

NODE JS



what is
backend
Development?



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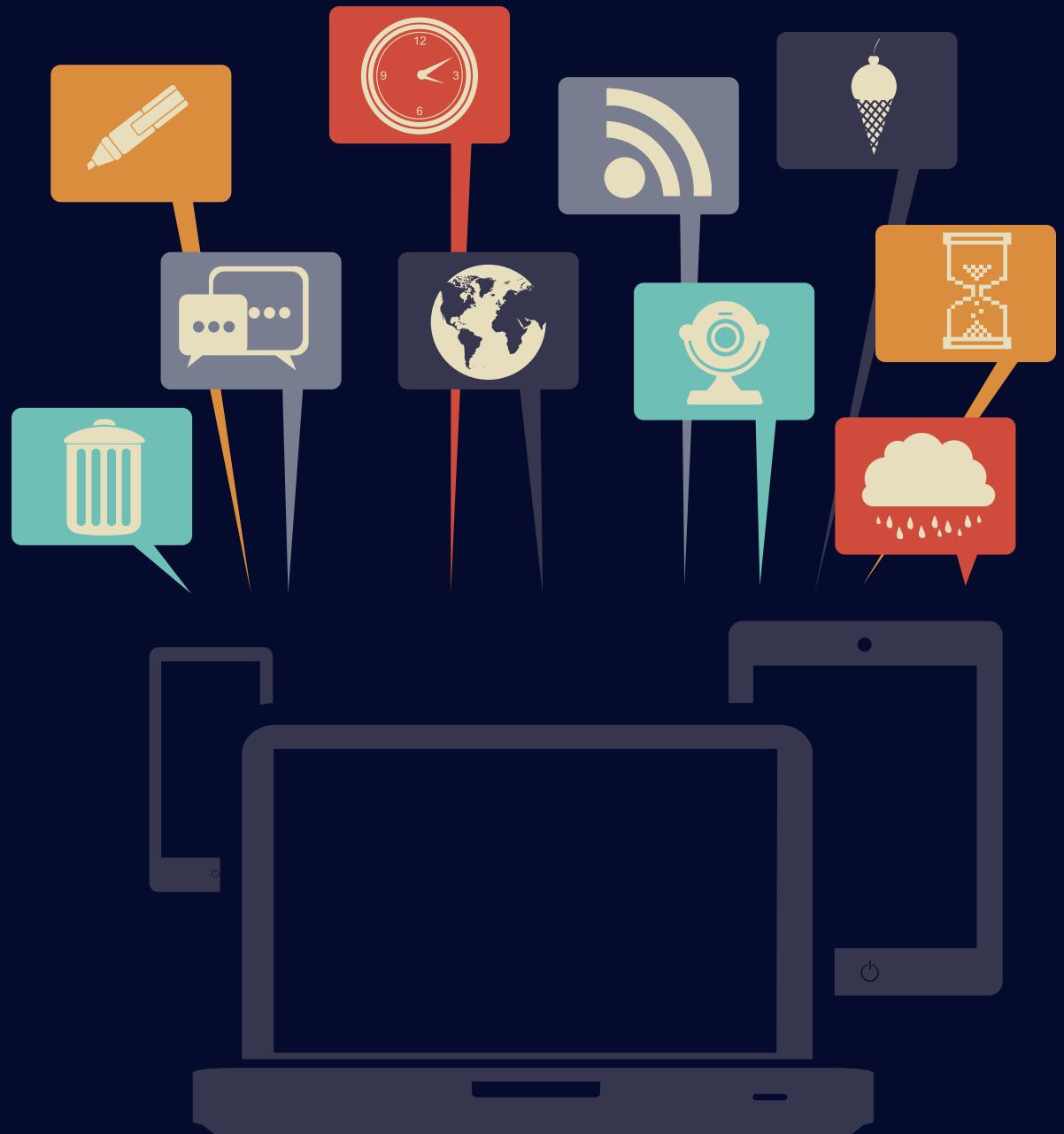


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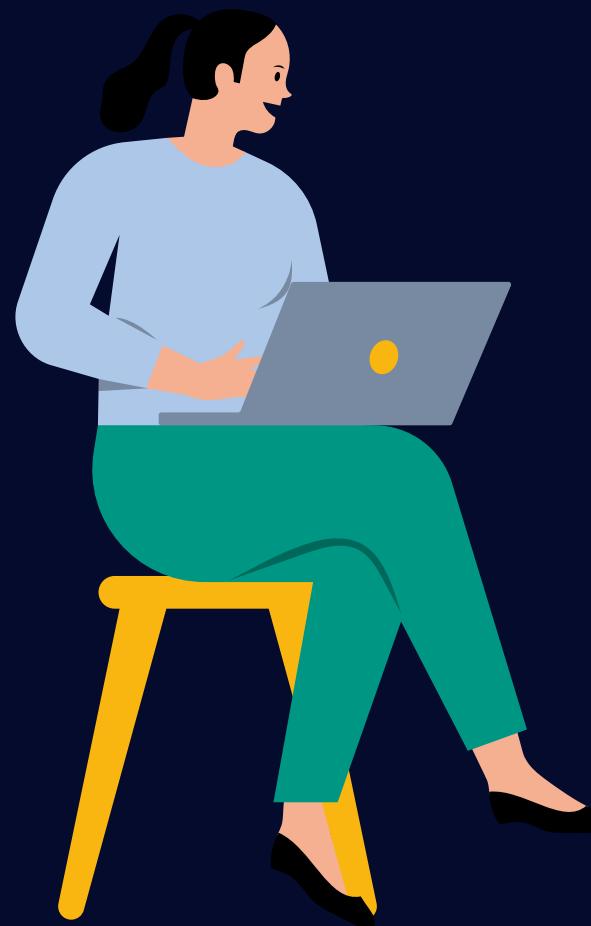




Components of a web application



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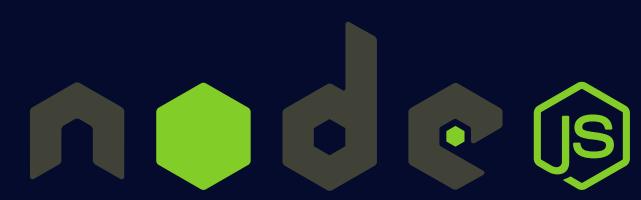


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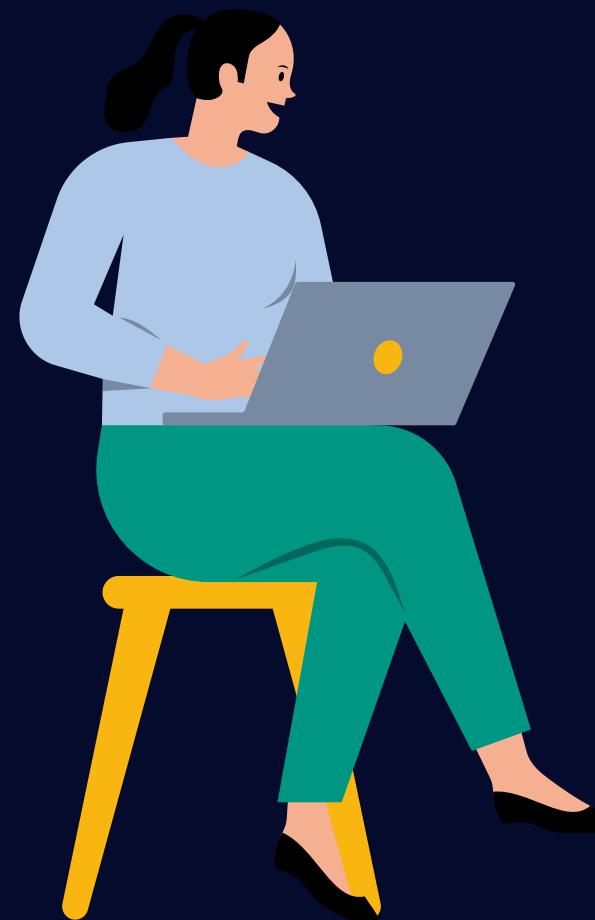


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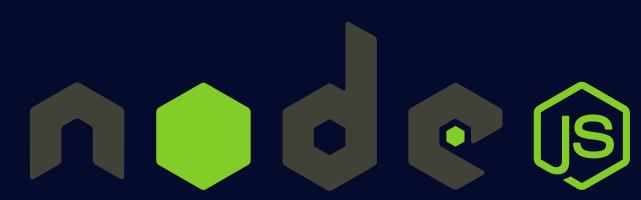


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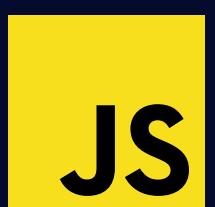
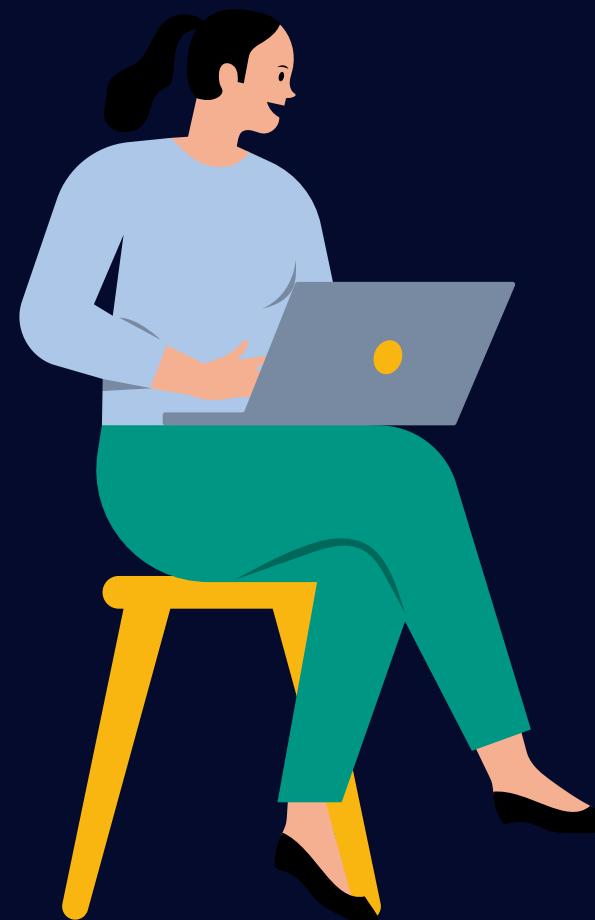


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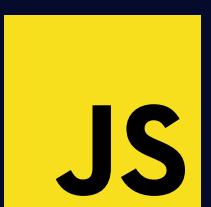
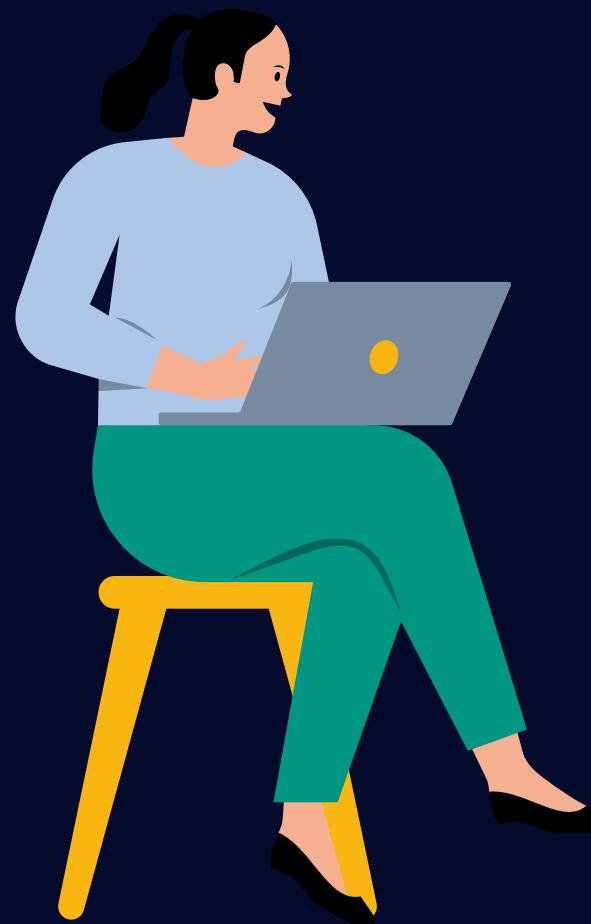


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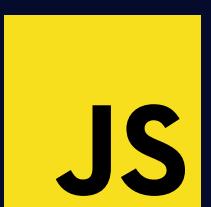
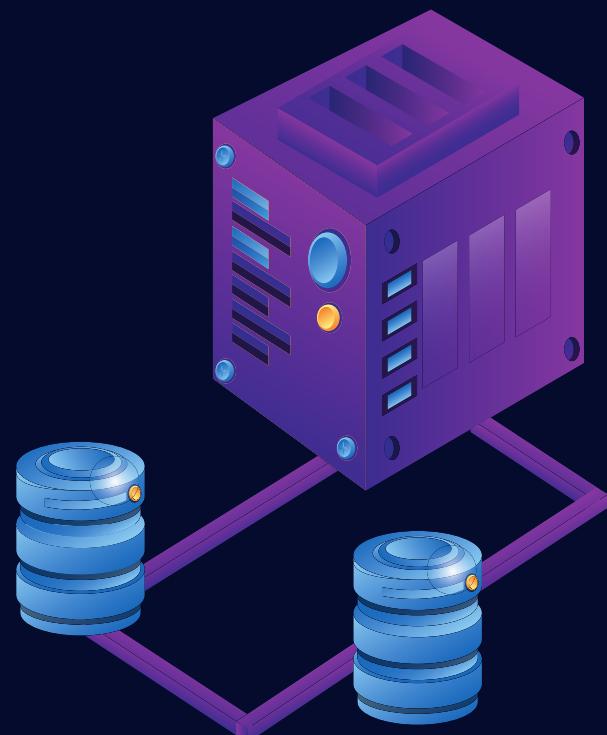
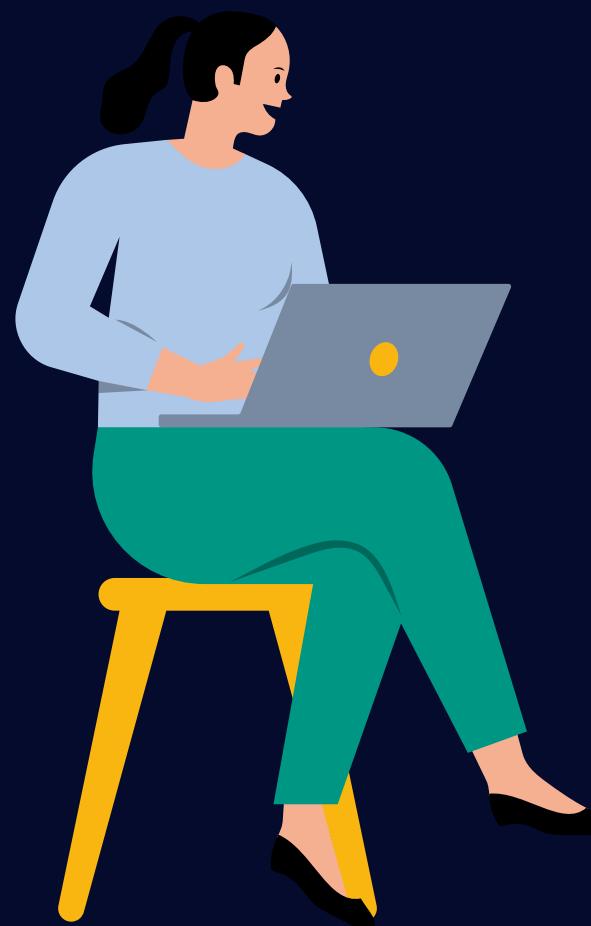


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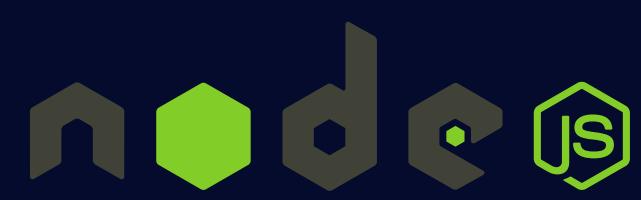


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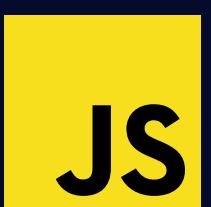
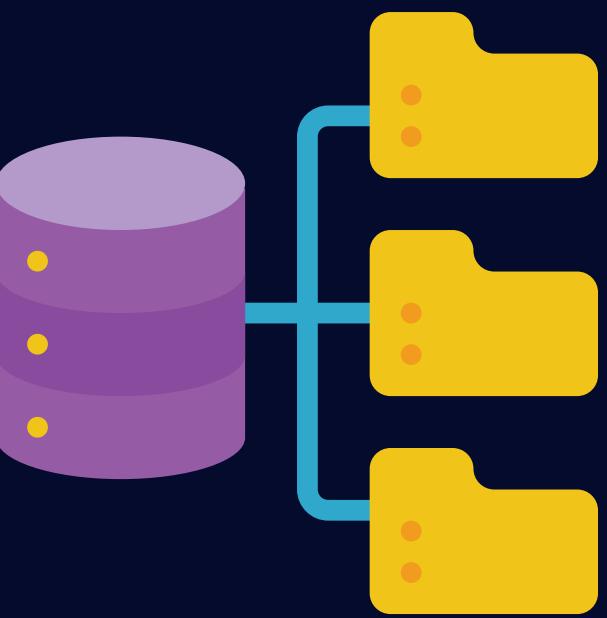
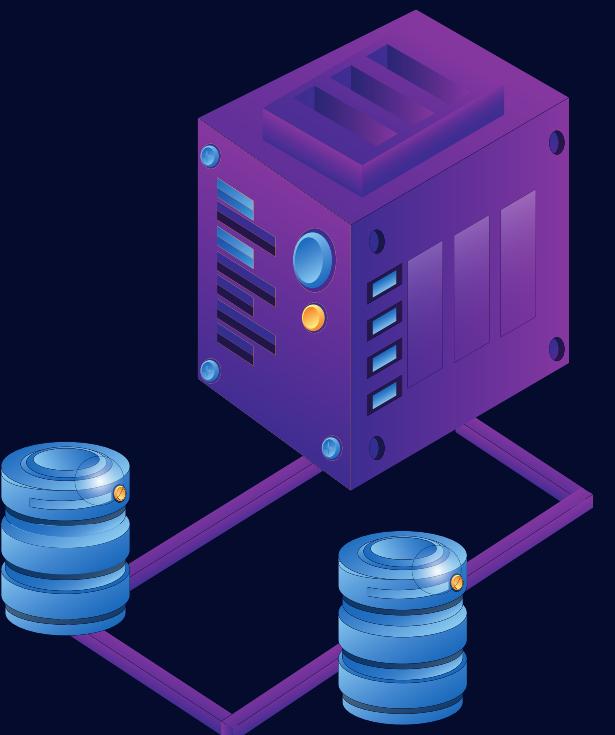
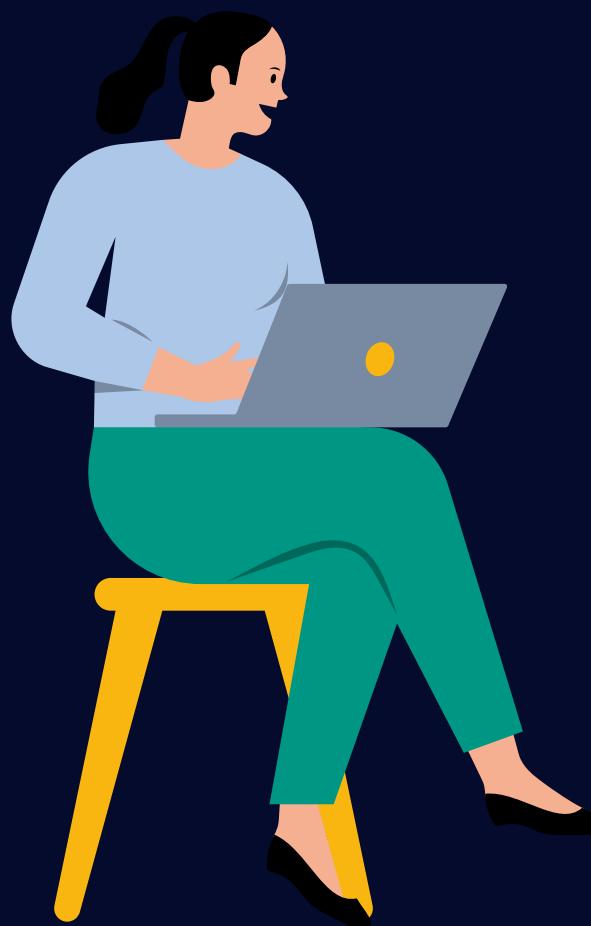


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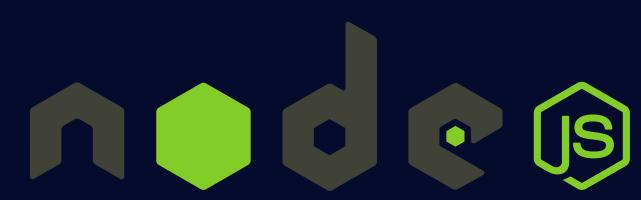


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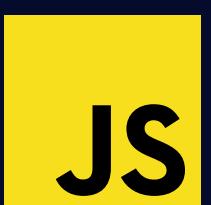
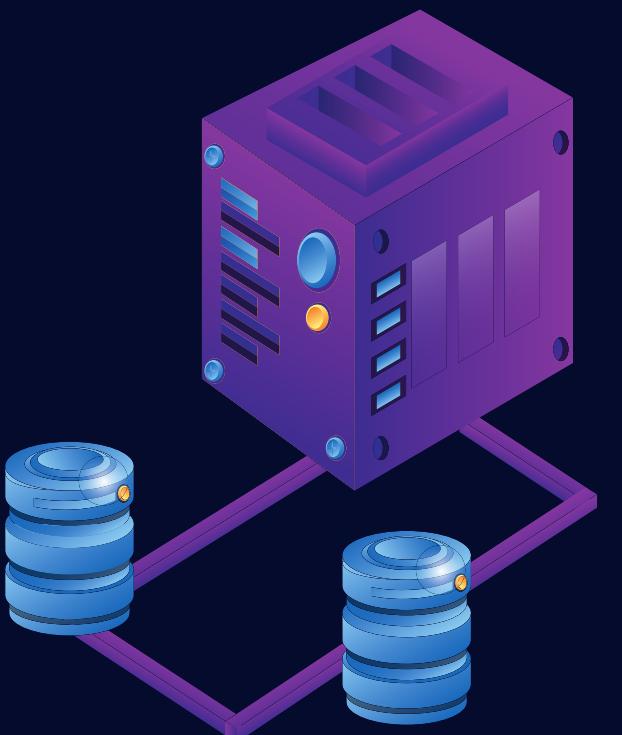
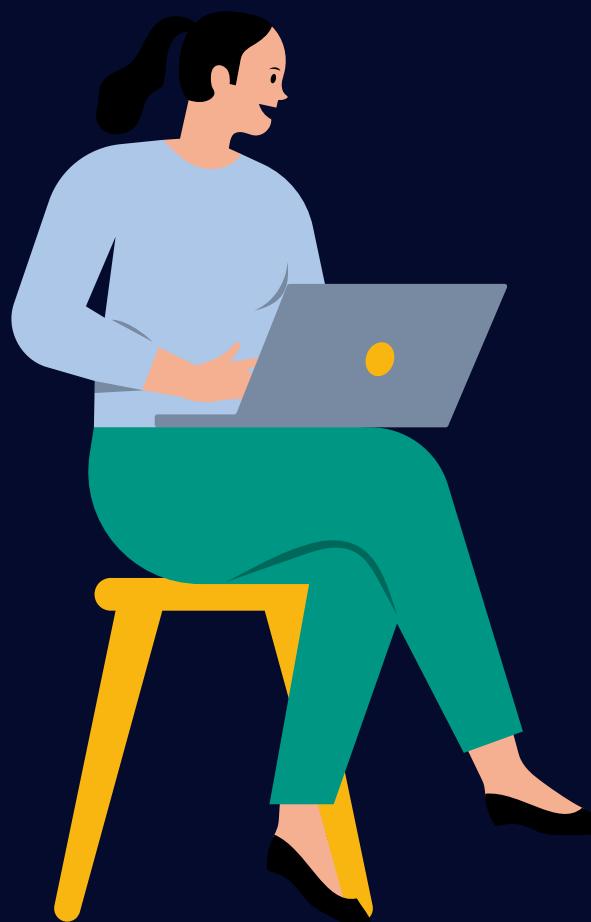


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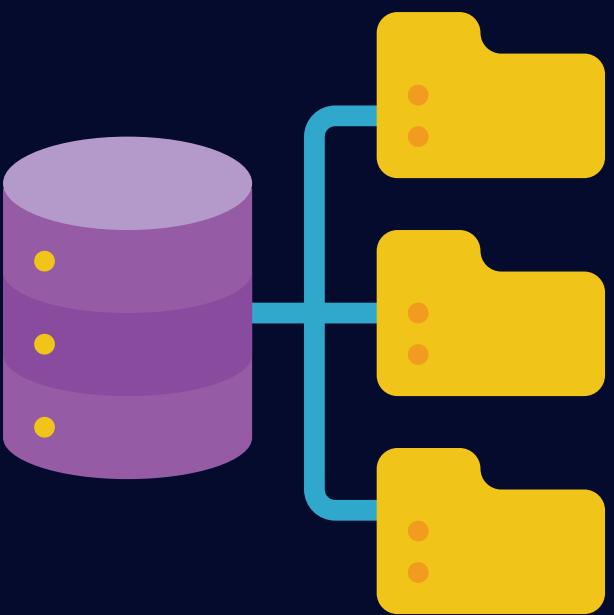




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React



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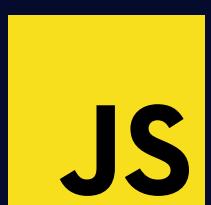
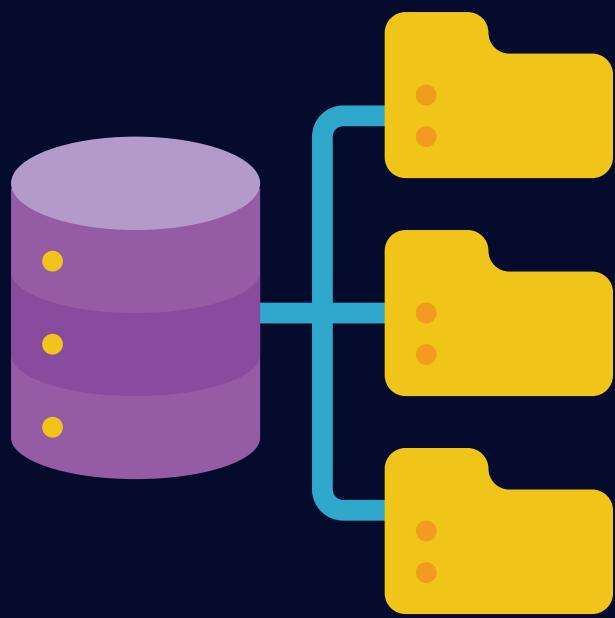
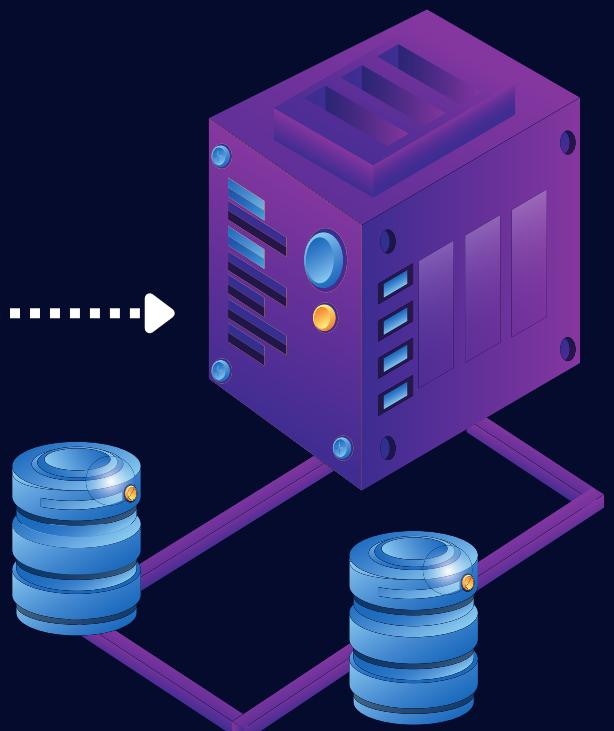
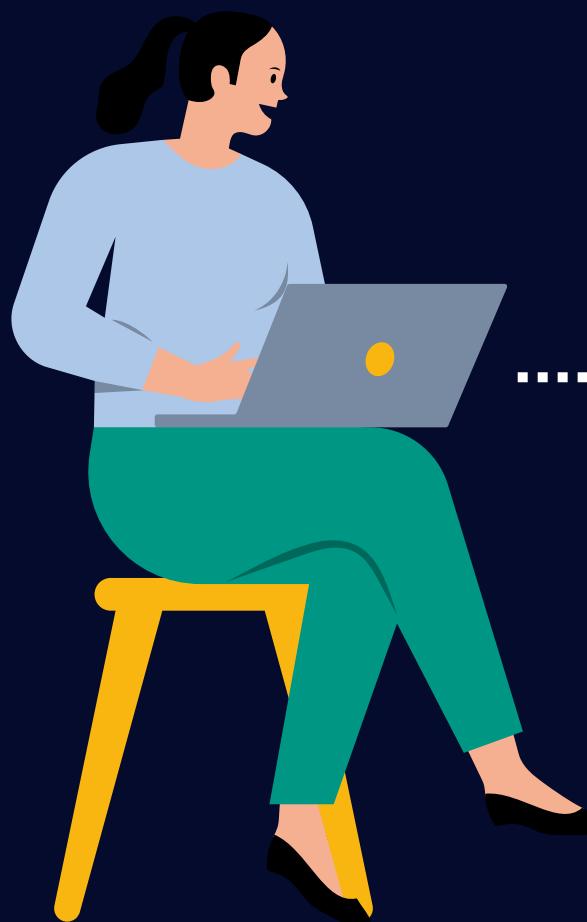
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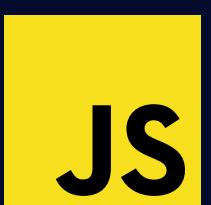
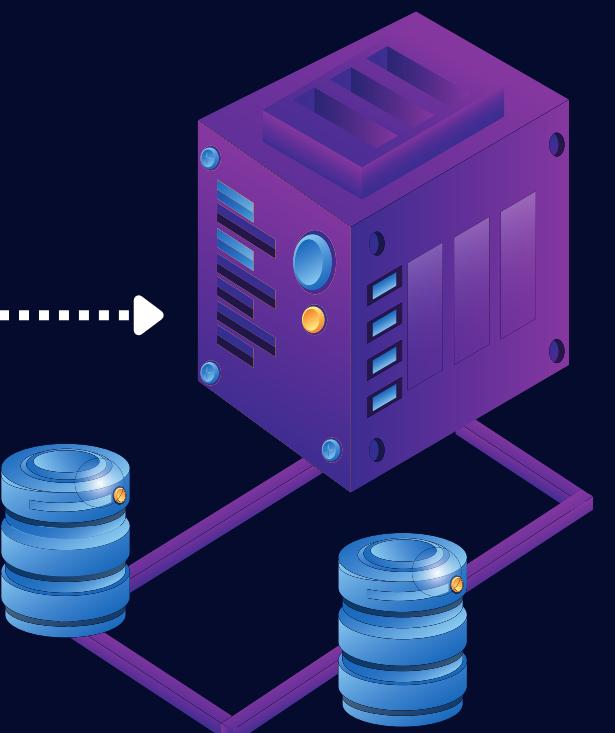
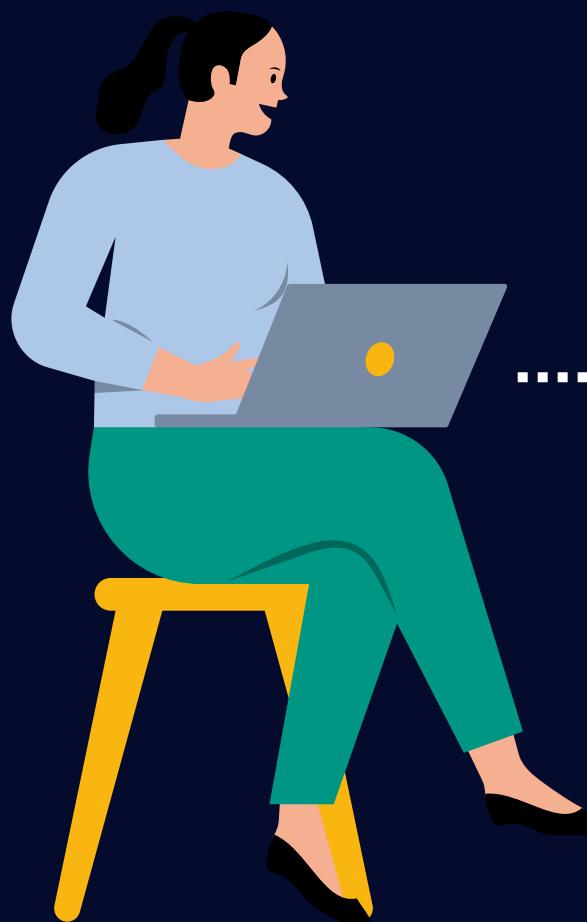


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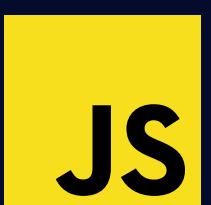
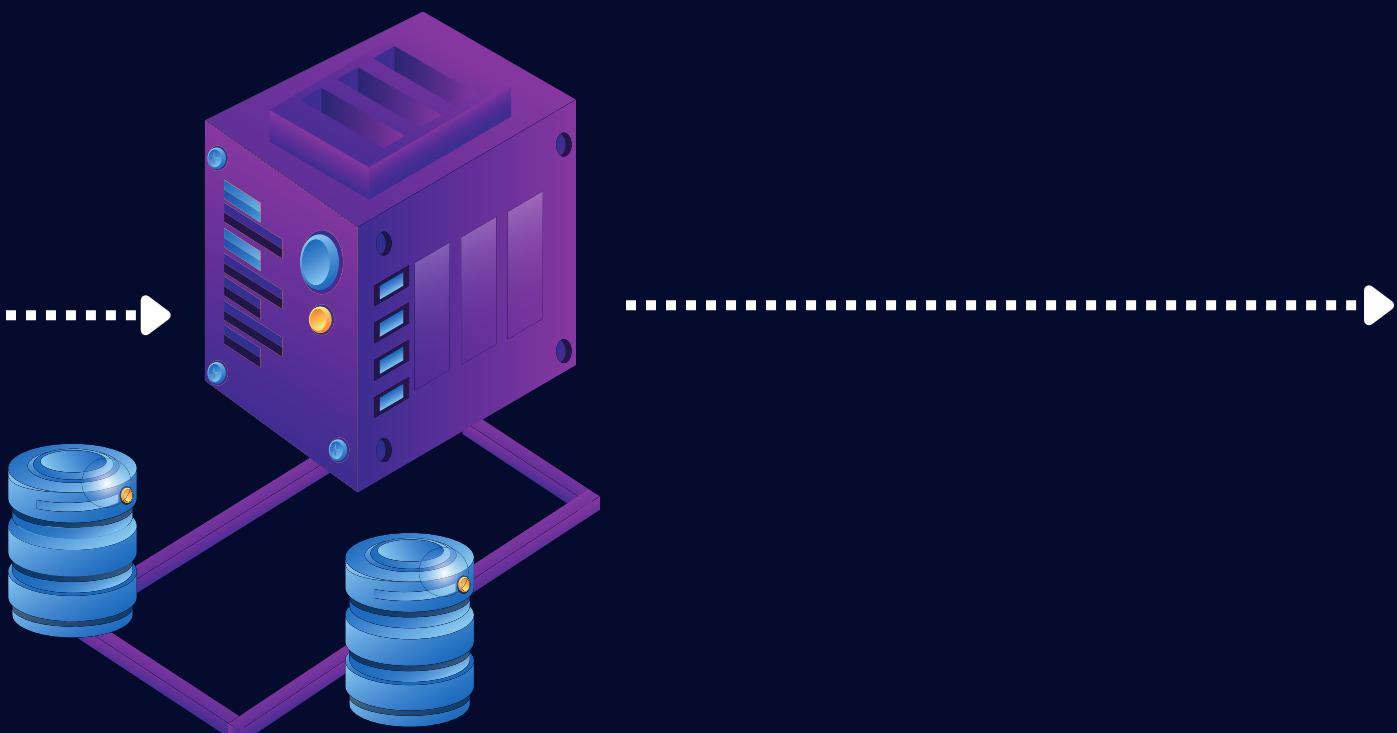
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Request



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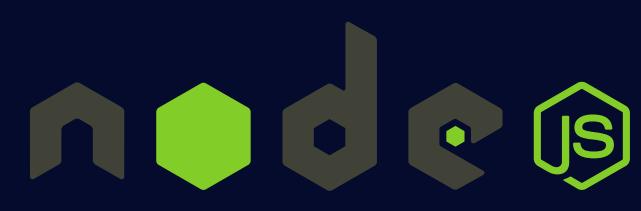
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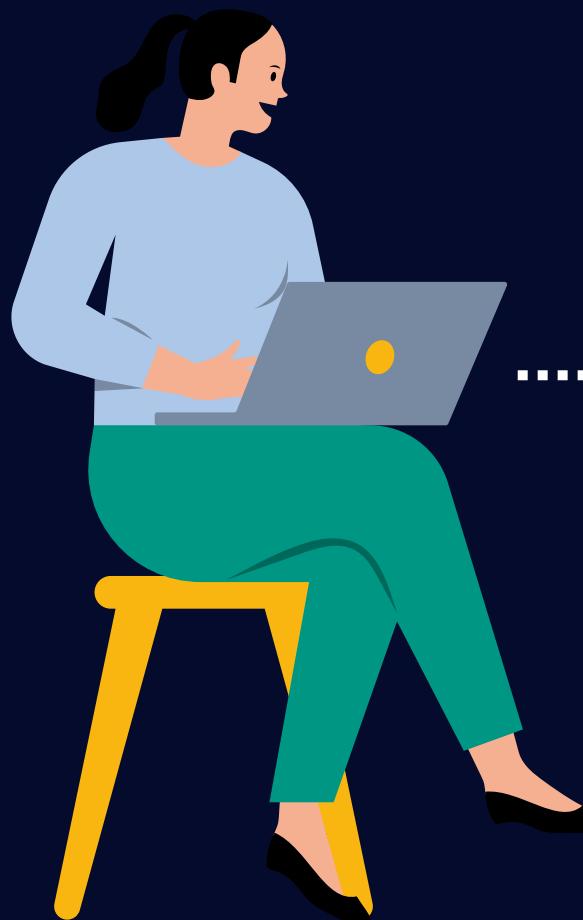
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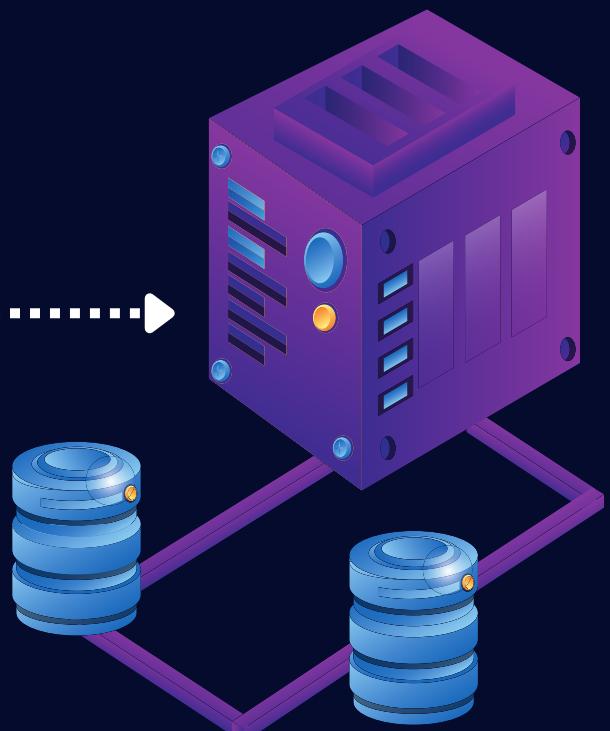


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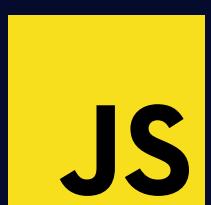


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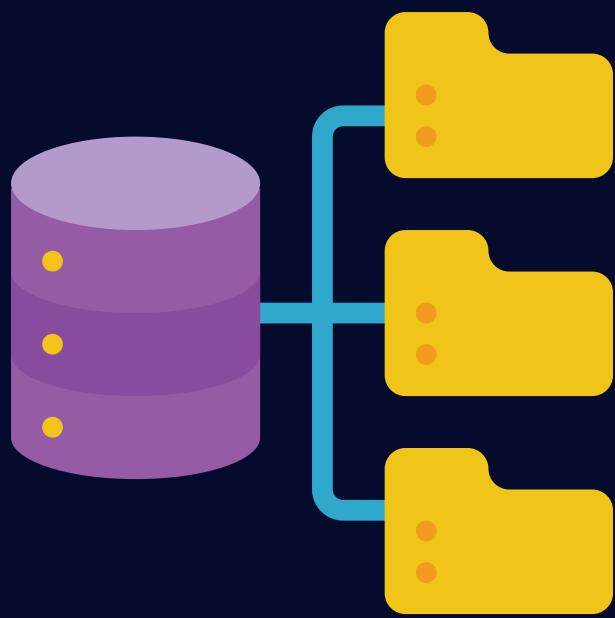
LOADING



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React



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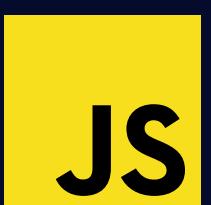
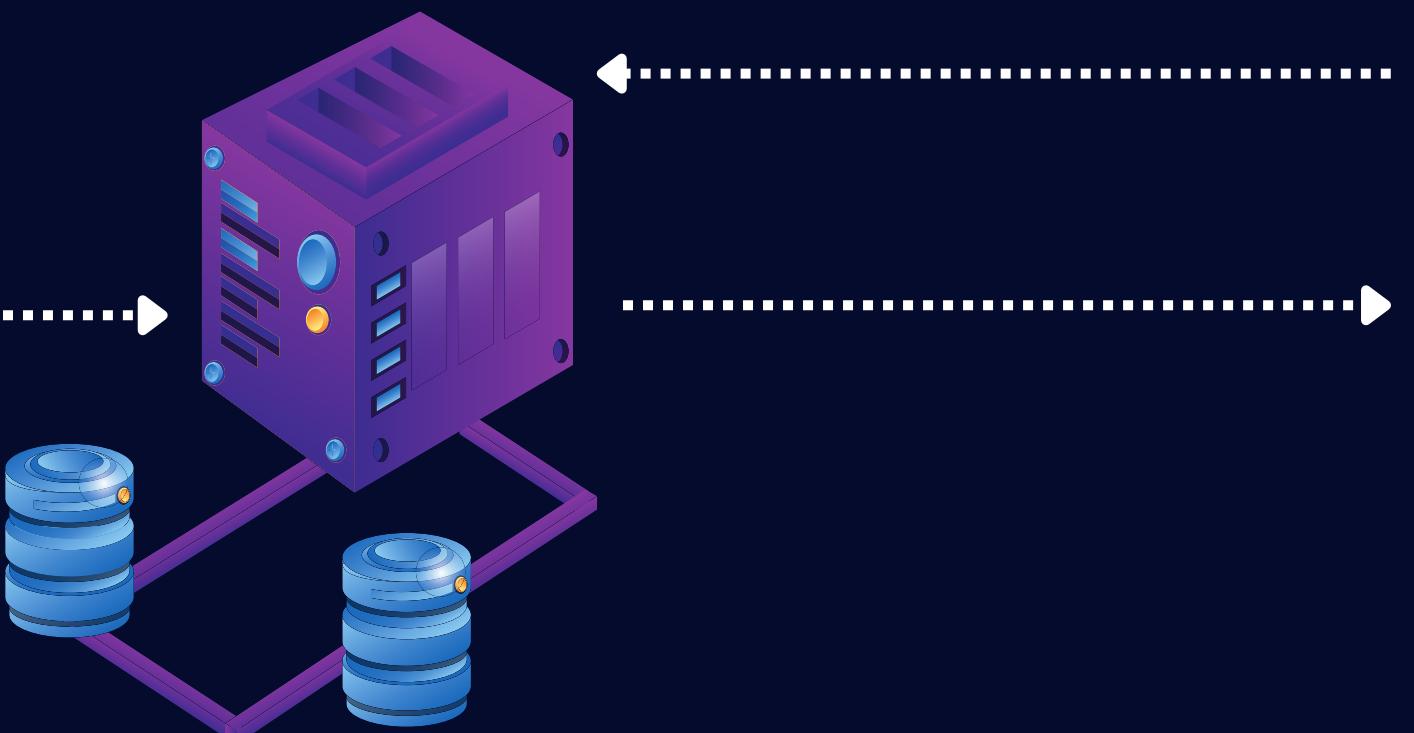
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Request



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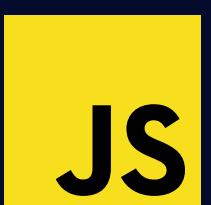
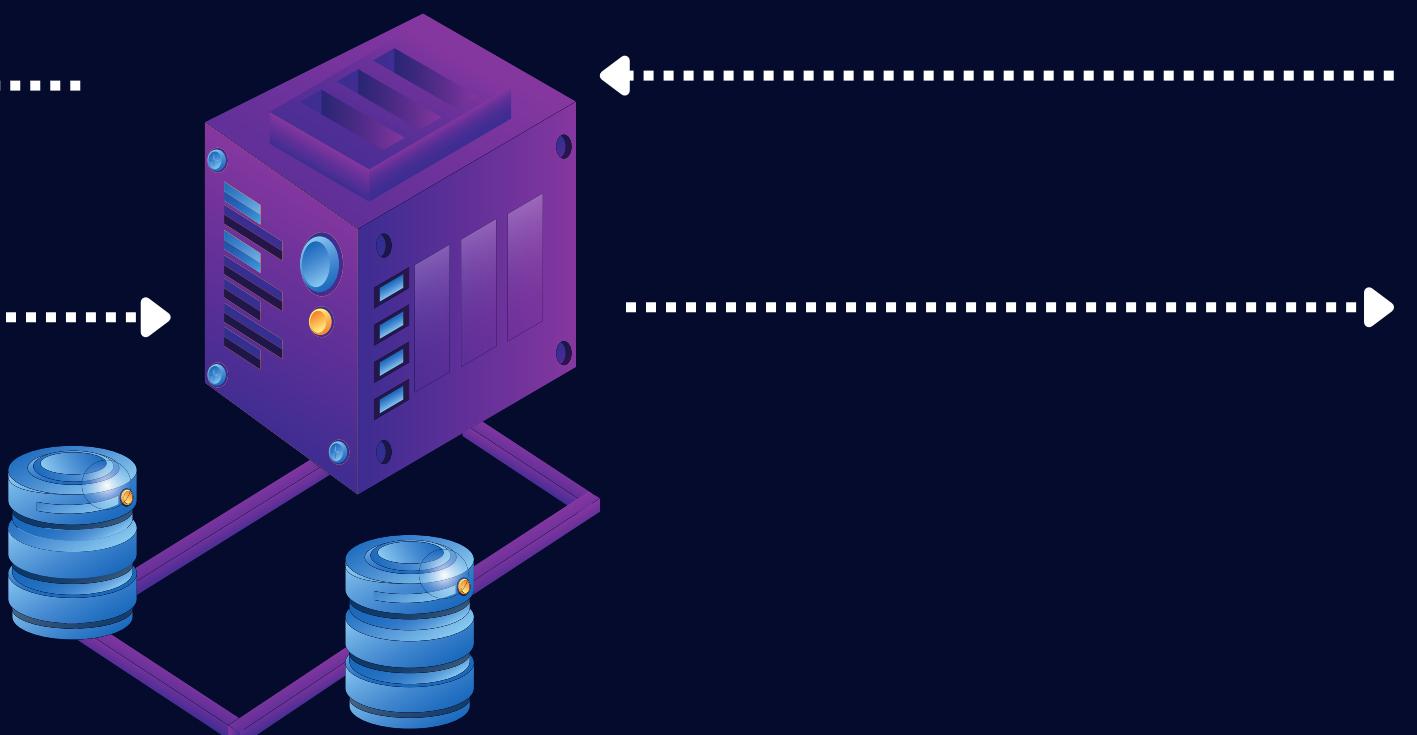




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Request



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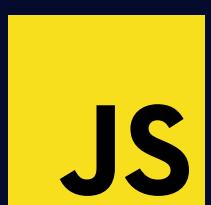
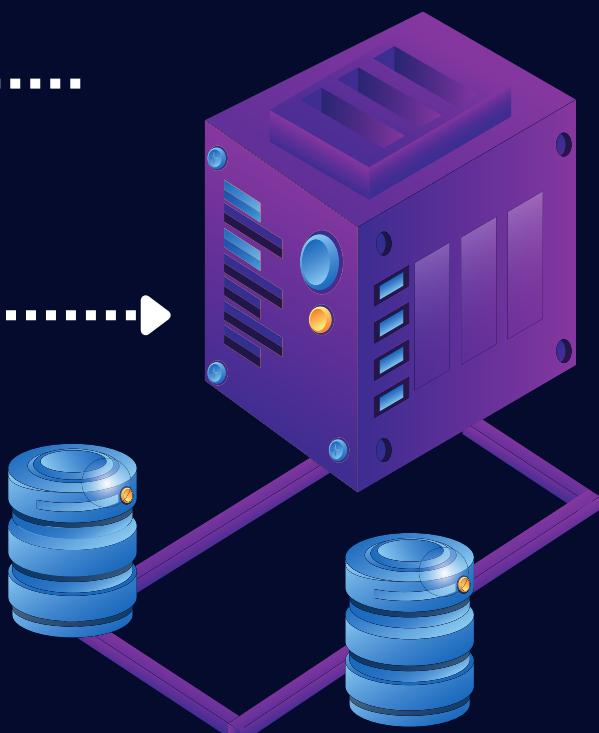


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Request

Request



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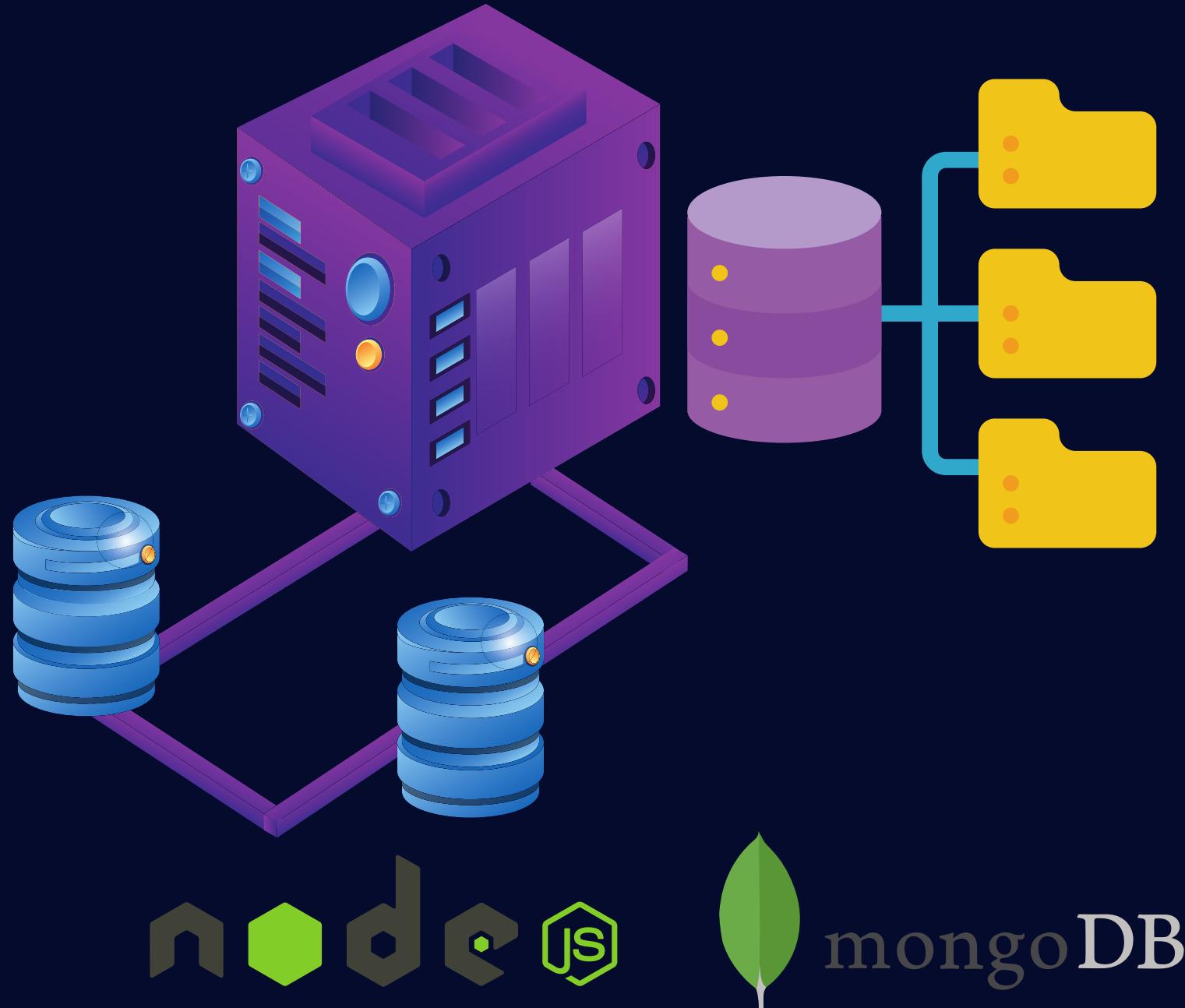
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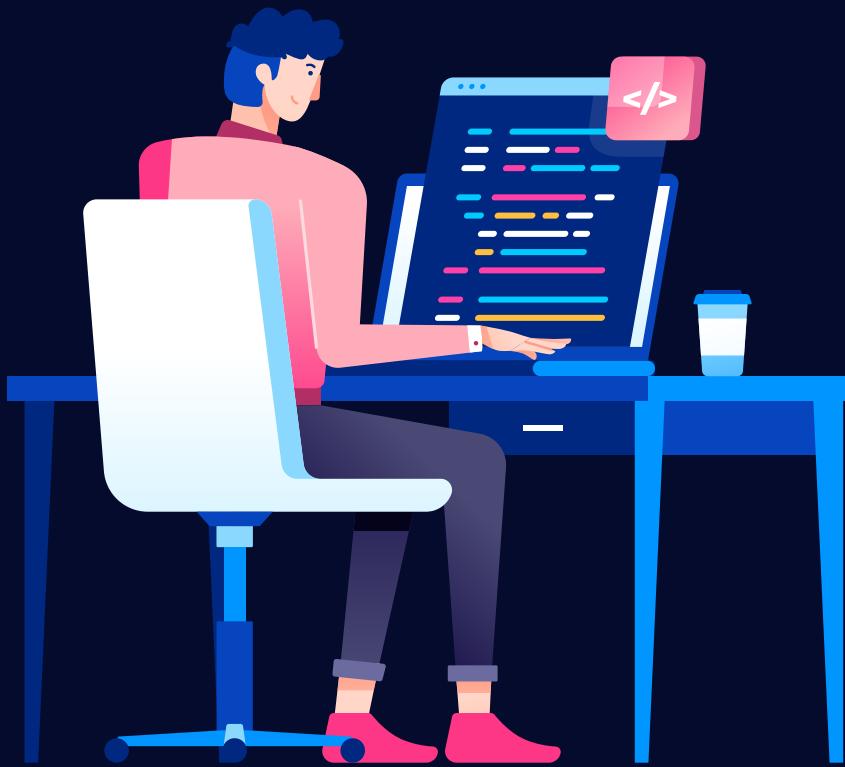


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backend development



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backend development



A backend developer is a software engineer who specializes in the development of server-side applications



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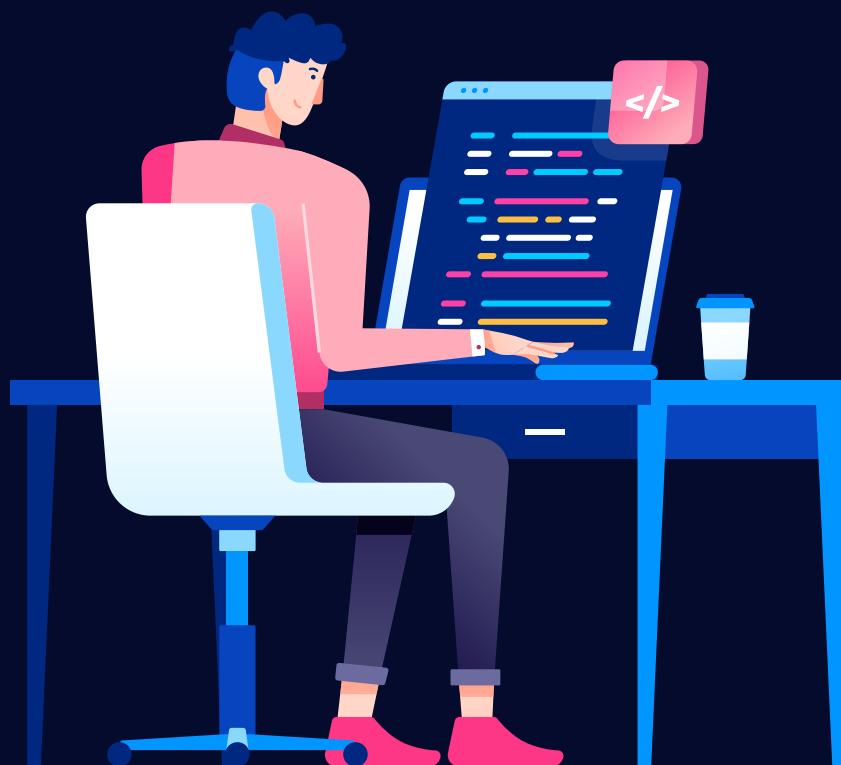




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backend Developer Roles



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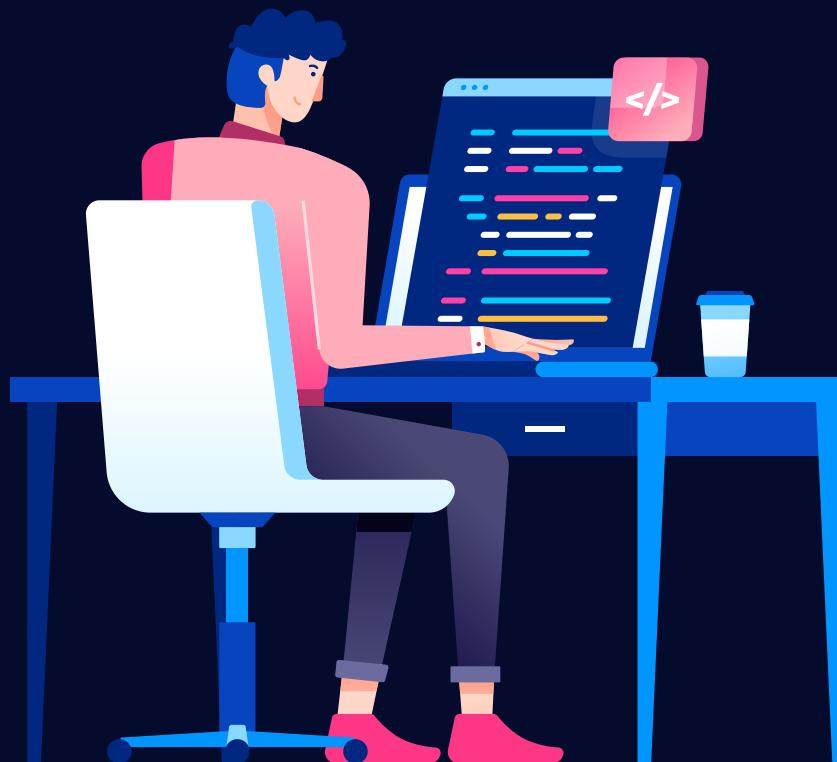




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backend Developer Roles



- ▶ Implement business logic of an application



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backend Developer Roles



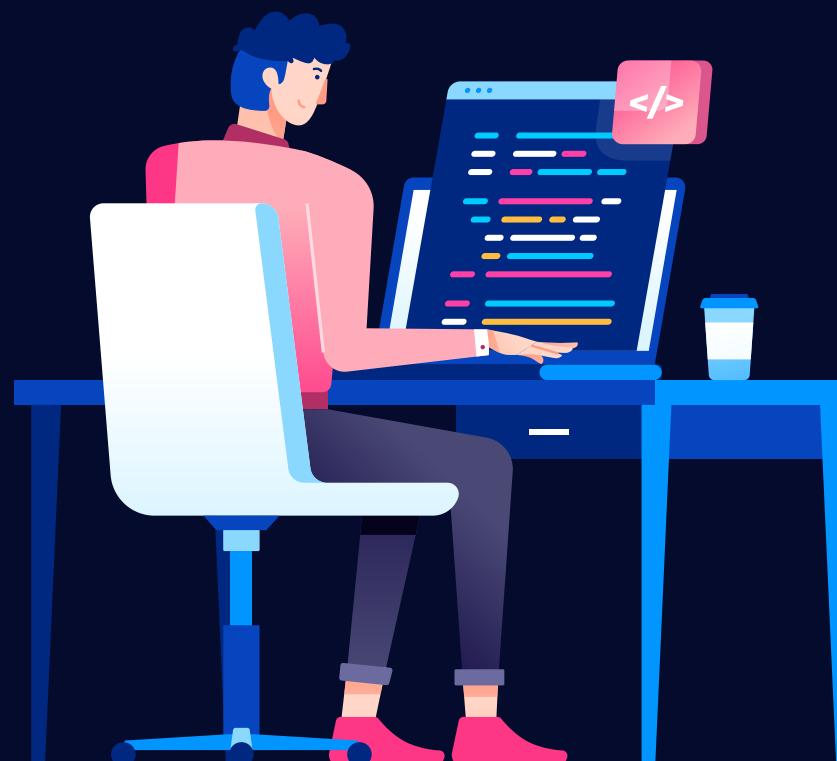
- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers



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backend Developer Roles



- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code



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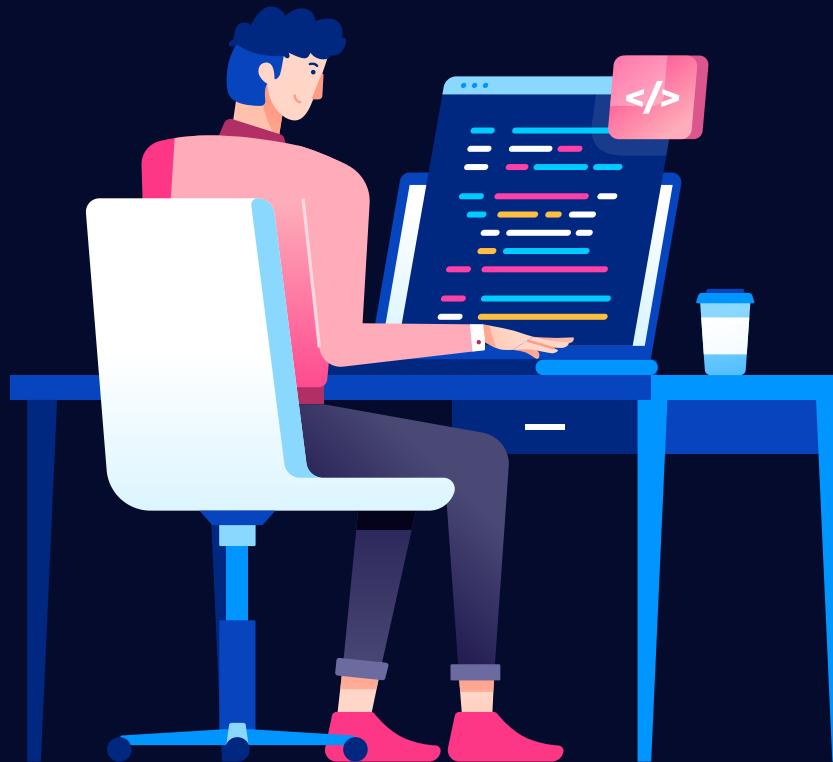
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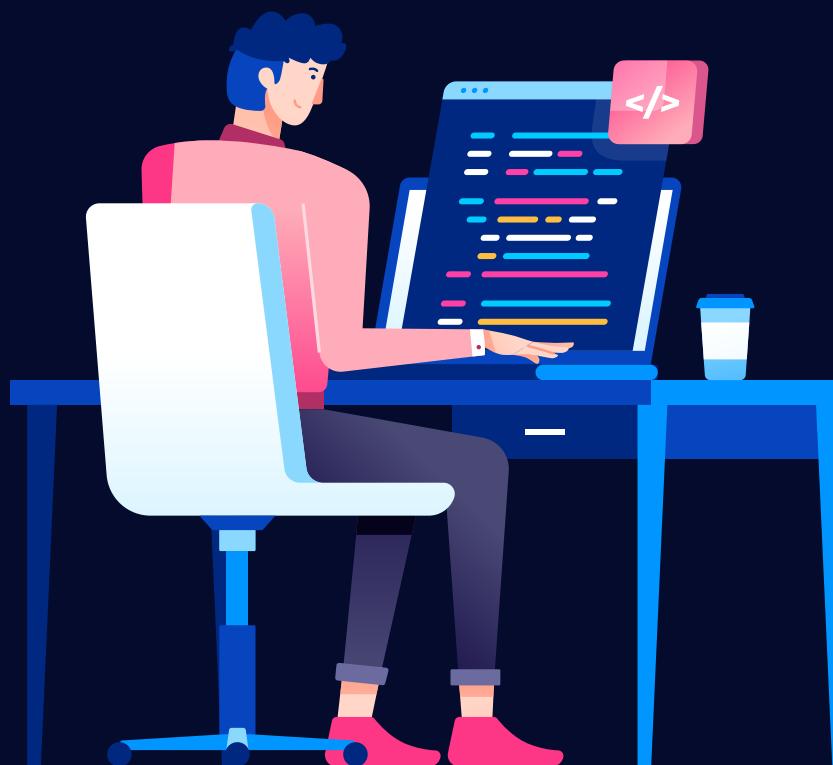


backend Developer Roles



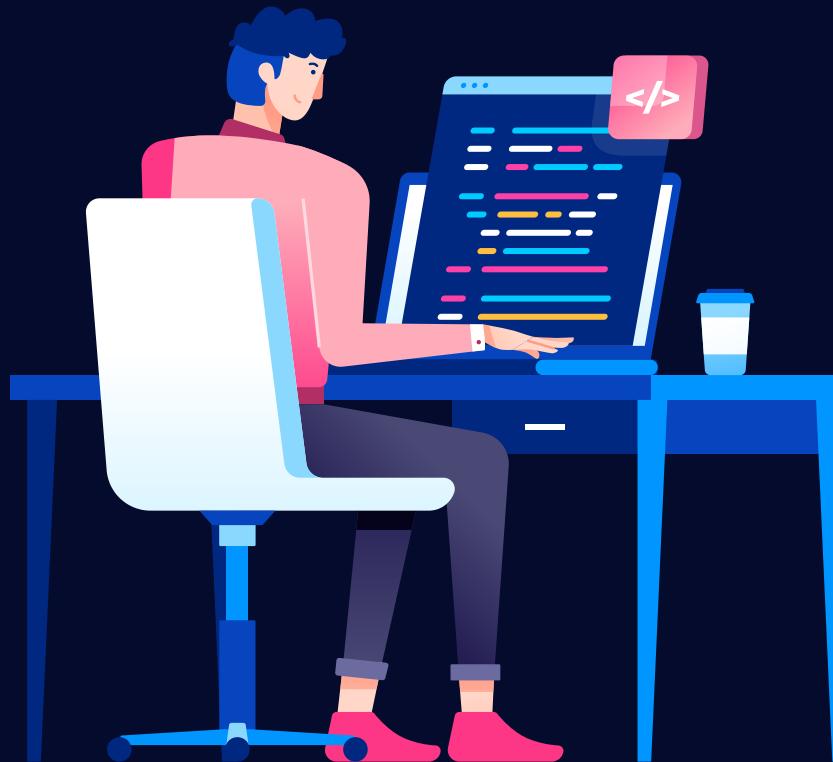
- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code
- ▶ Design, develop and implement web-based applications

backend Developer Roles



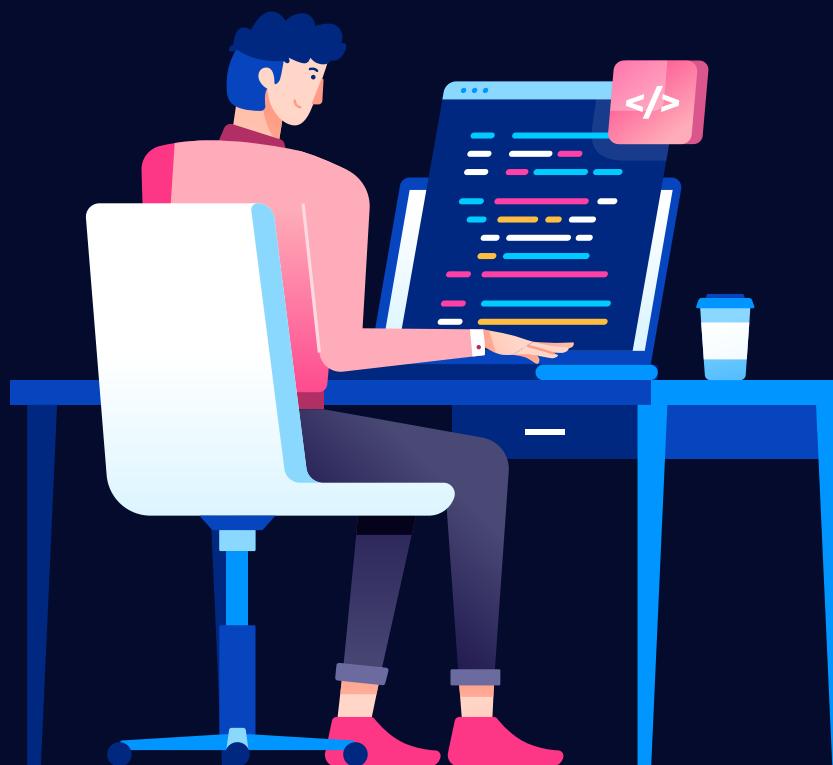
- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code
- ▶ Design, develop and implement web-based applications
- ▶ Develop and maintain server-side APIs

backend Developer Roles



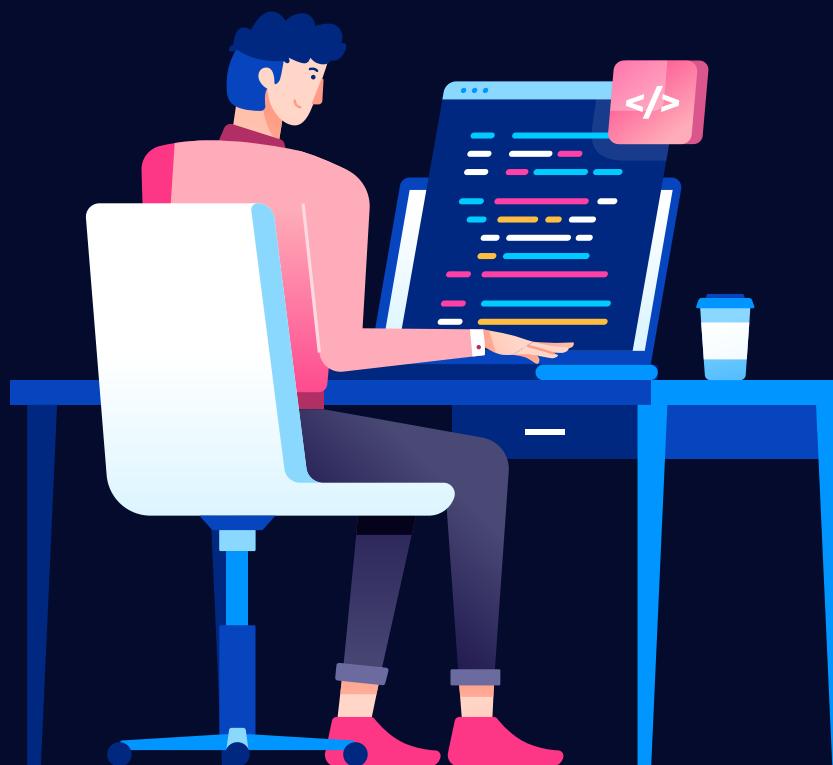
- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code
- ▶ Design, develop and implement web-based applications
- ▶ Develop and maintain server-side APIs
- ▶ Manage server-side code libraries

backend Developer Roles



- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code
- ▶ Design, develop and implement web-based applications
- ▶ Develop and maintain server-side APIs
- ▶ Manage server-side code libraries
- ▶ Optimize server-side code for performance

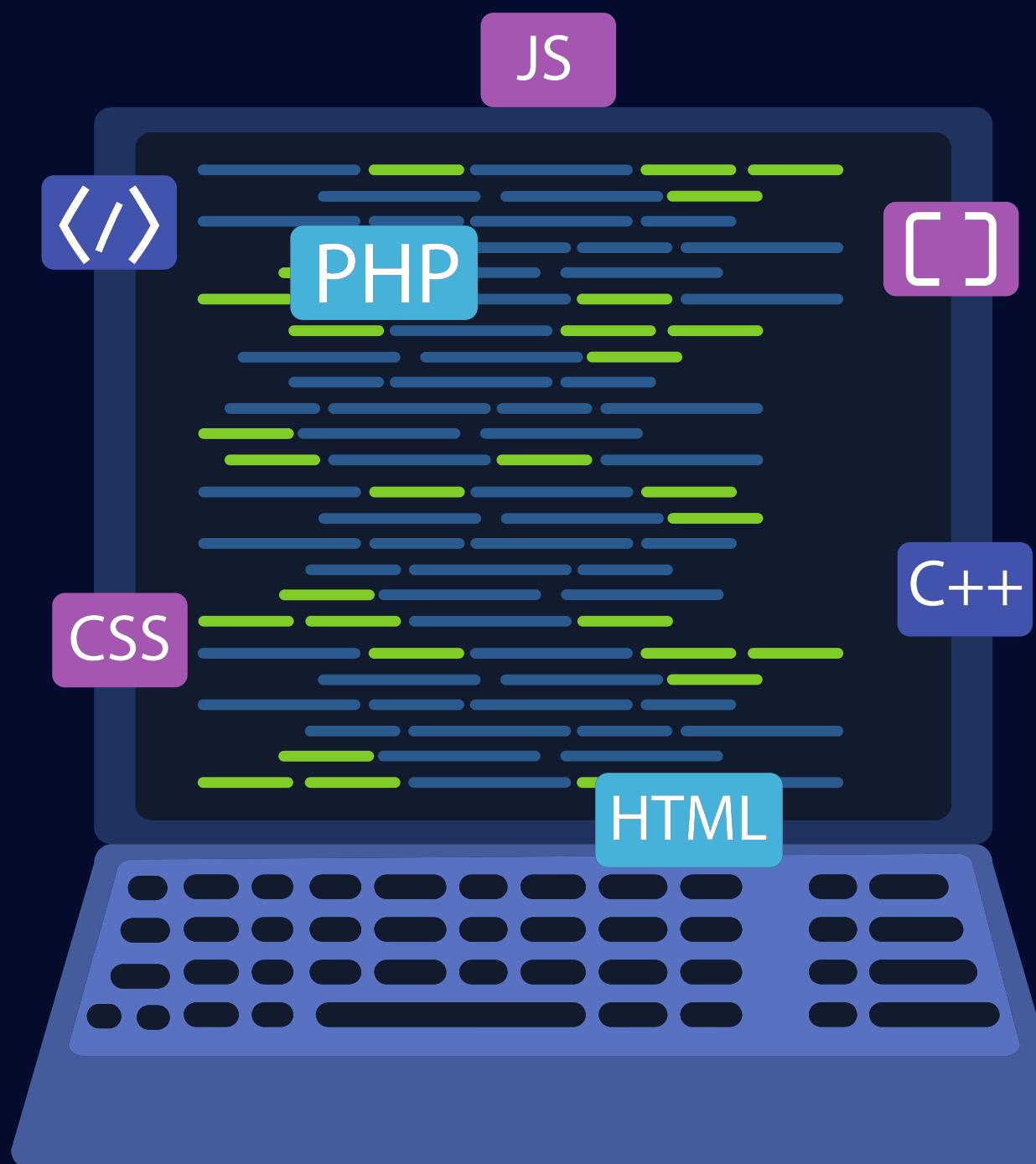
backend Developer Roles



- ▶ Implement business logic of an application
- ▶ Act as the server-side counterpart to front-end web developers
- ▶ Write, test and debug server-side code
- ▶ Design, develop and implement web-based applications
- ▶ Develop and maintain server-side APIs
- ▶ Manage server-side code libraries
- ▶ Optimize server-side code for performance
- ▶ Handle server security issues



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Programming Languages



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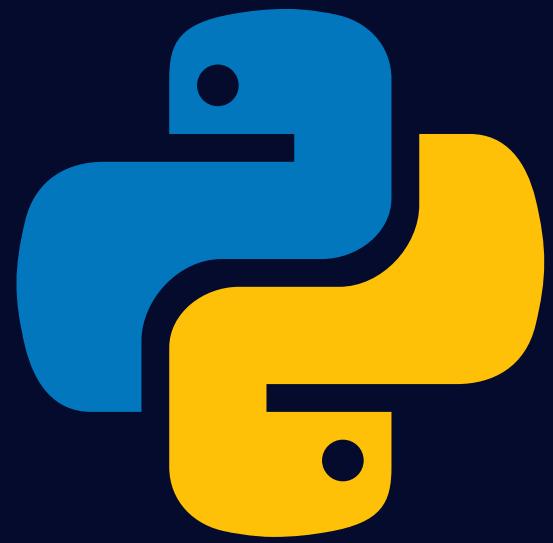


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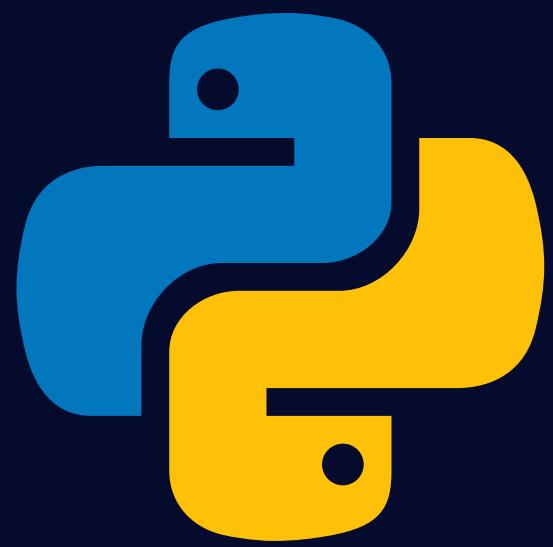


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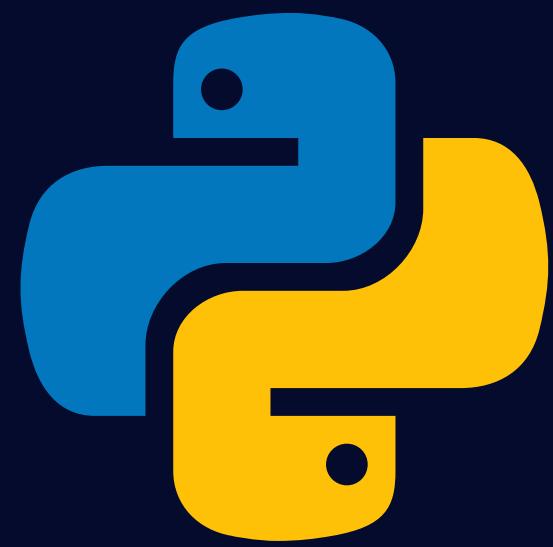


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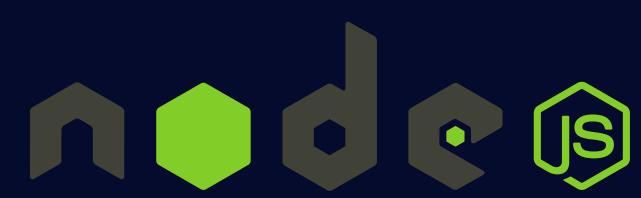


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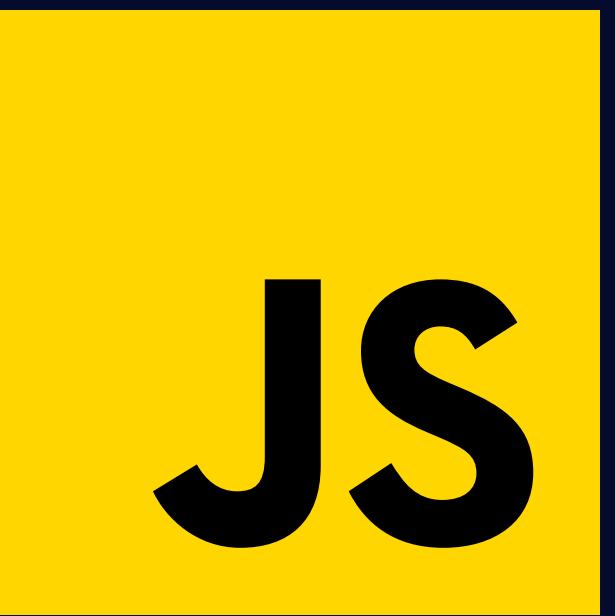
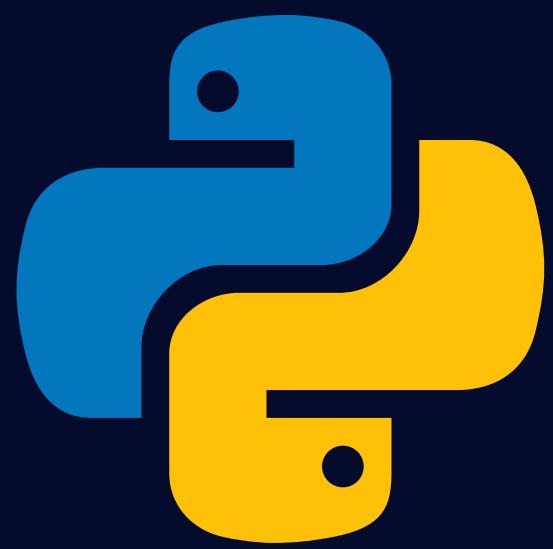


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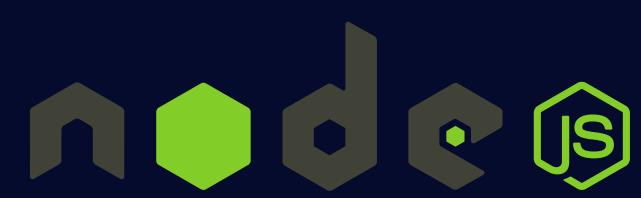


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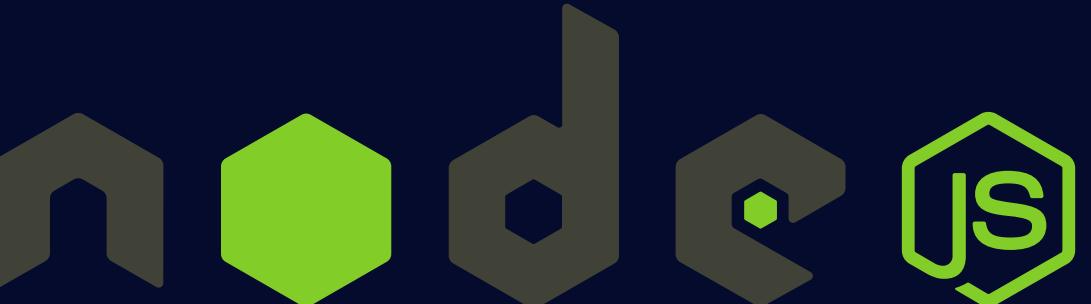
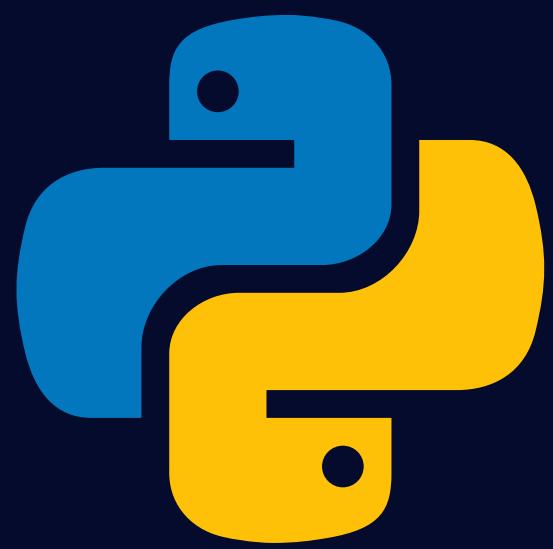


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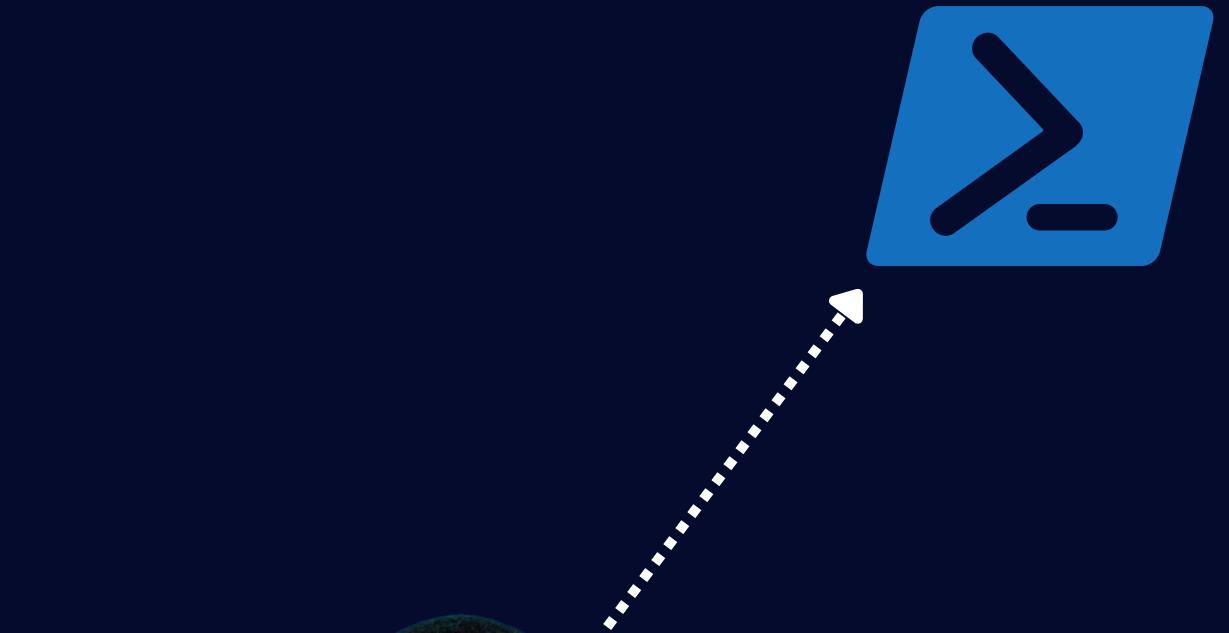


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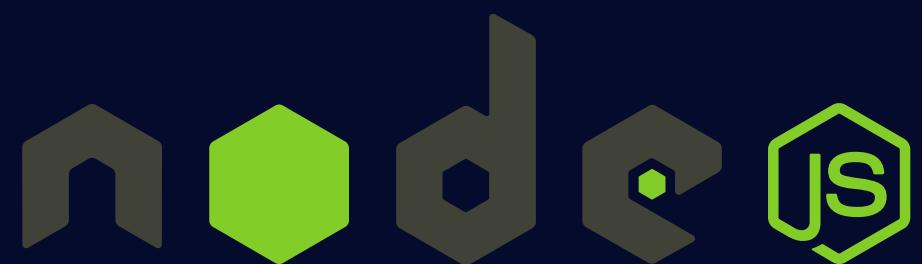


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Command Line



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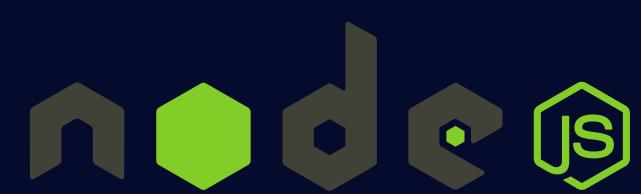


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Confusing Terminologies



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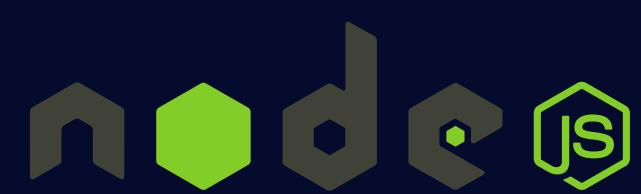


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👉 Terminal



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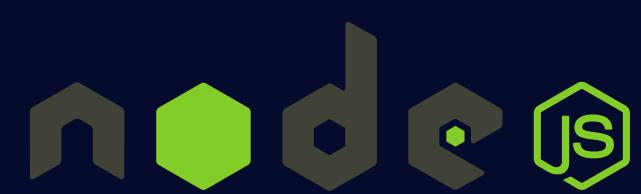


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Confusing Terminologies



👉 Terminal
👉 Shell



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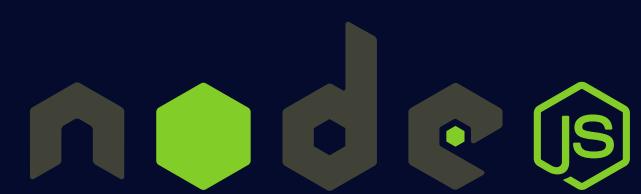


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Confusing Terminologies



👉 Terminal

👉 Shell

👉 Command Line



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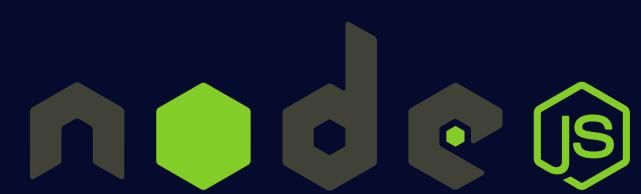


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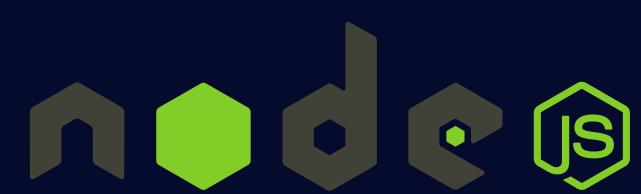


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Confusing Terminologies



Terminal



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Terminal

The terminal is a device that gives you access to the console of your computer.



Terminal

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Command Line



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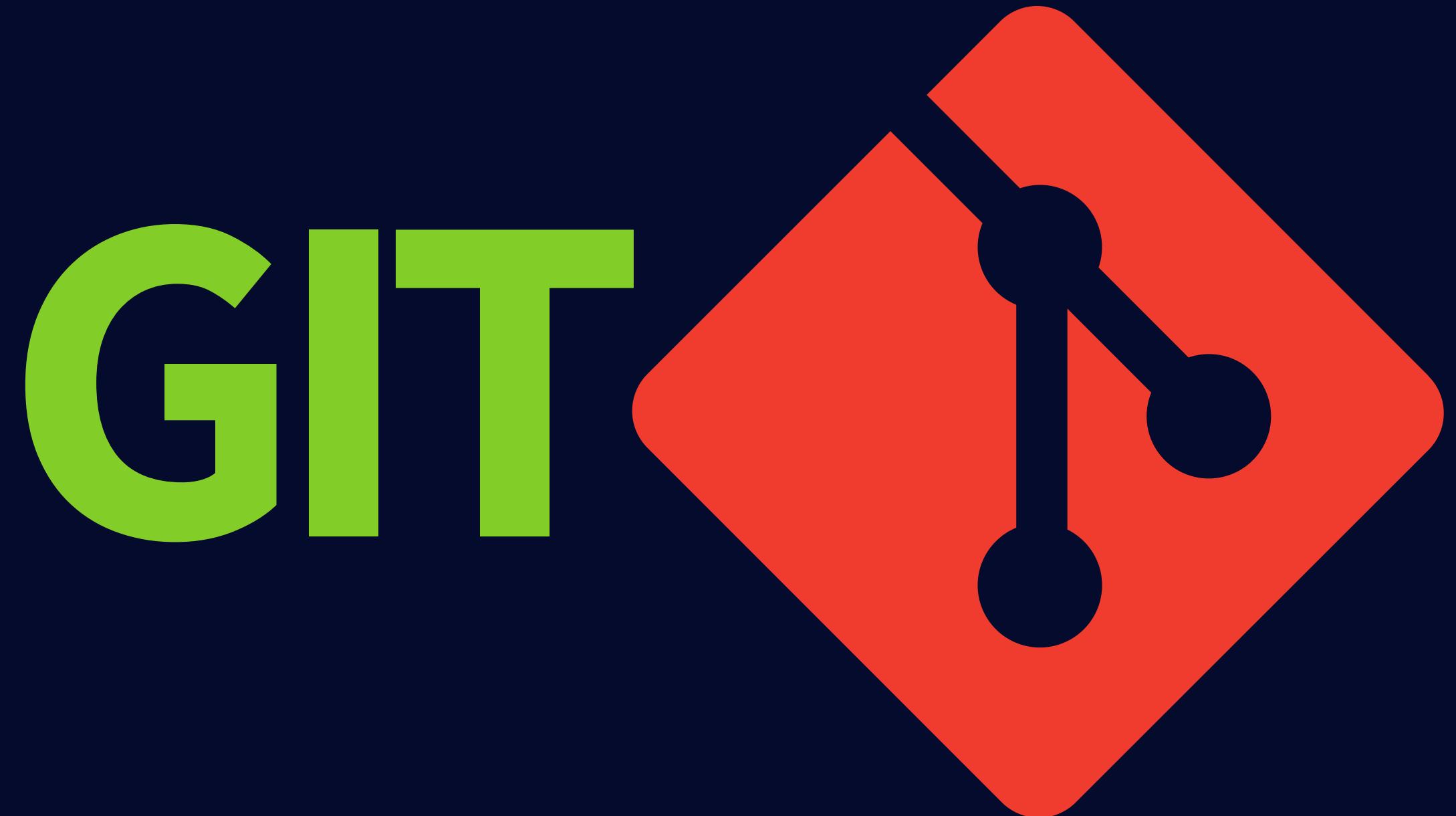
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Command Line

A command-line interface is any kind of interface that is used by entering (textual) commands. The terminal is one of these, but some programs have their own command-line interfaces.



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GIT



GIT (Version Control System)



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GIT (Version Control System)



A GIT is a software that helps developers keep track of the changes they make to their code. This is helpful because it makes it easy to go back and see what changes were made and when.



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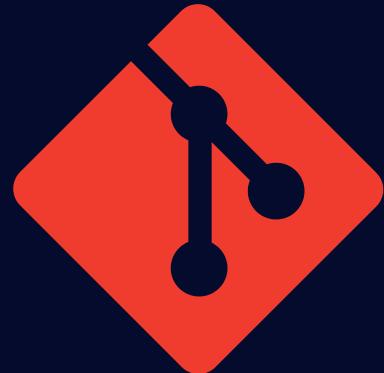


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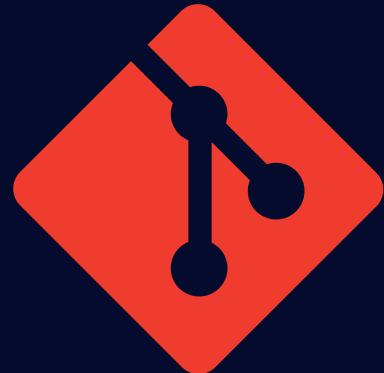




GIT (Version Control System)



Login functionality



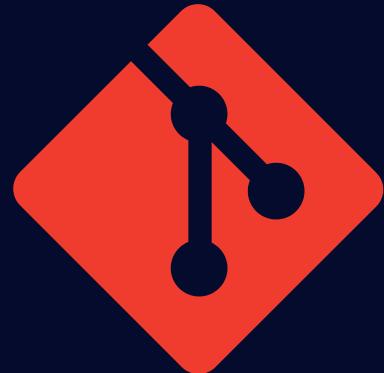
GIT (Version Control System)



Login functionality



Fixed Registration Error



GIT (Version Control System)



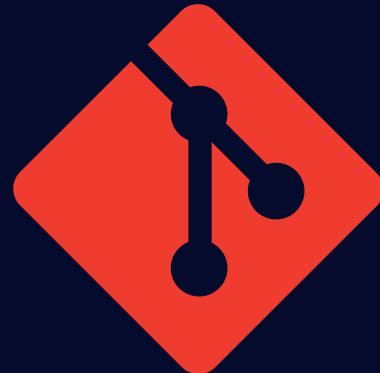
..... ➔ Login functionality



..... ➔ Fixed Registration Error



..... ➔ Added Paid Plan



GIT (Version Control System)



..... ➔ Login functionality



..... ➔ Fixed Registration Error



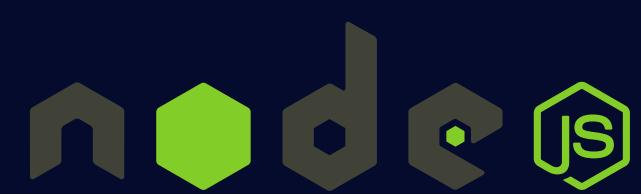
..... ➔ Added Paid Plan



..... ➔ Redesign Homepage



COMMON COMMANDLINE COMMANDS



COMMON COMMANDS



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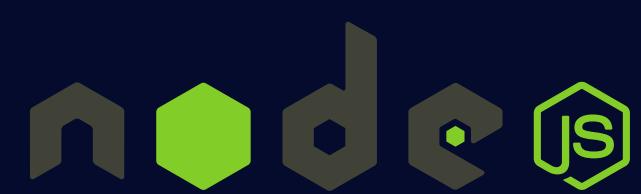


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COMMON COMMANDS



► **pwd** → Print Working Directory



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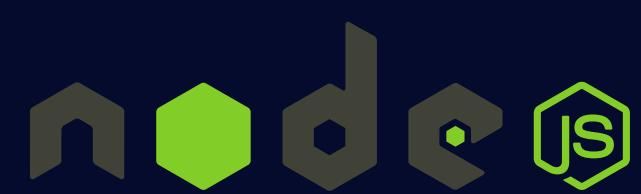


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COMMON COMMANDS



- ▶ **pwd** → Print Working Directory
- ▶ **mkdir** → Makes a new directory



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COMMON COMMANDS



- ▶ **pwd** → Print Working Directory
- ▶ **mkdir** → Makes a new directory
- ▶ **touch** → Create a file





COMMON COMMANDS

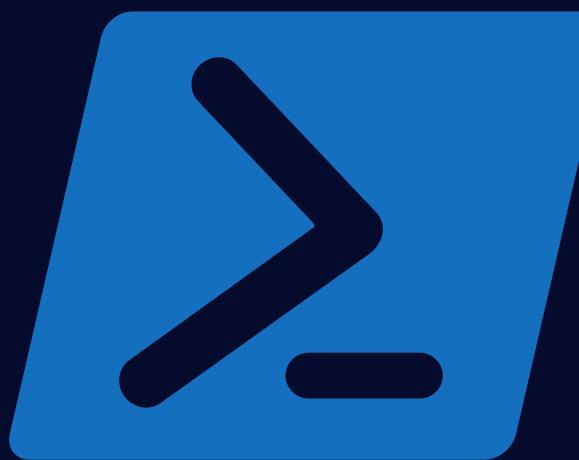


- ▶ **pwd** → Print Working Directory
- ▶ **mkdir** → Makes a new directory
- ▶ **touch** → Create a file
- ▶ **ls** → Lists all files and folders in the current directory





COMMON COMMANDS



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COMMON COMMANDS



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- ▶ **rm** → Remove a file
- ▶ **rmdir** → Removes an empty directory
- ▶ **rm -rf** → Removes a folder and all of its contents. BE CAREFUL! This command cannot be undone!



Getting Started With NodeJS



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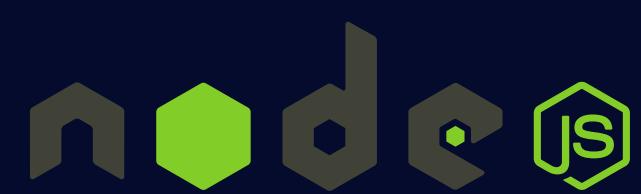


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NodeJS



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What is Node JS?



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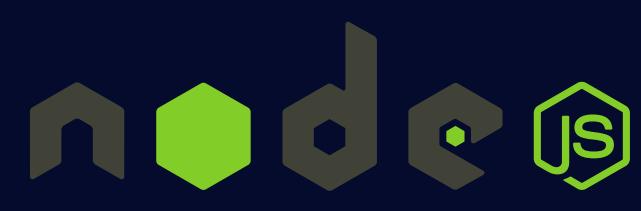


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Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O. (input and output) model that makes it lightweight and efficient



JS Environments



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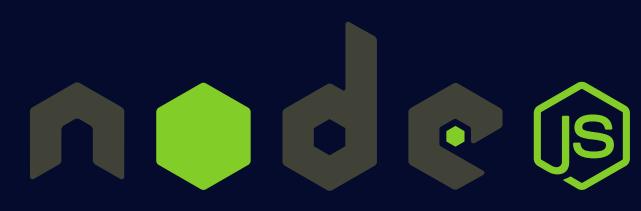


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NODE JS



*Node js was built on
top of chrome v8
engine*



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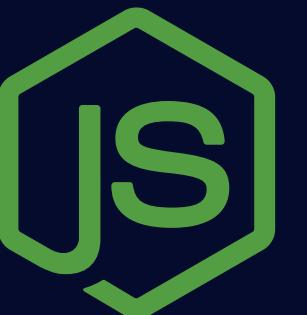




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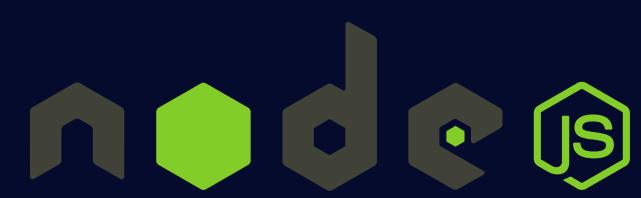


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Why use Node JS?



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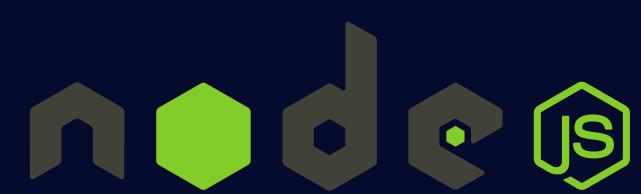


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Why use Node JS?



- ▶ It uses an event-driven, non-blocking I/O model that makes it lightweight and efficient



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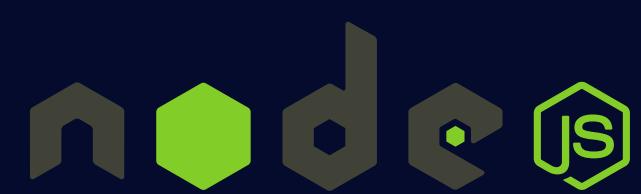


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Why use Node JS?



- ▶ It uses an event-driven, non-blocking I/O model that makes it lightweight and efficient
- ▶ It has a large and active open-source community



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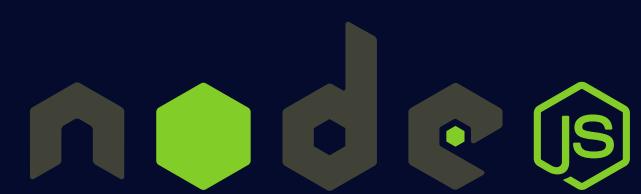


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Why use Node JS?



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- ▶ It runs on various platforms, including Windows, Linux, and macOS.



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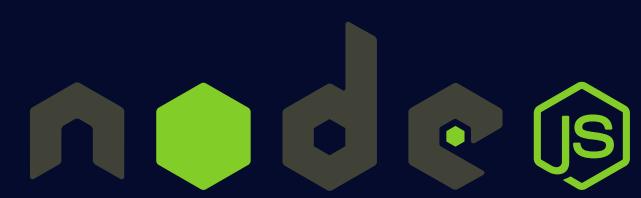


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- ▶ It supports real-time data applications with features such as WebSockets and WebRTC



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Uses of Node JS



Uses of Node JS



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Uses of Node JS



Developing web applications



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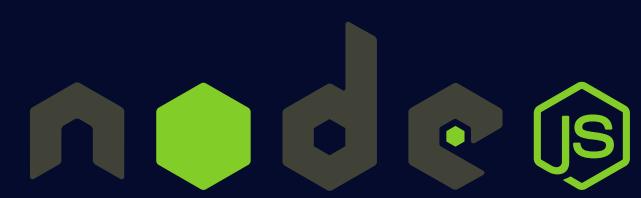


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Uses of Node JS



- ▶ Developing web applications
- ▶ Building chatbots



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Uses of Node JS



- ▶ Developing web applications
- ▶ Building chatbots
- ▶ Creating real-time applications



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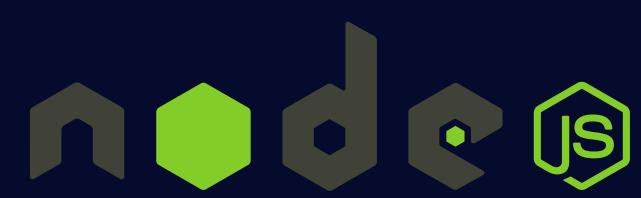


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- ▶ Creating real-time applications
- ▶ Streaming video and audio



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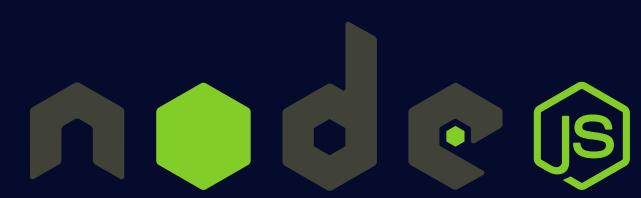


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Uses of Node JS



- ▶ Developing web applications
- ▶ Building chatbots
- ▶ Creating real-time applications
- ▶ Streaming video and audio
- ▶ Building microservices



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Who uses Node JS?







UBER



UBER





N



UBER

N



P PayPal

UBER

N



ebay



P PayPal

UBER



Install Node JS



REPL



R=Read

E=Evaluate

P=Print

L=Loop



NODE JS MODULES



fs-File System