

# Lecturer Availability Tracking System (LATS)

A project paper submitted to the

Universiti Teknologi MARA

In partial fulfillment of the requirement for the

BACHELOR OF SCIENCE (HONS) DATA COMMUNICATION AND  
NETWORKING

By

FADLI BIN OTHMAN

BSC (HONS) DATA COMMUNICATION AND NETWORKING

FAKULTI TEKNOLOGI MAKLUMAT DAN SAINS KUANTITATIF

# LECTURER AVAILABILITY TRACKING SYSTEM (LATS)

BY

FADLI BIN OTHMAN

2004106946

A final project submitted in partial fulfillment of the requirement for the

B. Sc (HONS) DATA COMMUNICATION AND NETWORKING

A project paper submitted to

FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCE

UNIVERSITI TEKNOLOGI MARA

NOVEMBER 2006

Approved by the Examining Committee:



.....  
Project Supervisor,  
Pn. Shapina Hj. Abdullah

.....  
Examiner,  
Cik Siti Rahayu Abdul Aziz

## **ABSTRACTS**

As a student, we realize that it is important to have a good relationship with our lecturer. But there are some students who find it hard for them to meet with their lecturer especially at the lecturer's room. By calling or sending SMS directly to a lecturer, it might distract an ongoing class or meetings attended by the lecturer. Therefore, the objective of this project is to develop an instant way of tracking the availability of a lecturer in their room without having to disturb their privacy through the use of SMS technology and Java application system. Using a Java application system, lecturers can update their availability status at their room. The application is linked to the MySQL database server. An SMS server will be configured to receive SMS from a student and sending back the availability status of a lecturer to the student mobile phone. This creates an instant way of tracking the availability of the lecturers at their room using the technology of SMS and Java.

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
ABSTRACTS .....	ii
TABLE OF CONTENTS.....	iii
LIST OF FIGURES .....	v
CHAPTER 1 .....	1
INTRODUCTION .....	1
1.1 BACKGROUND OF THE STUDY .....	1
1.2 PROBLEM STATEMENT.....	2
1.3 THE OBJECTIVES OF THE STUDY .....	2
1.4 THE SCOPE OF THE STUDY .....	3
1.5 SIGNIFICANCE OF THE STUDY.....	3
1.6 SUMMARY .....	4
CHAPTER 2 .....	5
LITERATURE REVIEW .....	5
2.1 INTRODUCTION .....	5
2.2 HUMAN TRACKING SYSTEM.....	5
2.3 SHORT-MESSAGE-SERVICE (SMS).....	6
2.3.1 Background.....	6
2.3.2 Architecture.....	7
2.3.3 Potential used of SMS.....	11
2.3.4 Benefits of SMS.....	11
2.4 JAVA LANGUAGE.....	12
2.4.1 Background.....	12
2.4.2 How Java works.....	13
2.4.3 Accessing Databases through Java Program.....	14
2.4.4 Benefits of Java.....	14
2.5 RELATED WORKS.....	15
2.5.1 Robust GPS-SMS Communication Channel for AVL System.....	15
2.5.2 Mi-Trek Web-based Vehicle Tracking .....	16
2.6 SUMMARY .....	17

CHAPTER 3 .....	18
METHODOLOGY .....	18
3.1 INTRODUCTION .....	18
3.2 INFORMATION GATHERING .....	18
3.2.1 Internet Research .....	18
3.2.2 Questionnaire .....	19
3.3 SYSTEM DEVELOPMENT LIFE CYCLE (SDLC).....	19
3.3.1 Planning .....	19
3.3.2 Analysis.....	20
3.3.3 Design .....	22
3.3.4 Implementation .....	23
3.3.5 Operation and Support .....	30
3.4 SUMMARY .....	30
CHAPTER 4 .....	31
RESULTS AND FINDINGS .....	31
4.1 INTRODUCTION .....	31
4.2 QUESTIONNAIRE DATA ANALYSIS .....	32
4.3 SYSTEM DEVELOPMENT FINDINGS AND RESULT.....	34
4.3.1 Section 1 – Java Application System.....	35
4.3.2 Section 2 – SMS Auto-Reply System.....	37
4.4 SUMMARY .....	39
CHAPTER 5 .....	40
CONCLUSION AND RECOMMENDATION.....	40
5.1 INTRODUCTION .....	40
5.2 CONCLUSION.....	40
5.3 RECOMMENDATION .....	40
5.4 LIMITATION AND CONSTRAINT .....	41
5.5 SUMMARY .....	42
BIBLIOGRAPHY .....	43
APPENDIX.....	44