**FULL-STACK DEVELOPMENT**Three main languages used among respondents: JavaScript (84%), HTML/CSS (75%), and Java (71%). The dominance of these three languages leads to the conclusion that respondents who develop full-stack applications mostly use Java as their backend language (though, as we’ll see, the use of Node.js is increasing), JavaScript for DOM manipulation and other front-end logic, and HTML/CSS for styling.

**FRONT-END WEB DEVELOPMENT: JAVASCRIPT FLAVORS AND FRAMEWORKS**JavaScript proved the most popular language for web application development among respondents.  
JavaScript, however, differs from many other popular development languages in that there is no one, true JavaScript.  
While the ECMAScript standard has been established, there exist several supersets under the main JavaScript umbrella other than ECMAScript, such as TypeScript, CoffeeScript, and Elm.

**BACKEND DEVELOPMENT**

Of those respondents who work with the Node.js ecosystem,54% do so on full-stack development projects and 40% on backend development projects. When we correlate our dataon respondents who work in the Node.js ecosystem with our data on databases used for web applications, non-relational (or NoSQL) databases have higher rates of adoption among Node.js developers. For respondents whose organizations use Node.js, 56% use MongoDB. For those who report using the Java ecosystem, 43% use MongoDB; among Python ecosystem users, 49% use MongoDB; and with C# ecosystem adopters, 37% choose MongoDB as their database. This higher rate of adoption for MongoDB among Node developers versus those who work in other backend environments such as Java, Python, and C# could well be due to the asynchronicity of both technologies.

Additionally, many developers use Mongoose, an open-source data schema solution, with MongoDB (source). Mongoose utilizes the JavaScript language, thus allowing Node.js developers to write their database logic in the same language as their application logic. For a more detailed discussion on databases, see the 2018 DZone Guide to Databsaes: Relational and Beyond.

**SERVER-SIDE OPERATIONS**

The back-end of an application is a complicated place, full of API and database calls, logic, and more. When we asked how respondents typically divide their work between client and server, 76% told us the server-side exposes APIs, 70% have the server-side perform business logic, and 66% use the server-side to integrate systems such as databases, message queues, and EIS. Despite the growth of Node.js noted above, Java remains the dominant language for performing such operations on the backend.