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JUDUL: MONITORING SYSTEM FOR PROJEK SARJANA MUDA

SESI PENGAJIAN: 2007/2008

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(TANDATANGAN PENULIS)

Alamat tetap:

A3 Kg Melayu Sri Kundang

48050 Rawang, Selangor

Tarikh: 7th Nov 2007

(TANDATANGAN PENYELIA)

Dr. Anton Satria Prabuwono
Nama Penyelia

Tarikh: 12 / 11 / 07

CATATAN: * Tesis dimaksudkan sebagai Laporan Akhir Projek Sarjana Muda (PSM)
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# MONITORING SYSTEM FOR PROJEK SARJANA MUDA (MOSYS)

**FINI FATIHA BINTI HJ AZMAN**

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY**
**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**
**2007**

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**MONITORING SYSTEM FOR PROJEK SARJANA MUDA**

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

STUDENT : _____ Date: 12/11/07

(FINI FATIHA AZMAN)

SUPERVISOR : _____ Date: 12/11/07

(DR. ANTON SATRIA PRABUWONO)

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## DEDICATION

To my beloved parent and siblings..

To my adored fiancée and supportive friends…

I love u all..

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## ACKNOWLEDGMENTS

Bismillahirahmanirrahim

Praise to Allah for giving me strength and patience to complete the Projek Sarjana Muda throughout these semester. Special thanks to my beloved parents Haji Azman Samirin and Hajah Aizan Mat Piah for always prays and blesses me until now. To my adored fiancée, Muhammad Ardza Fared Zahiruddin, thank you for always be my strength. I also would like to express my gratitude and honor to the project supervisor Dr. Anton Satria Prabuwono for motivate and guiding me through the completion of this project, and my supportive friends Nurfairuza, Shafika Hani, Norhasliza, Fakhrulzaman, and Azwan, you all never bored to help and for those who involved in contributing something meaningful during this project.

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## ABSTRACT

Monitoring System for Projek Sarjana Muda (MOSYS) is a research, to develop the application which based on the current scenario in monitoring and evaluating progress of Projek Sarjana Muda (PSM). This application is limit to the stage of observation and evaluation project phase. The process of monitoring project progress is conducted by the lecturer which entitled as a project supervisor. The objective of this application development is to lighten the burden of project supervisor in managing and monitoring student's project. Beside that, it aims to give full information regarding about PSM 1 and PSM 2 detail as well. Object-oriented approach is used as a project methodology for this project. The Rational Unified Process is chosen to aid in this application development based on the capabilities of this approach in smoothing the object-oriented software development process. Results get from this application development is hoped to help the lecturer especially for the project supervisor in maintaining their task in monitoring PSM student.

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# ABSTRAK

Sistem Pemantauan Projek Sarjana Muda atau *Monitoring System for Projek Sarjana Muda (MOSYS)* adalah penyelidikan untuk membangunkan aplikasi yang berkisar kepada senario semasa di dalam proses pemantauan dan penilaian kemajuan Projek Sarjana Muda. Aplikasi ini mencakupi kepada fasa pemantauan dan penilaian projek sahaja. Proses pemantauan projek biasanya di lakukan oleh pensyarah yang bertindak sebagai penyelia projek. Matlamat pembangunan sistem ini adalah untuk memudahkan pengurusan dan pemantauan projek pelajar oleh penyelia. Ia juga bertujuan untuk memberi informasi secara terperinci berkenaan PSM 1 dan PSM 2. Metodologi atau kaedah yang diguna pakai semasa pembangunan projek ini adalah berdasarkan kepada orentasi objek. *Rational Unified Process* telah di pilih untuk membantu proses pembangunan perisian ini. Ini berdasarkan kepada kemampuan pendekatan tersebut di dalam kaedah pembangunan sistem yang berorentasikan objek. Hasil daripada pembangunan projek ini, diharapkan dapat membantu para pensyarah khususnya yang bertanggungjawab di dalam menyelia pelajar Projek Sarjana Muda.

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# TABLE OF CONTENTS


| CHAPTER | SUBJECT | PAGE |
|---|---|---|
| | **DECLARATION** | **i** |
| | **DEDICATION** | **ii** |
| | **ACKNOWLEDGMENTS** | **iii** |
| | **ABSTRACT** | **iv** |
| | **ABSTRAK** | **v** |
| | **TABLE OF CONTENTS** | **vi** |
| | **LIST OF TABLES** | **ix** |
| | **LIST OF FIGURES** | **xi** |
| | **LIST OF APPENDICES** | **xii** |
| | **LIST OF ATTACHMENT** | **xiii** |
| **CHAPTER I** | **INTRODUCTION** | |
| | 1.1 Overview | 1 |
| | 1.2 Problem Statement | 2 |
| | 1.3 Objectives | 3 |
| | 1.4 Project Scopes | 4 |
| | 1.5 Project Significant | 6 |
| | 1.6 Expected Output | 6 |
| | 1.7 Conclusion | 6 |


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**CHAPTER II LITERATURE REVIEW AND PROJECT METHODOLOGY**

2.1 Introduction 7
2.2 Fact and Finding 7
2.2.1 Domain 8
2.2.2 Existing System 9
2.2.3 Technique 13
2.3 Project Methodology 17
2.4 Project Requirements 22
2.4.1 Software Requirement 22
2.4.2 Hardware Requirement 22
2.4.3 Other Requirement 22
2.5 Project Schedule and Milestone 23
2.6 Conclusion 24

**CHAPTER III ANALYSIS**

3.1 Introduction 25
3.2 Problem Analysis 26
3.3 Requirement Analysis 32
3.3.1 Data Requirement 32
3.3.2 Functional Requirement 34
3.3.3 Non-functional Requirement 41
3.3.4 Other Requirement 44
3.4 Conclusion 46

**CHAPTER IV DESIGN**

4.1 Introduction 47
4.2 High-Level Design 48
4.2.1 System Architecture 48
4.2.2 User Interface 52
4.2.2.1 Navigation Design 53
4.2.2.2 Input Design 54
4.2.2.3 Output Design 55
4.2.3 Database Design 57
4.2.3.1 Conceptual and Logical Database Design 57
4.3 Detail Design 60
4.3.1 Software Specification 60
4.3.2 Physical Database Design 60
4.4 Conclusion 61

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**CHAPTER V IMPLEMENTATION**

| | | |
|---|---|---|
| 5.1 | Introduction | 62 |
| 5.2 | Software Development Environment Setup | 62 |
| 5.3 | Software Configuration Management | 63 |
| 5.3.1 | Configuration Environment Setup | 64 |
| 5.3.2 | Version Control Procedure | 64 |
| 5.4 | Implementation Status | 65 |
| 5.5 | Conclusion | 68 |

**CHAPTER VI TESTING**

| | | |
|---|---|---|
| 6.1 | Introduction | 69 |
| 6.2 | Test Plan | 70 |
| 6.2.1 | Test Organization | 70 |
| 6.2.2 | Test Environment | 71 |
| 6.2.3 | Test Schedule | 72 |
| 6.3 | Test Strategy | 72 |
| 6.3.1 | Classes of Tests | 73 |
| 6.4 | Test Design | 74 |
| 6.4.1 | Test Description | 74 |
| 6.4.2 | Test Data | 79 |
| 6.5 | Test Result and Analysis | 80 |
| 6.6 | Conclusion | 81 |

**CHAPTER VII PROJECT CONCLUSION**

| | | |
|---|---|---|
| 7.1 | Observation on Weaknesses and Strengths | 82 |
| 7.2 | Propositions for Improvement | 84 |
| 7.3 | Contribution | 84 |
| 7.4 | Conclusion | 85 |

**REFERENCES** **86**

**BIBLIOGRAPHY** **90**

**APPENDICES** **92**

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# LIST OF TABLES


| TABLE | TITLE | PAGE |
|---|---|---|
| 2.1: | Comparison between Microsoft Office Project Standard 2007 and dotProject | 12 |
| 2.4: | Project schedule and milestone | 23 |
| 3.1: | Data model of lecturer's table | 33 |
| 3.10: | Functional requirements of MOSYS | 39 |
| 3.11: | Performance and throughput systemic qualities | 41 |
| 3.13: | Integrity systemic qualities | 42 |
| 3.14: | Security systemic qualities | 42 |
| 3.15: | Serviceability systemic qualities | 43 |
| 3.16: | Usability systemic qualities | 43 |
| 3.17: | Software requirement | 44 |
| 3.18: | Hardware and network requirement | 45 |
| 4.1: | Input design for login interface | 55 |
| 5.10: | Version control procedure | 64 |
| 5.11: | User interface implementation status | 65 |
| 5.12: | Implementation status for database module. | 66 |
| 5.13: | Implementation status of supervisor module | 66 |
| 5.14: | Implementation status of student module | 67 |
| 5.15: | Implementation status of project detail module | 67 |
| 5.16: | Implementation status of searching module | 68 |
| 6.1: | Developer machine configuration | 71 |


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| | | |
|---|---|---|
| 6.2: | Environment setup | 71 |
| 6.3: | Test schedule | 72 |
| 6.4: | Test cases for system authentication | 75 |
| 6.5: | Test cases for agenda management | 75 |
| 6.6: | Test cases for searching student information | 76 |
| 6.7: | Test cases for student information | 76 |
| 6.8: | Test cases of monitoring and controlling project progress | 77 |
| 6.9: | Test cases for project evaluation and project status | 78 |
| 6.10: | Test cases for progress summary | 78 |
| 6.11: | Test data for system authentication's module | 79 |
| 6.19: | Test Result and Analysis | 80 |


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# LIST OF FIGURES


| DIAGRAM | TITLE | PAGE |
|---|---|---|
| 1.2: | Staged and module covered in MOSYS | 5 |
| 2.1: | The RUP phase model | 20 |
| 3.2: | Business flow of approval process of a student without supervisor | 28 |
| 3.3: | Business flow of approval process of student with supervisor | 29 |
| 3.4: | Business flow of monitoring process | 30 |
| 3.5: | Business flow of project status | 31 |
| 3.6: | Overview of MOSYS application | 36 |
| 4.1: | System architecture of MOSYS | 48 |
| 4.2: | Architecture layer for MOSYS | 49 |
| 4.3: | Sequence diagram of creating supervisor information | 51 |
| 4.20: | Hierarchy navigation design (Site map) | 53 |
| 4.13: | Login interface | 54 |
| 4.12: | Project summary interface | 56 |
| 4.13: | Entity Relationship Diagram | 58 |
| 5.1: | System architecture and implementation | 63 |


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## LIST OF APPENDICES


| APPENDIX | TITLE | PAGE |
|---|---|---|
| A | Gantt Chart | 94 |
| B | Data Requirement | 95 |
| C | Use Case Specification | 99 |
| D | Dynamic View (UML Sequence Diagram) | 112 |
| E | Static View (UML Class Diagram) | 122 |
| F | Input Design | 124 |
| G | Normalization | 132 |
| H | Data Dictionary | 136 |
| I | Software Specification | 145 |
| J | Physical Database Design | 154 |
| K | Configuration Environment Setup | 158 |
| L | Test Data | 169 |


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## LIST OF ATTACHMENT


| ATTACHMENT | TITLE | PAGE |
|---|---|---|
| A | User Manual | 178 |


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# CHAPTER I

# INTRODUCTION

## 1.1 Overview

This project is to study about monitoring and supervision process specific to Projek Sarjana Muda (PSM). In the current monitoring scenario in PSM, supervisor need to do a reminder on supervisory and monitoring schedules for every student that had assigned to them. This is happened to every lecturer that responsible as a PSM supervisor. The figure 1.1, elucidate the current circumstances in PSM process.

According to the definition, monitoring is the regular observation and recording of activities taking place in a project or program. It is a process of routinely gathering information on all aspects of the project. Monitoring also involves giving feedback about the progress of the project to the donors, implementers and beneficiaries of the project (Bartle, 2007).

To monitor is to check on how project activities are progressing. It is observation. Monitoring is very important in project planning and implementation. It is like watching where you are going while riding a bicycle; you can adjust as you go along and ensure that you are on the right track.

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Monitoring System for Projek Sarjana Muda (MOSYS) is an application which is implemented as a web based application. This application is designed to support PSM monitoring process, and to provide information about student's project progress. Besides, it also will afford for project evaluation as well. All those aspect will be an extra feature in monitoring and supervision process.

The project modules consist of Project Monitoring, Project Status, Project Evaluation, Student Performance's Report, and Student Management Information. Every module has their dedicated function that will support to the objective of development of this application.

## 1.2 Problem Statement

Based on the current PSM scenario, we can see that PSM were manually monitored by the supervisor itself. There is no appropriated computerized system to monitor PSM activities especially in our university. These are the problem that have been identified which lead to the development of the MOSYS.

### 1.2.1 Project monitoring aspect

The difficulty from the manual supervision is, for lecturer itself, they have to deal with six to seven PSM students in a time, and keep on monitoring the student progress, and at the same time to record the student's project progress base on the milestone. They also need to arrange and deal to their timetable and the student. This not yet includes the problem that will interfere with the schedule that has been planned before. So they need one application that will record and able to track student progress and student's project status effectively.

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### 1.2.2 Project evaluation aspect

Lecturers need to give and submit PSM marks for their students. They have to evaluate the marks for six to seven students in a time and there will be a probability of an accurate marking. Here the function which will cater the entire problem and will provide the accurate mark for every student.

### 1.2.3 Efficiency aspect

If we look from the efficiency aspect, to compare with current system means here is refer to the manual procedure, the developing of this application will provide them much advantage in presenting their job. This application will let them to schedule their time and synchronize with student's timetable.

## 1.3 Objectives

The objectives to develop this project are:

- To provide an application which able to monitor PSM student's project progress and to attain the student to reach their goals.
- To provide PSM project status and evaluation in order to control the quality and standard of the project that will be delivered.
- To produce an effective application that offer benefit in management and monitoring aspect respectively to the PSM supervisors.

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## 1.4 Project Scopes

The scopes in developing this project are:

- User:
  User of this application is a PSM supervisor of Fakulti Teknologi Maklumat dan Komunikasi (FTMK).

- Platform:
  This application will run on Windows XP and use Apache as a web server.

- Functionality (modules):
  Below is the module that will be operates on this application.

  - **Manage Student Profile**: The system is able to provide a function to get access to student's profile and project details.

  - **Project Monitoring:** The system should be able to keep track to student's project progress.

  - **Project Status:** The system is able to cover the supervisor's power in order to determine whether student's progress is achieved to PSM standard and the students are capable to continue their project.

  - **Project Evaluation:** The system should be able to provide evaluation function and capable to determine project grade. The system also should be able to deliver evaluation's report.

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- **Student Performance's Summary:** The system is able to generate the report due to student's performance.

- **Searching:** The system should be able to perform a search function to enable supervisor to get access the student info easily.

Figure 1.1 explains about stage and modules that will be covered in this project. As state in the figure, this project scope will cover up to supervisor's circumstance only.

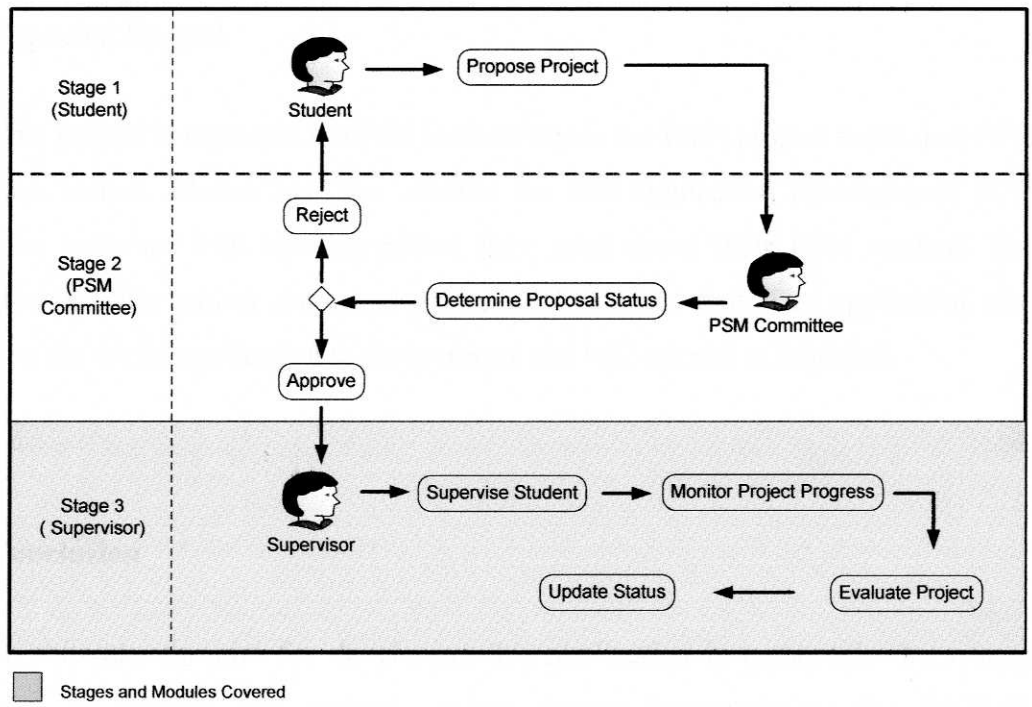


**Figure 1.1: Staged and module covered in MOSYS**

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## 1.5 Project Significant

This project is estimated to provide applications that help the lecturer in order to updates and monitoring their student progress. This project is trust to lease the lecturer burden and this project will help the lecturer to focus on their career and at the same time they are able to give their best effort in helping the student to success in their study.

## 1.6 Expected Output

This project is expected to fulfill lecturer needs for PSM project status and PSM information indeed. Means here the mission for this application development is to provide the lecturers with all information they need about their PSM student. The information includes project status and project evaluation as well. This application also hopes to be the useful application to the lecturers and will operate as expected.

## 1.7 Conclusion

To reiterate, the aim for developing this application is to provide the system which able to observe and control student project improvement. The MOSYS development is intend to offer benefit in monitoring and evaluation stages especially to the PSM supervisors. The benefit of the system is to help the supervisor to keep on eye to their student performance. Besides, it also estimated to ease the supervisor burden to monitor student's project. Next chapter is describing about literature review and project methodology that will be used in developing this application.

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# CHAPTER II

# LITERATURE REVIEW AND PROJECT METHODOLOGY

## 2.1 Introduction

In this chapter we will discuss about literature review, fact and finding also project methodology in order to study and understand the current business of existing system which is the fact later will be use as a guidance to develop the application which is focus to the system that based on monitoring orientation.

## 2.2 Fact and Finding

For this section, we will review and study about the current system that have monitoring and evaluation characteristic. This research will focus on monitoring system which based on education orientation that has been state on the scope in previous chapter.

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### 2.2.1 Domain

After some research and finding process, the domain of this project it more concentrate on project management and project monitoring area. The project will focus on monitoring and evaluation project for academic purpose corresponding to control and maintaining the project significance, quality and standard.

Refer to Geiko (2003) and Danilova (2003) the management of the quality of education deals with all the spheres of studying process at any Higher Education Establishment and nowadays it has specific meaning, which is not only managing academic activities but also comparing them with achieved result i.e. the quality of education obtained by student (in other words the quality of knowledge and skill)

Rosenshine and Stevens (1986) noted that most teachers (including unsuccessful ones) employ teaching practices that could help them make appropriate decisions–for instance, daily reviews and guided student practice. The successful teachers use the information they gather while implementing these practices to make decisions. In addition, they do so more frequently and at more appropriate times than less successful teachers. Making appropriate instructional decisions requires knowing what to do and when to do it. Such decision making requires constant monitoring of student performance.

According to Utah State University (t.th.) the two major purposes of academic monitoring are closely related: the attainment of student goals and the progressive improvement of instructional practices. Rosenshine (1979), in identifying the critical aspects of successful instruction, recommended that teachers set clear instructional goals and monitor student progress toward those goals. In addition, teachers must set and maintain clear, firm, and reasonable work standards.

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Students must know exactly what is expected in completing an assignment, how the format of the assignment should look, how neat the work should be, and the accuracy level they are expected to attain. If teachers establish objective standards, they will be more able to evaluate student performance.

Before teachers can effectively monitor student progress, they must have in place a sequence of valid instructional objectives. To be instructionally valid, the sequence of objectives must be integrated with a validated instructional program. That is, the instructional objectives students are expected to meet should be a part of an instructional program that has been sufficiently tested. The program should be supported by data showing that similar students achieved high levels of mastery under similar conditions.

### 2.2.2 Existing System

In this section, we will study and exposed the systems which have management and monitoring project element. In this case a model on existing system that related to monitoring topic will be pickup as a case study. One of the examples is Microsoft Desktop Product which is Microsoft Office Project Standard 2007 and another one is an open source monitoring application known as dotProject.

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