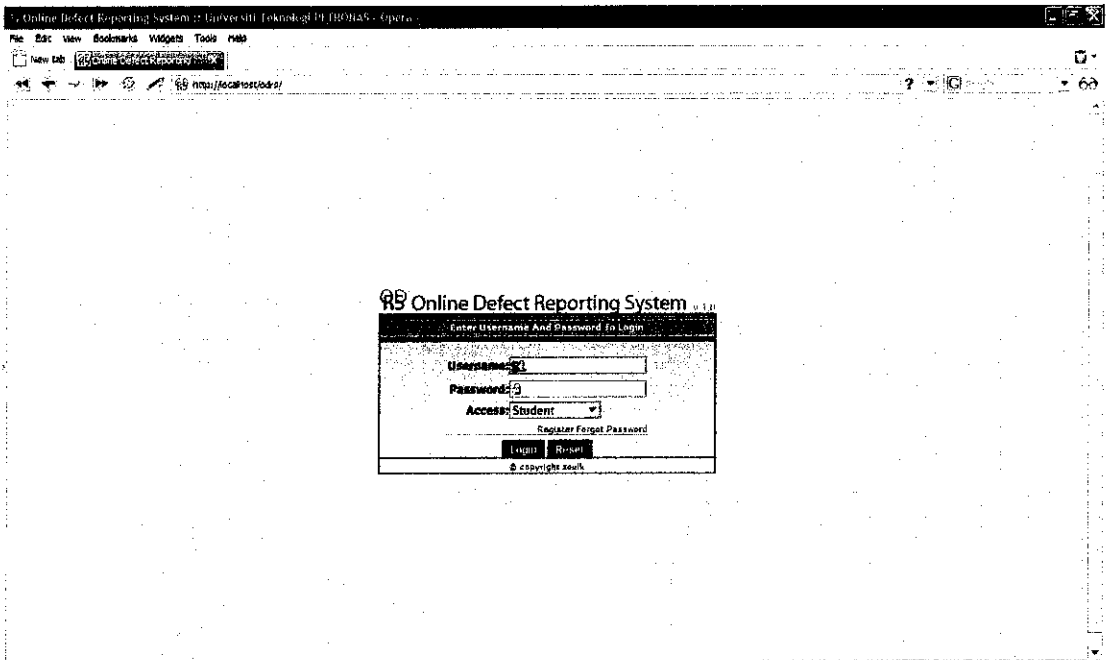
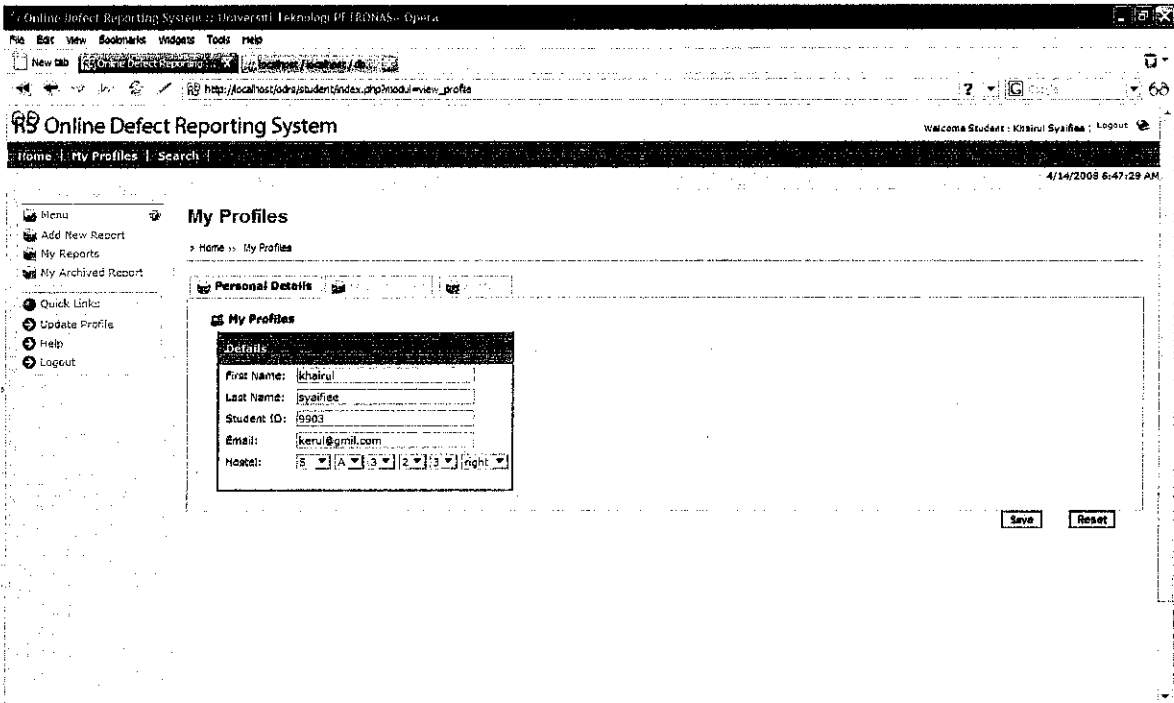**Figure 13: Login page overview**
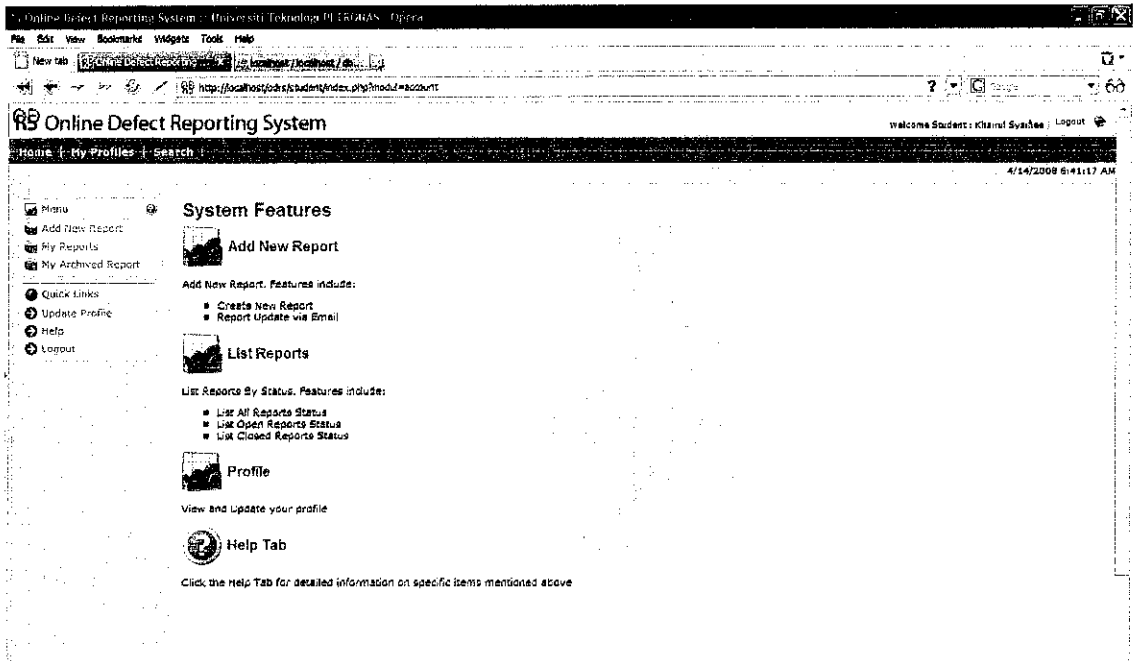
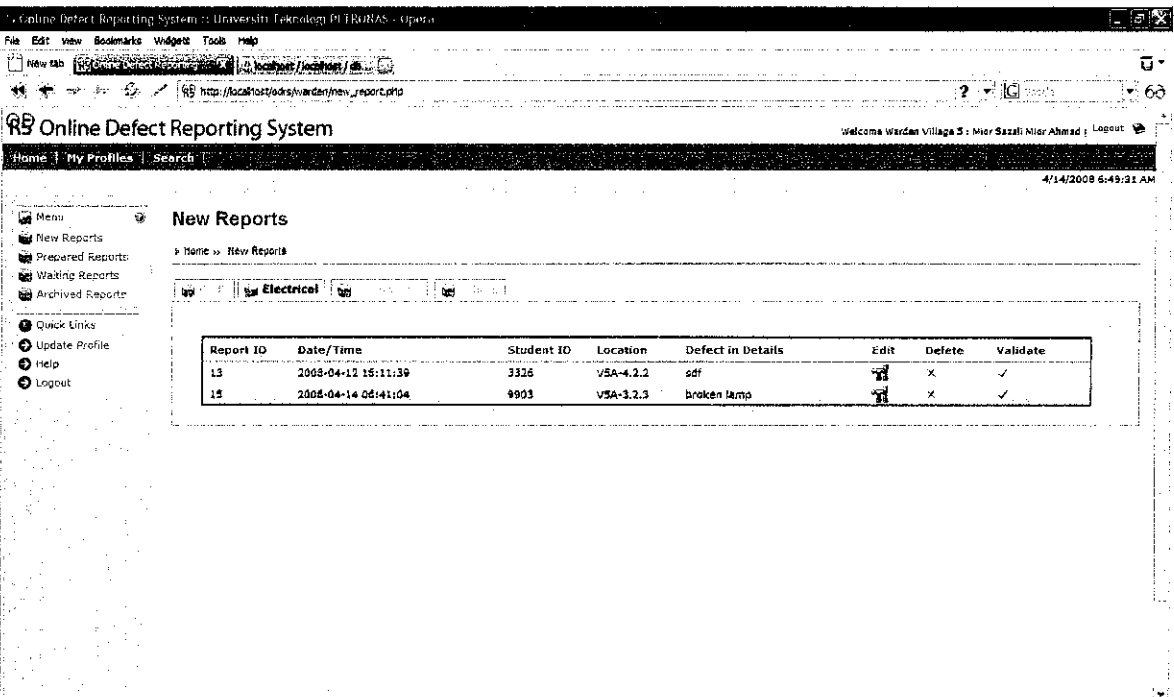**Figure 14: Student Panel access view**
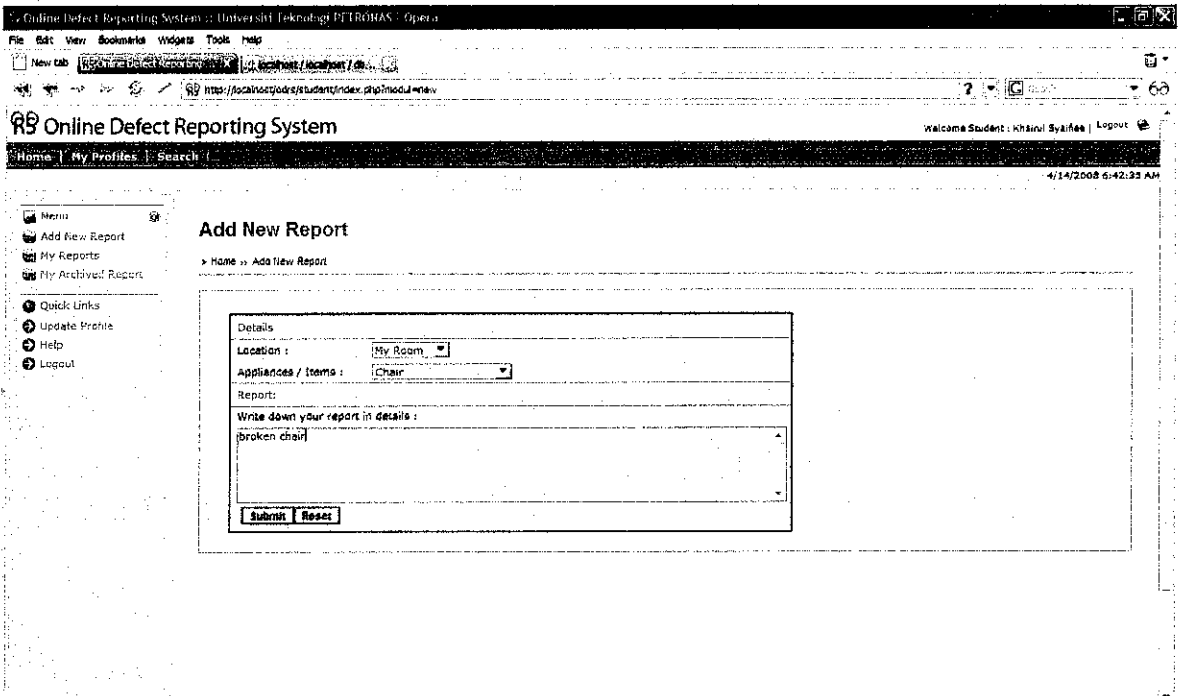
Figure 15: Student adds new report view

Figure 16: Students view the status of reports

Figure 17: Students profile access view
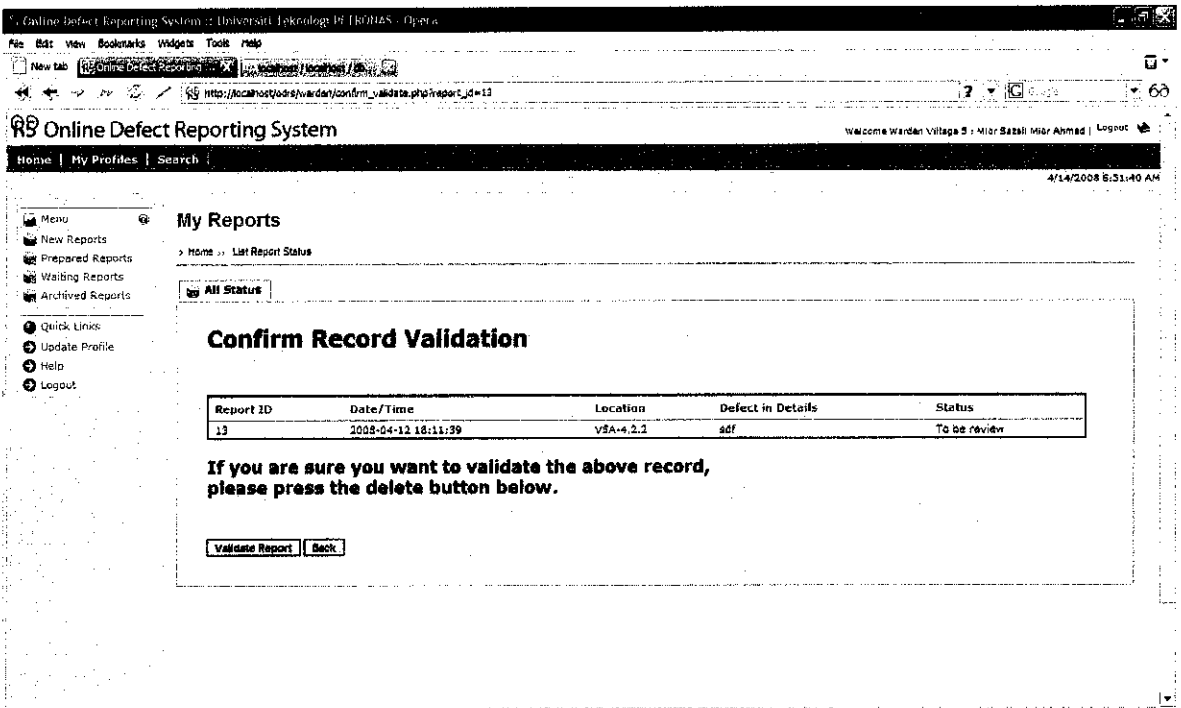

Figure 18: Warden views new incoming reports
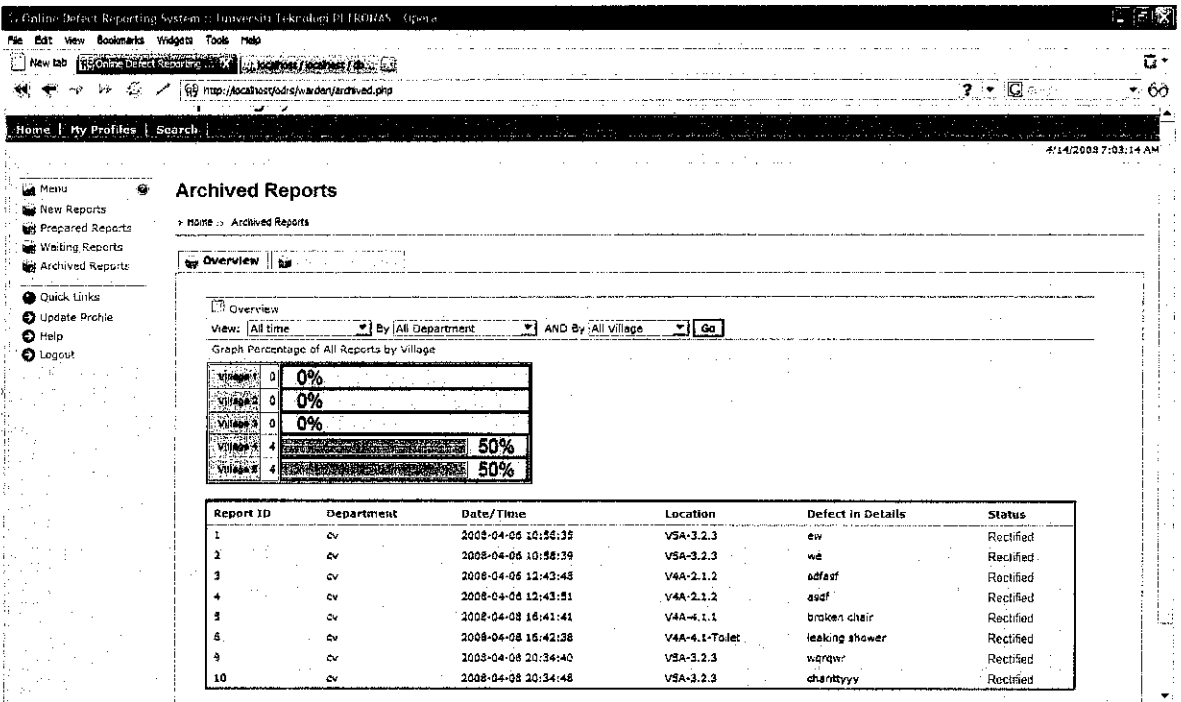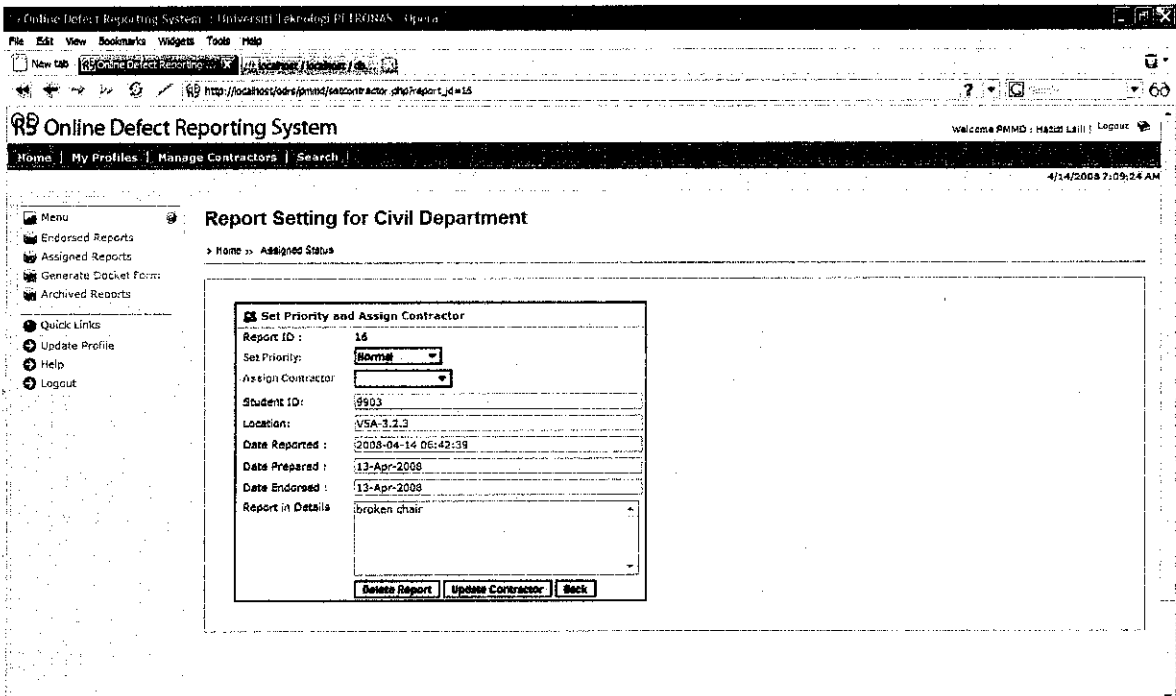
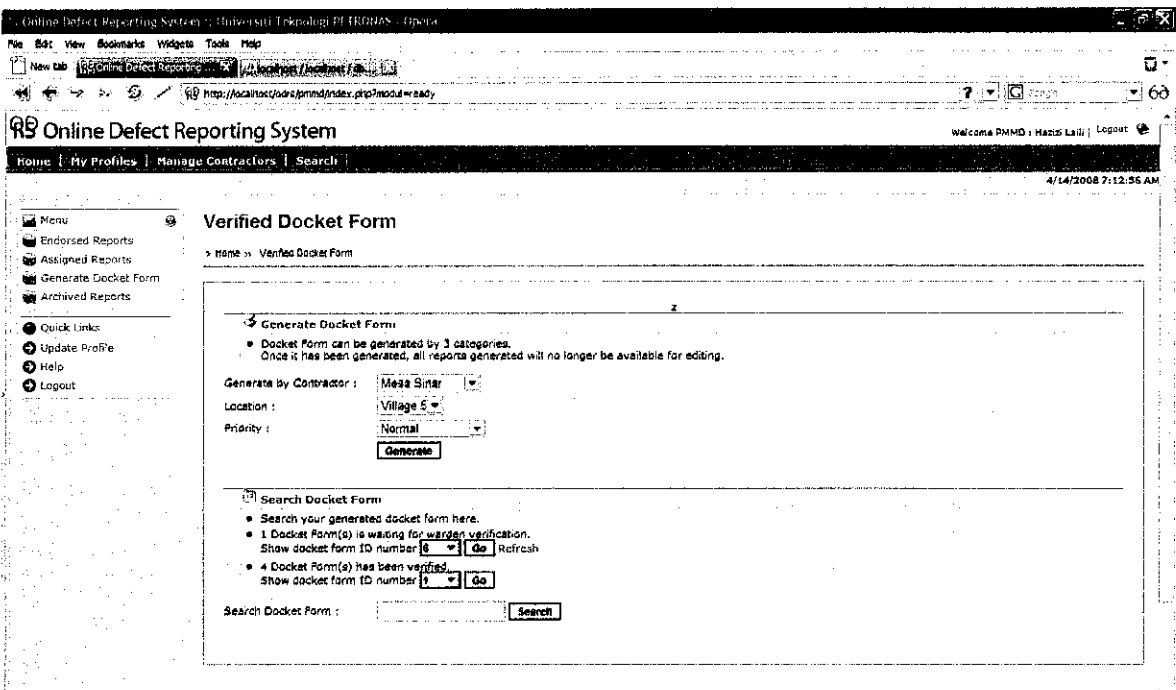**Figure 19: Warden validates report**

Figure 20: Report Archive and Statistics

Figure 21: PMMD Staff assign the contractor and set priority of report

Figure 22: PMMD Staff generates the docket form

Figure 23: Docket Form generated

Figure 24: Warden verify the docket form

3.2.5 System Prototype

The objective of the system prototype phase is to convert the deliverables of the system design phase into a complete system. This phase contains activities for building the system, testing the system, to ensure the system functional processes satisfy and meet the user requirements. At the end of this phase, the system will be ready for the activities of the integration and testing. Programming is generally recognized as a major aspect of the construction phase. The primary inputs for this activity are the technical design statement, plan for programming development, and test data developed during the system design.

In this phase, individual program units or programs are integrated as a complete system to ensure that the software requirements have been met successfully. In system testing and evaluation, individual program units or programs that have been integrated into a complete system will be tested to avoid any possibilities of system failure. Testing will be conducted during this phase. Testing must not be deferred until after the entire program has been written. There are three levels of testing implementation namely the stub testing, unit testing, and system testing. Stub testing is the test whereby performed on individual events or modules of a program. While unit testing is a test whereby all events and modules that have been coded and stub subsequently tested for a program which tested as an integration unit. Whereas system testing is performed to ensure the application program written and tested in isolation will work properly whenever they are integrated into the final system.

3.3   Tools Required

3.3.1   Software and Hardware

Software	Hardware
Macromedia Dreamweaver MX	Server
Apache 2.2.3	Computer
phpMyAdmin 2.9.1.1	
MySQL 5.0.27	
XAMPP Security 1.0	
PHP 5.2.0 + PHP 4.4.4 + PEAR	
Internet Browser	

Table 1: Software and Hardware

Chapter 4

Result and Discussion

Results and findings from this project were collected from the Online Hostel Defect Reporting Systems (ODRS) development phases.

4.1 Network Policies

The system architecture will have two components that will be located at Residential College Department and student's hostel. Each of the components will have a single database. All these databases or information will be kept and stored in different sets of data, according to the elements of information. Ideally, the main database was located in Residential College Department and the next second database is located in hostel. For this CASS project purpose, the scope of implementation will only be applied on the Residential College Department, which will contain a specific database element with related working area and can be access by all students. For that purpose, Apache Server being implemented to run the system of CASS with integration of PHP element to ensure its functionality can be used simultaneously by students at each village with their computers. Students might not be able to access the system directly from their room due to network policies if the database is located at the hostel.

4.2 Access Level

Students will have to register for their own username and password access and warden, RC Executive, and PMMD Staff will be given with a unique and valid username and password. In principle, there is five category of access level, namely full access level, which will be granted to system administrator, RC Executive, whereas the limited access level of user will be granted to the student, wardens and PMMD Staff. They have a specified set of privileges designated by the database administrator.

4.3 Backup and Recovery

The ODRS will definitely use a backup and recovery features in MySQL where is a database construct that enables PHP and Apache to work together to access and display data. Apache is quite powerful and can accomplish virtually any task as a Webmaster. The Recovery Manager is a component of MySQL that provides a tightly integrated method of creating, managing, restoring, and recovering the MySQL database backups.

Chapter 5

Conclusion

In this documentation, I have discuss one way in which computer technology can be used to create a campus facilities management system via web-based application that simultaneously fulfils the need of Residential College Unit staff, Property Management & Maintenance Department (PMMD) and students. Therefore, I hope with this system, students can access to make a report about hostel problems and also for wardens to check and manipulate the reports from students into database main server. The system can be expanded to various aspects and ability to help the user to use the system. This system also will help the UTP management to reduce the workload of each department as well as for the management process. The system should be to perform an efficient defect reposting system for Residential College Unit (RCSU) unit as well as PMMD. The system provides tools to ease the personnel in RCSU and PMMD by decreasing decision-making time and reduce staff workload.

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