

MODERN WEB-DESIGN

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The modern media sphere cannot be imagined without the web resources and web services that allow us to access any information – beginning with news and weather, and ending with the full-fledged online courses and web universities. For information, the user can get just a couple of clicks, and it's all thanks to modern means of website development and promotion of quality of web resources forces webmasters and marketers.

Web development consists of two parts: the frontend and the backend. As the part of web development is to test Web applications and sites, troubleshooting (debugging), as well as marketing analysis of website allows you to increase the efficiency of a web resource as well as its popularity.

Frontend: This section of the web development is engaged in the development of web applications appearance – that is: by filling the content of web pages, web page layout, style as well as writing scripts to make the basic behavior of Web pages. Frontend is based on the triad of technologies: ^[1]

- HTML (Hyper Text Markup Language) – is the basic language used for creating web page elements, its layout as well as content filling.
- CSS (Cascading Style Sheets) – is the language used for describing the appearance of the documents written using a markup language.
- JS (JavaScript - implement of the ECMAScript) – is a programming language that is widely used in web application development to make it interactive and basic behavior (Response web page to user actions)^[2]

The standards of the first two languages triad web design is supported by a special organization called the W3C (World Wide Web Consortium) as the organization develops the standards for the entire World Wide Web. The head of W3C is Timothy John Berners-Lee, the creator of HTML.

Since JavaScript is an implementation of ECMAScript - its standard is supported by the organization ECMA International, which since 1961 has been the standardization of information and communication technologies.

Modern versions of the triad languages allow you to create a truly excellent web application, just to simplify the development of third-party developers to create so-called Frameworks JavaScript language. Frameworks can reduce the volume of work done on the development of an application by an abstraction of some basic and advanced designs used to obtain the desired result .The most popular frameworks of JS are as follows: jQuery, Angular, Ember.js and Backbone.js. Due to these frames the routine work of the developer can be considerably reduced and there is a much

more possibility of concentrating on more important details of the development. Each of them helps to solve a specific task set before the developer frameworks and therefore it is a good solution for large scaled projects.^[3]

Backend: This section is responsible for the development of Web server-side application that works with the user's data, processes them and calculates the user's query result – that is: work with databases, transfer the information to other servers, response to the user's input. There are a variety of server programming languages but the most popular language PHP (Hypertext Preprocessor). It is used to write web programs to work with a huge variety of user-entered data. It is also used to manage the Web application databases.

Programs for PHP receive data through HTTP protocol (Hyper Text Transfer Protocol) via GET or POST special request code can then manipulate the data received from the web document. PHP can work with SQL (Structure Query Language) with which work with databases, receive and impart information. PHP is also able to handle the connection to a specific port (Sockets) and act as a full-fledged query server clients.^[3]

There are many other languages and frameworks that allow the user to work with data and databases such as Perl, Java, Python as well as frameworks: Ruby on Rails and node.js. They largely have the same functions as the PHP as well as in some cases can achieve better performance and greater functionality.

The majority of modern web development is being built on PHP but node.js is also gaining popularity. Node.js is a software platform based on the V8 engine from Google (V8 JavaScript Engine). Node.js JavaScript transformed into the general-purpose language adds the ability to interact with the input-output devices as well as make the JavaScript language essentially a server programming language and allows you to write web server for Web applications. Node.js offers great opportunities for JavaScript programmers to develop web applications.^[4]

MVC - Model - View – Controller : is a model development web application that allows you to break the web development into three distinct components: application model, user interface and user interaction. The main idea of MVC it is to minimize the dependence of these three components on each other.

There is a very popular framework for Ruby is Ruby on Rails. It implements the MVC model and provides an integration of application server and database. David Hansson developed and released it on July, 2004. RoR is used in such popular web resources like Twitter, Groupon, GitHub, Hulu, etc. RoR uses REST-style building Web applications, and is now being used more and more actively. Also, RoR usually uses JS framework jQuery for development AJAX applications.^[6]

Conclusion: The modern world of web development is vast and everyone can find a job for his/her entertainment and opportunities. Also, this variety is a very structured area of development that allows you to create the development team, which will deal with each kind of their work and, thus, accelerate the process of

development. Web sites are an integral part of our world and every year their performance increases the information content, develops web development technologies and increases the scope of these proper technologies.

REFERNCES:

1. HTML and CSS - the complete guide - *John Daket*
2. JavaScript the definitive guide 7th edition- *David Flanagan*
3. Create dynamic websites using PHP, MySQL, JavaScript, CSS and HTML5 – *Robin Nixon*
4. Operating node.js - *Shelley Powers*
5. English-Russian dictionary –*Mueller*
6. The free Encyclopedia – *www.en.wikipedia.org*