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JUDUL: A SMART SUPPORT TOOL FOR PSM TITLE SIMILARITY CHECK
USING INFORMATION VISUALIZATION TECHNIQUE (smartTIC)
SESI PENGAJIAN: 2012/2013

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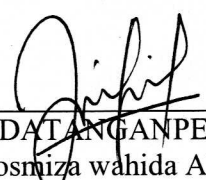
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**A SMART SUPPORT TOOL FOR PSM TITLE SIMILARITY CHECK
USING INFORMATION VISUALIZATION TECHNIQUE (smartTIC)**

NURUL AZLINA BINTI REDZUAN

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

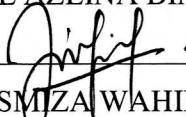
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DECLARATION

I hereby declare that this project report entitled
**A SMART SUPPORT TOOL FOR PSM TITLE SIMILARITY CHECK
USING INFORMATION VISUALIZATION TECHNIQUE (smartTIC)**

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

STUDENT : _____ Date: _____
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SUPERVISOR :  _____ Date: 4 sept 2013
(PN ROSMIZA WAHIDA ABDULLAH)

DEDICATION

Specially dedicate to

My beloved parents, my whole family,

My supportive supervisor, Pn. Rosmiza Wahida Abdullah, and all lecturers,

And all my understandable friends,

Thank you for the support and guidance given throughout the completion of my PSM

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Alhamdulillah, Thanks to Allah SWT, whom with His willing give me the opportunity to complete this Final Year Project which is title "*A Smart Support Tool for PSM Title Similarity Check using Information Visualization Technique (smartTIC)*". This final year project report was prepared for Faculty of Information and Communication Technology (FICT), University of Technical Malaysia Malacca (UTeM), basically for student final year of Bachelor of Computer Science.

Firstly, I would like to express my deepest thanks to, Pn Rosmiza Wahida Abdullah which is my supervisor who had guided be a lot of task during complete my PSM. She always been very helpful and share her knowledge and idea for my project.

Deepest thanks and appreciation to my parents, family, special mate of mine, and other for their cooperation, encouragement, constructive suggestion and full of support for the project completion, from the beginning till the end. Also thanks to all of my friends and everyone, that has been contributed by supporting my work and helps myself during the final year project progress till it is fully completed.

ABSTRACT

A Smart Support Tool for PSM Title Similarity Check Using Information Visualization Technique (smartTIC) is used by student, supervisor and PSM committee members. This system is developed for student to do a checking of the previous PSM title that has been done by previous students. Students also can search and insert their proposed PSM title for committee approval. Besides that, this system will help students to reduce their time to do a checking at the library. This system also alerts student if the proposed title is similar with the existing title. The alert will be notified using color code. It is also help the PSM committee members to record all the information about student's PSM. All the title proposed are submitted and approve through this system. For title approval, student will be notified through SMS. The Prototyping methodology is used as a guide in completing this project because it suitable for system that has many requirement changes and for limited time to deliver or complete the development such as in PSM. The smartTIC applies the Information Visualization technique for data representation. The selected Information Visualization technique is the Hyperbolic Technique. The Information Visualization technique is applied for the data representation to make the information retrieval easier and the look of the system more interesting. The smartTIC is developed using Adobe Dreamweaver and MySQL database. The SMS notification are using OZEKI SMS server.

ABSTRAK

Alat Sokongan bagi menyemak persamaan tajuk cadangan PSM yang menggunakan teknik visualisasi maklumat (smartTIC) digunakan oleh pelajar, penyelia dan ahli-ahli jawatankuasa PSM. Sistem ini dibangunkan bagi pelajar untuk melakukan pemeriksaan dari segi tajuk yang dicadangkan dengan tajuk sebelumnya yang dilakukan oleh pelajar yang sebelumnya. Pelajar juga boleh mencari dan memasukkan tajuk PSM yang di cadangkan untuk kelulusan jawatankuasa. Selain itu, sistem ini akan membantu pengguna untuk mengurangkan masa mereka untuk melakukan pemeriksaan di perpustakaan. Sistem ini juga memberi amaran kepada jika tajuk yang dicadangkan adalah sama dengan tajuk yg sedia ada. Amaran akan dimaklumkan dengan menggunakan kod warna. Ia juga membantu ahli-ahli jawatankuasa PSM untuk merekodkan semua maklumat mengenai PSM pelajar. Semua tajuk yang dicadangkan telah diserahkan dan kelulusan adalah dilakukan melalui system ini. Bagi keputusan kelulusan tajuk, pelajar akan dimaklumkan melalui SMS. Metodologi prototaip digunakan sebagai panduan menyiapkan projek ini. Perwakilan data sistem ini menggunakan Teknik Visualisasi Maklumat yang terpilih seperti, teknik hiperbola. smartTIC dibangunkan dengan menggunakan Adobe Dreamweaver dan pangkalan data MySQL. Pemberitahuan SMS menggunakan OZEKI server SMS.

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEDGEMENTS	iii
	ABSTRACT	iv
	ABSTRAK	v
	TABLE OF CONTENTS	vi
	LIST OF TABLES	x
	LIST OF FIGURES	xii
	LIST OF DIAGRAMS	xiv
CHAPTER I	INTRODUCTION	
	1.1 Project Background	1
	1.2 Problem Statements	2
	1.2.1 Problem 1.	2
	1.2.2 Problem 2	2
	1.2.3 Problem 3	2
	1.3 Objectives	3
	1.3.1 Objective 1	3
	1.3.2 Objective 2	3
	1.3.3 Objective 3	3
	1.4 Scopes	4
	1.4.1 System scope	4
	1.4.2 User scope	4
	1.5 Project Significance	5
	1.6 Expected Output	5

1.7 Conclusion	6
CHAPTER II LITERATURE REVIEW AND PROJECT METHODOLOGY	
2.1 Introduction	7
2.2 Facts and Findings	8
2.3 Domain	8
2.4 Related work/previous work	12
2.5 Proposed solution / further project	16
2.7 Project Methodology	16
2.9 Project Schedule and Project Milestones.	20
2.9.1 Project Schedule.	20
2.9.2 Project Milestone.	21
2.10 Conclusion	21
CHAPTER III ANALYSIS	
3.1 Introduction	22
3.2 Problem Analysis	23
3.2.1 Analysis of current System.	23
3.2.2 Problem Analysis	23
3.2.3 Overview of current system	24
3.2.4 Proposed System	25
3.3 Requirement Analysis	26
3.3.1 Data Requirement	26
3.3.2 Functional Requirement	29
3.3.3 Non –functional Requirement	31
3.3.4 Other requirement	32
3.3.4.1 Software requirement	32
3.3.4.2 Hardware requirement	33
3.3.4.3 Network requirement	34
3.4 Conclusion	34
CHAPTER IV SYSTEM DESIGN	
4.1 Introduction	35
4.2 High-level Design	36
4.2.1 System Architecture	36

4.2.2	User Interface Design	38
4.2.2.1	Navigation Design.	38
4.2.2.2	Input Design	39
4.2.2.3	Output Design	42
4.2.3	Database Design	44
4.2.3.1	Logical Database Design	44
4.3	Detail Design.	45
4.3.1	Software Design	45
4.3.2	Physical Database Design	46
4.4	Conclusion.	47
CHAPTER V	IMPLIMENTATION	
5.1	Introduction	48
5.2	Software Development Environment Setup	48
5.2.1	Install Adobe Dreamweaver	49
5.2.2	Install Adobe Photoshop	49
5.2.3	Install XAMPP Control Panel in window	49
5.2.4	Install Star UML	53
5.2.5	Install OZEKI SMS server	53
5.3	Software Configuration Management	53
5.3.1	Configuration environment setup	53
5.3.2	Version Control Procedure	54
5.4	Implementation Status	54
5.5	Conclusion	56
CHAPTER VI	TESTING	
6.1	Introduction	57
6.2	Test Plan	58
6.2.1	Test Organization	58
6.2.2	Test Environment	59
6.2.3	Test Schedule	60
6.3	Test Strategy	62
6.3.1	Classes of Test	63
6.4	Test Design	64

6.4.1 Test Descriptions	64
6.4.2 Test Data	70
6.5 Test Result and Analysis	75
6.6 Conclusion	80
CHAPTER VII PROJECT CONCLUSION	
7.1 Observation of weakness and Strengths	81
7.2 Proposition of Improvement	82
7.3 Contribution	82
7.4 Conclusion	83
REFERENCES	84
APPENDICES	85

LIST OF TABLES

TABLE	TITLE	PAGE
1.1	System Scope	4
1.2	User Scope (Administrator/PSM committee)	4
1.3	User Scope (Student / supervisor)	5
2.1	Software Requirement	19
2.2	Hardware Requirements	19
2.3	Project Schedule	20
3.1	Problem Analysis	23
3.2	Data of table STUDENT	26
3.3	Data of table ADMIN	27
3.4	Data of table STUDENT PROJECT	27
3.5	Data of table DOMAIN CATEGORY	28
3.6	Data of table SUPERVISOR	29
3.7	Functional Requirement specification	29
3.8	Non-Functional Requirement	31
3.9	Software Requirement	33
3.10	Hardware Requirements	34
3.11	Network Requirements	34
4.1	Input Design	39
4.2	Tools and validation for login page	40
4.3	Tools and validation for checking title	40
4.4	Tools and Validation for find project	41
4.5	Tools and validation for insert project	41

4.6	Output Design	42
4.7	Physical database design	46
5.1	Version Control Procedure	54
5.2	Implementation Status	54
6.1	Individual Involved in Testing Phases	58
6.2	Test Environment	60
6.3	Test Schedule	61
6.4	White-Box Testing and Black-Box Testing	62
6.5	System Login	65
6.6	Find Project Title	65
6.7	Checking Project Title	66
6.8	Insert Project Title	67
6.9	New Supervisor	68
6.10	Title Approval	69
6.11	System Testing	69
6.12	Integration Testing	70
6.13	Test Data	71
6.14	Test Result and analysis for System Login	75
6.15	Test Result and analysis for Checking Project Title	76
6.16	Test Result and analysis for Find Project Title	76
6.17	Test Result and analysis for Insert Project Title	77
6.18	Test Result and analysis for New Supervisor	78
6.19	Test Result and analysis for Title Approval	79
6.20	Test Result and analysis for System Testing	80
6.21	Test Result and analysis for Integration Testing	80

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Visualization Process	8
1.2	Scientific Visualization	9
2.3	Line Visualization	10
2.4	Vann Diagram	11
2.5	Hyperbolic Browser	11
2.6	Exhibit, Visualization for Web Page	13
2.7	Displaying the text similarity	14
2.8	Wordle word cloud	15
2.9	Prototyping Methodology	17
3.1	Current system Flow	24
3.2	Current system Flow Continue	25
4.1	Login input Design	40
4.2	Checking title input design	40
4.3	Find project title input design	41
4.4	Insert project title input design	41
4.5	Login User	42
4.6	List of title	43
4.7	Details of project	43
4.8	Checking Result	43
4.9	Approval List	43
4.10	ERD diagram	45
5.1	XAMMP Basic Package	50

5.2	XAMMP Control Panel	51
5.3	XAMMP Web base Control Panel	52

LIST OF DIAGRAMS

DIAGRAM	TITLE	PAGE
4.1	System Architecture in smartTIC	37
4.2	Navigation Design	38

CHAPTER I

INTRODUCTION

1.1 Project Background

This (SmartTiC) system is develop using visualize approach. The main function for this system is for user to do a checking their title of proposed project in every domain/cluster compare with the current title of project that completed by previous student. This system is preventing or give early reminder to user not do the same project title. It also prevents the plagiarism activity.

Furthermore, the difficulties to keep track the same title or project proposed by student are high so, with this system student can do an earlier checking wither their idea for title available to do or not. This is can prevent student do the same project as their senior. User can also register their proposed title using this system.

Using this system perhaps can help the user and supervisor in give the proposed title for PSM.

1.2 Problem Statements

Every year, the entire final year student has their PSM. Before do the project all the student must give their proposed title to their supervisor and then will be approve by the PSM committee members. So, there is some problem that might occur for this student. The problems are:

- 1) Students do not know what title of project that their senior's done.
- 2) Probabilities a student use the previous Project title or ideas are high.
- 3) There are no systems that can do a title checking.

1.2.1 Problem 1.

Students do not know what title of project that their senior's done.

Student always have problem to make their proposed title because some of them does not know what kind of title that will done by their senior. Event all the final year report are compile and store at the library, there are some of student might have the problem to trace the title.

1.2.2 Problem 2

Probability a student uses the previous Project title or ideas are high.

In this context of helping the student in checking their title that probability a student uses the previous project title, student can use this system to checking whether the title are done or not but, system dos not void student to insert their project to this system for AJK approval.

1.2.3 Problem 3

There are no systems that can do a title checking in UTeM.

There is no existing checking system for student except the students itself do a checking at the library. With this system student can reduce their time and increase their efforts to check their proposed title.

1.3 Objectives

The main aim to develop this system is to create a new system regarding the problem statement. This system is expected to help the student to do a title checking and searching. The objectives of this smartTIC system are:

- 1) To check the similarity in PSM title and give early message to student.
- 2) To apply the information visualization technique in this system.
- 3) To record the PSM student proposal information.

1.3.1 Objective 1

To check the similarity in PSM title and give early message to student.

System can give user early message with give information using color code by do the title checking. If the title are already done by senior the message will be appear with RED color of font if not message will appear in BLUE color of font.

1.3.2 Objective 2

To apply the information visualization technique.

This system develops using the visualizations technique. All the title is divide into the category that visualize into picture and size.

1.3.3 Objective 3

To record the PSM student proposal information.

This system will allow student that taking PSM to insert their proposed title for PSM committee approval. All the approved proposed title will be record into the database. Student can do the title checking based on that all the approved title.

1.4 Scopes

A few scopes have been defined to develop this project. This system will be developed based on two scope categories; that are the system's scope and the user's scope.

1.4.1 System scope

Table 2.1: System Scope

Module	Description
Login	Will allow an authorize user login into the system as admin.
View project title	Will allow user to view all the list of student project title.
Approval	Will allow the admin / PSM committee to make a title approval.
Find project title	Will allow user to find the PSM project title.
Checking title	Will allow user to make a PSM project title checking.
Insert project	Will allow student to insert their proposed project title.
Send Notification	Will send a SMS notification to student.

1.4.2 User scope

Table 1.2: User Scope (Administrator/PSM committee)

Module	Description	User
Login	Will login into the system as admin.	Admin, Committee Member.
View project title	Will view all the list of student title of project	Admin, Committee Member.
Approval	Make approval for student proposed	Admin/Committee

	project title.	member.
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In this administration module, the administrator will login, view project title and makes an approval for the proposed title from student.

Table 1.3: User Scope (Student / supervisor)

Module	Descriptions	User
Login	Will login into the system as student.	Student / supervisor
View project title	View list of project title	Student / supervisor
Find project title	Find the existing project title	Student / supervisor
Checking title	Checking proposed title	Student / supervisor
Insert project	Insert the proposed PSM title	Student / supervisor

Student or supervisor can insert their proposed title for the AJK approval. Besides that, student or supervisor can do a checking for their proposed title using checking function. Their also can find PSM title from this system based on senior's project that registered in this system.

1.5 Project Significance

Significance of this project is that a student has much benefit by using this system. Student can get an early message by checking their proposed title. Furthermore, this system can avoid student and supervisor proposed the same title that was done by their senior.

Besides that, this system is useful for the student that does not have enough time go to the library for checking the PSM project.

1.6 Expected Output

The expected output for this project is able to apply the visualization technique in this system. It is also can give are earlier message to student before register their proposed title.

1.7 Conclusion

From the overall that being predicts in this chapter, a conclusion can be made to overview all content in this chapter. This chapter gave an explanation about the background of the project that can give those readers overview about the operation and requirement of develop this smartTIC system. All the problems had been listed out and those objectives are identified.

The smartTIC system is standalone systems which will be used by Faculty of Information and Technology (FICT) and focus to Software Development Department (BITS). It will help BITS student get early idea for their *Projek Sarjana Muda (PSM)* title proposed.

Next chapter which is chapter two will discuss about literature review for this project.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter will describe about literature review and project methodology. It is important to discover the project methodology because methodology used to measure the possibility of the project whether success or not in the future, besides to provide the framework that enable the developer to make reasonable estimate of resources, cost and schedule. Since the development of this project using the PHP programming language and it must develop in short time, the best methodology for smartTIC are Object-Oriented Analysis and Design (OOAD) as methodology.

A literature review is periodically intergrade the findings on this topic and specific field of study or related particular line of research by summarized study and try to makes sense of the pattern of finding. The conclusion for literature is about what is known, what is not, and what should be. Usually is often a good to begin studying the research on something. Meta-analyses are quantitative literature reviews, combining statically findings across very difference study.

It is also can help the researcher to know whether all relevant matter is being considered in the study of problem. Furthermore, it will help the developer to make a hypothesis about user expectation and also help in the whole of project development. Developer will find the solution based on literature review.

To get all the information to develop smartTIC project, the resources includes of regarding from faculty and from lecturer will be referred as reference. The literature studies from the resources will find more references on doing a developing process of a new system.

2.2 Facts and Findings

Fact and finding is a classical set of technique used to collect information about the problems, opportunities, solution requirement and priorities. For the reason, several fact and finding had been carried out for the development of checking title for final student project.

2.3 Domain

This system will be developing using Visualization Technique. Visualization is solely a human cognitive and has nothing to do with computer. Thus , the activity of information visualization can be summarized as data in whatever form is transformed into pictures, and the picture are interpreted by a human being using mental model of that data.

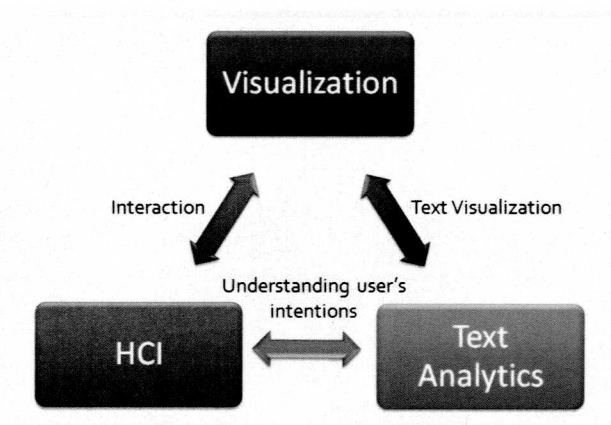


Figure 2.1: Visualization Process