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Book 5
**Mathematics, Informatics and
Physics**

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RUSE

The Ruse Branch of the Union of Scientists in Bulgaria

was founded in 1956. Its first Chairman was Prof. Stoyan Petrov. He was followed by Prof. Trifon Georgiev, Prof. Kolyo Vasilev, Prof. Georgi Popov, Prof. Mityo Kanev, Assoc. Prof. Boris Borisov, Prof. Emil Marinov, Prof. Hristo Beloev. The individual members number nearly 300 recognized scientists from Ruse, organized in 13 scientific sections. There are several collective members too – organizations and companies from Ruse, known for their success in the field of science and higher education, or their applied research activities. The activities of the Union of Scientists – Ruse are numerous: scientific, educational and other humanitarian events directly related to hot issues in the development of Ruse region, including its infrastructure, environment, history and future development; commitment to the development of the scientific organizations in Ruse, the professional development and growth of the scientists and the protection of their individual rights.

The Union of Scientists – Ruse (US – Ruse) organizes publishing of scientific and popular informative literature, and since 1998 – the "Proceedings of the Union of Scientists- Ruse".

BOOK 5

**"MATHEMATICS,
INFORMATICS AND
PHYSICS"**

VOLUME 9

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CORPORATE PRESENCE WEB SITE FOR DENTAL CLINIC

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Abstract: This paper describes a corporate presence web site developed for the needs of dental clinic. It provides information related to the both restorative and preventive dental services, latest techniques and most advanced materials in the dental medicine and the current promotions and discounts of the clinic.

Keywords: information system, HTML documents, Dental, Internet

INTRODUCTION

One of the most useful elements of the Internet is the World Wide Web, which allows information to be visible to anyone anywhere in the world. Every day, millions of people connect to the Internet to shop, pay bills or check the local news, etc.

The developed corporate presence web site is designed for the needs of dental clinic. It provides the patients detailed information about the dental treatment, working team, restorative and preventive dental services, latest techniques and most advanced materials in the dental medicine, the contemporary methods of dental treatment, the dental surgery modern equipment and the promotions of the clinic.

1. Types of Web Sites

The Web sites can be categorized based on their purpose. The five basic types of Web sites and their primary purposes are shown in Figure 1.

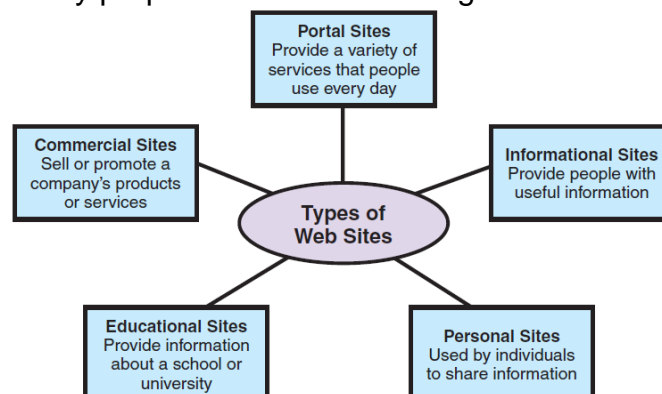


Figure 1. Types of web sites [1]

The primary purpose of a commercial site is to sell or promote products or services. There are two main types of commercial sites: *E-commerce sites* (for buying and selling stocks and services over the Internet) and *Corporate Presence Sites* (provide information about the goods or services, explain the company's purpose and foundation, advertise a positive attitude for the company).

2. The Web Site Development Process

The Web site development is a complex process. The described web site went through the following main steps:

- Determine the purpose and goals of the web site;
- Design and develop the web site;
- Evaluate and test the web site;
- Implement the web site;

- Maintain the web site;
- Search engine optimization.

Step 1: Determine Purpose and Goals

The main purpose of the web site is to inform the visitors about the services offered by the dental clinic:

- Dental treatment;
- Working team;
- Restorative and preventive dental services;
- Latest techniques and most advanced materials in the dental medicine;
- Contemporary methods of dental treatment;
- Dental surgery modern equipment
- Promotions and discounts;
- Different clinical cases and interesting dental topics.

Step 2: Design and Develop

In this phase is determined what the Web pages will look like, as well as how they will interact with each other:

- Interaction (hyperlinks) – how the user will navigate through a site (Figure 2, Figure3, Figure 4, Figure 5);
- Information - content that will appear on each page;
- Presentation - appearance of the pages (Figure 2, Figure3, Figure 4).



Figure 2. Splash page

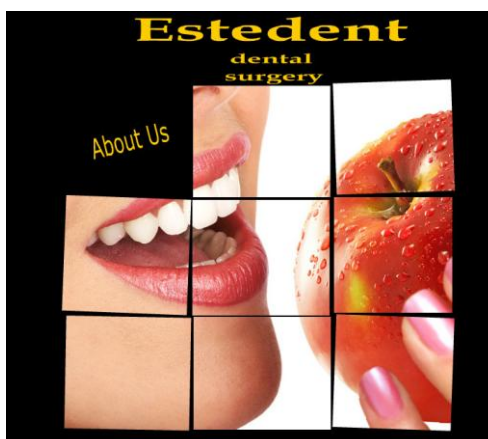


Figure 3. English version of the web site menu

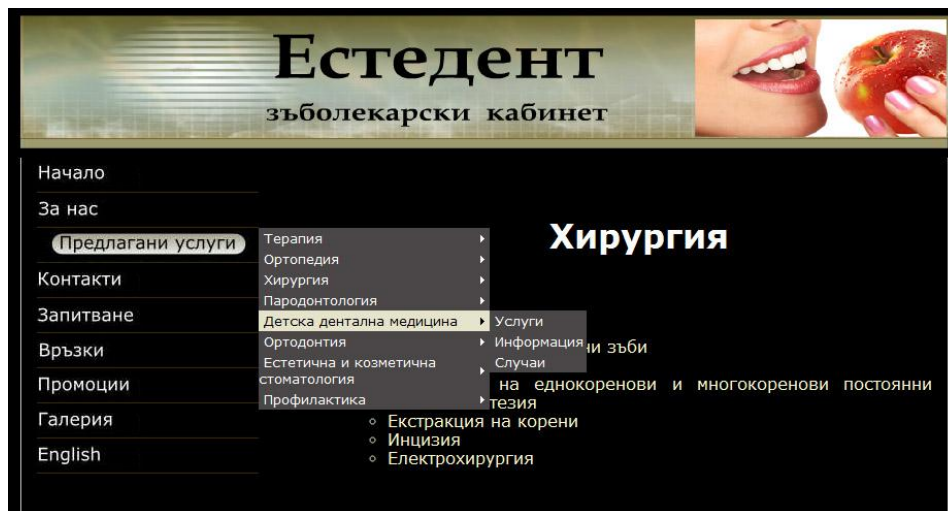


Figure 4. Web site navigation

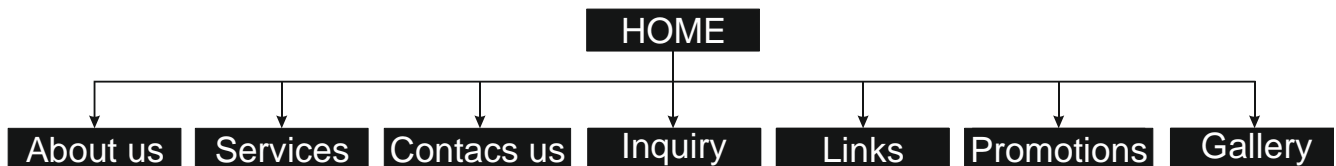


Figure 5. Web site structure

SOFTWARE APPLICATIONS USED TO IMPLEMENT THE PLANS:

Web site development application - Adobe Dreamweaver CS5 is the industry-leading web authoring and editing software that provides both visual and code-level capabilities for creating standard-based websites and designs for the desktop, smartphones, tablets and other devices [4]. It allows using a GUI (Graphic User Interface) to create Web pages. What is on the screen is similar to the page's final appearance. This feature is known as WYSIWYG, which stands for "what you see is what you get."

Animation development applications - Adobe Flash Professional CS5 is the industry-leading authoring environment for producing expressive interactive content. It offers the most complete set of tools available for authoring accessible rich media applications. This software allows developers to deliver accessible video through support for a new World Wide Web Consortium (W3C) caption data standard (TTML) in its FLVPlaybackCaptioning component and through accessible player controls for FLV and H.264 video [4].

Graphics Application - Adobe Photoshop CS 5 is industry standard program for photo editing, graphic design, and digital imaging. It provides tools for preview, organize, search, and manage image files with the Adobe Bridge File Browser; combines tools for painting, drawing, retouching, adding notes, and working with type; edit images non-destructively with layer styles, adjustment layers, masks, smart objects, smart filters, and history; includes tools for graphic design, web design, video production and photography.

Scripting Language - JavaScript is a computer programming code that is read by a built-in interpreter inside an Internet browser [7]. This means it can be used to manipulate and interact with elements on a Web page. Dreamweaver includes different snippets of JavaScript that you can insert into a page to make it dynamic and interactive.

Step 3: Evaluate and Test a Web Site

Web site evaluations assure that it meets the intended purpose and goals, while the testing makes sure that everything works and displays correctly:

- Proper hyperlinks functioning;

- Use various browsers and different computers (both a Macintosh and a Windows computer) to preview the web site. It can be difficult to create pages that work effectively in all the different web browsers currently available. Dreamweaver provides a Target Browser Check that allows to specify which types and versions of browsers to check the site against;
- Validating accessibility - the validation report in Dreamweaver checks site's files to ensure they meet the established W3C (World Wide Web Consortium) standards.

Dreamweaver provides a built-in validation tool to check the accessibility of a web site or document. When run an Accessibility report, Dreamweaver lists accessibility errors and identifies what part of Section the error violates. The Reference panel shows more about the identified error [1].

Step 4: Implement a Web Site

After a site has been evaluated and tested, it is ready to be implemented or published. To make the website accessible on the world wide web, it needs to copy on a web server, which theoretically can be any computer with an Internet connection and the right configuration.

Choosing a web server

Several factors need to be considered when choosing a web server:

- CPU Power - web server's CPU power determines the number of instructions it can process in a given time period;
- Hard Drive Speed and Capacity - the hard drives in web servers usually retrieve data at a substantially higher rate than the drives in common desktop systems;
- Communications Channel Bandwidth - high-speed digital communication lines transfer data quickly between computers;
- Scalability - web server's ability to meet response time and to handle increasing web traffic;
- Reliability - some servers incorporate dual power supplies so in case of problems, the other will continue running the system.

Choosing a Web Host

Several factors need to be considered when choosing a service to host the web site

[5]:

- Cost;
- URL/Address;
- Bandwidth/Transfer:- it is quoted monthly and is the total amount of files which can be transferred in a month from the site;
- Storage Space
- CGI-BIN:- If you want to run interactive scripts (counters, form-to-mail, guestbooks etc.) you will need a CGI-BIN.
- MySQL/PHP/ASP Support:- to include a database on the site;
- Reliability - the speed of the servers and the uptime;
- Technical Support:- reliable service to ensure the site remains available as much as possible;

Step 5: Maintain the Site

Once the site is published, it must be kept current and working properly. Web site maintenance includes:

- Adding, deleting, and updating content and pages.
- Checking that links continue to work properly.

Updating hyperlinks is an essential part of Web site maintenance. The Link Checker report identifies broken links in your site or within a particular file. Only broken links will show up in the report. You can also use the report to check your site's external links. The Link Checker also identifies orphaned files. An orphaned file is a file that does not link to other files in the site.

Step 6: Search engine optimization

Search engine optimization is probably the most important aspect of website design. SEO is the process of improving the visibility of a website or a web page in search engines. It is a method of getting the web site to rank higher in search engines—such as Google, Yahoo or Bing.

When Internet users search for products or services, the website needs to be the first one they find. SEO helps the search engines recognize the website's relevance to specific keywords that people search for online. The search engine optimization process includes researching keywords, creating content, building links and making sure the website is visible in the search engines [6].

The following basic SEO technical rules need to be considered when building a website in order to get good search engine placement:

- Choice of good domain name;
- Choice of good web hosting company;
- Define the key word phrases;
- Set up meta tags;
- Set up <Title> tag;
- Set up meta keyword tag;
- Set up meta description tag;
- Put keywords in Headings;
- Use keywords in the text;
- Put keywords in Alt – tags;
- Put keywords in anchor – tags;
- Use a robots.txt file;
- Validate the HTML code;
- Register by hand with the search engines (like Google and MSN) and directories (like Yahoo! and the ODP);
- Register in the Search Engines – Google, Yahoo, Bing;
- Get links pointing to the site - the more links there are to the site, the more relevance it will have in some search engine results and the better placement it will get.

CONCLUSION

The developed corporate presence web site is designed for the needs of dental clinic. It may be further developed as user-friendly dynamic web site which provides a great way for website owner to meet in a better way the needs of visitors and to find what they need in a quick and easy way, while keeping track of what information is being accessed, which gives the owner a way to access information about how the site is being used. Using this information, the site owner can improve and expand the site in a way that benefits the visitors, increasing the success of the web site. The improvement may include the following:

- Provide an administrative and client part that will allow editing through web interface;
- Tracking a web site's visitors - dynamic components to keep track of web site traffic - hit counters, page views and unique visits;

- Search capabilities - to help visitors find information and services quickly by searching a particular word or phrase;
- Frequently asked questions - to answer common questions that visitors are likely to have about the site;
- Guest book - gives patients an opportunity to share their experiences and comments about the services provided by the dental clinic.

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КОРПОРАТИВЕН УЕБ САЙТ ЗА ЗЪБОЛЕКАРСКИ КАБИНЕТ

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Резюме: Статията описва корпоративен уеб сайт, разработен за нуждите на зъболекарски кабинет. Той осигурява информация, свързана с възстановителни и превантивни стоматологични услуги, използвани съвременни техники и материали в областта на денталната медицина; за специалисти, работещи в кабинета, както и за наличните промоции и отстъпки в предлаганите услуги.

Ключови думи: Information system, HTML documents, Dental, Internet

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