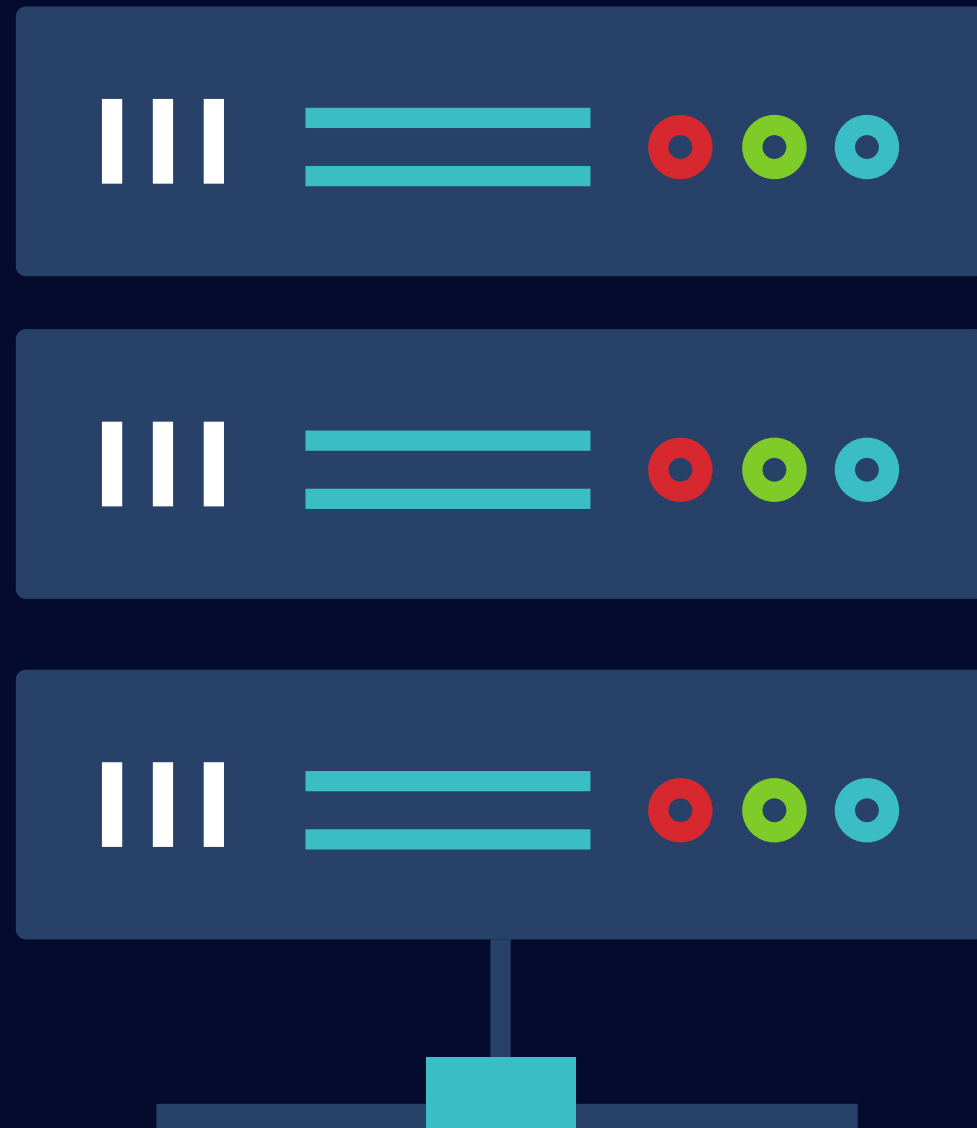




what is backend Development?



Components of a web application



What is a server?

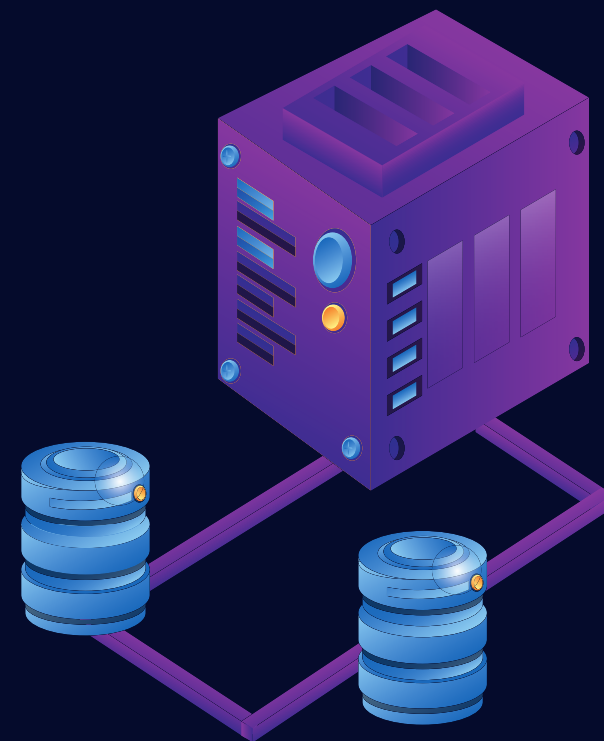


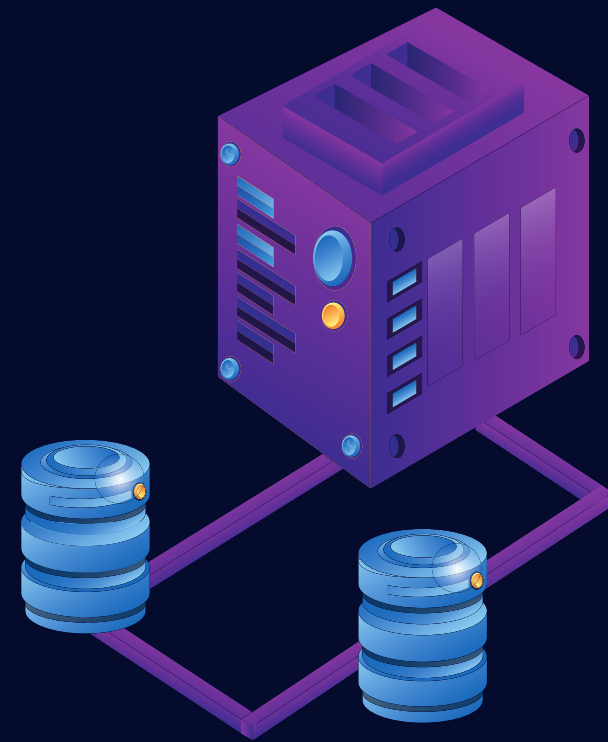
It is a program that accepts requests from clients and responds to those requests

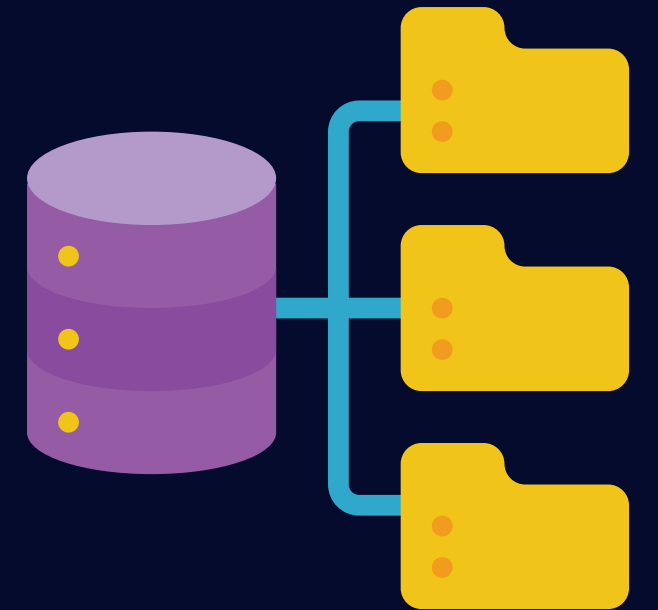
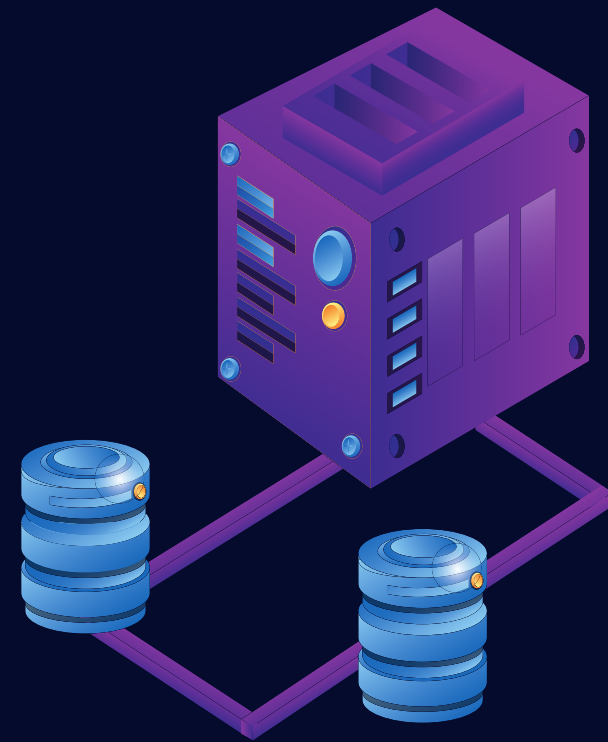


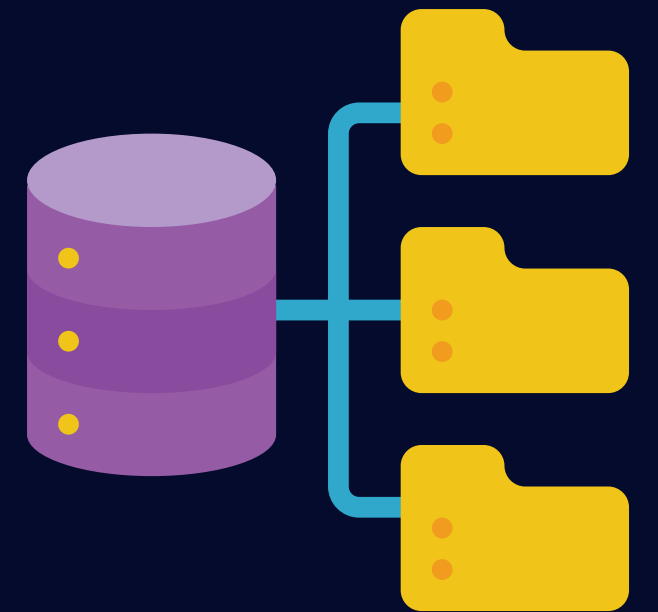
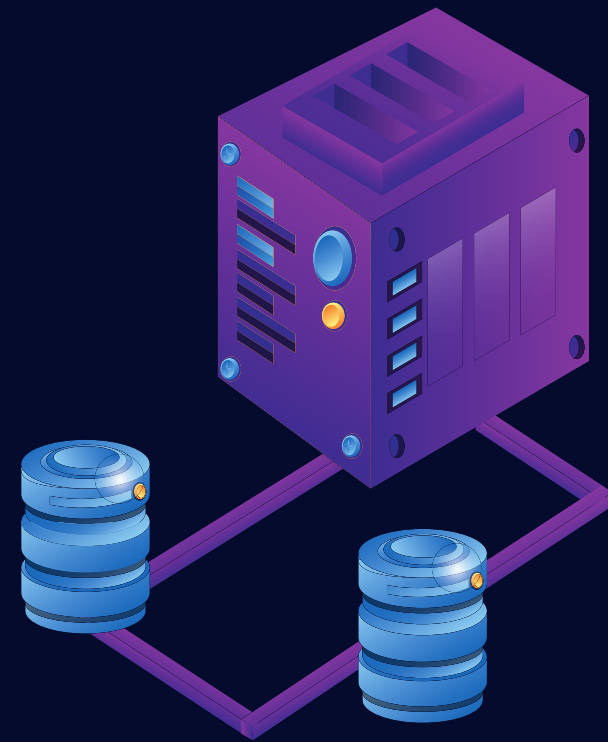


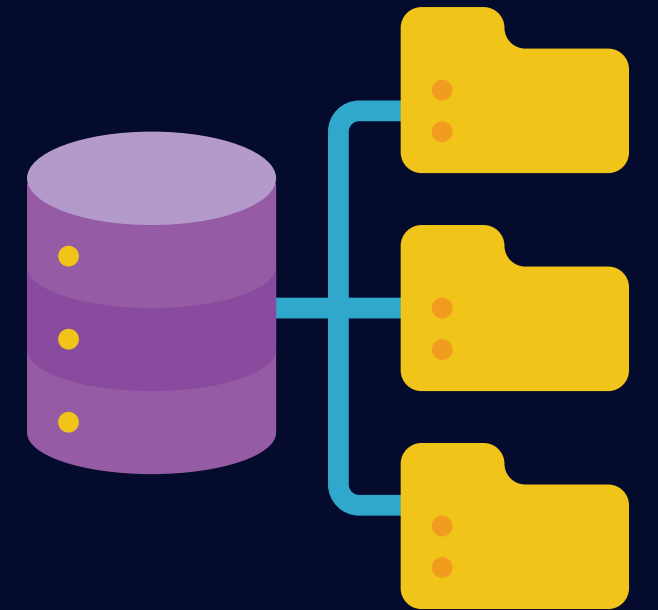
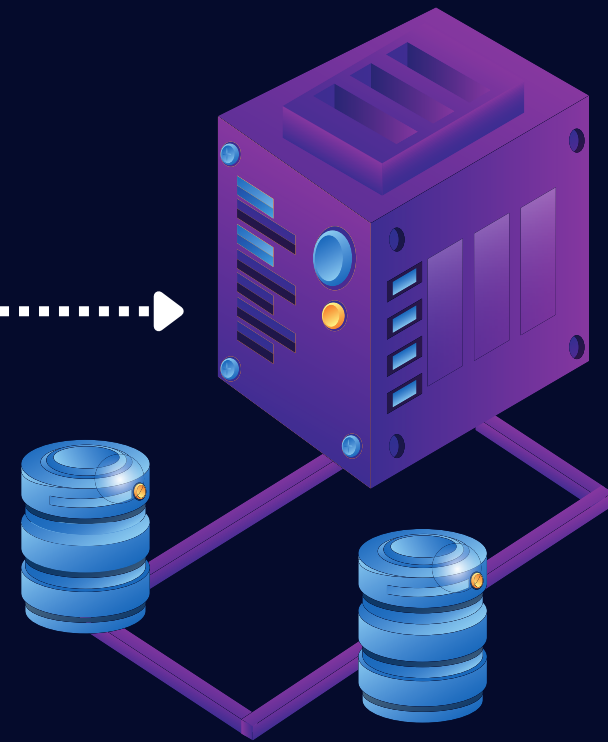


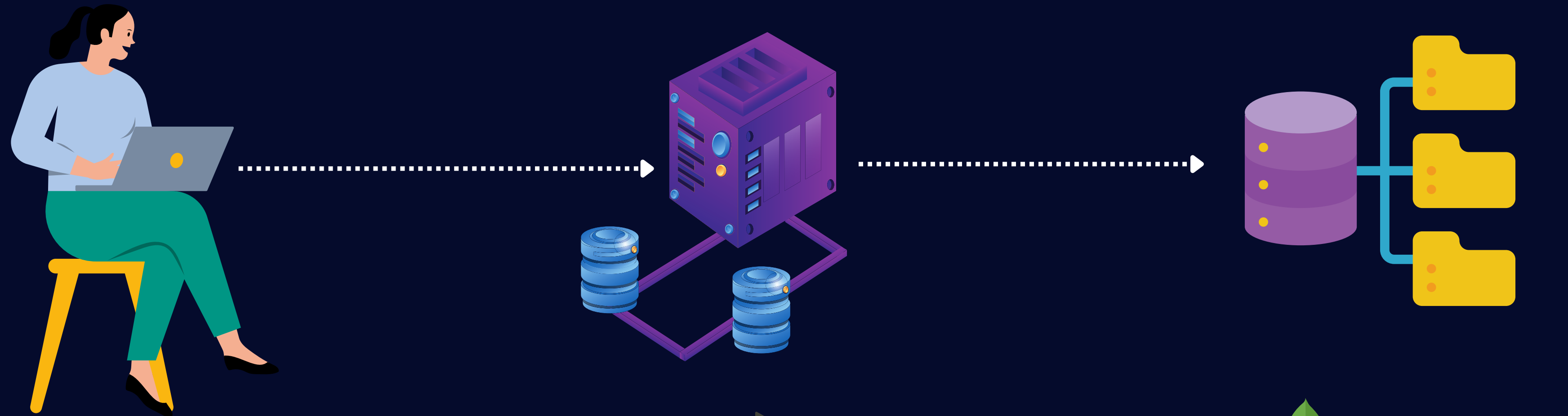


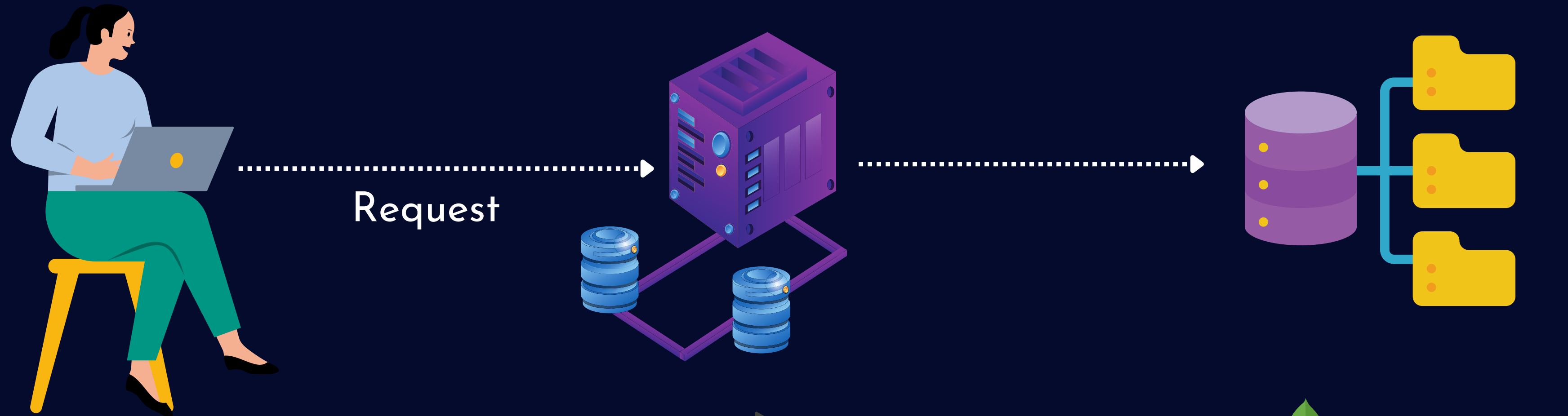




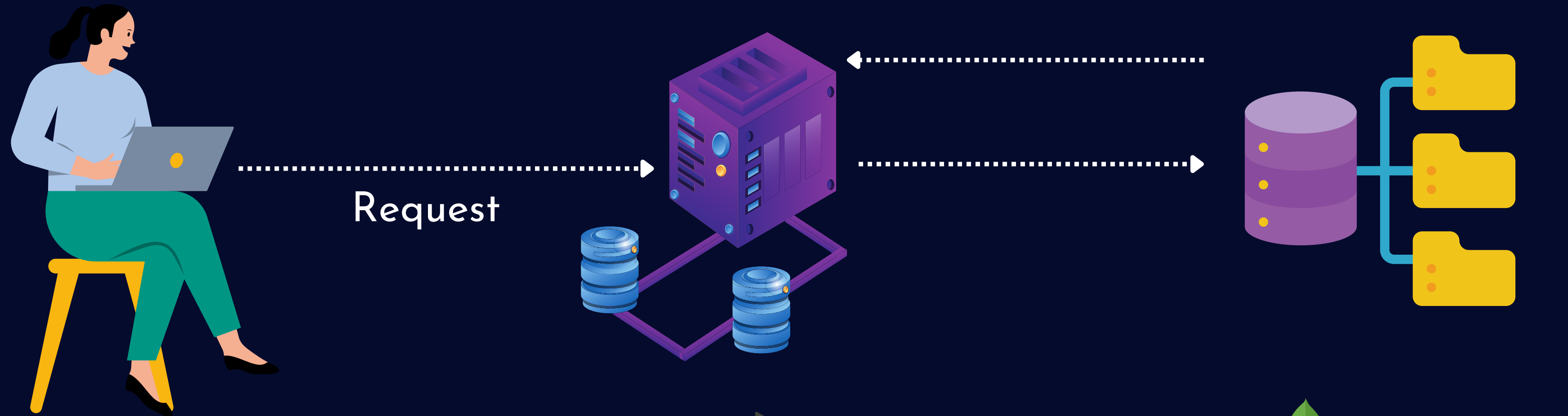


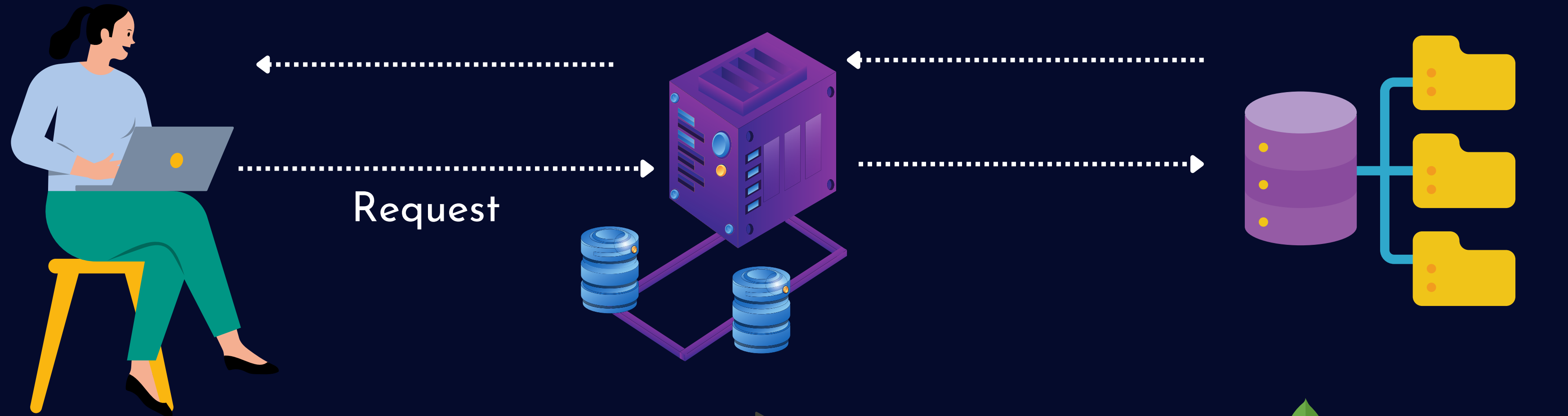


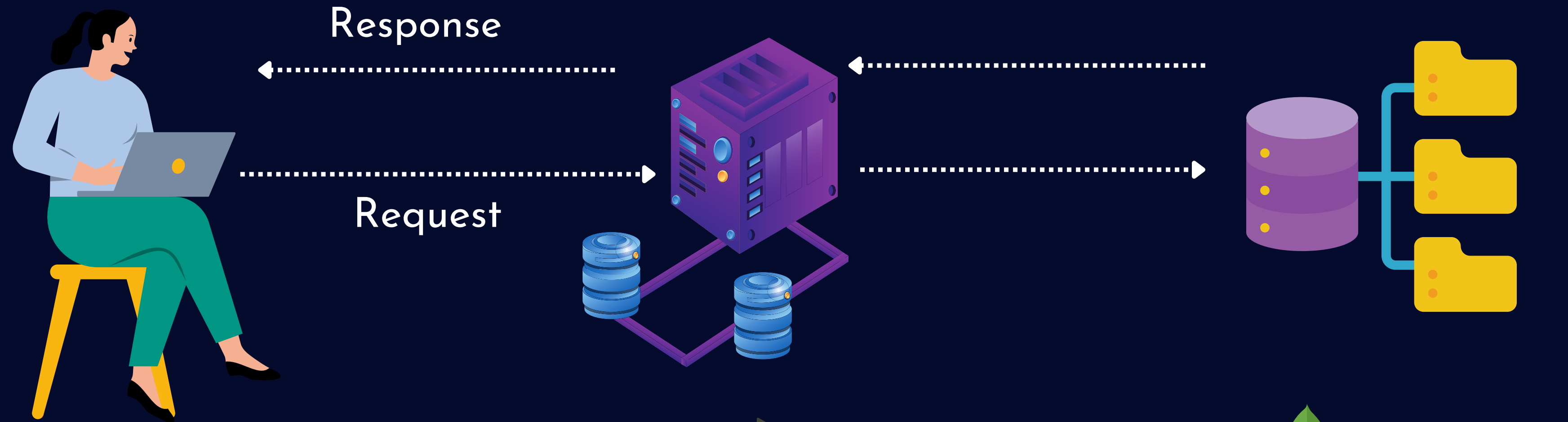


















backend development



what is
backend
Development?



backend development



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

backend Developer Roles



backend Developer Roles



- Implement business logic of an application

backend Developer Roles



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

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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backend Developer Roles



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- ▶ Manage server-side code libraries

backend Developer Roles

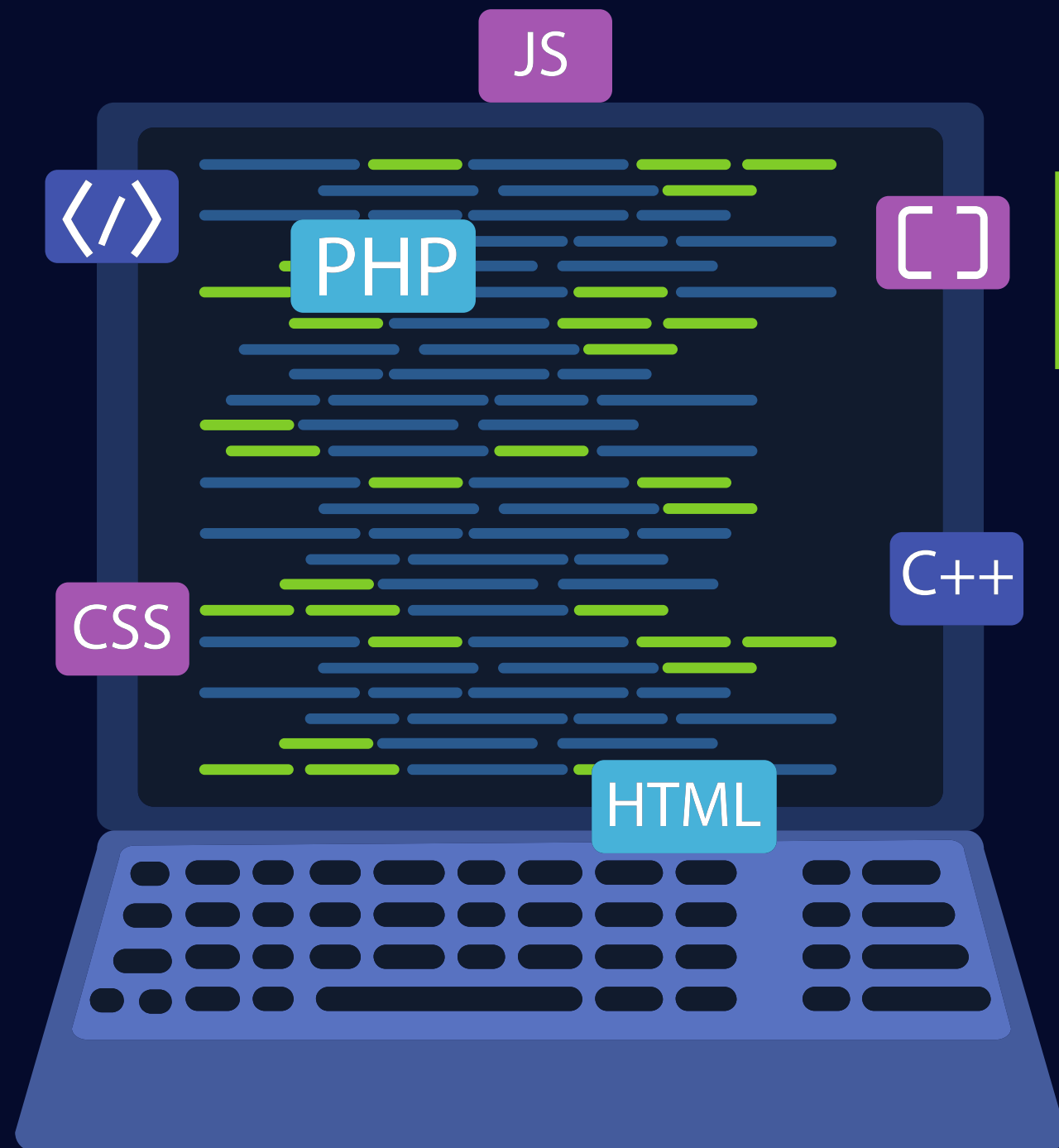


- ▶ Implement business logic of an application
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- ▶ Optimize server-side code for performance

backend Developer Roles



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- ▶ Develop and maintain server-side APIs
- ▶ Manage server-side code libraries
- ▶ Optimize server-side code for performance
- ▶ Handle server security issues

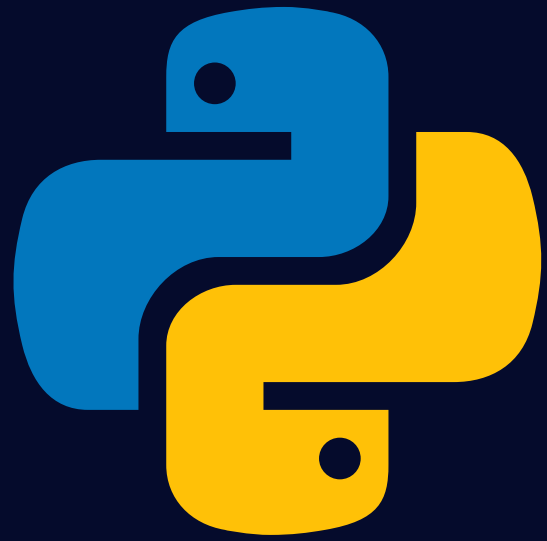


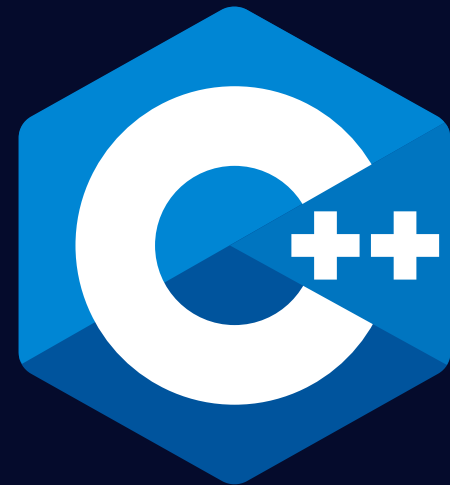
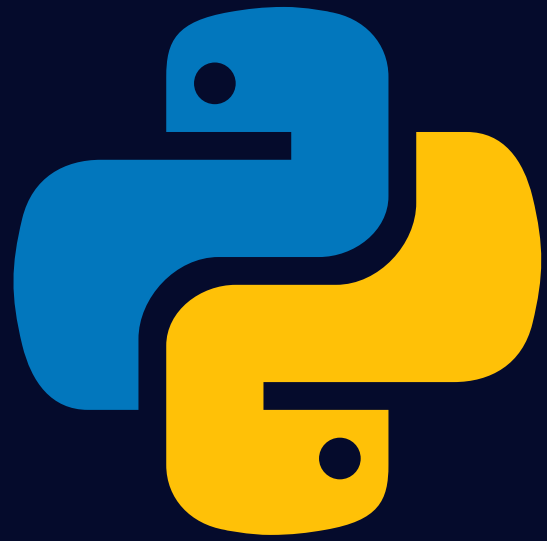
Programming Languages

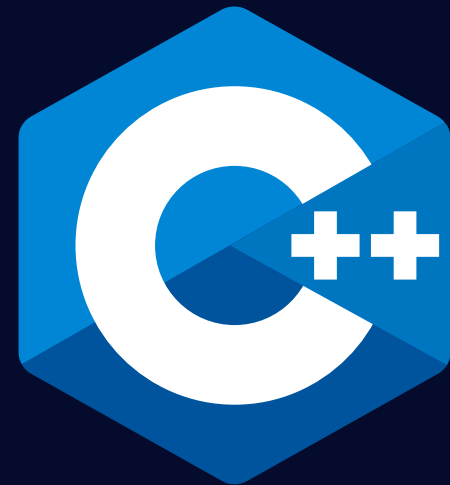
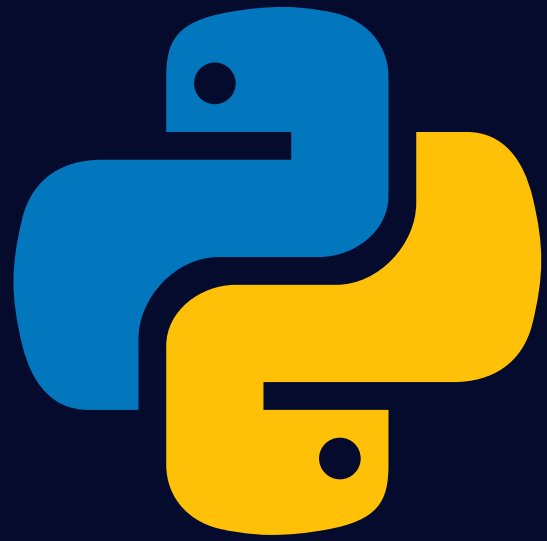


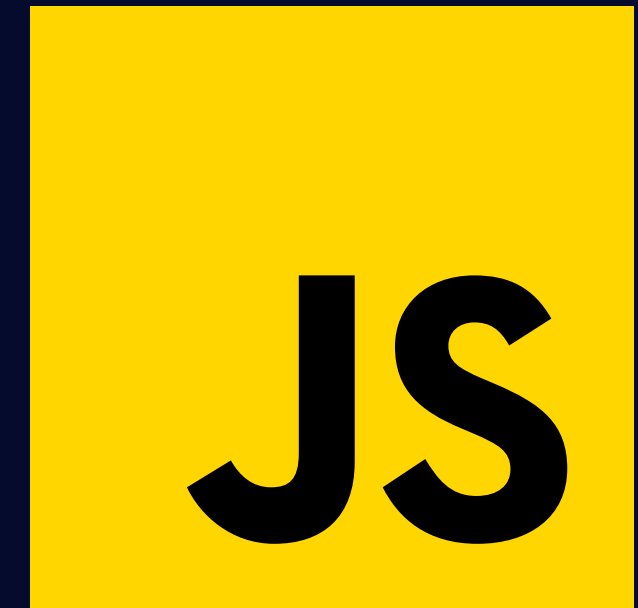
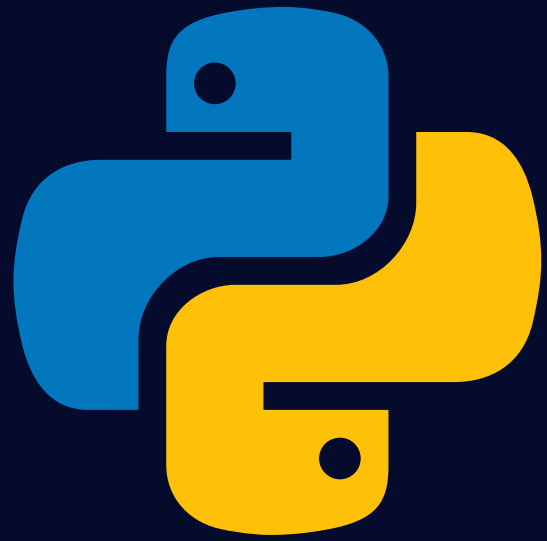
NODE JS

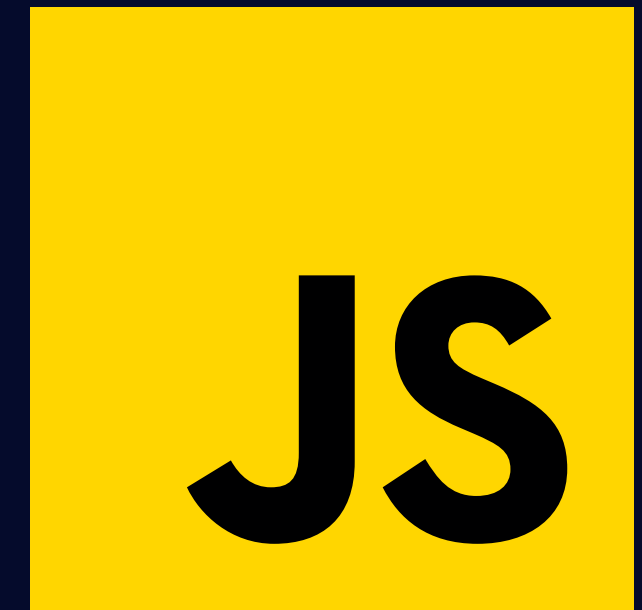
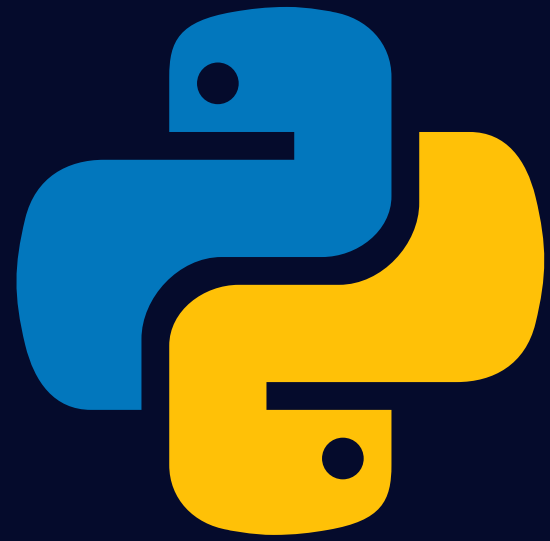














NODE JS

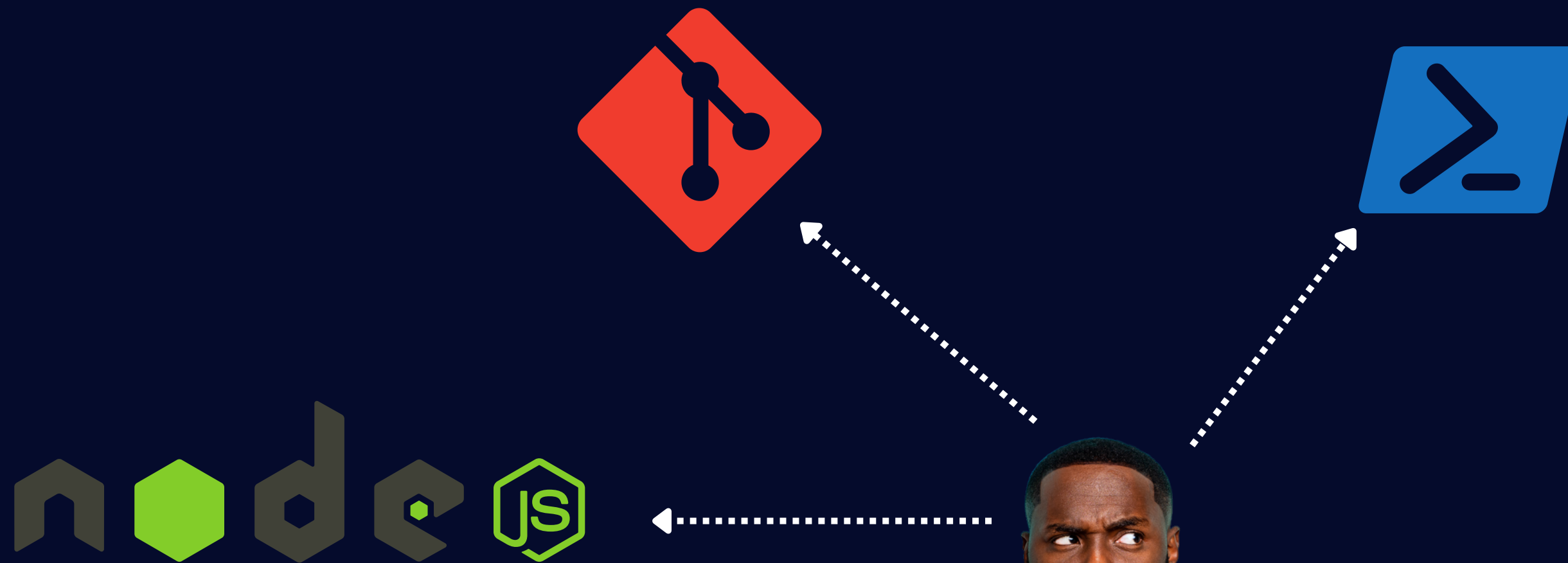


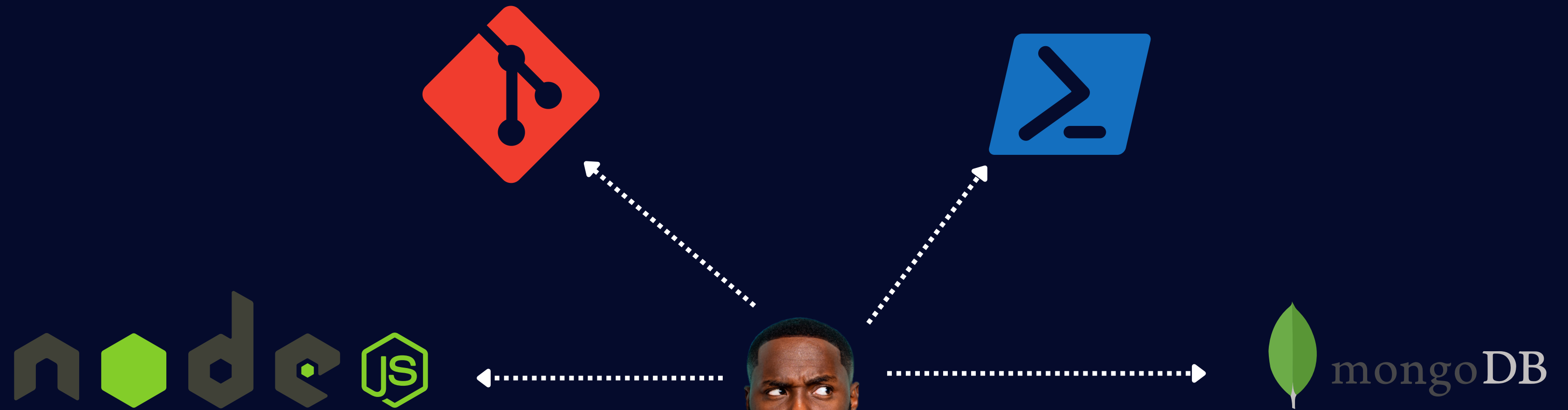
What You need to know















Confusing Terminologies





👉 Terminal



👉 Terminal

👉 Shell



☞ Terminal

☞ Shell

☞ Command Line





Terminal





Terminal

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





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Shell





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Shell

The shell is the program that runs in the terminal, giving users a command prompt. Popular shells include sh, bash, zsh, fish, ash, and csh. The shell processes commands and returns output, like Bash in Linux.





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Command Line



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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.

GIT





GIT (Version Control System)





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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GIT (Version Control System)



GIT (Version Control System)



Login functionality



GIT (Version Control System)



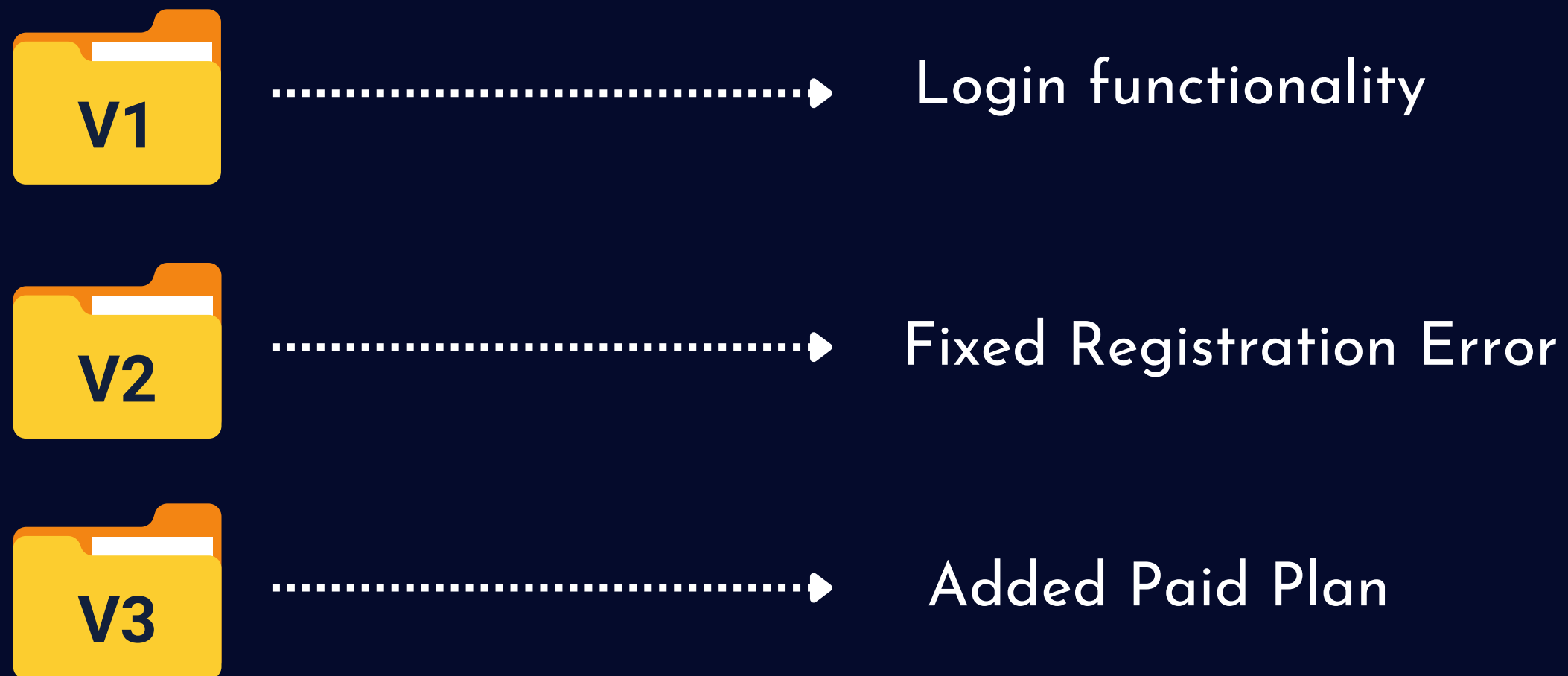
Login functionality



Fixed Registration Error



GIT (Version Control System)





GIT (Version Control System)





COMMON COMMANDLINE COMMANDS



► **pwd** → Print Working Directory



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





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- ▶ **cd** → Change Directory
- ▶ **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 Node JS



Node JS

What is Node JS



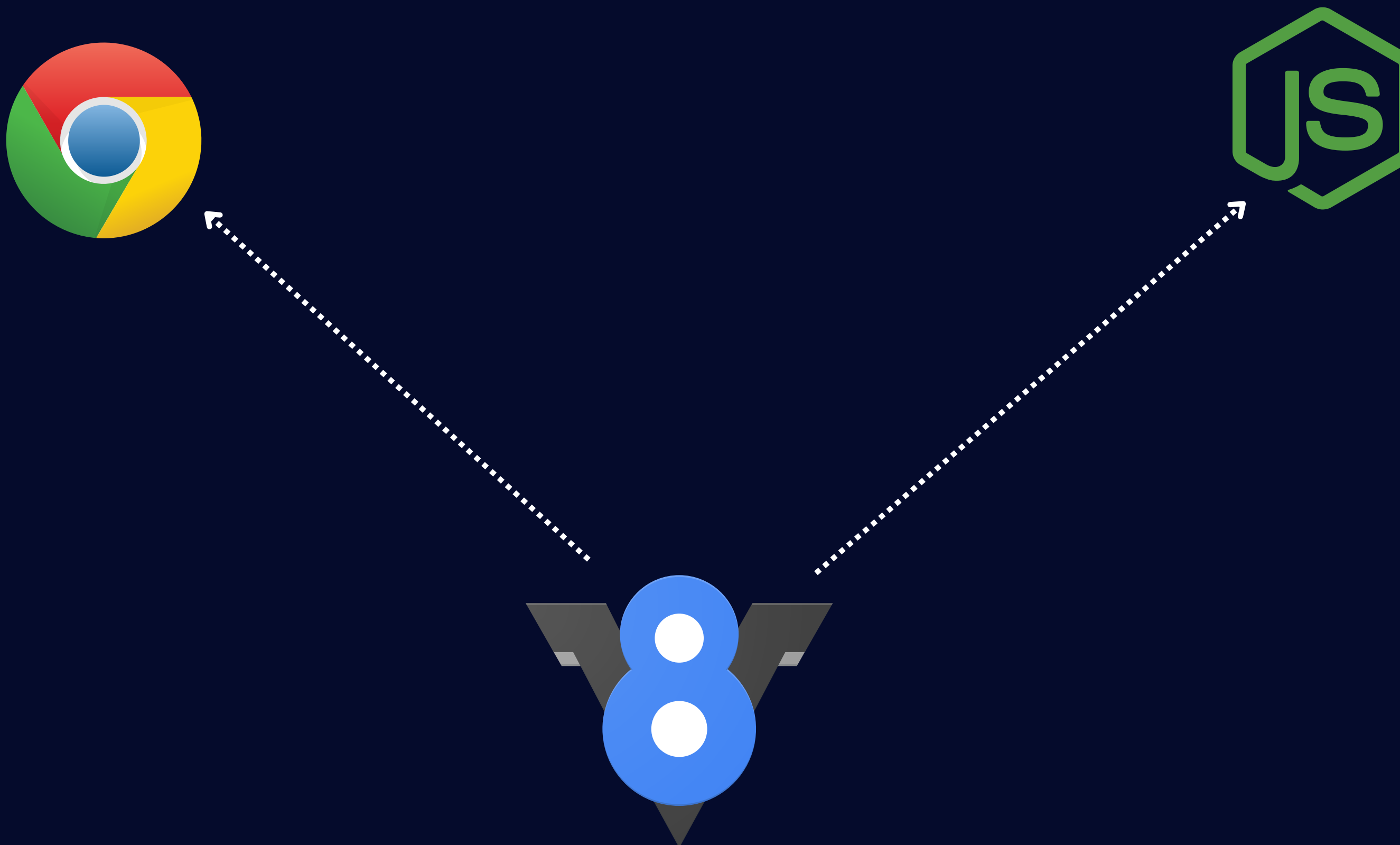


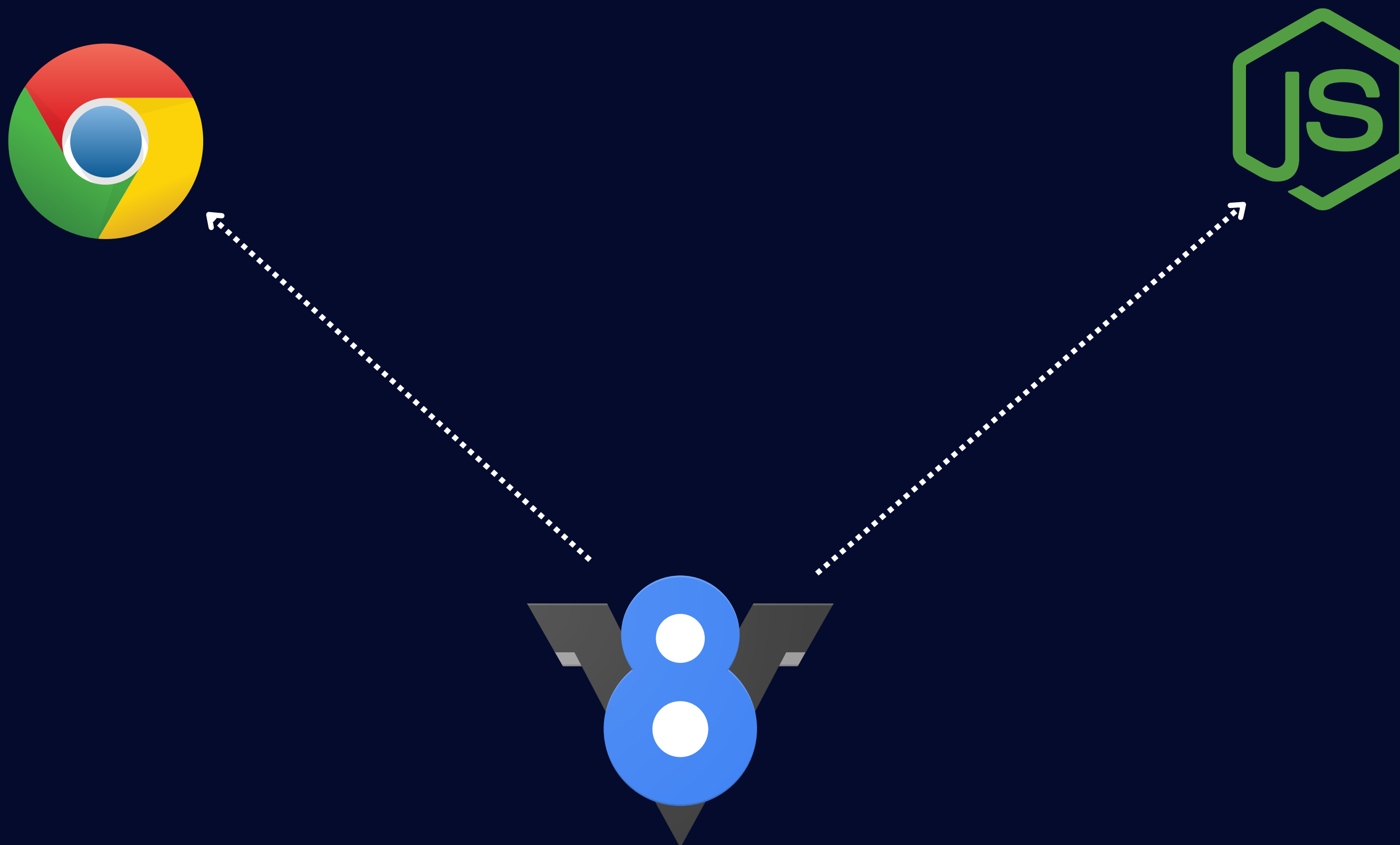
Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O. (input and output) model that makes it lightweight and efficient

JS Environments









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



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





Why use Node JS?



Why use Node JS?



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

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- It has a large and active open-source community

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- ▶ It has a large and active open-source community
- ▶ It runs on various platforms, including Windows, Linux, and macOS.
- ▶ It supports real-time data applications with features such as WebSockets and WebRTC



Uses of Node JS



Uses of Node JS





Developing web applications

- ▶ Developing web applications
- ▶ Building chatbots

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

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- ▶ Streaming video and audio

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



Who uses Node JS?







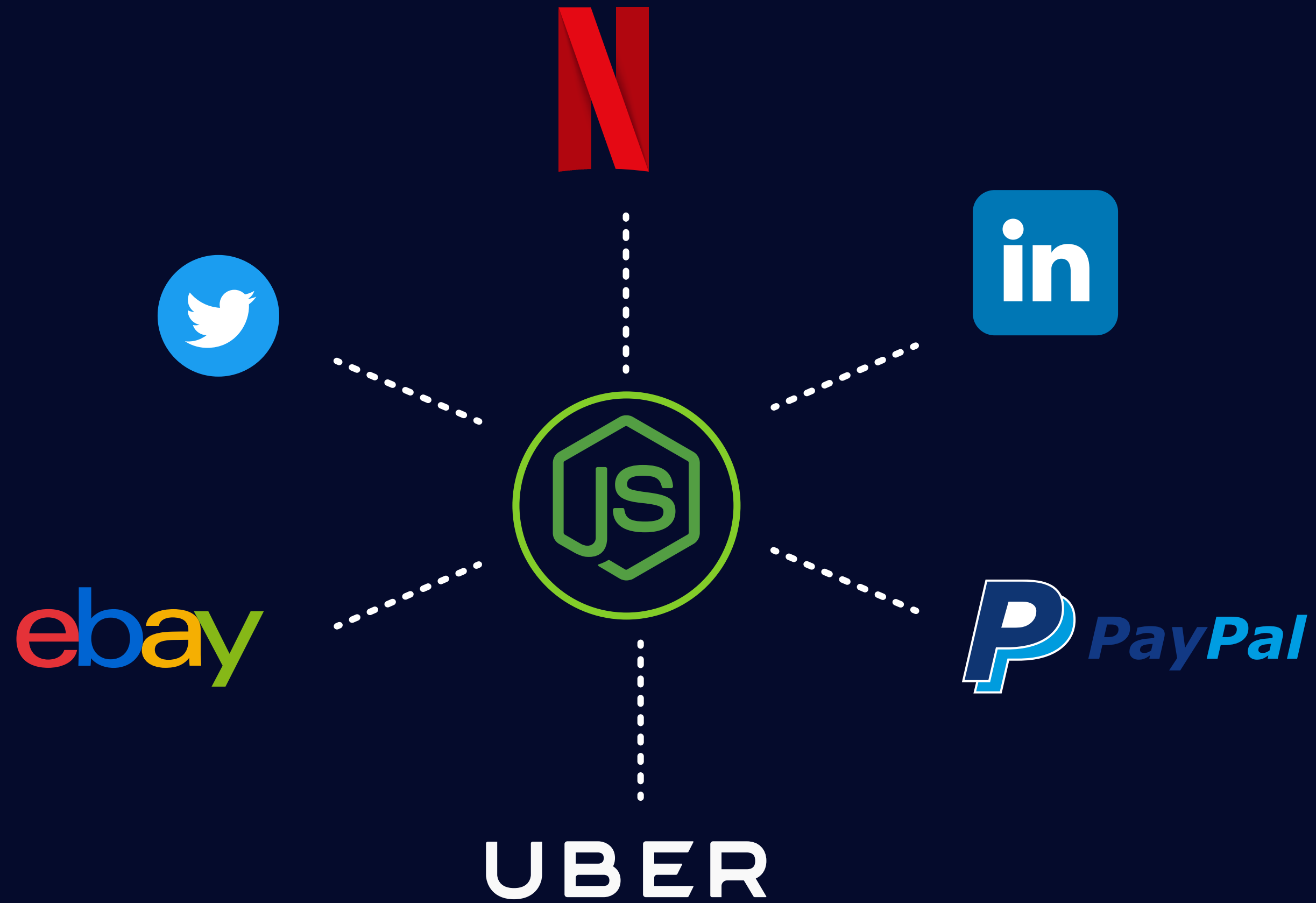
UBER













Install Node JS

R=Read

E=Evaluate

P=Print

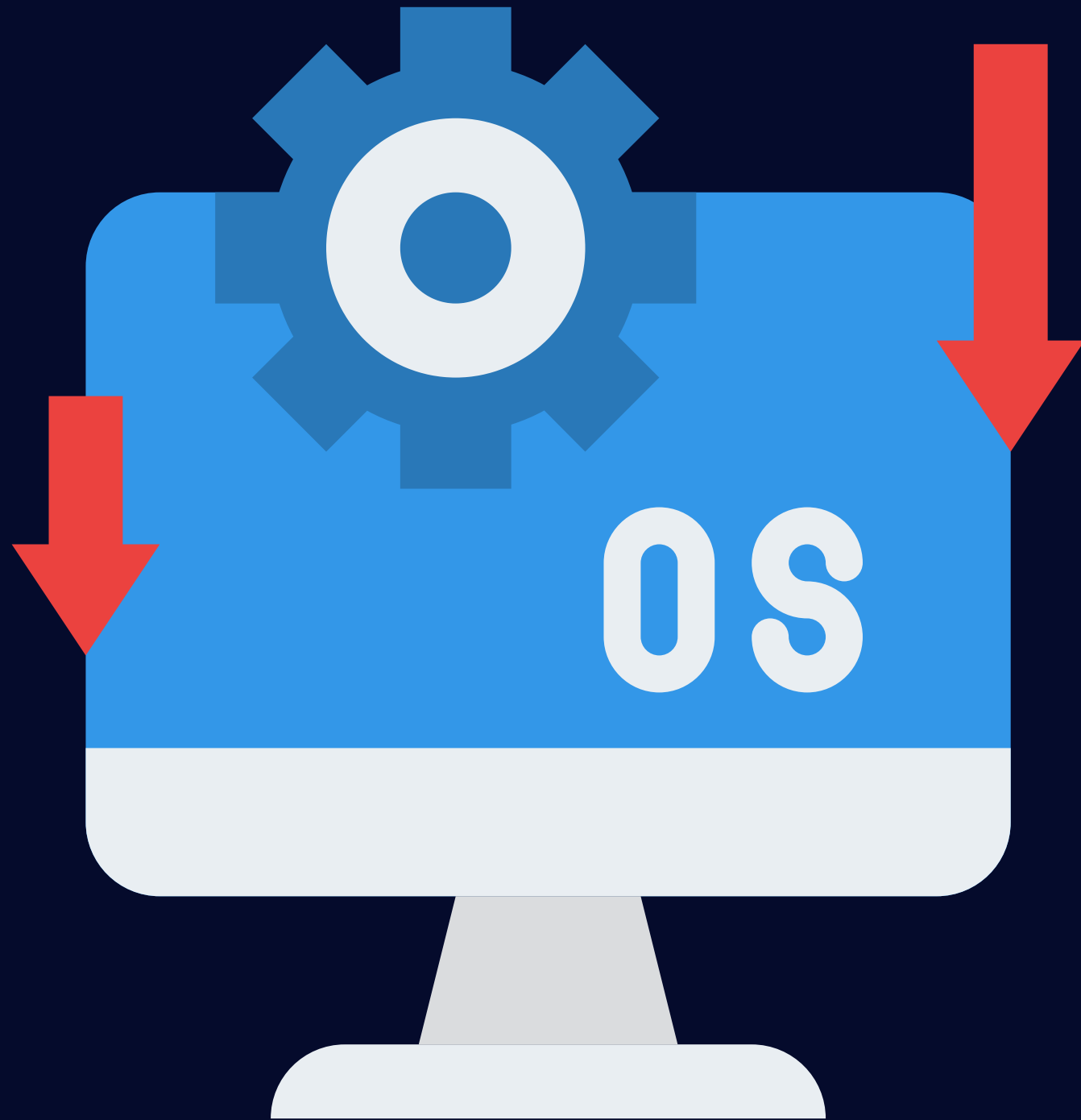
L=Loop



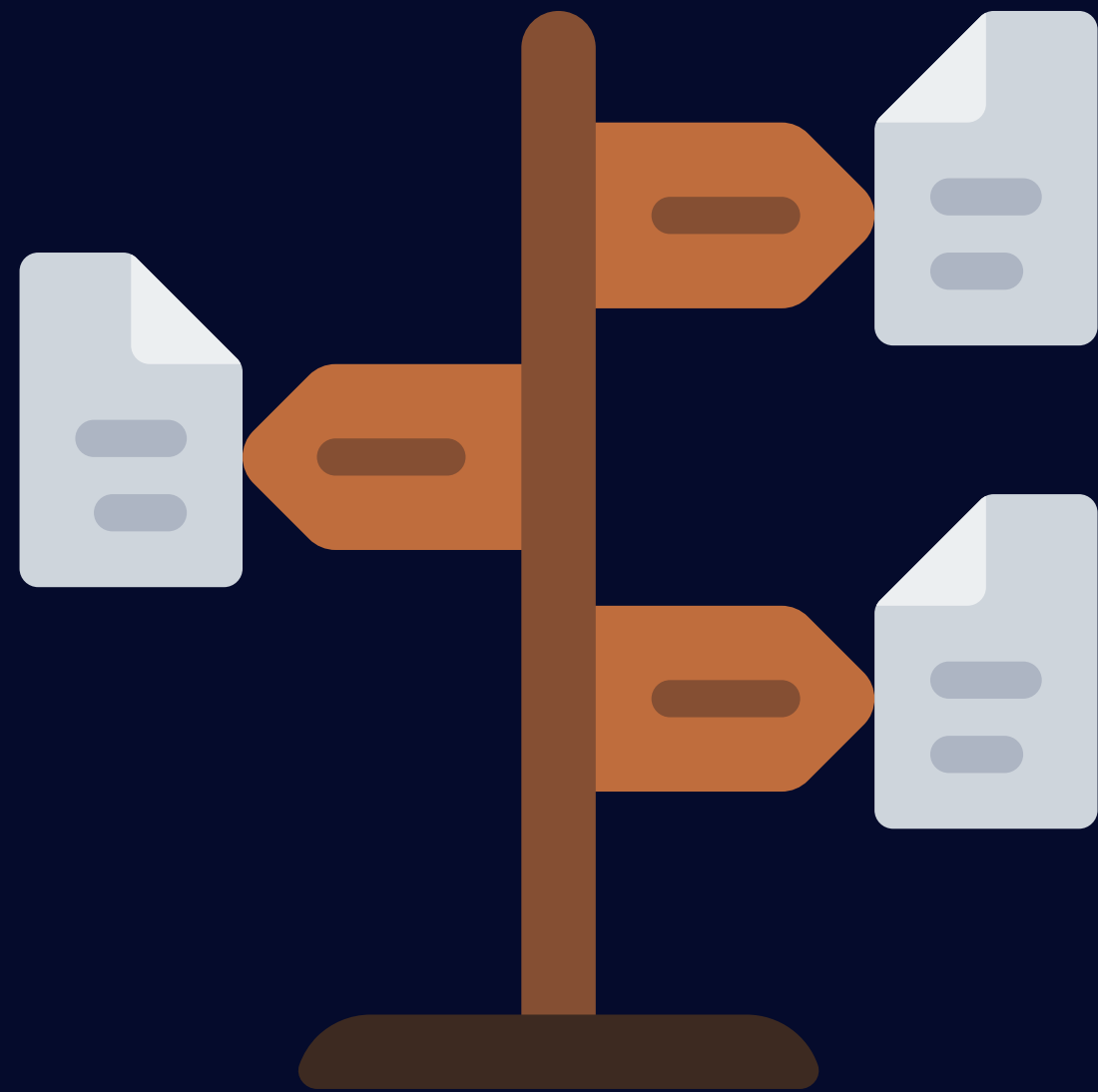
NODE JS MODULES



fs-File System



OS - Operating
System



Path - Module