**In your own words compare server-side programming to client-side programming.**

Server-side programing is backend programing. That means that its processes are not visible from the browser. All server-side programing requires a server to work, hence server in the name. When we do an HTTP search, it is sent from your browser to a server. The server does something with that information, and then sends it back to your browser.

Client-side programing is front end programing. All this part of the process runs on the client’s machine. The programing does not need a server to run client-sided programing. For a lot of reasons, this speeds up the process.

The magic happens when the user goes onto a browser , a request occurs. Then the server-side language interacts with a server. The client continues to work on their end, but the server now has processed whatever transpired. It is a dance of server and client sided programing. An ever continuing mingle of request to a server and running of scripts on the client’s computer.

**What are some common server-side languages. What are some common client-side languages.**

Some common server-side languages include PHP, Ruby, Python, C#, and NodeJs. According to Mr. Thor from twm.me,

*“Node.js is the newest in the list (released in 2009) and the quickest growing today. It provides the ability to run JavaScript code on the server-side. The great thing is that you do not have to learn a new language for back-end development. You can use JavaScript for front-end rendering and then reuse it later in the back-end.”*

There are client sided languages as well. Some common ones are JavaScript, VBScript, HTML, and CSS. There are a ton of frameworks for JavaScript and according to Mrs. Wodehouse from upwork.com, “*Client-side scripting is always evolving—it’s growing simpler, more nimble, and easier to use. As a result, sites are faster, more efficient, and less work is left up to the server.*”

**How is Node different than Javascript?**

According to Copes from Flaviocopes.com,

*“In the browser, most of the time what you are doing is interacting with the DOM, or other Web Platform APIs like Cookies. Those do not exist in Node, of course. You don’t have the document, window and all the other objects that are provided by the browser.*

*And in the browser, we don’t have all the nice APIs that Node.js provides through its modules, like the filesystem access functionality.*

*Another big difference is that in Node.js you control the environment. Unless you are building an open source application that anyone can deploy anywhere, you know which version of Node you will run the application on. Compared to the browser environment, where you don’t get the luxury to choose what browser your visitors will use, this is very convenient.*

*This means that you can write all the modern ES6-7-8-9 JavaScript that your Node version supports.”*

**What are the recommended databases to be used by the Node applications and why?**

According to a Data Access from tutorial teachers .com,

“*Node.js supports all kinds of databases no matter if it is a relational database or NoSQL database. However, NoSQL databases like MongoDb are the best fit with Node.js.* ”

To further the discussion that was made in the last quote, according to Cubet at flaviocopes.com,

“*MongoDB is a distributed database which allows ad-hoc queries, real-time integration, and indexing efficient. Moreover, MongoDB is open-source and perfect for frequently changing data. It also offers server-side data validation.*”

**What is server-less computing and how it is related to web application development?**

According to Mrs. Narang at TechAhead,

“*In serverless architecture, the infrastructure is provided by third-party vendors as BaaS (back end as a service). Companies and individuals signing up for this cloud-based infrastructure need to install an API add their end to access the services provided by the window. The payment mode of using serverless architecture is paid as you use, which proves to be a viable option for companies of all sizes. The development team focuses only on writing the code, which is then submitted to the vendor for testing, debugging, deployment and maintenance.*

*The vendor provides the necessary tools for all tasks like testing, debugging, maintenance, monitoring, security, etc. The users simply need to decide which tool to use. Serverless architecture is completely event-driven. Each event at the developers end calls a function rendered as function as a service (FaaS), which is used to perform all the required activities.*”

**What are the top cloud hosting providers and their key benefits?**

According to Carmichael from websitebuilderexpert.com,

“*A2 Hosting takes first place, with impressive features and an anytime money-back guarantee. InMotion comes in second place, offering top-notch customer service. HostGator is a solid choice in third, being the only host to provide unmetered storage on all its plans.*”

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