Vietnam Tourism Promoting Web-site

By

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Abstract

The Vietnam tourism web-site is a dynamic webpage which is designed to provide foreigners a better look at the country, the people, and culture of Vietnam. For best accessibility the web-site is hosted on a dedicated server and can be easily viewed with a standard internet connection. A series of administrative pages allow an administrator to control the content of the site. The primary goal of the web-site is to increase tourism to the country by allowing users to get a broad and current view of it.

1. Description and Intended Use

1.1 Statement of Problem

In the early 1990s, with the collapse of the USSR, at the end of the Cold War, economic aid to Vietnam from the Eastern world was cut dramatically. Vietnam was put into a position where it had to change its international policies. For the last fifteen years, with a more open border, tourists from all over the world have been coming to Vietnam, making tourism the country's fastest growing industry.

Although having an impressive growth rate (approximately 20%/year), the tourism industry could not reach its full potential. In contrast, neighboring countries in the South East Asia region like Thailand, Malaysia, and Singapore are all high-volume tourist attractions. It can be very useful and rather important for travelers to gather information before starting a trip. For most people nowadays, using the internet is the best means to acquire this information. While doing research for this project, the top Vietnamese tourism related web-sites (including the official one which is maintained by the government) proved to be poorly designed. In these designs, users find themselves overwhelmed with textural content and they find it difficult to locate the information that they are seeking. Moreover, information is sometimes not easy to understand particularly when it is in Vietnamese. (See Figure 1. page 2)

Web site	Drawback
http://www.dulichvietnam.com	Vietnamese language website name
http://www.vietnamopentour.com/	Full of textual content
http://www.vietnamtourism.gov.vn/	Official web-site, the English page has no useful information for travelers

Figure 1. Researched Web-sites

1.2 Solution of the Problem

The top design priority for developing the web-site is to keep the organization of the site as simple as possible. Information (texts and pictures) is categorized into a few major sections such as: cities, tourist attraction points, tourism news, photo gallery, etc. The user should be able to move between sections by selecting them from the menu without having to go back to the main page.

This web-site, using PHP technology, backed by a MySQL database, will work well with many standard web browsers including both Internet Explorer and Mozilla Firefox.

Some of the key concerns:

- **Consistency**: The outlook of the web-site must be consistent. This is critical for new users to navigate around without confusion.

- **Navigational Tools:** The side bar on top of the control panel on the left contains the most used options such as *browse photo gallery*, *access maps*, and *check news*.

- **Maintainability:** The web-site is written in PHP. The pages derive their content from the database back-end. A series of administrative web-pages will be built in order to update the MySQL database. The goal is that anyone with basic computer skills can maintain the web-site without having to know what goes on in the background.

2. User Profiles

2.1 Web User

The web user is the key user of this web-site. He or she accesses the web-site for information on Vietnamese tourism (this includes: news, pictures, maps, etc.)

2.2 Web Administrator

The web administrator is the user whose job is to update the information on the site.

3. Design Protocols

3.1 Deliverables

The deliverables for the project will include:

- A robust, user friendly, dynamic web-site running on a MySQL 3.0.x.x back-end database
- A gallery which will be displayed inside the main page
- Web site users will be able to get the following information
    - Tourism news
    - Details of cities
    - Maps and scenery images
    - Weather information for certain cities
- The Web-site administrator will be able to update information for the site

3.2 Color Scheme

This web-site uses a master style sheet which ensures that the entire site follows the same outline and color scheme. In the main menu bar, which is found on all pages, white text is used for a clean accent to the light green background. For normal text, black is used on a white background.

4. Design Details

4.1 Timeline

The project requires time as well as effort because it has considerable research criteria a challenging new programming language, multiple testing phases, and documentations. The first quarter of senior design was spent to gain knowledge of similar web-sites (See Figure 2.)

The second quarter of senior design was focused on implementing the database, gathering information on general topics (cities, sights), scanning and altering images, developing PHP pages, and documenting the findings.

Finally, the third quarter of senior design includes testing, considering reviews by testers, and finalizing the written parts of the documentation. The following timeline contains a schedule of specific tasks in a timely manner:

Task	Time	Status
Senior Design I		
Research	5/22/2005 – 5/25/2005	Completed
Write proposal	6/12/2005 – 6/20/2005	Completed
Present proposal	6/28/2005	Completed
Senior Design II		
Develop test database	8/1/2006 – 8/3/2006	Completed
Develop admin pages	8/3/2006 – 8/20/2006	Completed
Develop prototype	9/1/2006 – 3/12/2007	Completed
Refine	3/12/2007 – 3/20/2007	Completed
Testing complete	4/1/2007	Completed
Write design freeze	4/20/2007 – 5/10/2007	Completed
Present prototype	5/24/2007	Completed
Senior Design III		
Prepare final report	6/4/2007 – 6/5/2007	Completed
Complete final project	6/5/2007 – 6/10/2007	Completed
Present completed project	7/12/2007	Completed

Figure 2. Schedule Details

4.2 Budget

The budget is shown in the table below:

Item	Cost	Status
Development Budget		
Macromedia Dreamweaver MX 2004	$249.95	Provided
Adobe Photoshop CS	165.00	Provided
Microsoft Office Suit	11.95	Purchased
Navicat	139.00	Provided
Windows Movie Maker (comes with Windows)	0.00	Provided
Nero CD burner 6	59.99	Purchased
Total	$628.89	
Production Budget		
Web hosting/database server	$9.95/month	Purchased

Figure 3. Budget Details

4.3 Software requirements

- **Macromedia Dreamweaver MX 2004**

  This Macromedia software package is commonly used in web development. Code is automatically generated for design-related tasks such as drawing tables, inserting images, and aligning text. The tool increases productivity. Dreamweaver allows web-site developers to work locally and publish the completed code to the web server.

- **Adobe Photoshop CS**

  This is a powerful image editing software. Images scanned for the site might require touching up before being uploaded to the web server.

- **Windows Movie Maker**

The software comes with basic installation of Windows. It is easy to use and should be enough to edit the videos for the site.

- **Navicat**

Navicat is recognized as the Most Popular MySQL front end for local or remote MySQL database administration and development. Navicat has been used by database users from Intel, Toshiba, Boeing, Ford Motor, General Electric etc. This is the tool of choice for creating and maintaining the web-site's database.

4.4 Hardware Requirements

4.4.1 Coding Machine Configuration

- **Processor**: Pentium IV 2.8 GHz
- **RAM**: 512MB SDRAM
- **Graphic card**: NVIDA GeForce FX Go5600 64MB RAM
- **Hard Drive**: 60 GB
- **DVD/CD burner**.

4.4.2 Server

A web-site was purchased from Netfirms. This hosting service provider has a very fast and reliable connection. They offer 250GB of disk space, support PHP hosting, and provide backup service. MySQL also comes with the package. This met all of the design needs of the web-site.

5. Technical Elements

5.1 PHP

PHP (hypertext processor) is a key element of this project. PHP is an open source, server-side HTML scripting language used to create dynamic Web pages. PHP is embedded within markup tags, so the web developer can move between HTML and PHP instead of using large amounts of code. PHP code is interpreted and executed on the server with users seeing the resulting output from the scripts. PHP is compatible with many different types of databases.

5.2 MySQL

This project is backed by a MySQL database. With over six million active installations worldwide,MySQL is being recognized as world's most popular open source database. MySQL appears in many large organizations, including Apple, Amazon.com, Google, and Yahoo! due to its commercial benefit and reliability.

5.3 AJAX

AJAX (Asynchronous JavaScript and XML) is a term which refers to the use of a group of technologies. AJAX is a web development technique in which a small amount of data can be exchanged between the server and the client without requiring that the entire web-page be reloaded which makes the webpage more interactive and responsive. .

6. Proof of Design

This section explains how each of the deliverables was met and if any problems occurred in the development and implementation of the project.

The system is comprised of three major components that needed to be developed, implemented and integrated: the database, the web-site and the administrative pages for updating the information.

6.1 Web Page Layout

This section will give a general look at the web-site, how it works, and what functionalities it provides.

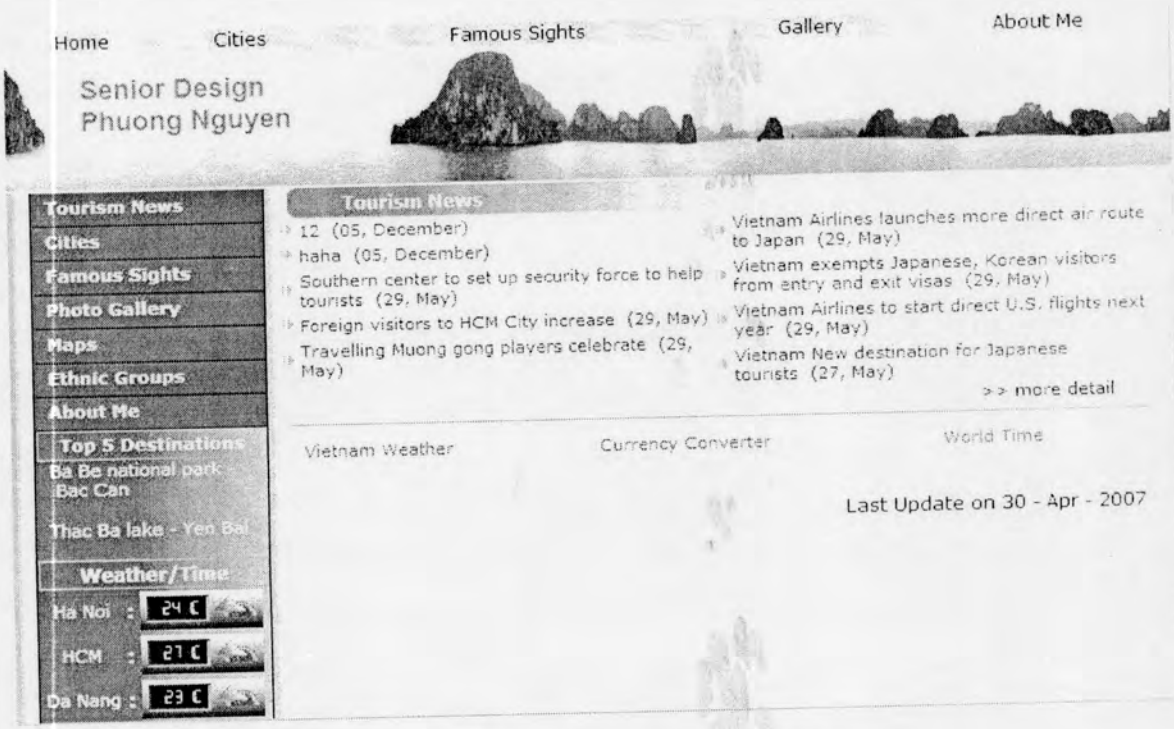


Figure 4. Display of the main pane

This is what the users will see when they first visit the web-site. At the top of the page there is a group of most frequently used options which are placed here for the viewers' convenience and which include *Home, Cities, Famous Sites, Gallery,* and *About Me.*. A panel on the left gives the user several options including the five most popular destinations and the weather and time of several major cities. The time and weather icons are a web service from wunderground.com. The main content area of the page is the news

pane. If the user clicks on any of the links within the pane, AJAX will refresh the content of the pane and display the selected news item in full detail.

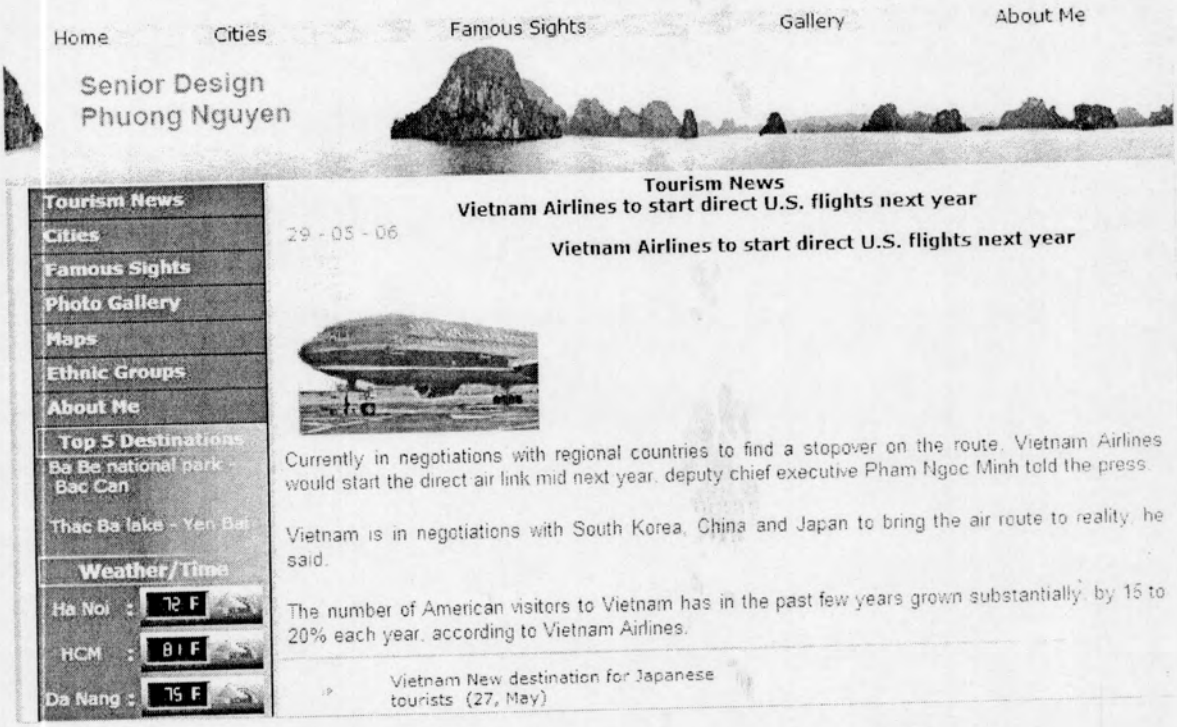


Figure 5. Main content pane with the news item displayed

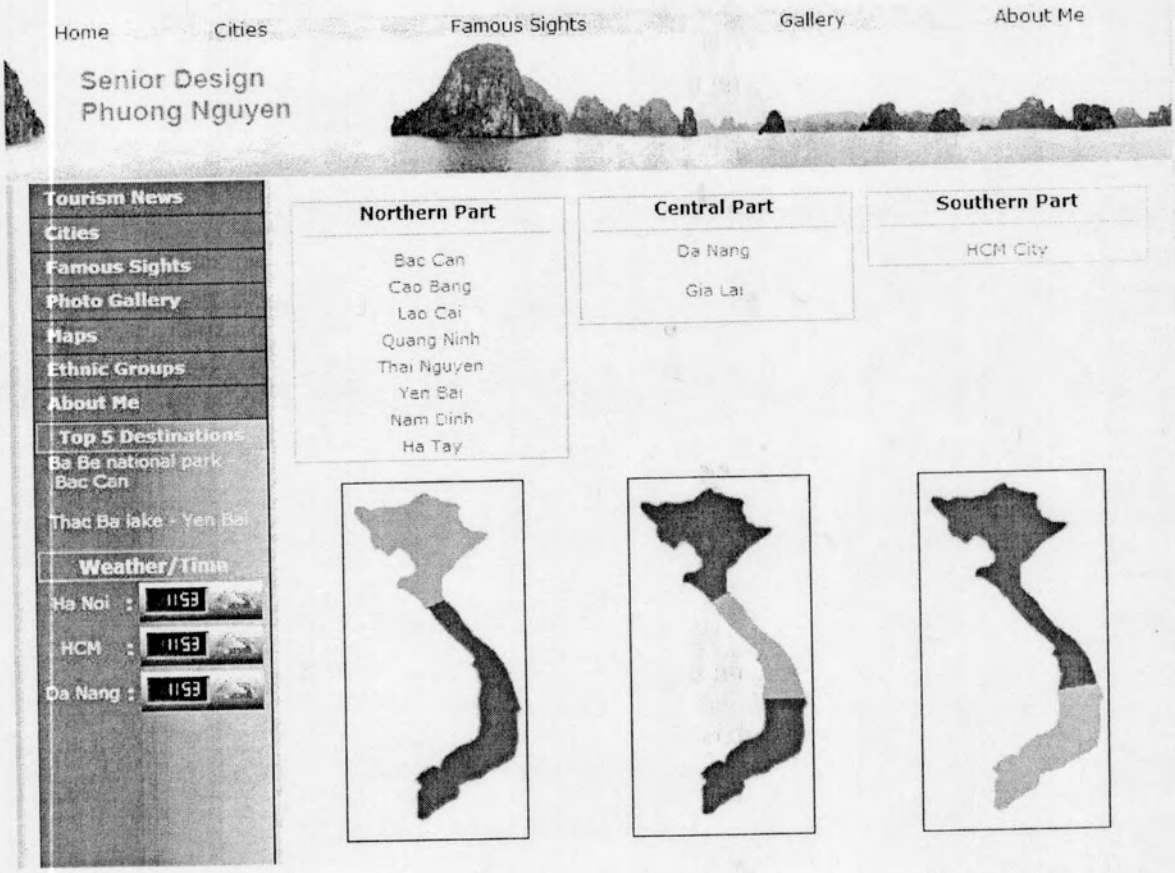


Figure 6. Cities link in main content pane

When the user clicks on the cities link, the main content pane will be replaced with the cities.php script. Cities.php contains a number of Vietnamese cities cataloged into three groups: Northern, Central, and Southern.

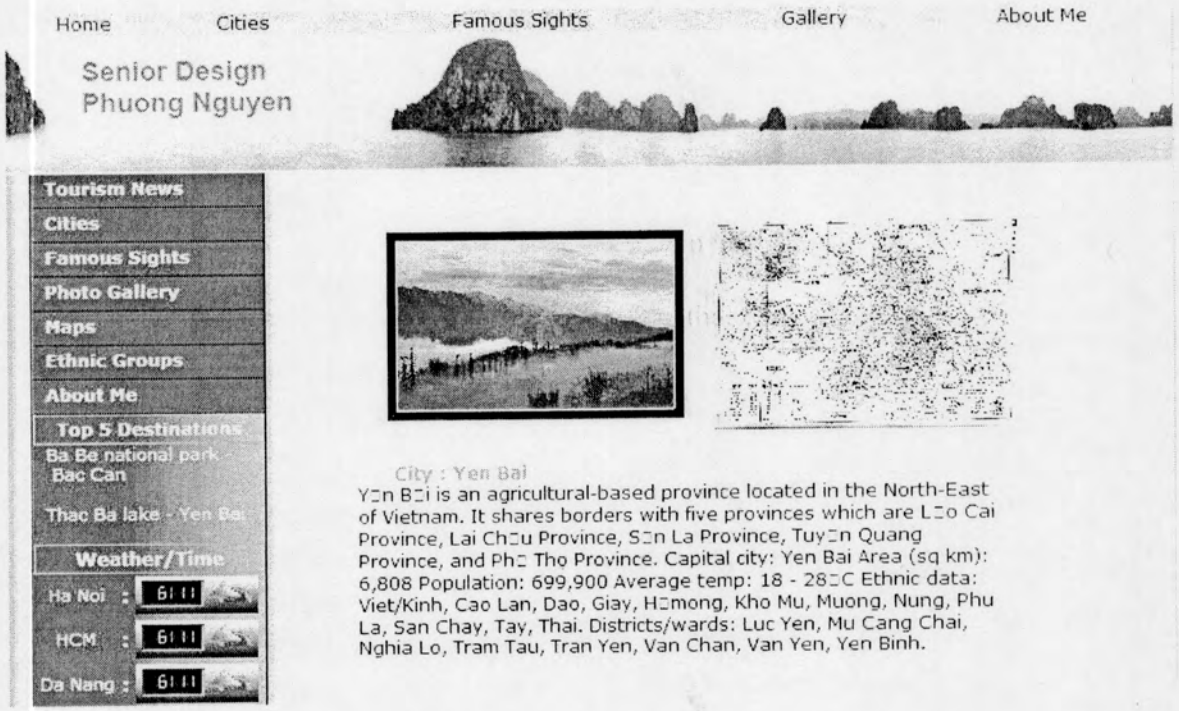


Figure 7: Detail of a city displayed in the main content pane

If the user wishes to view a particular city, a new page will be loaded into the main content pane by AJAX with a small picture of that city on the left, a map on the right, and detailed description is aligned underneath.

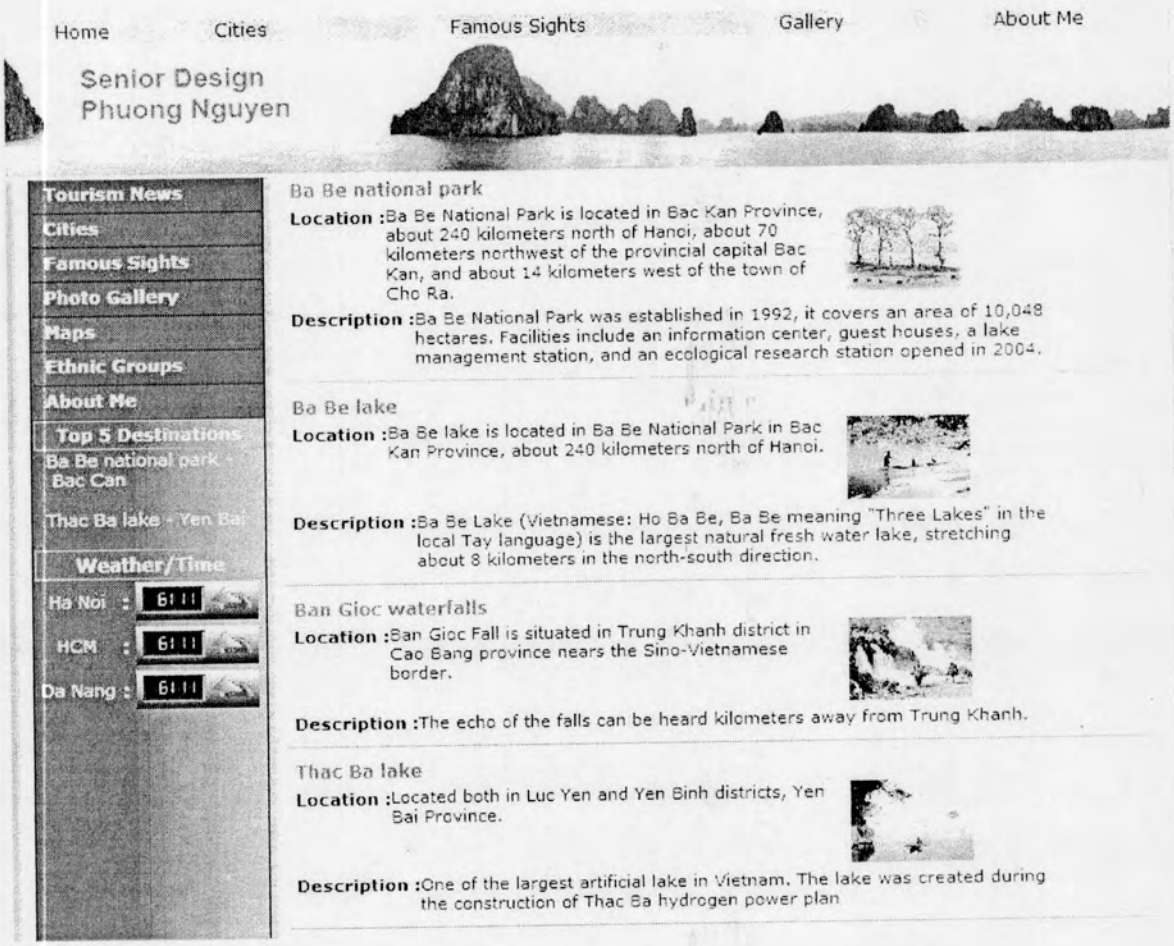


Figure 8. List of sights in the main content pane

The next link, *Famous Sights* loads the output of the sight.php script into the main content pane. The page is divided into sections separated by a gray line. Each section contains the name, location, and a brief description of one selected tourist attraction.

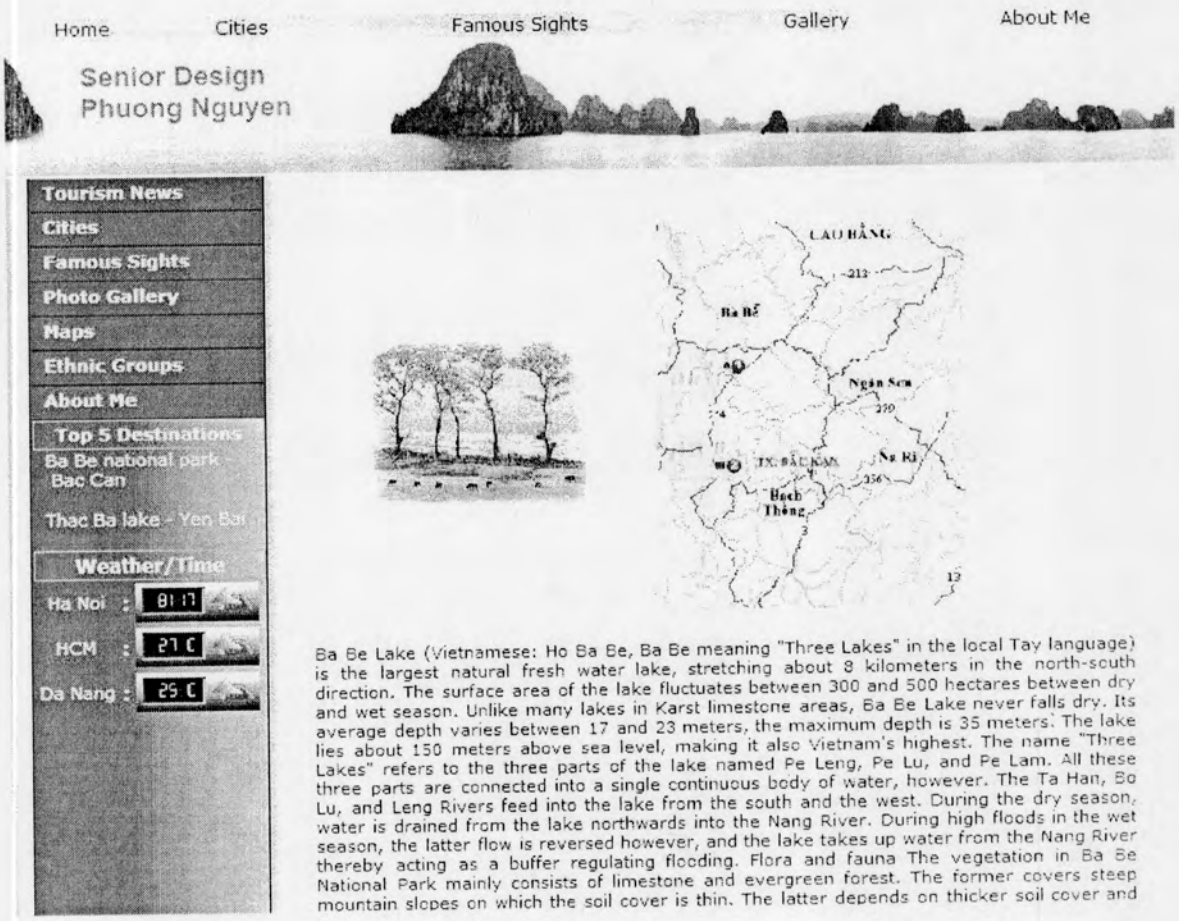


Figure 9. Detail of a sight displayed in the main content pane

Figure 9. illustrates a *Favorite Sight* in detail with a small picture on the left, a map of the location on the right and a descriptive information text section placed at the bottom. Clicking on the list of top five destinations is the quick way to access this page.

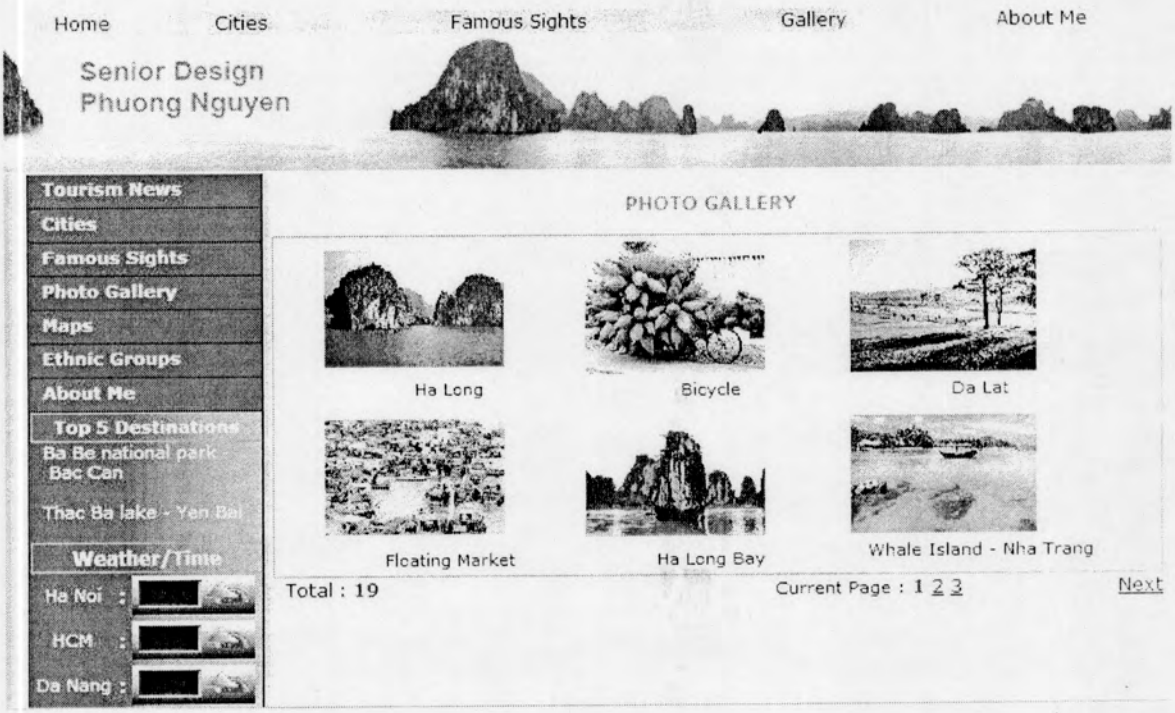


Figure 10. Web-site's photo gallery

The *Photo Gallery* link loads the gallery page into the main content pane. This page might well be considered the most important page of the web-site. When the user clicks on a gallery image, a new window will pop up and display the full size version of the selected image. (See Figure 11. page 15)

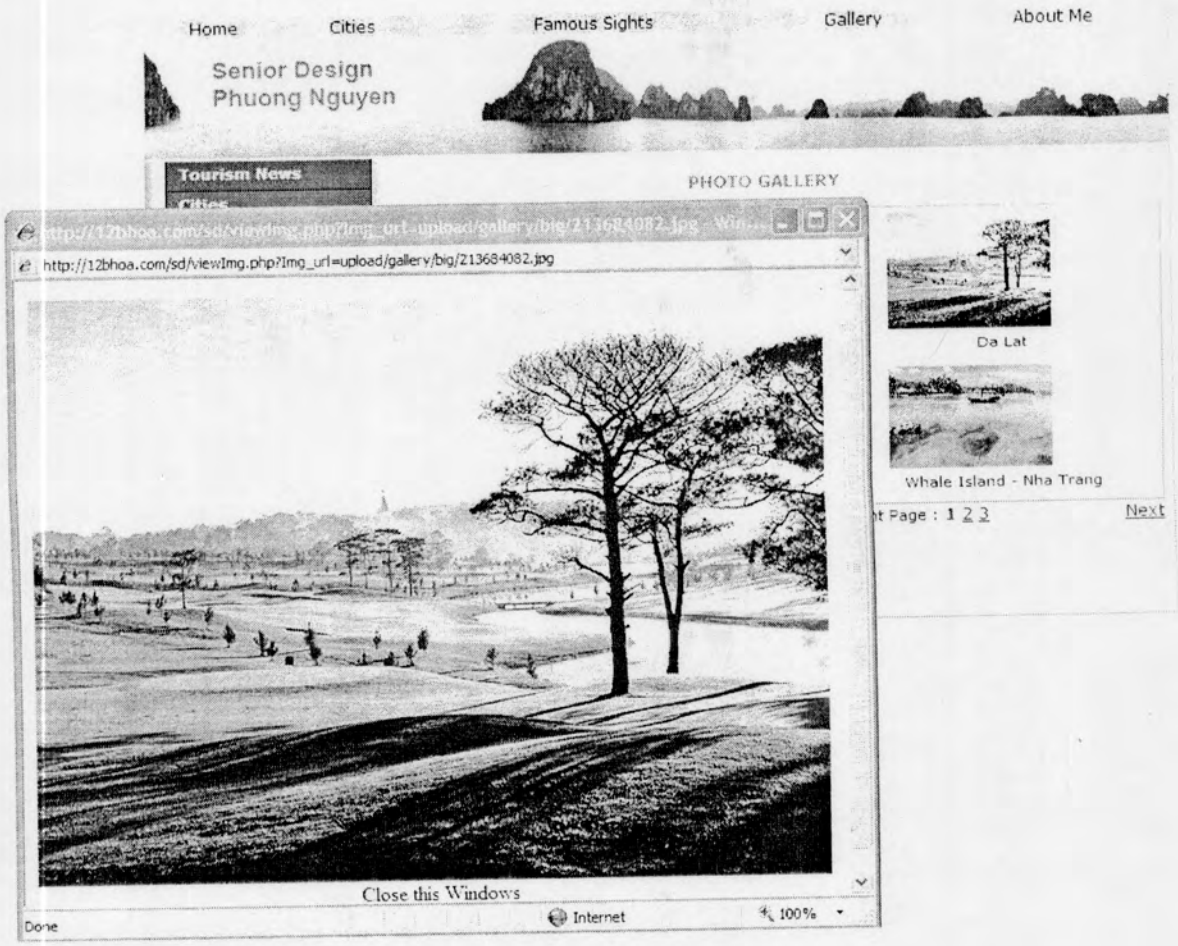


Figure 11. A gallery photo shown full size in the pop-up window

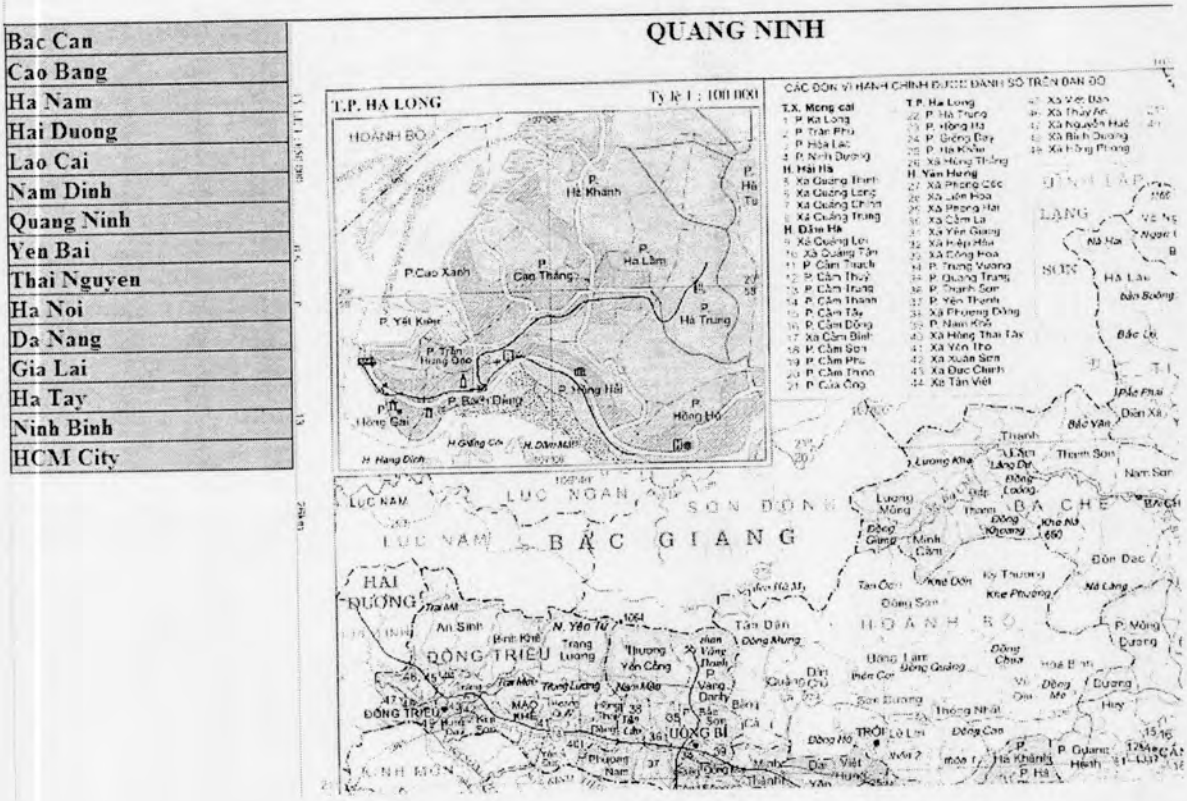


Figure 12. Web-site's maps section

It is helpful for the user to be able to view and print high resolution versions of some metropolitan areas of Vietnam. The map page is separated from the main page. It is a pop-up window with a banner of the web-site on top, a list of available maps on the left, and whenever the user selects a city link, AJAX will replace the bottom right area of the web-site with a map corresponding to that city.

7. Testing Procedures

Testing is a very important part of the development process. Pieces of code were tested consistently after a modification was made. Tests were conducted in both the

programming and reviewing stages of the project. The chosen web browsers were Internet Explorer versions 6.0 and 7.0, and Firefox version 2.0.

This is the testing plan for the project. This plan will ensure that

- The style sheet is working correctly
- The database keeps the correct data
- All links work
- The code is error free and everything is running correctly

Code tests follow the incremental units testing approach. Each part, after being edited and re-uploaded is tested to ensure that the information was displayed correctly and that the new code does not affect existing portions of the web-site. Further testing was performed by a some of my friends. Most of their feedback was about the design of the web-site. Their feedback was carefully reviewed, analyzed, and corrections made to the site as needed.

The following table shows some of the problems and suggestions that came from the user testing phase of the project. (See Figure 13.)

Problem/Suggestion	**Solution**
Test users noted that when clicking on the cities link the content was displayed inconsistently due to a variation in the size of the city images.	All cities images were set to a standard size for consistency.
Test users suggested that a separate map section be implemented.	The Map option was added.

Test users reported that the image panel with 16 images (4 by 4), did not display correctly on a low-resolution monitor.	The number of images was reduced from 16 (4 by 4) to 6 (3 by 2) in order to support a wider range of browser resolution settings.
Test users suggested that some of the most famous tourist attractions should be on the main page	A section which lists the five most popular tourist destinations was placed in the left control panel on the main page of the site.
Test users indicated that the *cities list* should be grouped geographically, not alphabetically.	Cities are now catalogued by their geographic location

Figure 13. Suggestions and Solutions

8. Conclusions and Recommendations

8.1 Conclusions

The project was created in response to the lack of understanding about how Vietnam tourism should be introduced to foreigners. The existing web-sites that were reviewed were found to be overdone with textual content that made them confusing to site visitors. In contrast, this newly created web-site was designed with simplicity in mind so users can easily find the information that they are looking for. The web-site is concise and functions are grouped in a clear manner. Macromedia Deamweaver MX 2004, Adobe Photoshop CS and Microsoft Office Suit were used to complete the project. The project was completed over one year. The estimate of $120 annually for hosting service would be the cost of the project. Two types of tests (incremental code testing and user design testing) were performed to ensure the web-site's stability and proper outlook.

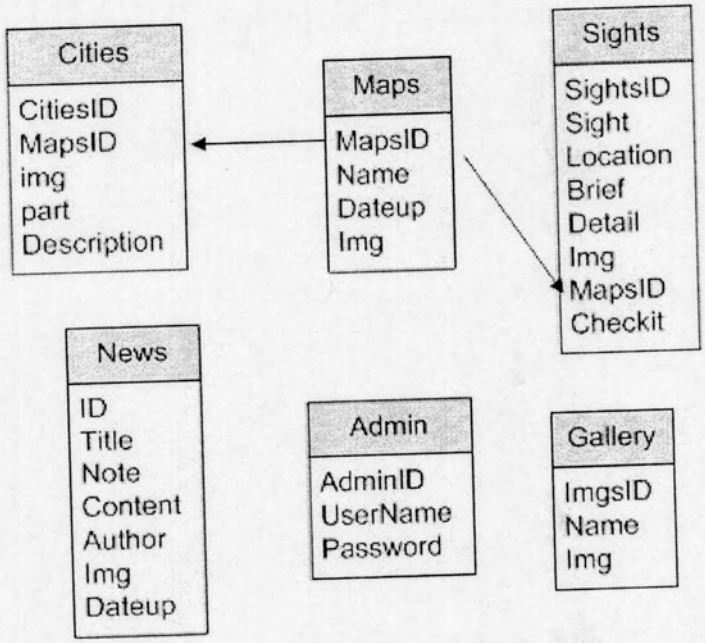
8.2 Recommendations

While working on this project, I encountered many challenges. This was the first time I designed a web-site. After some research, I found out there are several commonly used programming languages for dynamic web development: PHP, JSP and ASP .net. Netfirms hosting offered me 5 MySQL commercial databases and PHP capability. PHP is commonly used with MySQL. I started learning PHP for this web application and really enjoyed it. PHP is simple enough for me to learn on my own, is compatible with many platforms, and is as powerful as the other prevalent server-based technologies (ASP .net, JSP, etc.).

MySQL, the open source database platform worked well with PHP. The MySQL front-end client used in this project was Navicat. I recommend it for those who want to work with MySQL, not only because its user interface was professionally designed but also Navicat is very reliable (I encountered no problems with it during the course of this project). Adobe Photoshop is easy to use, even for those who are new. It is a full featured application for editing graphic images.

I started the project originally with the intent to use Visual Studio .NET, and Microsoft SQL Server. But after much consideration, I decided to learn a technology that I had not used previously and did research on available open source platforms. Because of the time limit, I did not want to have to deal with the complexities of configuring a web server, so I bought the server (and services) from Netfirms since their price was reasonable and their software package includes PHP and MySQL. The use of open source software technology reduces the cost of this project significantly.

Database Relationship



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