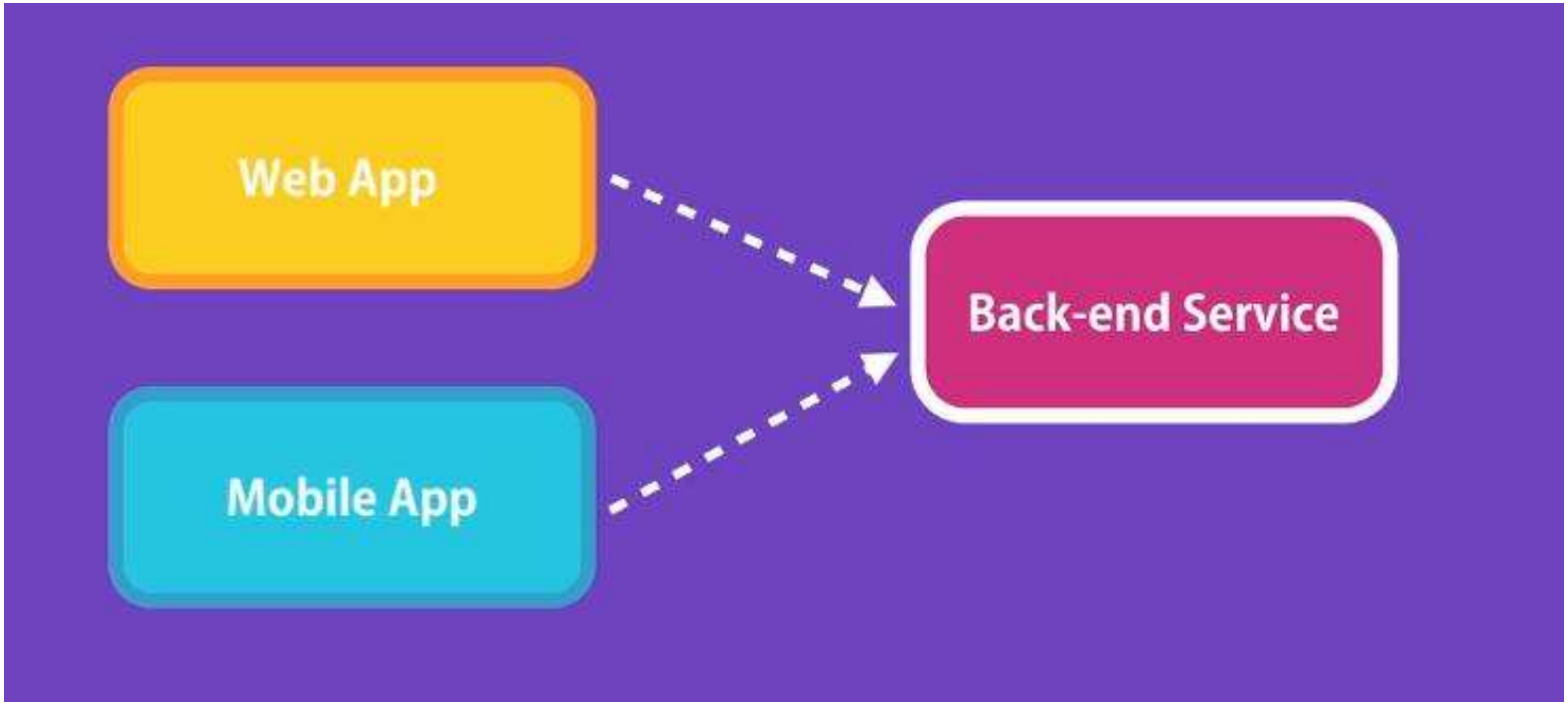
Node

INTRODUCTION

Node Getting Started

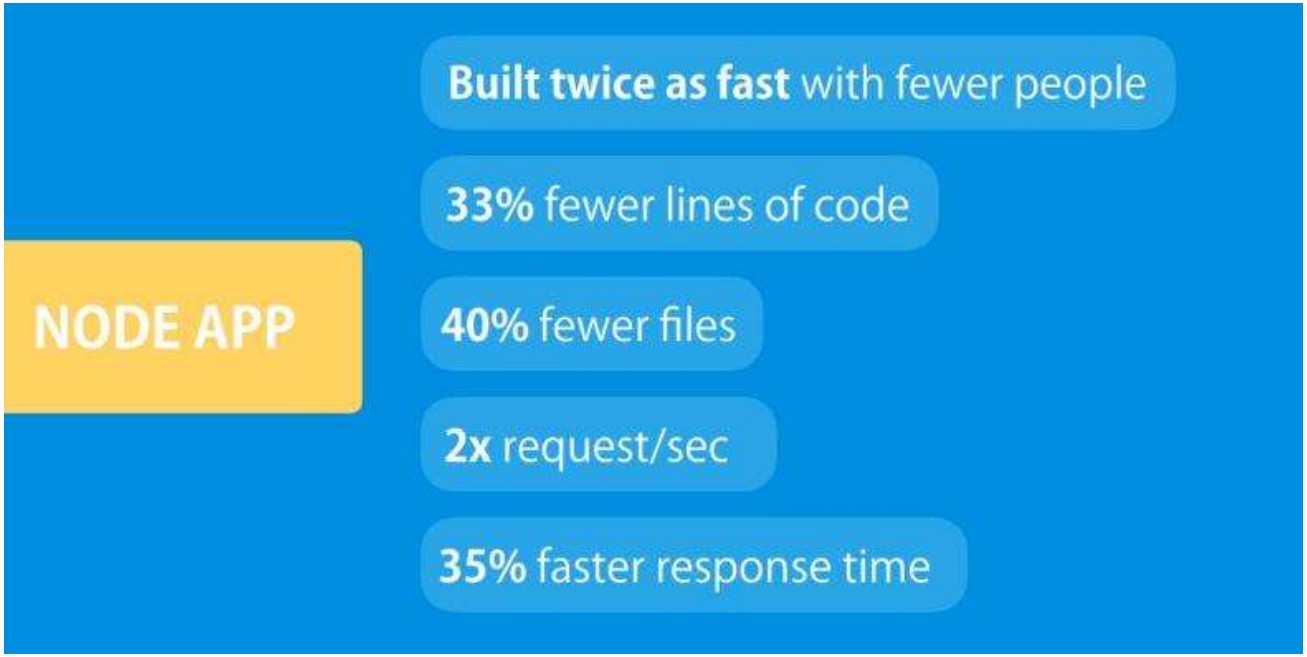
A run Time Environment for Executing Java Script Code.
Mostly we build ….


Web App
Mobile App
Back-end Service

Highly-scalable, data-intensive and real-time apps

Why Node

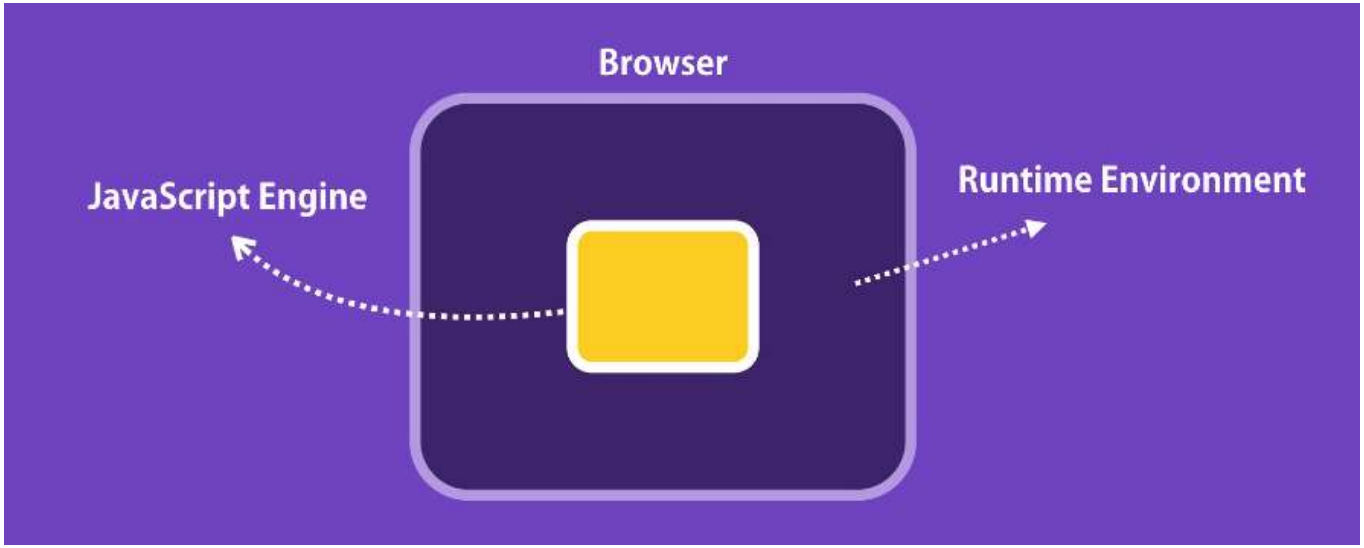
Paypal, Uber, NetFlix, Wall Mart



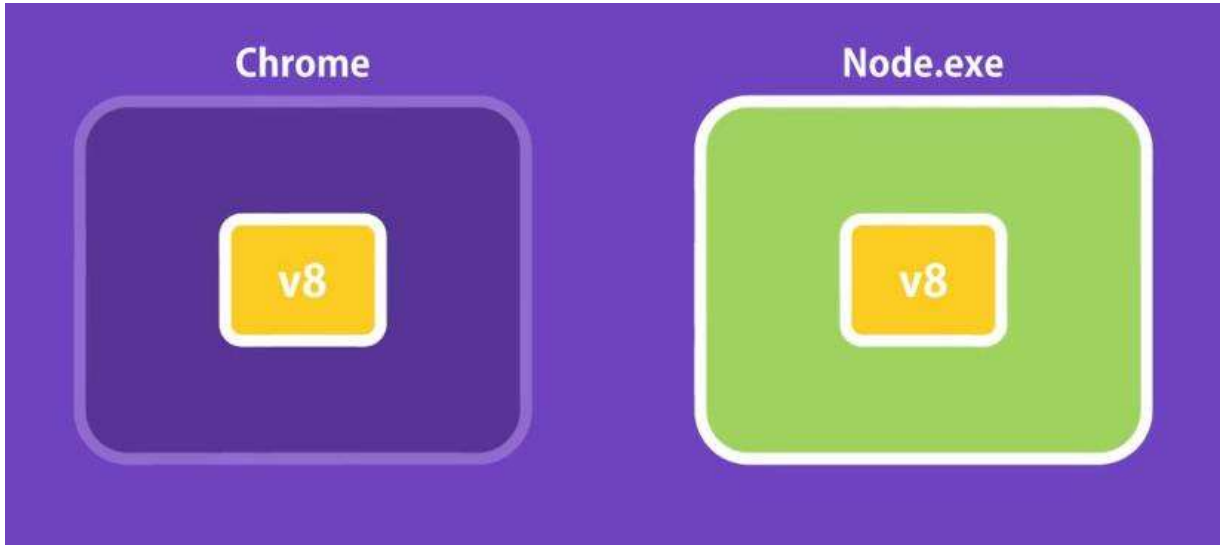

Great for prototyping and agile development
Superfast and highly scalable
JavaScript everywhere
Cleaner and more consistent codebase
Large ecosystem of open-source libs

Node Architecture

Node Architecture



Node Architecture by Ryan Dahl



JSON

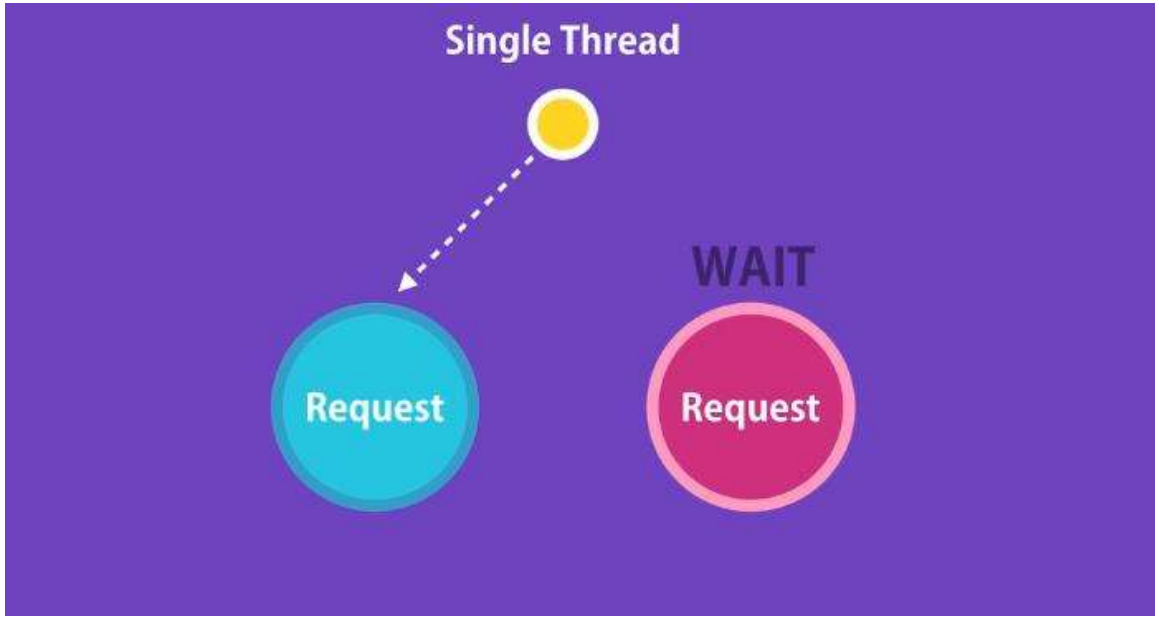
JAVASCRIPT OBJECT NOTATION

Object

```
{
    "name":       "Jack B. Nimble",
    "at large":   true,
    "grade":      "A",
}
```

Node Architecture by Ryan Dahl

Not suitable for computational Hungry Tasks




HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | NEWS | FOUNDATION
Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.
Download for Windows (x64)
10.15.0 LTS
Recommended For Most Users
11.6.0 Current
Latest Features
Other Downloads | Changelog | API Docs
Other Downloads | Changelog | API Docs

node app.js

```
function sayHello(name) {
console.log("Welcome " + name);
}
sayHello("Usman");
//window or document objects are not available here
```

Node Recap

- Node is a runtime environment for executing JS code. –
- Essentially, Node is a C++ program that embeds Chrome's v8 engine, the fastest JS engine in the world. –
- We use Node to build fast and scalable networking applications. It's a perfect choice for building RESTful services. –
- Node applications are single-threaded. That means a single thread is used to serve all clients. –

Node Recap

- Node applications are asynchronous or non-blocking by default. That means when the application involves I/O operations (eg accessing the file system or the network), the thread doesn't wait (or block) for the result of the operation. It is released to serve other clients. –
- This architecture makes Node ideal for building I/O-intensive applications. –
- You should avoid using Node for CPU-intensive applications, such as a video encoding service. Because while executing these operations, other clients have to wait for the single thread to finish its job and be ready to serve them. –
- In Node, we don't have browser environment objects such as window or the document object. Instead, we have other objects that are not available in browsers, such as objects for working with the file system, network, operating system, etc.