## STAND-ALONE STUDENT PLANNER SYSTEM

THEN NYET KIM

This project is submitted in partial fulfillment of the requirements for the degree of Bachelor of Education with Honours (Information Technology)

# **DECLARATION**

Then Nyet Kim	March 2005	
higher learning.		
	J	
application for another degree or qualification	of this or any other university or institut	tion of
No portion of the work referred to in this repo	ort has been submitted in support of an	

## **ACKNOWLEDGEMENTS**

I would like to express appreciation and sincere gratitude toward the people who have spent time helping me to successfully complete the final year project.

Miss Chai Soo See, my supervisor who had given her very countless guidance in this final year project. She had been very tolerant to help in every way possible to solve the problems encountered during the development of the system and report writing without hesitancy. Without her guidance, I will not be able to complete this system on time.

# TABLE OF CONTENTS

DEC	LARA	ATION	ii
ACK	NOW	LEDGE	iii
TABI	LE OI	F CONTENTS	iv
LIST	OF F	TIGURES	X
LIST	OF T	ABLES	xii
ABST	ΓRAC	T	xiii
ABST	ΓRAK		xiv
СНА	PTER	2 1: AN OVERVIEW	1
	1.1	Introduction	1
	1.2	Problem Statement	1
	1.3	Scope of Project	2
	1.4	Purpose of Study	2
	1.5	Research Significance	2
	1.6	Methodology	3
	1.7	Project Plan	3
	1.8	Outline Project Report	3
CHA	PTER	2: LITERATURE REVIEW	5
	2.1	Introduction	5
	2.2	Review of Existing Systems	5
		2.2.1 Student Life System	5
		2.2.2 Acute Software Network Diary	7
		2.2.3 Ajour System	9
	2.3	Comparison of Existing System	10

		2.3.1 Comparison of User Interface	10
		2.3.2 Comparison of Functionality	10
	2.4	Review of Relational Database Management System (RDBMS)	11
		2.4.1 MySQL	11
		2.4.2 Microsoft Access	12
		2.4.3 Oracle	12
		2.4.4 Comparison of RDBMS	13
	2.5	Review of Programming Language	14
		2.5.1 Visual Basic 6.0	14
		2.5.1.1 Introduction	14
		2.5.1.2 Language Fundamentals	14
		2.5.2 Java	14
		2.5.3 Programming Language Comparison	15
	2.6	Tools Used For the Proposed System	17
		2.6.1 Programming language: Visual Basic 6.0	17
		2.6.2 Database Software	17
	2.6	Conclusion	17
СНАР	TER	3: METHODOLOGY	18
	3.1	Introduction	18
	3.2	System Planning	19
		3.2.1 Feasibility Study	19
		3.2.2 Identify Problems and System Requirements	19
		3.2.2.1 Questionnaires	19
	3.3	System Analysis	20

	3.4	System Design	21
		3.4.1 User interface Design	21
		3.4.2 Data Design	21
	3.5	System Implementation	22
	3.6	Conclusion	22
CHA	PTER	4: SYSTEM ANALYSIS AND DESIGN	23
	4.1	Introduction	23
	4.2	Proposed System Analysis	23
	4.3	Requirement Analysis	23
	4.4	User Requirement	24
	4.5	Software Requirement	24
	4.6	Hardware Requirement	
	4.7	System Design	25
	4.8	System Architecture	25
		4.8.1 Context Diagram	25
		4.8.2 Data Flow Diagram Level 0	26
		4.8.3 Level 1	28
		4.8.3.1 Level 1 diagram of user registration in Stand-alone	28
		Student Planner System	
		4.8.3.2 Level 1 diagram of user login to Stand-alone	29
		Student Planner System	
		4.8.3.3 Level 1 diagram of user construct appointments	30
		information to Stand-alone Student Planner System	
		4.8.3.4 Level 1 diagram of user construct routine activities	32

		information to Stand-alone Student Planner System	
		4.8.3.5 Level 1 diagram of user construct school timetable	33
		information to Stand-alone Student Planner System	
	4.9	Entity Relationship Diagram	34
	4.10	Data Dictionary	34
	4.11	Input and Output Design	36
	4.12	Conclusion	38
CHAI	PTER	5: SYSTEM IMPLEMENTATION	39
	5.1	Introduction	39
	5.2	Implementation of Hierarchy Model	39
	5.3	Database Implementation	40
	5.4	Implementation of system Module	40
		5.4.1 'User Login' Module	40
		5.4.2 'Registration' Module	41
		5.4.3 'Main Page' Module	42
		5.4.4 'Appointment Information' Module	43
		5.4.5 'Important Date' Module	45
		5.4.6 'Routine Activities' Module	46
		5.4.7 'School Timetable' Module	48
	5.5	Interactive Help Module	49
	5.6	Conclusion	49
CHAI	PTER	6: SYSTEM TESTING AND EVALUATION	50
	6.1	Introduction	50
	6.2	Testing	50

	6.2.1 Unit Testing	50	
	6.2.2 Module Testing	50	
6.3	System Integration Testing	51	
6.4	System Testing	51	
6.5	System Evaluation	51	
	6.5.1 User Acceptance Test	52	
6.6	Users Comments	54	
6.7	System Limitations	54	
6.8	Conclusion	55	
CHAPTER 7	: PROJECT CONCLUSION AND FUTURE WORK	56	
7.1	Introduction	56	
7.2	Achievement	56	
	7.2.1 Main Features	56	
7.3	Future Work	57	
7.4	Conclusion	58	
REFERENC	ES / BIBLIOGRAPHY	59	
APPENDIX A	A: Questionnaires	61	
APPENDIX 1	<b>B</b> : Level 2 diagram is the detailed of process 3.1	62	
APPENDIX	C: Level 2 diagram is the detailed of process 3.4	63	
APPENDIX 1	<b>D</b> : Level 2 is the detail of process 3.5	64	
APPENDIX 1	E: Level 2 diagram is the detailed of process 3.6	65	
APPENDIX 1	APPENDIX F: Level 2 diagram is the detailed of process 4.5		
APPENDIX	APPENDIX G: Entity Relationship Diagram 6		

APPENDIX H: Stand-alone Student Planner System Verification Testing	68
APPENDIX I: Heuristic Evaluation Testing	73
APPENDIX J: Stand-alone Student Planner System User Acceptance	74
Test and Analysis	

# LIST OF FIGURES

Figure 2.1	Main page of Student Life System	6	
Figure 2.2	Main page of Acute Software Network diary 8		
Figure 2.3	Interface of adding task		
Figure 2.4	Main page of Ajour System	9	
Figure 3.1	The Waterfall Development Methodology	18	
	(Dennis A. and Wixom B.H., 2000)		
Figure 4.1	Context Diagram of Stand-alone Student Planner System	26	
Figure 4.2	Level 0 diagram of Stand-alone Student Planner System	27	
Figure 4.3	Level 1 diagram of user registration in Stand-alone	28	
	Student Planner System		
Figure 4.4	Level 1 diagram of user login to Stand-alone	29	
	Student Planner System		
Figure 4.5	Level 1 diagram of user construct appointments	30	
	information to Stand-alone Student Planner System		
Figure 4.6	Level 1 diagram of user construct routine activities	32	
	information to Stand-alone Student Planner System		
Figure 4.7	Level 1 diagram of user construct school timetable	33	
	information to Stand-alone Student Planner System		
Figure 4.8	Users log-in via user ID and password whereas new user needs	37	
	To register		
Figure 4.9	New user register to Stand-alone Student Planner System	37	
Figure 4.10	User key in appointment event and set reminder	38	
Figure 5.1:	Figure 5.1: Student Planner System hierarchy model 39		

Figure 5.2:	Login Form	41
Figure 5.3:	Registration Form	42
Figure 5.4:	Main page of Stand-alone Student Planner System	43
Figure 5.5:	Appointment Information Entry Form	44
Figure 5.6:	Important Date Entry Form	45
Figure 5.7:	Routine Activities Form	47
Figure 5.8:	School Timetable entry form	48

## LIST OF TABLES

Table 2.1:	Features of Student Life's System 6	
Table 2.2:	Network Diary Features and Benefits 7	
Table 2.3:	: Functionalities of Student Life System, Ajour System	
	and Acute Software Network Diary System	
Table 2.4:	Strength and Weaknesses Comparison	13
Table 2.5:	Java Strengths and Weaknesses	15
Table 2.6:	Comparison of Java and Visual Basic	16
Table 3.1:	Showing number of students who own a computer and number	20
	Of students who own a computer with internet access	
Table 3.2:	Comparison result between computerized and paper-based system	20
Table 4.1:	Data Flow Table	35
Table 4.2:	Data Stores Table	36
Table 6.1:	Stand-alone Student Planner System Heuristic Evaluation	52
	Checklist Result	
Table 6.2:	Usability of Student Planner System	53
Table 6.3:	Attractiveness of Stand-alone Student Planner System	53
Table 6.4:	Adequacy of features provided in Stand-alone Student Planner System	53
Table 6.5:	The Easiness of the System	54
Table 7.1:	Project's Objectives and Achievements	57

#### **ABSTRACT**

In this Final Year Project, the target user of Stand-alone Student Planner System will be focus on secondary school students. The programming language used for implement the Student-alone Student Planner System is Visual Basic 6.0 and Microsoft Access 2000 is used to implement the database. The implementation of Stand-alone Student Planner System is based on user's requirements. Thus the users can easily adapt to all of the provided features that help users to manage their time and work easily and efficiently. Even though faced problem that are inevitable during implementation, the objectives of the system is achieved.

Comments and recommendation is used to produce a more efficient and effectiveness Standalone Student Planner System.

#### **ABSTRAK**

Dalam projek tahun akhir ini, sistem yang dibangunkan ialah Stand-alone Student Planner System di mana sistem ini dibangunkan khas untuk pelajar sekolah menengah. Sistem ini dibangunkan dengan menggunakan Visual Basic 6.0 dan pangkalan data yang dipilih ialah Microsoft Access 2000. Sistem ini dibangunkan untuk memudahkan pengguna untuk merekodkan tarikh-tarikh penting, temujanji, aktiviti-aktiviti harian dan jadual waktu sekolah. Tujuan utama membangunkan Stand-alone Student Planner System adalah untuk memudahkan menguruskan masa mereka dengan lebih baik dan berkesan.

**CHAPTER 1: OVERVIEW OF PROJECT** 

1.1 Introduction

In the era of information technology and our nation's smart school aspiration, the uses of

computer become more important in our lives. Therefore, implementation of the

computerized system namely Stand-alone Student Planner System is much needed to replaced

the existing paper-based system that used by students. The existing paper-based systems have

some weaknesses such as the systems are not allowed alarms or reminders to be set and the

records or information kept in paper is prone to misplaced. The implementation of Stand-

alone Student Planner System will provides opportunity for students to keep track of their

daily record more effectively. In addition, this system will facilitate students to manage their

time more efficiently and be more self-disciplined.

1.2 Problem Statement

Some problems have been found with the existing paper-based system. These problems are as

below:

a) Records or information kept on paper are prone to misplaced.

b) Important dates or time are easily forgotten as paper-based systems do not allow alarms or

reminders to be set.

c) Updating of information is troublesome.

1

#### 1.3 Scope of the project

This project focuses on the Stand-alone Student Planner System. This system is designed with a security feature by mean of user ID and password. This system allows users to record the appointments information, routine activities information, important dates and school timetable schedule. It also allows users to set reminder and display the important task information that has to be done. Users can also update the information that has been entered.

## 1.4 Purpose of Study

This section looks into the objectives of the implementation of the Stand-alone Student Planner System. This project focuses on five main objectives:

- a) To develop a computerize system for student to do their daily planning.
- b) To create the system that allows user to record the appointments information, routine activities information, important dates and school timetable schedule.
- c) To create the system that allows user to view the information that has been entered.
- d) To create the system that enable user to set reminder.
- e) To provide an attractive organizer to entice students to persistently doing so.

### 1.5 Significance of Research

Student Planner System is specially designed to replace the traditional system called paperbased system. Through this system students can plan their daily activities more flexible. Hopefully this system can satisfy the students' needs.

#### 1.6 Methodology

Creating the system can be a complex task. It involves several distinct phases, each of which must be completed before a subsequent task can be begin. To ensure the Stand-alone application system be implemented successfully, the waterfall development methodology is used for the entire development life cycle.

## 1.7 Project Plan

The project development is divided into two parts. The first part of the project will take 14 weeks to complete up to system design. The next part will start at system implementation up to system testing. The project planning is to review the project goal and objectives to ensure understanding of what is to be produced.

## 1.8 Outline of Project Report

Chapter 1 is the introduction to the Stand-alone Student Planner System. This chapter deals mainly with the problem statements, scope of the project, purpose of study, and significance of the research.

Chapter 2 elaborates reviews of existing system as well as the existing software and technology. The chapter also compares about the functionalities of the respective reviewed systems. It will contribute in the decision making regarding the most suitable tools for the implementation of the Stand-alone Student Planner System.

Chapter 3 discusses the methodology used in implementing the system, which is the waterfall development methodology. The phases in the methodology include planning, analysis, design and implementation of the system.

Chapter 4 is the System Analysis and Design. This chapter analyzes and designs the proposed system, and its requirements which consist of the user requirements, software requirements and hardware requirements and system design, which outlines the system architecture by way of data flow diagram, ERD diagram, data dictionary, and input and output design.

Chapter 5 discuss on system implementation, which include implementation hierarchy model.

Chapter 6 will provide an evaluation of the developed system. There are various topics will be discuss under this chapter including system testing, system evaluation, user acceptance test, result analysis and system limitations.

The last chapter will provides information on the achievement and suggestions for future work of the system.

#### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1 Introduction

The literature review is to support and to justify studies done on material collected from sources such as books, and the internet. It consists of information on technology, the tools used, previous finding or history and other related information.

The review was conducted on existing organizer systems. These reviews will be the basis for providing better understanding about the technology and concept used to implement the system.

## 2.2 Review of Existing Systems

### 2.2.1 Student Life System

Student Life System helps users to organize everything from class schedule to social life activities. Student Life system can be used to organize or keep all the class related information such as class schedule, instructor's name, class notes, test schedules and social activities. Users can also setup reminders for the activities. Figure 2.1 is the main page of Student Life System. Users can use both keyboard and mouse to communicate with the system. Table 2.1 is a summary of features of Student Life's System.

Event	Features
Class Scheduler	Keep track of class days / times.
	Store instructor office hours and contact information.
	<ul> <li>Organize notes for every class.</li> </ul>
Homework and	Keep track of homework assignments and set reminders for their
Test Organizer	due dates.
	<ul> <li>Keep track of test dates and set reminder for them.</li> </ul>
Social Activities	Organize social activities.
Organizer	Organizer to do list.
	<ul> <li>Keep track of job schedule</li> </ul>
Calendar	Weekly calendar view of activities.
	Monthly calendar view of activities.
	Reminder Manager
	<ul> <li>Manage all homework, test, social life and any other reminders.</li> </ul>

Table 2.1: Features of Student Life's System

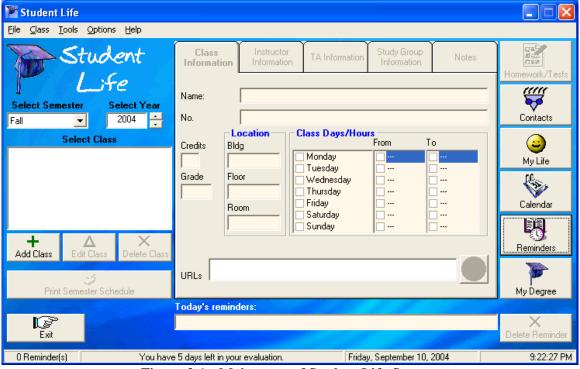


Figure 2.1: Main page of Student Life System

(Source: <a href="http://www.downloadfreetrial.com/business/busi12105.html">http://www.downloadfreetrial.com/business/busi12105.html</a>)

## 2.2.2 Acute Software Network Diary

Acute Software Electronic Diary was developed to replace the paper-based diary. User can use it to jot down notes, appointments, websites and set reminders; and it can also be retrieved instantly. The Network Daily features and benefits are illustrated in Table 2.2. The main page of Acute Software Network Diary is illustrated in Figure 2.2 and Figure 2.3 shows the interface for adding task.

Features	Benefits
<ul> <li>Enter appointment with reminders</li> </ul>	<ul> <li>Never forget important date and time.</li> </ul>
■ Add Notes, Tasks and Events	<ul> <li>No more Post-it notes laying around the</li> </ul>
quickly via the toolbar or the	desk, and it is faster than reaching for a
menus	pen and paper
■ Book Meetings with Other Users	■ Plan meetings without making phone
	calls, and see when others are busy

Table 2.2: Network Dairy Features and Benefits.

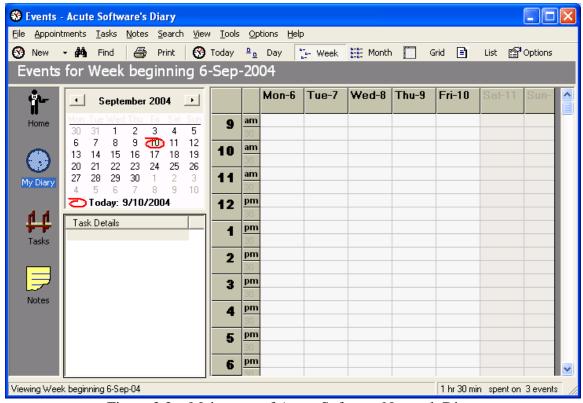


Figure 2.2: Main page of Acute Software Network Diary (Source: <a href="http://www.downloadfreetrial.com/business/busi9924.html">http://www.downloadfreetrial.com/business/busi9924.html</a>)

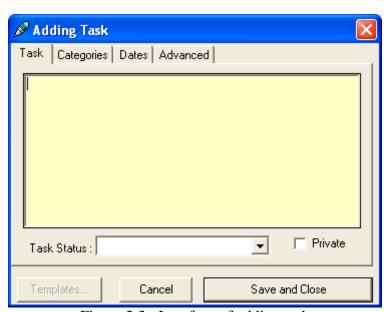


Figure 2.3: Interface of adding task

(Source: <a href="http://www.downloadfreetrial.com/business/busi9924.html">http://www.downloadfreetrial.com/business/busi9924.html</a>)

#### 2.2.3 Ajour System

Ajour is an easy-to-use personal information manager (PIM). This system can be used for keeping information such as diary, appointments, and reminders. Four languages are supported in the user interface: English, French, German, and Danish. In the package users also get a program that starts automatically when users log on/start the computer (this behavior can be turned off). It will show whatever upcoming appointments and events in the following week as well as any "tagged" to-do items that users have entered. The main page of Ajour system is shown in Figure 2.4.



Figure 2.4: Main page of Ajour System

(Source: http://www.downloadfreetrial.com/business/busi3526.html)

### 2.3 Comparison of Existing System

## 2.3.1 Comparison of User Interface

All the reviewed System has graphical user interfaces (GUIs) with icons and menus through which a user gains access to the functions of a system. Users can use both keyboard and mouse to communicate with the system. Keyboard is mainly used for user data input, while mouse event is for the option selection. The GUIs design of Student Life System is more attractive than Acute Software Network Diary System and Ajour System. Student life system uses the meaningful icons to design the user interface. The graphics are used as visual elements in the system and enhance the interaction between users and system.

### 2.3.2 Comparison of Functionality

All functions of Student Life System, Micro-System Ajour and Acute Software Network Diary System are satisfactory, and perform well. However, these systems do not possess any security feature. Therefore, the privacy of users is not guaranteed as other users can directly access or entering these systems without permissions. Table 2.3 shows the comparison of functions of Student Life System, Micro-System Ajour and Acute Software Network Diary System.