Front-End vs. Back-End

What's the Difference?

Agenda

Topics Covered

What is front end development?

What is back end development?

How are front end and back end development different?

What is full-stack development?

What is front end development?

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Front end developers build with the user in mind. Front end development is a style of computer programming that focuses on the coding and creation of elements and features of a website that will then be seen by the user. It's about making sure the visual aspects of a website are functional. You can also think of front end as the "client side" of an application. So let's say you're a front end developer. This means your job is to code and bring to life the visual elements of a website. You'd be more focused on what the user sees when they visit a website or app. And, you'd want to make sure the site is easy to interact with while also running smoothly. These developers take the visual designs from UX and UI designers and bring the website to life, making sure it functions well for the user. One of the many ways you could use front end skills is in creating a static website, which is a website with fixed content that's delivered to a user's browser exactly as it's stored. You might run into a static website if you happen upon a simple landing page or a small business website that doesn't allow users to perform any interactive tasks.

Front end developers build elements like:

- Buttons
- Layouts
- Navigation
- Images
- Graphics
- Animations
- Content organization

What is back end development?

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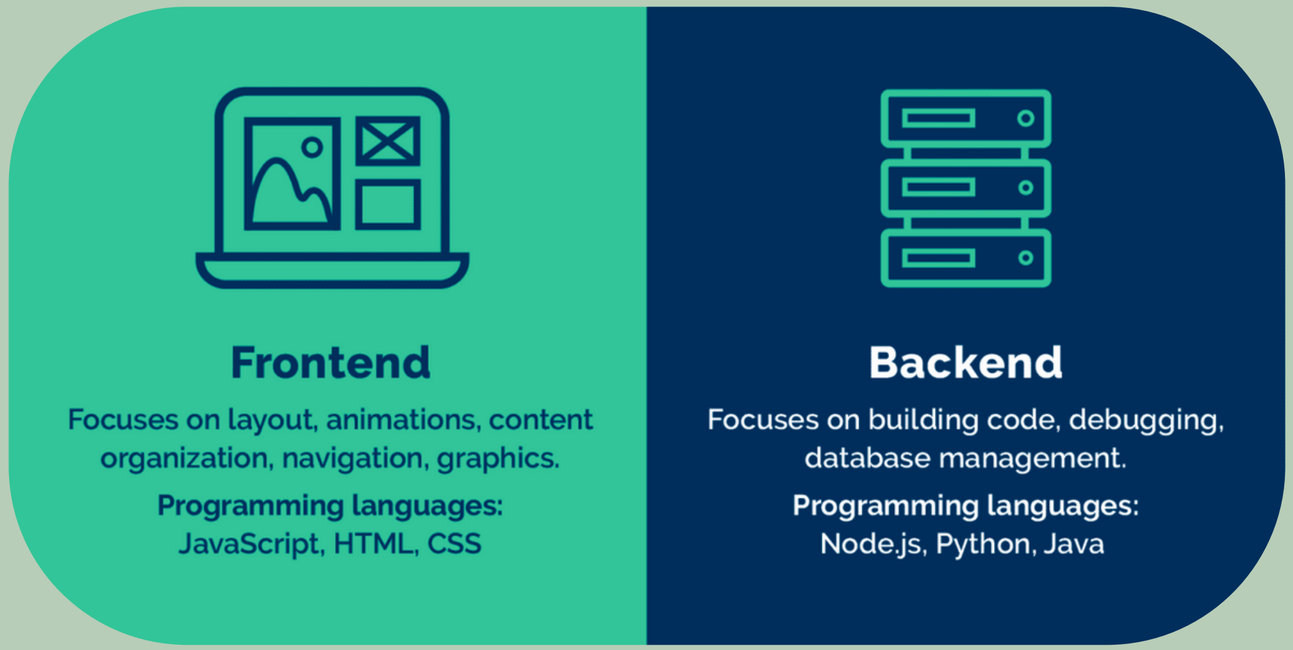
Back end development focuses on the side of the website users can’t see. It’s what makes a site interactive. You can also refer to the back end as the “server side” of a website. For instance, let’s say you’re running a social media website. You need an accessible place to store all of your users’ information. This storage center is called a database and a few widely used examples include Oracle, SQL Server, and MySQL. Databases are run from a server, which is essentially a remote computer. A back end developer will help manage this database, as well as the site contents stored on it. This ensures that front end elements on your social media website can continue to function properly as users browse uploaded content and other user profiles.
While users do not directly interact with the back end of a website, they’ll indirectly interact with elements these developers work on through a front-end application. Back end development deals with storing and arranging data while also ensuring the front end is functioning well.

Back end web developers work on tasks like:

- Building code
- Troubleshooting and debugging web applications
- Database management
- Framework utilization

Front end vs. back end: what's the difference?



Front and back end developers work on different sides of a website

Front end development is programming which focuses on the visual elements of a website or app that a user will interact with (the client side). Meanwhile, back end development focuses on the side of a website users can't see (the server side). They work together to create a dynamic website to allow users to make purchases, use contact forms, and any other interactive activities you might participate in while browsing a site. Some examples of dynamic websites are Netflix, PayPal, Facebook, and the Kenzie Academy site you're currently on.

So what pays more, front end or back end?

With differences in strengths, there are also differences in pay. Mid-career front end developers rake in an average annual salary of $76,929 in the U.S., according to Glassdoor. Meanwhile, U.S.-based, mid-career back end developers bring in an average of $101,619 annually.

Though there are differences in what you can earn, depending on if you specialize as a front or back end developer, it all comes down to your unique talents, passions, and abilities. You may find you prefer one side of development over another. If you're deciding between the two, it's best to also think about which one brings you more fulfillment and satisfaction as a developer rather than solely focusing on salary projections.

Front and back end developers work in different languages

When you're coding, you'll use a programming language. Much like human languages, these languages allow programmers to communicate with their computers through a series of symbols (referred to as code). Very simply, it's like giving your computer instructions. Front end developers work in languages like HTML, CSS, and JavaScript.

- HTML stands for Hyper Text Markup Language. It's the standard markup language for creating webpages.

- CSS is short for Cascading Style Sheets. While HTML is used to create structure on a site, CSS is used to bring style and flair. It defines a site's colors, fonts, and the style of other site content.

- JavaScript is a language that can be used to make a site interactive and fun. You can use it to run a game on your site, to name one example.

Front end also works in its own set of frameworks and libraries. Here are just a few of the frameworks and libraries a front end developer would work with:

- AngularJS
- React.js
- jQuery
- Sass

Back end developers work in languages like PHP, C++, Java, Ruby, Python, JavaScript, and Node.js. Here's a bit more on a few of these languages:

- PHP is a server-side scripting language.
- Java is a highly popular platform and programming language.
- Python is a general-purpose coding language. It's different from some of the others we've mentioned here because it can be used for other kinds of software development and isn't limited solely to web development.

Back end frameworks include:

- Express
- Django
- Rails
- Laravel
- Spring

Front and back end developers work together to create awesome applications

While there are some similarities between the two sides of web development, it's easiest to think of them as sides of a cassette tape. They are both necessary parts of the web dev process that are used to create functional, visually appealing websites and applications. So if you're considering a career as a web developer and aren't sure which side of the development cassette you're interested in jamming to, you could consider becoming a full stack developer. Full stack developers get the best of both worlds and their work consists of both front and back end elements. It's like getting to listen to the whole flipping cassette every day.

Front End Skills:

- Break apart interesting problems, as well as design engaging solutions.
- Design, create, and modify static web pages that conform to HTML5 specifications.
- Analyze the client-side performance of a webpage to better understand the consumer experience.
- Imagine, create, and deploy interactive and mobile-friendly applications for the web using the latest web technologies, including HTML5, CSS3, JavaScript (ES6+), and React.
- Pair those skills with back-end technologies like databases and Node.js, as well as developer tools like Bash, Git, and automated tests.
- Understand how to effectively work and collaborate on a software project, and also how to interview confidently.

Back End Skills:

- Level up with a second, popular programming language (Python 2 & 3), as well as its own most common web framework, Django. Also use language features like lists, sets, and dictionaries appropriately for simple algorithmic tasks.
- Become adept at interacting with behind-the-scenes technologies, like databases and servers, and also at solving more complex sets of problems.
- Identify and fix performance bottlenecks in a web application. Additionally, propose a viable fix to a specific bottleneck in a provided sample application.
- Learn to make applications faster, more secure, more stable, and more capable.

Thank you!