Introduction to Backend Development and Deployment

Via NodeJS and Azure

Session 1 on 08-04-2020

Microsoft Student Partners

About this series

Topic To Be covered in the Series

- Introduction to NodeJS and NPM
- Basic web deployment via NodeJS
- RESTFull Webservice via ExpressJS
- Connectivity to MongoDB
- Modularizing code using the concept of MVC
- Deployment on Azure

Basic Introduction to Web Development

Categorized

- Frontend

Front-end web development is the practice of converting data to a graphical interface, through the use of HTML, CSS, and JavaScript, so that users can view and interact with that data.

- Backend

the part of a computer system or application that is not directly accessed by the user, typically responsible for storing and manipulating data.

HTTP/S

HTTP means HyperText Transfer Protocol. HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands. In HTTPS 'S' stand for Secured via SSL/TLS.

HTTP Methods

HTTP Verb	CRUD	Entire Collection (e.g. /customers)	Specific Item (e.g. /customers/{id})
POST	Create	201 (Created), 'Location' header with link to /customers/{id} containing new ID.	404 (Not Found), 409 (Conflict) if resource already exists..
GET	Read	200 (OK), list of customers. Use pagination, sorting and filtering to navigate big lists.	200 (OK), single customer. 404 (Not Found), if ID not found or invalid.
PUT	Update/Replace	405 (Method Not Allowed), unless you want to update/replace every resource in the entire collection.	200 (OK) or 204 (No Content). 404 (Not Found), if ID not found or invalid.
PATCH	Update/Modify	405 (Method Not Allowed), unless you want to modify the collection itself.	200 (OK) or 204 (No Content). 404 (Not Found), if ID not found or invalid.
DELETE	Delete	405 (Method Not Allowed), unless you want to delete the whole collection—not often desirable.	200 (OK). 404 (Not Found), if ID not found or invalid.

https://www.w3schools.com/tags/ref_httpmethods.asp

Introduction to NodeJS

Node.js is an [open-source](), [cross-platform](), [JavaScript]() runtime environment that executes JavaScript code outside of a [web browser](). Node.js lets developers use JavaScript to write command line tools and for [server-side scripting]()—running scripts server-side to produce [dynamic web page]() content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm,[6] unifying [web-application]() development around a single programming language, rather than different languages for server- and client-side scripts.
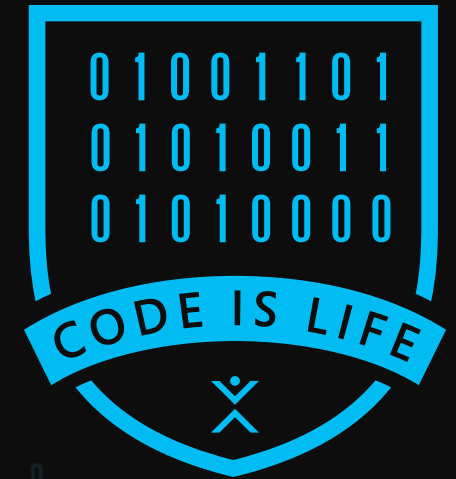

Original author(s)	Ryan Dahl
Developer(s)	Various
Initial release	May 27, 2009; 10 years ago[1]
Stable release	13.12 / March 26, 2020; 11 days ago[2]
Repository	github.com/nodejs/node ✎
Written in	C, C++, JavaScript
Operating system	Linux, macOS, Microsoft Windows, SmartOS, FreeBSD, OpenBSD, IBM AIX[3]
Type	Runtime environment
License	MIT license[4][5]
Website	nodejs.org

Demo

- Hello World

- DataTypes and Loops

- Introduction Node Package Manager(npm)

- Managing scripts using npm

- NodeJS server

Thank You

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