ZULKIFFLI BIN ABU BAKAR

This report is submitted in partial fulfillment of the requirements for the Bachelor of Information and Communication Technology (Interactive Media)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2004
THESIS APPROVAL STATUS FORM

TITLE: IN-MEDIA PORTAL

ACADEMIC SESSION: 2003/2004

I Hereby: ZULKIFFLI BIN ABU BAKAR

I hereby allow this thesis (PSM/Graduate/PHD) will be kept by Faculty of Information and Communication Technology library under these usage requirements:

1. The theses are officially owned by KUTKM.
2. The Faculty of Information and Communication Technology library are allowed to distribute the copies of the thesis for educational purpose only.
3. The Faculty of Information and Communication Technology library are allowed to distribute the copy of this thesis as an exchange between higher learning institutions.
4. Please Tick (/)

_____ CONFIDENTIAL (Contains information that has security level or the importance of Malaysia, as quote in the ACT of OFFICIAL SECRET 1972).

_____ LIMITED (Contains LIMITED information that had been classified by organization / institution where the research is held).

_____ UNLIMITED

(AUTHOR'S SIGNATURE) (SUPERVISOR'S SIGNATURE)

Lot 3960, Bkt Che Ali Ms. Faaizah Bt. Shahbodin
Kampung Kjing, 18 October 2004.
21600 Marang,
Terengganu.

18 October 2004.
ADMISSION

I admitted that this project title name of

IN-MEDIA PORTAL

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

STUDENT : ZULKIFLI BIN ABU BAKAR

SUPERVISOR: MS. FAAIZAH BT SHAHBODIN

Date: 18 October 2004
DEDICATION

I would like to dedicate my final year project and this thesis to the lecturers who had without any hesitation and as they are filled with precious knowledge, spirit and initiative to thought me about the ICT (Information Communication Technology) knowledge and practiced me with lots of practical concept and application oriented elements. It is also my honor to appreciate and present this thesis to be continuously used, for further reference, whether by other students or for research work and presentation by KUTKM.

My parents is the other reason why I keep doing and implementing the good practices of learning and excepting any ideas to be implemented and to be used throughout my whole duration of study. Their supports have given me the courage to keep on moving although it took time to implement all the phases.

And lastly, I would like to thank for each individual and organizations that has contributed time, resources either directly or indirectly, my colleagues toward the completion of this thesis and project.
ACKNOWLEDGEMENTS

Peace and blessings of Allah Al Mighty be our beloved, final Prophet and Messenger of Allah, his relatives and all his companions and those who have followed. Alhamdulillah, all praise and thankfulness to Allah S.W.T, the most Glorious and Omnipotent, with His willing has allowed me to complete this Projek Sarjana Muda II.

First of all, I would like to take this golden opportunity to express my deeply gratitude to Ms. Faaizah Bt. Shahbodin who is my faculty supervisor for her guidance, advice, valuable suggestion, encouragement and moral supports throughout the completion of this Projek Sarjana Muda II.

A deeply appreciation dedicated to all my family members for their faith, support and encouragement. Finally, special thanks to the lecturers concerned and to all my beloved friends for their support and those who were involved directly or indirectly in helping me to prepare this dissertation until its completion. Thank you very much.
ABSTRAK

TABLE OF CONTENTS

PROJECT TITLE I
THESIS APPROVAL STATUS FORM II
ADMISION III
DEDICATION IV
ACKNOWLEDGEMENT V
ABSTRACT VI
ABSTAK VII
TABLE OF CONTENTS VIII
LIST OF FIGURES XI
LIST OF TABLES XIII
LIST OF ABBREVIATION XIV

CHAPTER 1: INTRODUCTION

1.1 Introduction 1
1.2 Problem Statement 2
1.3 Objective 2
1.4 Scope 3
1.5 Important and Benefit 3
1.6 Conclusion 4

CHAPTER II: LITERATURE REVIEW

2.1 Introduction 5
2.2 Case Research 6
2.2.1 Web Site and Internet 7
2.2.2 Discussion and interview 7
2.2.3 The research on software 7
2.2.4 Safety Research 8
2.2.5 Table of Research 8
2.3 Conclusion 9
CHAPTER VI: IMPLEMENTATION

6.1 Introduction 40
6.2 Production and Implementation 41
  6.2.1: Production of Texts 41
  6.2.2: Production of Graphic 41
    6.2.2.1 Graphic Design 42
  6.2.3: Production of Audio 42
  6.2.4: Productions of Animation 43
    6.2.4.1 Animation 43
  6.2.5 Process of Integration 43
  6.2.6 Creating link 44
  6.2.7 Script 45
6.3 Development Status 45
6.4 Conclusion 45

CHAPTER VII: TESTING

7.1 Introduction 47
7.2 Test Plan 47
  7.2.1 Test Organization 48
  7.2.2 Test Environment 48
  7.2.3 Test Schedule 49
7.3 Test Strategy 50
  7.3.1 Classes of Tests 50
7.4 Test Design 52
  7.4.1 Test Description 52
  7.4.2 Test Data 54
  7.4.3 Test Case Result (for each test case individually) 56

CHAPTER VIII: CONCLUSION

8.1 Observation on Weaknesses and Strengths 58
8.2 Propositions for Improvement. 59
8.3 Conclusion 59

BIBLIOGRAPHY

Bibliography 1 60

APPENDIX

Appendix I (Story board of portal)
Appendix II (User Manual of portal)
Appendix III (Testing Appendix)
Appendix VI (Gantt chart)
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 3.1</td>
<td>Multimedia Design Methodology</td>
<td>11</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Problem Management Process</td>
<td>17</td>
</tr>
<tr>
<td>Figure 4.2</td>
<td>Design Internet System for In-Media Portal</td>
<td>20</td>
</tr>
<tr>
<td>Figure 5.1</td>
<td>Main site of portal</td>
<td>26</td>
</tr>
<tr>
<td>Figure 5.2</td>
<td>Register form site</td>
<td>26</td>
</tr>
<tr>
<td>Figure 5.3</td>
<td>List of ID site</td>
<td>27</td>
</tr>
<tr>
<td>Figure 5.4</td>
<td>Show profile site</td>
<td>27</td>
</tr>
<tr>
<td>Figure 5.5</td>
<td>Edit profile form site</td>
<td>28</td>
</tr>
<tr>
<td>Figure 5.6</td>
<td>View topic site</td>
<td>28</td>
</tr>
<tr>
<td>Figure 5.7</td>
<td>New topic form site</td>
<td>29</td>
</tr>
<tr>
<td>Figure 5.8</td>
<td>Reply form site</td>
<td>29</td>
</tr>
<tr>
<td>Figure 5.9</td>
<td>In-Media navigation design</td>
<td>30</td>
</tr>
<tr>
<td>Figure 5.10</td>
<td>Structure Chart Model Module Checking ID <em>User</em> and <em>Password</em></td>
<td>31</td>
</tr>
<tr>
<td>Figure 5.11</td>
<td>Structure Chart User Module</td>
<td>32</td>
</tr>
<tr>
<td>Figure 5.12</td>
<td>In-Media Portal Architecture Context Diagram (ACD)</td>
<td>33</td>
</tr>
<tr>
<td>Figure 5.13</td>
<td>Register form user</td>
<td>34</td>
</tr>
<tr>
<td>Figure 5.14</td>
<td>Login form for registered user</td>
<td>34</td>
</tr>
<tr>
<td>Figure 5.15</td>
<td>Profile data form</td>
<td>35</td>
</tr>
<tr>
<td>Figure 5.16</td>
<td>Image editing</td>
<td>36</td>
</tr>
<tr>
<td>Figure 5.17</td>
<td>Post new message for forum</td>
<td>36</td>
</tr>
<tr>
<td>Figure 5.18</td>
<td>Select of searching in forum</td>
<td>37</td>
</tr>
<tr>
<td>Figure 5.19</td>
<td>List of registered user</td>
<td>37</td>
</tr>
<tr>
<td>Figure 5.20</td>
<td>Profile of user</td>
<td>38</td>
</tr>
<tr>
<td>Figure 5.21</td>
<td>List of message in forum</td>
<td>38</td>
</tr>
<tr>
<td>Figure 6.1</td>
<td>Designing portal banner</td>
<td>42</td>
</tr>
<tr>
<td>Figure 6.2</td>
<td>Animation process using Flash MX</td>
<td>43</td>
</tr>
<tr>
<td>Figure 6.3</td>
<td>Example hyperlink to other page in portal</td>
<td>44</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------</td>
<td>------</td>
</tr>
<tr>
<td>6.4</td>
<td>Script Properties</td>
<td>45</td>
</tr>
<tr>
<td>7.1</td>
<td>Test cycle</td>
<td>49</td>
</tr>
<tr>
<td>7.2</td>
<td>Login data</td>
<td>54</td>
</tr>
<tr>
<td>7.3</td>
<td>Edit profile data</td>
<td>55</td>
</tr>
<tr>
<td>7.4</td>
<td>Reply new topic</td>
<td>56</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Table of Research</td>
<td>8</td>
</tr>
<tr>
<td>3.1</td>
<td>Software Requirement</td>
<td>14</td>
</tr>
<tr>
<td>3.2</td>
<td>Hardware Requirement</td>
<td>15</td>
</tr>
<tr>
<td>6.1</td>
<td>Development status of portal</td>
<td>46</td>
</tr>
<tr>
<td>7.1</td>
<td>Requirement system for test environment</td>
<td>49</td>
</tr>
<tr>
<td>7.2</td>
<td>Test Schedule</td>
<td>50</td>
</tr>
<tr>
<td>7.3</td>
<td>Test Description</td>
<td>53</td>
</tr>
<tr>
<td>7.4</td>
<td>The testing description</td>
<td>56</td>
</tr>
<tr>
<td>7.5</td>
<td>Test case result</td>
<td>57</td>
</tr>
</tbody>
</table>
LIST OF ABBREVIATION

KUTKM  Kolej Universiti Teknikal Kebangsaan Malaysia
FTMK  Fakulti Teknologi Maklumat Dan Komunikasi
PSM  Projek Sarjana Muda
MS  Microsoft
CPU  Control Processing Unit
MDM  Multimedia Design Methodology
CD-ROM  Compact Disc-Read Only Memory
ICT  Information and Communication Technology
CD  Compact Disc
HEP  Hal Ehwal Pelajar
PHP  Personal Home Page
HTML  Hyper Text Markup Language
MySQL  Standard Query Language
OS  Operating System
ACD  Architecture Context Diagram
BMP  Windows Bitmap
GIF  CompuServe GIF
JPG  JPEG
CHAPTER I

INTRODUCTION

1.1 Introduction

Nowadays, information and communication technology or ICT in Malaysia is very important. This is can be support with a development of Multimedia Super Corridor (MSC) at Putrajaya and Cyberjaya. Besides that, Internet has been used as a new tool in education and to help in learning process and to make the information easily distributed to all peoples in the world.

One of encourage business in ICT is portal industry. Portal functions likes a web site is very important today. We can see many companies in world using portal to access their customers. It covers education, sport, business, information and many more. Based on this scenario, the project that will be developed is also about portal development.

By the research and study, currently there is no specific portal focus about Interactive Media programme exist in KUTKM but only web site about KUTKM that combine all faculty and department in one web site. As a planning this portal offer all information about multimedia such tutorial, download for software, video and music, user account and many more. It also user friendly with the interesting interface design and can be uses by any user who want to join it.
1.2 Problem Statement

Based on the scenario today, the idea for the PSM is to develop a portal. According to the research, currently there is no one portals exist in KUTKM that focus only for Interactive Media students. The purpose of this portal is to help student especially to get information about multimedia including news, tutorial, graphic collection and other software to be downloaded by students. The name of portal is In-Media Portal.

The statement of In-Media stands for Interactive Media. The features of In-Media Portal including member account registration, forum to discussion section, e-mail account, and other information. The portal also is user friendly because many directions can help user to handle this portal.

A project life cycle is a collection of project phases and a project must successfully complete each phase before moving on to the next. Most information technology professionals are familiar with the concepts of a Systems Development Life Cycle (SDLC), which is a framework for describing the phases involved in developing and maintaining information systems.

1.3 Objective

The objective of this project can be divided into four categories. Following are the list of the objective for In-Media Portal.

a. To research of portal developed by other programming language.
b. To promote Interactive Media program in KUTKM for other peoples.
c. To give information about multimedia course and as an extra benefit, user also can extra information by downloads samples tutorials, music, graphic and others.
d. To encourage the sharing of information such as academics, events or discussion.
1.4 Scope

This portal is also as a way for students to get some tutorials, information, discussion and other. Besides that, there is a few scope of project.

a. The development of the In-Media Members Portal covers the information and latest news about multimedia.
b. The development of the In-Media Portal focuses about Interactive Media student in KUTKM.
c. The portals have members account registration, discussion forum and other

1.5 Important and Benefit

Basically In-Media Portal has several significances of importance which follows into the development of itself. This section will explain why the In-Media Portal has to develop. As a first technical university may be people want to know detail about KUTKM, especially in Interactive Media course.

a. To promote interactive media course to new student who wish to study at KUTKM.
b. To give Interactive Media student more information about activities that has been done
c. It will encourage the sharing of information and communication or relationship among student to other student.
d. To study the theory of Multimedia Design Methodology used.
1.6 Conclusion

In brief, this chapter tries to invoke to the purpose and introduction of this project. There are 4 subsections in this chapter that explains the significance of doing the project, including state out the objective of the project, the scope of the project and the importance of the project. This chapter can also be recognized as the introductory chapter for the whole report that related to the core research element for the whole project itself. According to the explanation above, the project that wants to develop have to refer based on current problem. This is very important for developer to plan and get information about the project.
CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Information is very important before any project can be developed by project developer. This is because to make sure the project is going to be completed on time. Many portal systems on this topic have been studied and there are some similarities and differences between them. But, mostly the researches focus on the categorized information and the interesting features of the portal system.

These studies provide a broad overview of the project that will be pursuing for the research project. Most of the information about this portal has to get from students by discussion and interview. There is a few of discussion and interview session had been done for Interactive Media students. Firstly the discussion and interview are focus more to concept of portal.

In this study also we also get more information and concept how on to create the best portal and add more new function. The second part of research is by visiting in the internet, much information and concept can be referring by already portal and web site. All information has been collected and analysed. This research also gives a feedback how the problem can be solved.
2.2 Case Research

The new technology in computer and communication has contributed more efficiency in the world. It can be implemented in various areas of life. There are a few methods of case research to discuss about theory that could be used in the project. Based on the whole portals that have been study we group its contents into several categories of information for instances history or division.

One of the examples of the portal is Tokeikedai.net. It contents all necessary for feature portal requirement such as user account, forum, e-mail, and other information. Many portals that have been studied have at least one of the unique features or interesting ideas offered by the portal. After lots of research has been done on the topic of good portal or web site structures, there are some criteria that can be used to identify which is a good portal.

The other important criteria of the good portal and web site are the consistency. The consistence format, navigation, diagram, style, button menu, images, fonts, colour, layout and display size resolution can shows the professionalism of portal can attract users to stay long at the internet. But, the portal can be different or unique between each other from different category.

The most important criteria are to have attractive interfaces design. The interface design includes the structure of the portal, the arrangement of items and the customized appearance of the graphics, animation or text. The other criteria are the portal should have largest repository of data and information, reliable and up-to-date information, user tour guide and contact or email of the portal developer.

Based on this case research, there is a few of portal that have referred so that it can compare with in-media portal. There are several methods to work on In-Media
portal project in this literature research. This is to gather the information about his portal. The methods are as the followings.

2.2.1 Web site And Internet

The beginning stage of research is done on the online portal and website. A few research and study have been done on the previous websites in other universities and also KUTKM as to gather the information and problem analysis. Therefore, comparison among websites and the portals could be considered as reference to identify the problem and way to prevent during the designation and implementation phase. As a conclusion, internet enables each person to reach the information in communication range through the internet. Nevertheless, an on-lineing based project will help the users to communicate and reach the related information.

2.2.2 Discussion And Interview

Discussion and interview are among the methods in case research. A few discussion and interview have been done with the students of Interactive Media course. This task very important to get feedback from student about the latest portal that offer multimedia information.

2.2.3 The Research on Software

As to ensure the development process of the portal runs smoothly, a research on software must be done. The portal development process needs software that totally could help in solving any problem that occurs.
2.2.4 Safety Research

When a web application is put in a range, this will expose it to an illegal reach. In some access cases, the user should have permission with the internal password. In another case, the external users try to reach for the bad purpose. Therefore, a few safety techniques should be done to guarantee the portal safety.

2.2.5 Table of Research


<table>
<thead>
<tr>
<th>Characteristic</th>
<th>In-Media</th>
<th>Portal</th>
<th>Siffo.com</th>
<th>Acfk.net</th>
<th>Telatah.com</th>
<th>Tokeikedai.net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Login Account (Suitable Used)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Forum Site (Suitable Used)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Animation Graphic (Suitable Used)</td>
<td>/</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Hit counter (Suitable Used)</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>/</td>
<td>x</td>
<td>/</td>
</tr>
<tr>
<td>Who online (Suitable Used)</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>/</td>
</tr>
<tr>
<td>List of User (Suitable Used)</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Music (Suitable Used)</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Calendar (Suitable Used)</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hyperlink (Suitable and neat)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Guest Books (Suitable Used)</td>
<td>x</td>
<td>/</td>
<td>x</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Button (Suitable and neat)</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Comment (Suitable Used)</td>
<td>x</td>
<td>/</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Table 2.1: Table of Research

Status Level

Yes = /  No = X
2.3 Conclusion

In this chapter, we have discussed on the definitions of pertinent technical terminology used in this project. Besides that, we also have discussed on different methodology or approach to solve similar and same problem, which elaborate in detail problems and weaknesses of other projects. From the literature review, the work research from the other people can be used as a guideline. The suitable approach and methodology can be used as direction in completing the research. Moreover, the result from other research can be useful to us in tackling the problem or change the topology that not suitable with the capacity of incoming data.
CHAPTER III

METHODOLOGY

3.1 Introduction

Methodology is a set of repeatable processes with project-specific methods, rules, and guidelines for building quantity application system that are manageable and deliver value to the organization. A methodology delivers value and productivity to organizations by describing a repeatable set of process and procedures for building systems. Methodologies are converging with project management techniques, process management techniques, and others to provide a delivery vehicle for addressing many of today’s application development problems.

In other situations, methodology also means the combination of model process, method, procedure, technique, equipment and programming language that used in system development. A suitable methodology is an important to make sure that application can be run perfectly. Besides that, methodology is used as a discipline to develop a good application software and high quality from developer and user focus. Most methodologies consist of four basic components:

- Guidelines – Specific steps necessary for successful application development. Guidelines contain advice and recommendations on how to proceed
- Techniques – The detailed process description that support the activities throughout the entire software development lifecycle (SDLC). Techniques provide assistance for completing the deliverables.
• Tools – Particularly, project management tools integrated with the methodology that draws on past project experiences. Most methodologies are independent of the primary application development software.

• Templates – Reusable documents and checklists that give advice and assistance.

In this project development, the methodology that be used for all development project are evolution prototype mythology that have three main phases. These phases will be looping until this portal perfect. Below are list of phase.

• To get explanation from user.
• To develop system frame.
• To test system frame.

### 3.2 Project Methodology

Some popular technique or model of a SDLC is a Waterfall Model that has well-defined, linear stages of systems development and support. This technique or model has six different levels that are feasibility, analysis, design, build, implementation, and operation. But in multimedia aspect the right chosen development method is important in producing a good portal. For the project design, Multimedia Design Methodology (MDM) is used to develop portal, it contains a few levels that are called as phases. Refer figure 3.1

![Diagram of project methodology](image)

**Figure 3.1:** Multimedia Design Methodology