DIVE INTO WEB DEVELOPMENT

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The purpose of paper is to give some basic information about how to start web development, about popular languages and frameworks for web development.

Web development (the same as Web programming) is a wide term of process of creating web sites and web applications for the Internet or Intranet. Web development ranges from developing simple web pages (called single-page applications) to the complex client-server web applications. Web development is divided by two main categories: front-end development and backend development. Front-end is an application that displays to a user. In most cases, it is a web page. Front-end is exactly what user sees and working with. Backend is an application that works with data, processes clients, generates web pages and returns them back to the user. Back-end application is a "core" of a web application.

Let's go deeper into the front-end. If you want to make front-end applications, you should use one of the most popular programming language today – JavaScript (JS). Also, you should know HTML (Hypertext Markup Language) for making a body of your application and CSS (Cascading style sheets) for a better look. This combination allows developers to create web pages which request information from the server and display it in a beautiful and structured way in your browser or even in a desktop application. And I'd like to underline, that time is passing and you should always follow modern technologies in web development. It is important to have a vision on a design. Pictures, color schemes, borders, shadows, fonts – all of these take a huge role in front-end. After making a mockup start some coding with JavaScript. JavaScript is a high-level, untyped, interpreted programming scripting language, standardized in the ECMAScript language specification. JavaScript is supported by all modern browsers. JavaScript makes web pages more dynamic, allows fetching data from the servers and represent them. Web chats, in-browser games, some 3D apps are built via JavaScript.

Now let's talk about another part of web development – backend. Backend is about how it works inside, how your data are collected and processed. For better understanding let's look at the example – VK. When you open https://vk.com, your browser downloads a front-end web page that allows you to send and receive messages, browse news feed, surf user's pages, etc. And this information is stored on the other, backend servers with databases that contain news, messages, etc. If you want to make a good backend you should know data structures, algorithms and know how to store a large amount of information. There are some popular languages that allow you to create backend applications: PHP, Python, Ruby, Java, C#, JavaScript. .

No doubt, we know programming languages for development, but how to start writing some web apps? We should use a web framework. What is a framework exactly? A framework is an abstraction in which software providing generic functionality can be selectively changed by an additional user-written code. A framework is a universal, reusable software environment that provides a particular functionality as a part of a larger software. Basically, a framework adds some functions to your project, that helps you easily build something of high level and you don't need to "reinvent the wheel". The most popular web frameworks today are Node.JS, Django, Ruby on Rails.

Besides, there are also front-end frameworks that allow you to make a client app quickly. Often, they are combined, because they represent different roles. There are frameworks that allow you to make a good responsive design like Bootstrap, Materialize, some frameworks that make your site more dynamic like jQuery, Angular, or even some complex frameworks, like React, that allow you to create advanced apps. Top software companies are actively using and contributing to those frameworks. There are JavaScript preprocessors, like CofeeScript and TypeScript, they make your code clearer.

If you want to start web development, it's essential to begin with simple basics: make a single web page using HTML and CSS. Get acquainted with Chrome Development Tools, it will help you understand how HTML pages are converted into DOM (Document Object Model) and displayed inside your browser. Then start to add some JavaScript code into web pages. Then you can try backend, for example, take a course of Node.JS or Django. It will be difficult at the beginning, but the more you practice, the more you get. Practice different things, find what you really like. It is important to follow modern technologies and get acknowledged with different frameworks and libraries. Within the years the situation is changing, so you need to be adapted. The highest grade of web developers is a full-stack developer. Full-stack developers have a lot of skills in both front-end and backend.

Being a web developer is great today. There are many frameworks that help you create web applications in different and unusual ways. Web development is a popular direction nowadays, because the Internet is inside of our life. We use the Internet every day. Most of computer technologies are connected with the Internet today. That's why web developers are so important.

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