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JUDUL: REDANG ISLAND WEBSITE

SESI PENGAJIAN: 2003/ 2005

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REDANG ISLAND WEBSITE

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA**

2005

DECLARATION

I hereby declare that this project report entitled

REDANG ISLAND WEBSITE

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

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ABSTRACT

Project that will develop for PSM is a Redang Island website. This project is web-based project that provides information about Redang Island and marine life form in the reef area. There are seven modules in the website which is Redang Island, Marine Life, Marine Park, Activities, Resorts, Gallery and Transportation. Redang Island modules will provide information about location of Redang Island, history, population and legendary of Redang Island. This module also will link the user with the extra function added to this web page which is 3D animation. Marine Life modules contain three sub-menus, which is Reef Fishes, Turtles and Dangerous Species. Information about type of fishes, turtle and coral that live in the area of Redang Island will be given in this module. Activities module contains two sub-menus which is Snorkel and Dive. This module gives information about snorkel and dive sites at Redang Island. Module for Gallery gives opportunity for user to view image of the Redang Island. Resorts modules will give list of general information resorts in Redang Island. While transportation modules will give information about transportation that can be used to get to Redang Island.

ABSTRAK

Projek yang akan dibina untuk PSM ialah 'Redang Island Website'. Projek ini adalah berdasarkan laman web yang mengandungi penerangan mengenai Pulau Redang dan kehidupan laut di sekitar kawasan karang laut di Pulau Redang. Terdapat tujuh modul utama di dalam laman web ini iaitu 'Redang Island', 'Marine Life', 'Marine Park', 'Activities', 'Resorts', 'Gallery' dan 'Transportation'. Modul 'Redang Island' mengandungi penerangan mengenai lokasi Pulau redang, sejarah, kependudukan dan juga legenda Pulau Redang. Modul ini juga mempunyai fungsi tambahan iaitu dapat memaparkan 3D animasi Pulau Redang. Modul 'Marine Life' mengandungi tiga sub-menu iaitu 'Reef Fishes', 'Turtles' dan 'Dangerous Species'. Maklumat mengenai jenis ikan, penyu dan karang laut terkandung dalam modul ini. Modul 'Activities' mengandungi dua sub menu iaitu 'Snorkel' dan 'Dive'. Maklumat mengenai kawasan 'snorkel' dan juga 'dive' boleh diperolehi di dalam modul ini. Pelawat dapat melihat paparan imej Pulau Redang melalui sub-menu 'Gallery'. Modul 'Resort' memberi maklumat mengenai senarai pusat peranakan yg terdapat di Pulau Redang. Modul 'Transportation' mengandungi maklumat pengangkutan yg boleh digunakan oleh pengunjung untuk ke Pulau Redang.

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
3D	Three dimensions
Html	hyper text markup language
PSM	Projek Sarjana Muda
CD	Compact Disc
MPEG	Moving Pictures Experts Group
AVI	Audio Video Interleaved
GIF	Graphic Interchange Format

CHAPTER I

INTRODUCTION

1.1 Project Background

Redang Island website is a project that will be developed for *Projek Sarjana Muda (PSM)*. This project is web-based project that provides information about Redang Island and marine life form in the reef area. Beside that, this project also will give a lot of information about geography of Redang Island, history, population, activities at Redang Island, resorts information and also transportation to go to Redang Island. Redang Island was choose as the specified place because it is well known among the divers as one of the best diving place in the world and it is recognize as a marine park in Malaysia. Redang Island has been established as a first marine park in Malaysia.

Elements of multimedia were included in this project. 3D animations of Redang Island can be viewed in one of the menu in the website, visitor can view Redang Island in 3D animation map in this website. Other than that, the website also contains animation that will be used in the banner and other contents. Project that will be developed is an interactive and attractive website that contained compact information about Redang Island and its marine life. The website is going to be a user friendly website for the ease of user.

1.2 Problem Statement

Several methods are use in presenting information to the public about Redang Island. Brochures and CD title is a usual methods that were used in presenting information about Redang Island. These methods give a lot of information generally but cannot interact with the user and it is also limited. There are a lot of website that provide information about Redang Island. Current website for Redang Island is not attractive and interactive. It is only a plain website that gives information and display images of Redang Island. Project that will be developed will stress on interactive and attractive website. The website will include 3D animation and animation to make it more interactive. The website also will emphasize on the content of the website. Content deliver in the website will include compact and clear information about Redang Island.

1.3 Objective

In this project, there are a few objectives that should be achieved to deliver a quality product. The objectives are:

- **Provide information about Redang Island**

The website will provide information about Redang Island. History, population and the legendary of Redang Island will also include in the website. Information for location of Redang Island and transportation that can be used to get to Pulau Redang is described in the website.

- **Provide marine life information at Pulau Redang, Terengganu.**

The website also will provide information about the marine life form. All sorts of fish and reef species can be viewed via this website.

- **Promote tourism at Redang Island, Terengganu.**

The website can be used to promote and introduce Pulau Redang as a diver and snorkel destination. The natural beauty of this island also can attract more tourist and diving lovers.

- **Provide an interactive environment in delivering contents to the user.**

The website will provide interactive environment to the user. 3D animations and animations will be included in the website.

1.4 Scopes

The project that will be developed is a web-based project. End product of the project is a Redang Island website. The website did not have any specific user, it is generally for public. Visitor for the website can be among the tourist, diving enthusiast and marine life lovers.

Minimum requirement that are required for the website are:

- Personal Computer :
 - 256 MB of RAM
 - Pentium III 500 Mhz
 - 16Bit Direct sound compatible soundcard
 - 4MB Video Card
 - 8x CD-ROM
- Software :
 - Flash Player- Plug in
- Operating System :
 - Microsoft Windows XP

This project will use an interactive and attractive approach to the user. Information about the marine life at the diver site at Redang Island can be gathered through this product. Technology that will be used in developing this product is a

multimedia technology. Elements of the multimedia will be applied in developing a good website.

1.5 Project Significance

This project will give benefit to the tourism at Redang Island, Terengganu. Via this website, tourist can get more information about Redang Island. The website is also beneficial to the public, public can learn more and get information about marine life in the reef area. Fish and reef species can be learned in an interactive and attractive environment. Concepts that are used in this product are interactive and attractive to the user. Multimedia elements will be applied in the website to create more interactive environment for user.

1.6 Expected Output

Product that will produce from the project is a web-based which is a Redang Island website. The website will include a lot of information about Redang Island such as its geography location, history, population and resorts at Redang Island. Redang Island is famous to diving enthusiast for its diving destination. The website will provide information about diving site, snorkel site and marine life that exist in Redang Island sea area. Information about marine life especially types of fishes and reef species is included. 3D animation of Redang Island map also will be included; visitor can view the Redang Island map in this website.

1.7 Conclusion

The project will produce interactive and attractive website to the user. Approach that will be used in this project, will gained interest of the user to visit Redang Island. Problem statements for the project are recognized to have a better view on the development of the project. Objectives of the project also were defined to achieve and deliver a quality product. Scopes of the project also were recognized. It is important to identify user and minimum requirement for the project. This product can be use as one of the promoting way to promote Redang Island. The website will give a new breath for Redang Island website in delivering contents and new environments to user.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Literature review and project methodology related to this subject area were presents in this chapter. Studies about the project methodologies and the approaches that will be use in developing this project were identified. Case studies were done extensively to clearly understand the related literature reviews for the subject propose. Developing a website for Redang Island require an investigation research for the Redang Island itself. Research about the geographic location, population, history and also legendary of Redang Island has been done. Beside that, marine life which include coral, turtles and fish that live at the surrounding of sea at Pulau Redang were identified.

Method of developing the website also was included in the literature review. Research that has been done is to identify the weaknesses and the advantages of a good web design. Therefore, developer can take acknowledge and learn and choose the right method in developing the website. Research about 3D animation also was done in this chapter. 3D animation is an additional module that will be include in the website. ADDIE model is used as a project methodology to develop the project. This is because ADDIE model are applicable with the project that will be develop.

2.2 Fact and finding

Research has been done to ensure that the project will satisfy the requirement of *Projek Sarjana Muda (PSM)* and also to gather information and analyze it in purpose to implement this project. Topics of research that has been done are:

2.2.1 Web Page Design

- **Browser Grid**

In designing web page, it is important to choose a width and height that are suitable for the user view. On a Windows PC, the browser window will make use of the full width of the screen by default. On a Macintosh, it will usually be slightly narrower so as not to hide the row of icons down the right hand side of the screen. With the growing popularity of larger screens - 800 x 600, 1024 x 768 and more, oversized web pages can, and do, become unreadable on smaller monitors. The graphics, which are a fixed size, can be too wide to fit and the text just word wraps to the browser's width making ridiculously long, unreadable lines.

For the lowest common denominator, cross-platform web page, design should be to a minimum width of the Macintosh default of around 470 pixels and a maximum of 625 wide to accommodate people who have standard 14" VGA monitors. The majority of surfers now have 800 x 600 or larger monitors. Even at the larger sizes, it is desirable from a 'readability' point of view, to limit the text line width to 8-10 words.

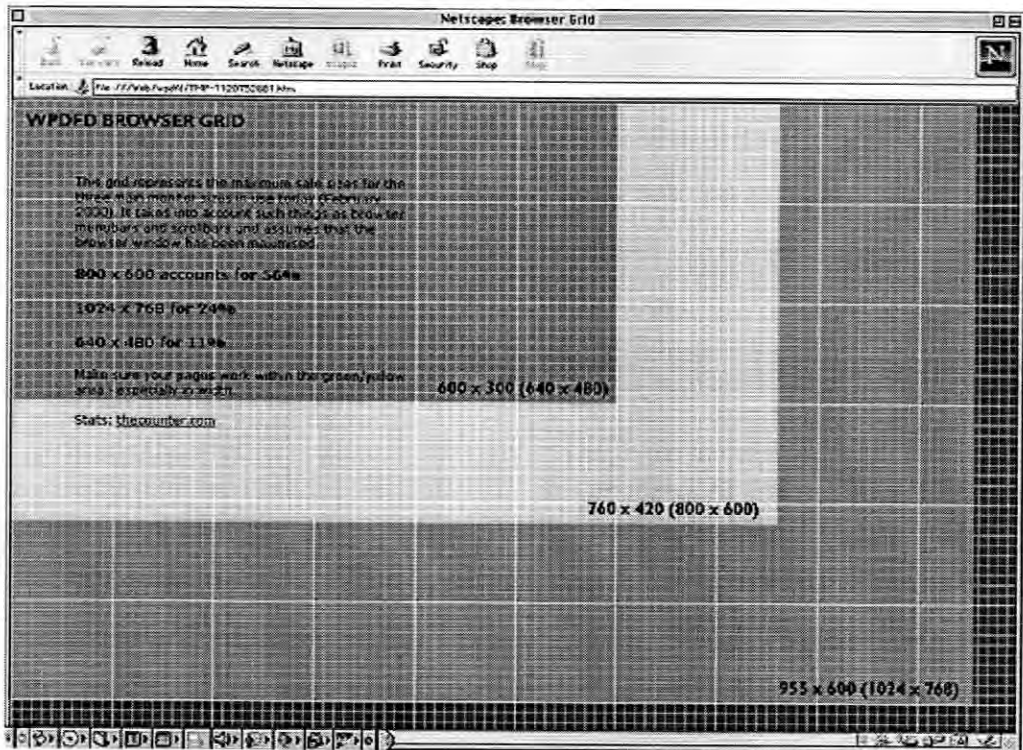


Figure 2.1: Maximum safe sizes for the three main monitor sizes

This grid represents the maximum safe sizes for the three main monitor sizes in use today (June 2001). It takes into account such things as browser menubars and scrollbars and assumes that the browser window has been maximised.

- 800 x 600 accounts for 51%
- 1024 x 768 for 35%
- 640 x 480 for 6%

This browser grid shows the 'safe areas' for different screen sizes. This takes into account the 'dead' areas populated by menu and button bars at the top and bottom of the screen and by scroll bars at the sides. <http://www.wpdfd.com/wpdtdame.htm> [Access on 2 April 2005]

- **Color Fidelity and Gamma**

Color fidelity is a major factor influencing how web pages look, especially if they are graphically intensive. The color swatches on the left are 10% steps of red, green, blue and grey. Ideally, they are not different but this very much depends on monitor's brightness, contrast and gamma settings. If your monitor is too bright, the black will not be a true black and if it is too dark, the white will not be pure. Contrast is not high enough if both can not be seen.

Monitor's gamma setting plays important rules because the gamma controls the brightness of midrange tones. The 50% grey should be visually half way between the white and black and there should be even steps of tone going to white on one side and to black on the other. Monitors don't behave the same way as the human eye, and on an uncorrected monitor the steps will not look even. Monitors on PCs are designed for non color critical office work.

Macintosh computers have built-in gamma correction but this errs in the other direction, it is intended to simulate the result of a printed page more closely. The consequence of all this is that graphics that look OK on a PC monitor, will look pale and insipid on a Mac monitor and what looks correct on a Mac will be visibly too dark on a PC. So, any GIF or JPEG image that you create should be produced, and look correct, at an intermediate gamma setting of 2.2 - this is the standard recommended by the W3C, and is the same gamma used for broadcast television. Although it is very easy to switch to a gamma of 2.2 on a Mac through the Monitors and Sound control panel, PCs don't usually have any such facility except for some of the more expensive video cards.

As gamma correction is non-linear in nature, and applied to the Red, Green and Blue components separately, it not only affects tone, but colour too. Across the range of possible RGB values, the relative intensity of each colour will differ as the gamma changes. On a Mac, the jump from the second darkest colour to black can be too severe. On a PC, there may not be enough differentiation between the darker tones. Macintosh

default gamma is 1.8, Television and Web gamma is 2.2 while Uncorrected PC gamma is 2.5. <http://www.wpdfd.com/wpdtame.htm> [Access 2 April 2005]

- **Typography**

Good typography is just as important on a web page as it is in any other medium. The fact that it appears on a computer screen and not on a piece of paper is immaterial, it should still be pleasing to look at and easy to read. Designing for a computer screen has its own set of problems. Add to these the elastic nature of a web page, which has to work across different computer platforms and screen sizes, and the problems get even worse. It is the designer's job to understand these issues and to address them - to maintain some kind of control when everything else is shifting. The first problem is that the line lengths get too long. In print, there is a relationship between the length of a line and the 'leading' - the space between lines.

If the line is too long, and the leading too tight, it is difficult to read from the end of one line to the beginning of the next - lines will be read twice - or skipped. A typist can use one and a half or double spacing to alleviate this problem, but a web page designer has no such luxury. There is no concept of 'leading' in HTML, but there is in Cascading Style Sheets, covered on the next page. Space between lines can be control easily with regular HTML. Restricting line widths with the BlockQuote feature to give wider left hand margins will help and tables can use to split text into narrower columns. The other way to regain control is to dispense with the default 'soft' word wrap feature and put in 'hard'
 (break) characters.

This allows to keep lines short - and to control the typographic shape of the right- ragged edge, a lot of horizontal space are need to compensate for the fact that the type could be larger on someone else's monitor. The HTML specifications allow for a hierarchy of headline sizes. These sizes are relative rather than absolute and are displayed in a bold typeface. There are typefaces which are designed especially for the screen and those that are produced by calculations from a basic font description. The

traditional techniques of using 'Color', in typography, refer to the perceived typographic 'color' that are not very useful in relative grayness of black and white type web page layouts because of the on a web page, real color lack of fonts and type weights available to achieve similar separation and contrast.

Designer has considered each individual character at a pixel level and optimised the character shapes to work within the constraints of a grid with a 'screen font'. Fonts will be designed in a range of specific font sizes 8, 9, 10, 12, 14 etc. Specifying a size that is not a 'designed' font size ie. 11 or 13 point, will generate a 'calculated' font which visually approximates the chosen size but loses all the design's subtleties.

In producing a screen version of a traditional printer font, like Helvetica or Times, the designer has to keep as true as possible to the original design.

Bold fonts are often calculated fonts based on an algorithm that adds extra pixels around the edge of a 'designed' roman font. When there is a combination of an 'undesigned' font size and the 'bolding' algorithm it will effect the web page typography. It's not just the character shapes that suffer, the tracking and kerning goes too. Italic fonts are best avoided. They are completely at odds with the constraints of a square pixel grid and will almost always look awful, but especially so at small sizes.

Many people use graphics for headlines. These can be created in Photoshop or other graphics packages, saved as GIF files and will generally look better than the indigenous type and give a lot more scope for individuality. They do take longer to download though, and there is the possibility that the user has switched off, or can't display, graphics. It is especially important to make use of the 'ALT' tag for graphics that contain text so that the headline message is not lost altogether.

<http://www.wpdfd.com/wpdtype.htm> [Access 2 April 2005]

- **Graphics and Colors**

With all the browser software producers trying to outdo one another in terms of features and functionality, it is not surprising that deviations from the 'standard' HTML,