

SUNGAI ISAP SECONDARY SCHOOL MANAGEMENT WEBSITE

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**A report submitted in partial fulfilment
of the requirements for the award
of the degree of
Bachelor of Computer Science (Graphics & Multimedia Technology)**

**Faculty of Computer Systems & Software Engineering
University Malaysia Pahang**

MAY 2012

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ABSTRACT

Internet has become good medium that employs networks to allow people to introduce their organization to world. Proper information management can be expressed into official website of that organization. This project is conducted because Sungai Isap Secondary School does not have proper information management to view itself to the public. Proper information management is necessary to providing the public with useful information. This project investigate the efficiency of information management via website and analyses the usefulness of the website as the medium to manage information. The scope of this research is Sungai Isap Secondary School. The target users in this system are public, students, teachers, school administrators and government (Ministry of Education). The data are collected based on structured interview to users to identify their requirements of the proposed system. The questions focused on three aspects of the proposed website. These aspects are the website design, the content, functionality and usability. The advantage of the proposed system, to society is that the public can view proper information via the school website.

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ABSTRAK

Internet merupakan medium yang baik yang menggunakan rangkaian untuk memperkenalkan organisasi mereka kepada orang ramai. Pengurusan maklumat yang betul dan cekap boleh dilakukan melalui laman web rasmi sesebuah organisasi tersebut. Projek ini dijalankan kerana Sekolah Menengah Kebangsaan Sungai Isap kerana sekolah ini tidak mempunyai pengurusan maklumat yang betul untuk tatapan orang ramai. Pengurusan maklumat yang betul adalah penting kerana bagi menyediakan maklumat yang berguna kepada orang ramai. Projek ini bertujuan untuk menganalisis kecekapan pengurusan maklumat melalui laman web sebagai medium penyampai maklumat. Skop projek ini adalah Sekolah Menengah Sungai Isap. Sasaran pengguna adalah orang luar, cikgu, pentadbir sekolah dan juga kementerian pelajaran Malaysia. Data dikumpul berdasarkan temubual dengan cikgu untuk mengetahui keperluan cikgu dalam sistem yang dicadangkan. Terdapat tiga jenis soalan temubual iaitu laman web susunatur, kegunaan dan kebolegunaan. Projek ini menyumbang kepada masyarakat awam dimana mereka dapat melihat dan mengetahui pengurusan maklumat yang betul melalui laman web sekolah ini.

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CHAPTER 1

INTRODUCTION

1.1 Background

Information has become an important thing of an organization. Without the information of an organization, how the public can know about that organization. According to Wikipedia, Information management (IM) is the collection and management of information from one or more sources and the distribution of that information to one or more audiences. Management means the organization of and control over the structure, processing and delivery of information [1].

School information management is very important to public, staff, teachers and also government (Ministry of Education in Malaysia). They want to know all information about the schools because it is related to their own life. But the way to share or deliver the information of an organization must be relevant and suitable based on organization type. Information management encompasses people, process, and technology.

If the school does not have proper information management, the public cannot identify which information is right or wrong. Sometimes, the information based on talk is wrong because people can give wrong information, not from the organization. If the school has proper information management, the public can know the right information via the official website of that organization. Website is a medium that always used by the organization to deliver the information about their organization. By using this, it can introduce the school to public community.

For this project, Sungai Isap Secondary School at Kuantan does not have a proper website. So, this project aims to develop the school website to help achieve more efficient management. The public also can find the information they need about the school. The website can provide the community with a mean to contact the school and respond to their enquiries.

1.2 Problem Statement

A preliminary investigation has been carried out in the Sungai Isap Secondary School to find out the problems the school is facing now have shown that the school does not have an official website to view for the public to find information and service. Proper information management is necessary to avoid, the public misunderstanding. Besides, ICT world is how growing rapidly and most of the information's is provided online. Internet is the good medium with networking that always use by people to introduce their organization to world. Proper information management can be expressed into official website of that organization. Some of the student does not have skill to use internet because their parents are not highly educated. The student wants to review previous year's exam question to improve their knowledge and get more information about the level of exam papers, but they does not have access to exam paper in the existing system. The teachers can search for more efficient techniques of teaching via this website by providing a link to the website of the Ministry of Education in Malaysia. The school management would like to provide the public with the information about the services the school can provide to their students.

1.3 Objectives

The objectives are:

- i. To develop "Sungai Isap Secondary School Management Website".
- ii. To ensure efficient information management and services provided by the website to public, teachers, staff, students and also government.

1.4 Scope of study

The selected school is Sungai Isap Secondary School. This school is chosen because it does not have website to manage information about the school and make it available to public. To make the proper information management, we help the school to create a website to deliver the information about the school. The target users in this project are public, students, teachers, school administrators and government (Ministry of Education).The public can view this website to obtain any information they are interested in with easy way and short time.For the student it will be a good medium for learning something new related to their studies.

1.5 Thesis Organization

Chapter 1: Provides an introduction or background information of project to be developed. The statement of the problem, the objective of proposed project and also the scope are stated clearly in this chapter.

Chapter 2: Contains literature review of the project, the techniques used and the tools or software and related technology that can be used to solve the problems faced by the user.

Chapter 3: The methodology used implementing this proposed project with the techniques to collect data and interpret data obtained.So, the analysis of project development in terms of hardware requirements and software. Data analysis and procedures followed are described.

Chapter 4: The implementation and testing of the system. Implementation and testing of systems to review the flow chart for each process.

Chapter 5: The discussion about the project is discussed in this chapter. The advantages and disadvantage of the project also involved in this. It also provides conclusion about the overall project, followed by references and appendices

CHAPTER 2

LITERATURE REVIEW

In this chapter, we will discuss about the techniques used, software development methodology and development tools to develop the proposed school website. Besides, we will review the current or existing systems for school management website. These existing systems help us to identify and discuss the advantages and disadvantages of it and design our website.

2.1 Golden rules for Interface Design

The golden rules are guidelines for developer to develop the system in aspect of interface design. According to Yusof, R.R. Amin and et.al (2004) states that Shneiderman's Eight Golden Rules of interface design provided a summary of key principles of interface design[2]. First is strive for consistency in action sequences, layout, terminology and command use. Second, enable frequent users to use shortcut to make the actions more quickly. Third, offer information feedback for every user action. Fourth, design dialogs to yield closure so that the user knows when they have complemented a task. Fifth, offer error prevention and simple error handling mean if the user makes mistakes, they are given some instruction to recover it. Sixth, permit easy reversal of action means the user can always return from the previous state. Seventh, support internal locus of control means respond to the user action. The last one is reduce short term memory load by keeping displays simple, consolidating multiple page displays and providing time for learning action sequences.

2.2 Theory for website design

There are two factor theories for design website which are hygiene-motivational theory about workplace could be used in the web environment. Ping Zhang and et.al (2000) state that the presence of hygiene factors would provide the basic functionality of a website, while their absence would create user dissatisfaction [3]. Motivating factors are those that contribute to user satisfaction.

Theory	Explanations
Hygiene	<ul style="list-style-type: none"> i. Authorized/unauthorized use of the user's data for unanticipated purposes. ii. Authorized/unauthorized collection of user data. iii. Stability/instability of the website availability. iv. Effective/ineffective navigation aids. v. Clear/unclear directions for navigating the website. vi. Presence/absence of overview, table of contents, and/or summaries/headings. vii. Structure of information presentation is logical/illogical. viii. Presence/absence of improper materials. ix. Accurate/inaccurate information. x. Up-to-date/outdated information. xi. Content that supports/does not support the website's intended purpose.
Motivational	<ul style="list-style-type: none"> i. Importance/lack of importance of the surfing activity to the user. ii. High/low level of learned new knowledge and/or skills by doing the surfing activity on the website. iii. Presence/absence of use of humor. iv. Presence/absence of multimedia. v. Fun/no fun to explore. vi. Presence/absence of assurance that user entered data is encrypted. vii. Users can/cannot control how fast to go through the website. viii. Users can/cannot control complexity of mechanisms for accessing information. ix. Visually attractive/unattractive screen layout. x. Attractive/unattractive screen background and pattern. xi. Presence/absence of controversial materials. xii. Presence/absence of novel (new) information.

Table 2.1: hygiene-motivational theory

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2.3 Development Methodology

System development life cycle (SDLC) is the steps or process developing systems. The chosen method in this project is Rapid application Development (RAD).

2.3.1 Rapid application Development(RAD)

Rapid application Development (RAD) consists of four phases that are requirements planning, user design, construction and also cutover. It used to define user's requirements and to design the final system[5]. RAD is an approach to develop information systems that provide better and cheaper systems. The diagram of RAD is shown below. Planning and design phases are more focusing work on system function and user interface requirements. Later on, those requirements will be verified using prototyping, eventually to refine the data and process models. These steps then repeated iteratively.

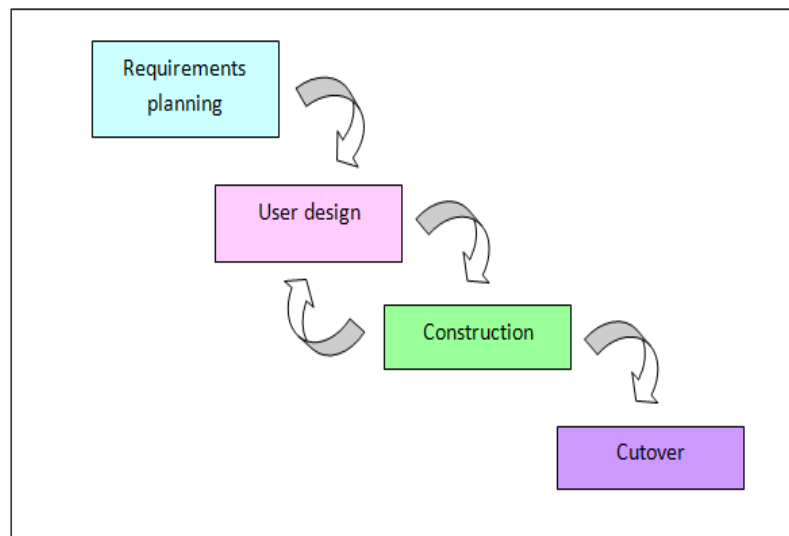


Figure 2.1: Rapid application Development Diagram

2.3.2 Interview Technique

A useful technique of eliciting requirement from the client is interview. Mostly, many interviewers prefer to use semi-structured interview during the interview session. Semi-structured interview method is most suitable because it is flexibility that no-pre defined agenda, allowing us to come out with new questions during the interview session [7]. Not only that, interviewee also feel to share anything that related to the conversation. To designing web based system, also use the semi-structured interview to identity the functional and interface requirement using give some screenshots of any current system. From that, the user can comment about the screenshot, the developer can identity aspect the user like and dislike about the interface as the interface requirements for the new system. It is efficient way to determine the interface requirements compared ask them directly.

2.4 Development Tools

The choice of tools to develop the website is very important thing that need the developer to think about correctly. There are many types of languages used in existing systems such as hypertext markup language (HTML), hypertext preprocessor (PHP), Java script and MySQL for the database. In this part, it will explain more details in below.

2.4.1 Hypertext Markup Language (HTML)

HTML is a computer language that is common use in the documents of website. Li Zhao and Si-Feng Du (2010) state that the developer can make the HTML file by using Dreamweaver software [10].It consists of the structure and template by using a variety of tags and attributes. The template is the initial page for making the layout and can regulate the whole layout style and positions of the page elements. Page element is the basic unit of the template. Every page element stands for a single function such as image element, news element, search element and navigation element.

The documents can generate the standard HTML page based on the user template and database. The user can customize HTML template to create own HTML files that can viewed

through a browser such as Mozilla Firefox , Internet Explorer and Goggle Chrome. The website can extract the database of the page and mapping of the database and store them. The data can be changed, edited and deleted in the database and finally is displayed to the users as HTML page into a visible form. For more understanding, it can be shown by given the system data flow of HTML.

There are some formatting and layout categories which are simple text and hyperlink, complex option lists, long simple option lists, complex text, multiple/single row and column table and complex, long text(Marcin Metter, Dr Robert Colomb,2000) [12]. For instance, three data types in simple text and hyperlink are images, informative text and hyperlinks. The images mean the interactive elements in providing the information. The informative text is provides the user with details about the application via the title given. The hyperlinks are providing the user with a set of answers that are selected by clicking on them in the easy and efficient ways.

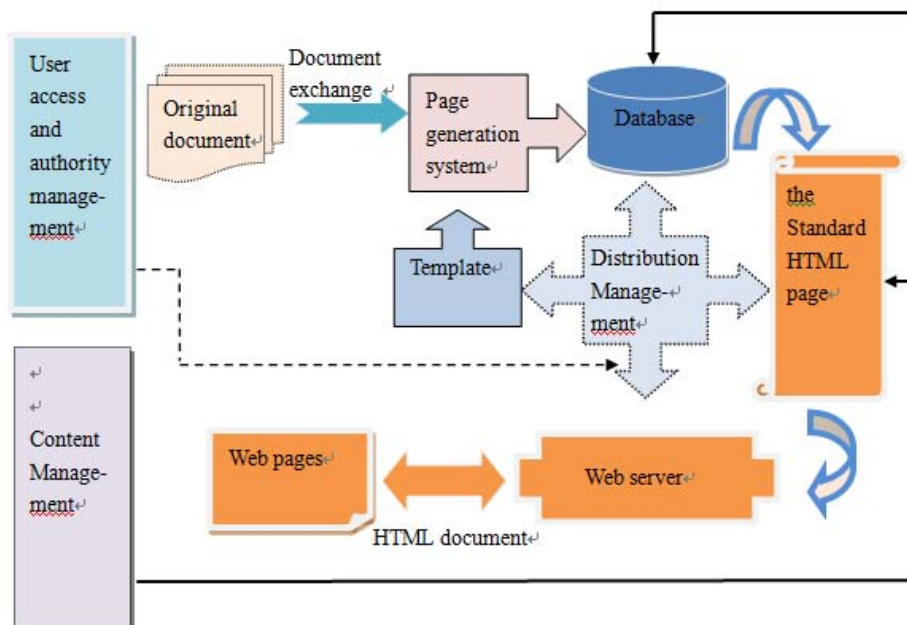


Figure 2.2: System dataflow of HTML

2.4.2 Hypertext Preprocessor (PHP)

PHP is used as an open source scripting language. PHP is used for web database applications because it supports a wide range of database and has tools that integrate the web and database environments[9]. The website will be developing using PHP and HTML. PHP scripts are implemented on the server side and the result is exported to do the user. The output from the PHP coding will be combined with HTML in the script and PHP code is interpreted and executed. The result server will process the PHP commands and send the results to the user web browser. The user also would not be able to know whether the web uses PHP in the scripting or not as all that can be seen is only HTML.

2.4.3 JavaScript

JavaScript is a client side or prototype-based scripting language. It is designed to add interactivity to HTML pages. The client-side JavaScript are implemented as part of a web browser to provide the dynamic website. JavaScript need to use together with HTML. JavaScript is a scripting language with a very simple syntax makes the HTML developer an easy programming tool[11]. JavaScript can react to events like when a user clicks on HTML elements. A JavaScript can read and change the content of an HTML element in the website. JavaScript can be used to create cookies by store and retrieve information on the visitor's computer. Not only that, JavaScript can be used to validate data and used to detect the visitors' browser. Validate data means to validate form data before it is submitted to a server. Detect the visitor's browser by load another page specifically designed for that browser.

2.4.4 Database

The meaning of database is the collection of data for more purpose usually in digital form. It could be managed, accessed and updated easily. Digital databases are managed using database management systems which store the databases contents allowing data

creation, maintenance, search and other access. Database is the part of the web application or website in the current world. Database based website have brought a revolution in the domain of information technology. The database is create of this website is SQL, and MySQL.

2.4.4.1 Structured Query Language (SQL)

From the Wikipedia, SQL is a programming language designed for managing data in relational database management systems (RDBMS)[14] .The school management website interact the database using SQL queries embedded in the code. The databases are of dynamic nature. The information in the database does not remain static. So, the previous operations will be effect on data during the testing phase. SQL contain variables and constant which intervene in the query. Queries are the process of retrieve the data based on specific criteria. This is the most important element of SQL. Queries allow the user to describe desired data, leaving the database management system (DBMS) responsible for planning, optimizing, and performing the physical operations. The most common operation in SQL is the query, which is performed with the declarative SELECT, UPDATE, DELETE and CREATE statement.

2.4.4.2 MySQL Database

MySQL is one of database creation. MySQL is fast and flexible enough to store storage. The data in MySQL is stored in database objects called table, is a collection of related data entries and it consists of columns and rows. Databases are useful when storing information categorically. MySQL is a freeware and its web interface can built easily. There are few advantages by using MySQL database are provide consistent fast performance, has high reliability, easy to use and save cost[14].

2.5 Existing System

To develop the school management website for Sungai Isap Secondary School, we need to look at some examples of existing systems as reference to guide us to develop our website. These existing systems can be used to create a new system that is related and more enhanced. School management website should offer or provide a large number of functionalities and present them with a simple, easy-to-use interface. Also, most importantly, the system must be user-friendly.

2.5.1 Tun Fatimah School Website (<http://www.stf.edu.my/v2/news.php>)

The first existing system that will be discussed is the Tun Fatimah School Website. It looks like good but it has some advantages and disadvantages. In this existing system, the homepage is good where it is provided by the menu bar on the top and left side and green backgrounds. The green color is the most suitable color for school management website as it means hope and perfect life. Green also is appealing and good for the eyes especially if we use it for long time.

The announcement board is provided on the top of this website after the menu navigation. It is a good place to put the announcement board because it can make the user or visitors alert about the announcement [2]. For example, it provides the date of final examination for each level, especially Form 1, Form 2, and Form 4. It also provides the link that enables the student to download the time table for final examination. From that, the student can start to make revision which subject should be studied and focus first.

The disadvantage from this existing system is the size of texts is so small. Maybe it is difficult to review this website for the elder person from us like the parents or the students/visitors who have eye problems can see the small text without their glasses. It should provide the icon of size text that can be selected by the users. This is all for the comfort of user to review this website.

The other disadvantage is the layout of this website look crowded. That is because the admin wants to share all the information about this school. It is fully with text or words in the layout of the website. This makes visitors to get bored when viewing this website. Not having the interactive element in this website. Purposely, this website can share all the information about this school but need to put the sub menu from the main menu to avoid the crowded looking.



Figure 2.3: The position of announcement board in this Sekolah Tun Fatimah website.



Figure 2.4: The image of size texts in this website.

2.5.2 King Edward VII School Website (<http://www.smkevii.edu.my/>)

The second existing system will be discuss is King Edward Secondary School website. The advantages in this school website is modern style which is provide the interactive element is the slide about the school shown in this website. Even the slide of pictures is only three pieces can show the interactive element in this website. Besides, it also provides the next or previous button to move a picture to another picture with can control by the user.

The most attractive part in this website is the teacher or staff can apply take leave from work by click at the link are provided. In this link, it showed the steps or method how they want to apply to take leave with latest information and correctness. Some of website does not provided the link or step how the staff or teacher want apply to take leave, just for using the manual steps which are they need to go the office and fill the form. After that, they need to wait the approval status from their application.

The first disadvantage that can be detected is the layout to review the whole website is too long. The user need to scroll the mouse button to view what the information are sharing in this website. After that, they also need to scroll upward to view again the information on the top of the website. It needs to provide the top button or icon at the last/bottom website view. It can make easy for the user to review this website again.

Next, the school website lists all the videos from this school. Maybe the admin do not to list all the videos because it can take the space of website to look the layout is long. The alternative way is the for the videos gallery need to place at the menu and the list of all videos are places at the sub menus.



Figure 2.5: The slide show that has the next and previous button act as one of interactive elements

Galeri Video

- ★ 4 April 2011 - Video SekolahKu Hebat Di Astro Ceria
- ★ 25 Mac 2011 - Video Kejohanan Balapan Dan Padang LMS
- ★ 21 Mac 2011 - Video Ucapan Sulung Pengetua Tn Hj Abdul Rahsib b Husain
- ★ 11 Mac 2011 - Video Profil En Abdul Wahid Nuruddin (Pengetua)
- ★ 9 Mac 2011 - Video Persaraan Cikgu Boo Yuk Choy
- ★ 16 Februari 2011 - Sambutan Maulidurrasul
- ★ 21 Mac 08 - Sambutan Maulidurrasul
- ★ 12 April 2008 Majlisi Anugerah Cemerlang 2008
- ★ 12 Mei 2008 - KEVI's School Dalam Kenangan
- ★ 16 Mei 2008 - Sambutan Hari Guru
- ★ Breakfast Show NTV7 - 25 July 2008
- ★ Perarakan Sambutan 125 Tahun
- ★ Galeri Perdana (14 dan 15 Oktober 2008) - SMK Kng Edward VII


 [list of all videos](#)

Figure 2.6: The list of all videos makes the layout become so long