



Complete Web-development Roadmap

Web Development
Workshop By **GDSC**
DAVIET

Introduction

HIMANSHU

The goal of our session is to give you an overview of what Web Development is. I will guide you on how to start your Web Development journey, what stack to choose and where to learn.



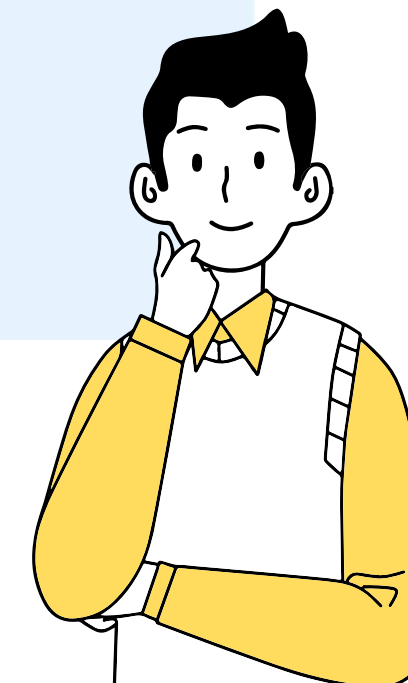
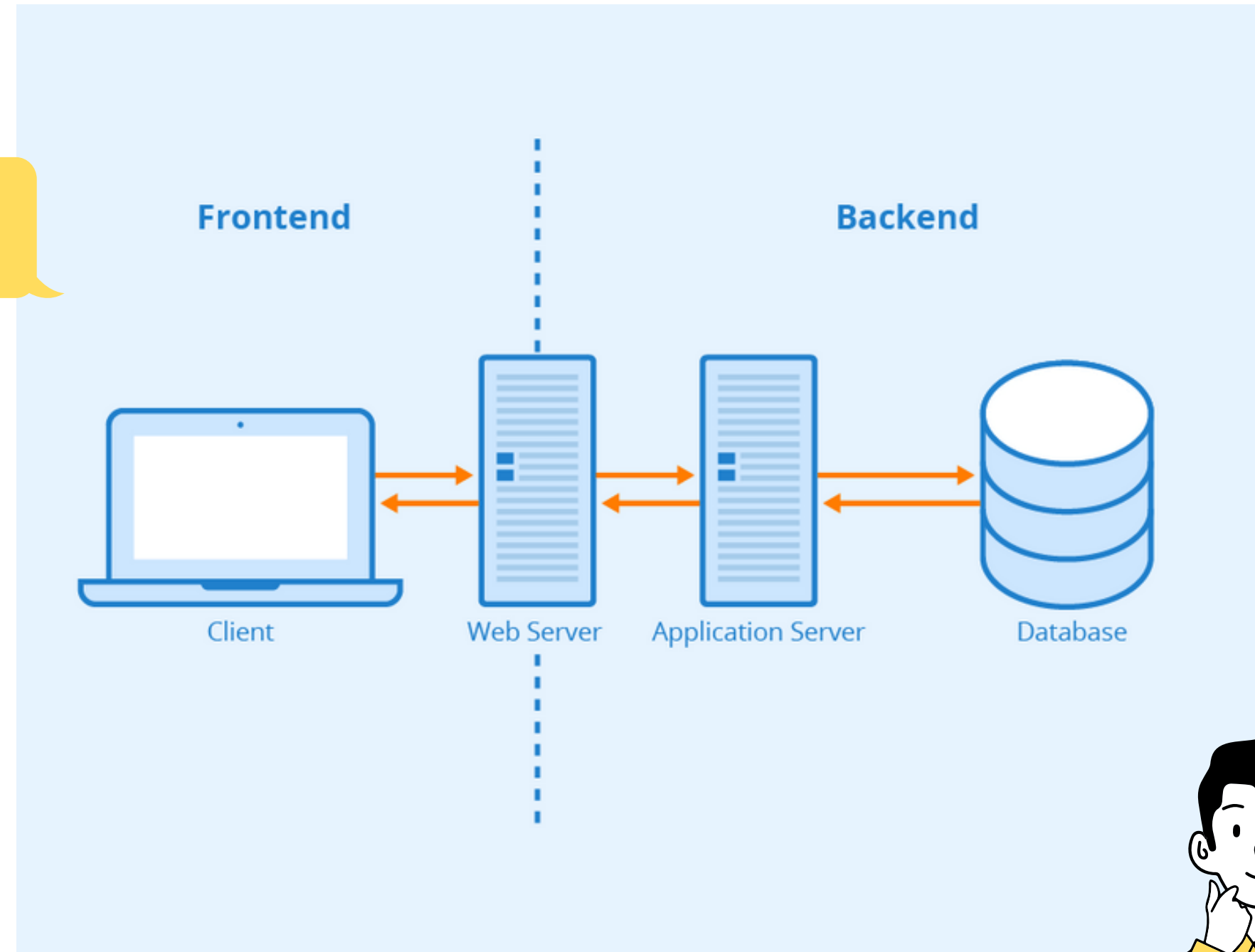
@_himanshu_325

Let's begin!

Are you ready?

Full Stack

Design

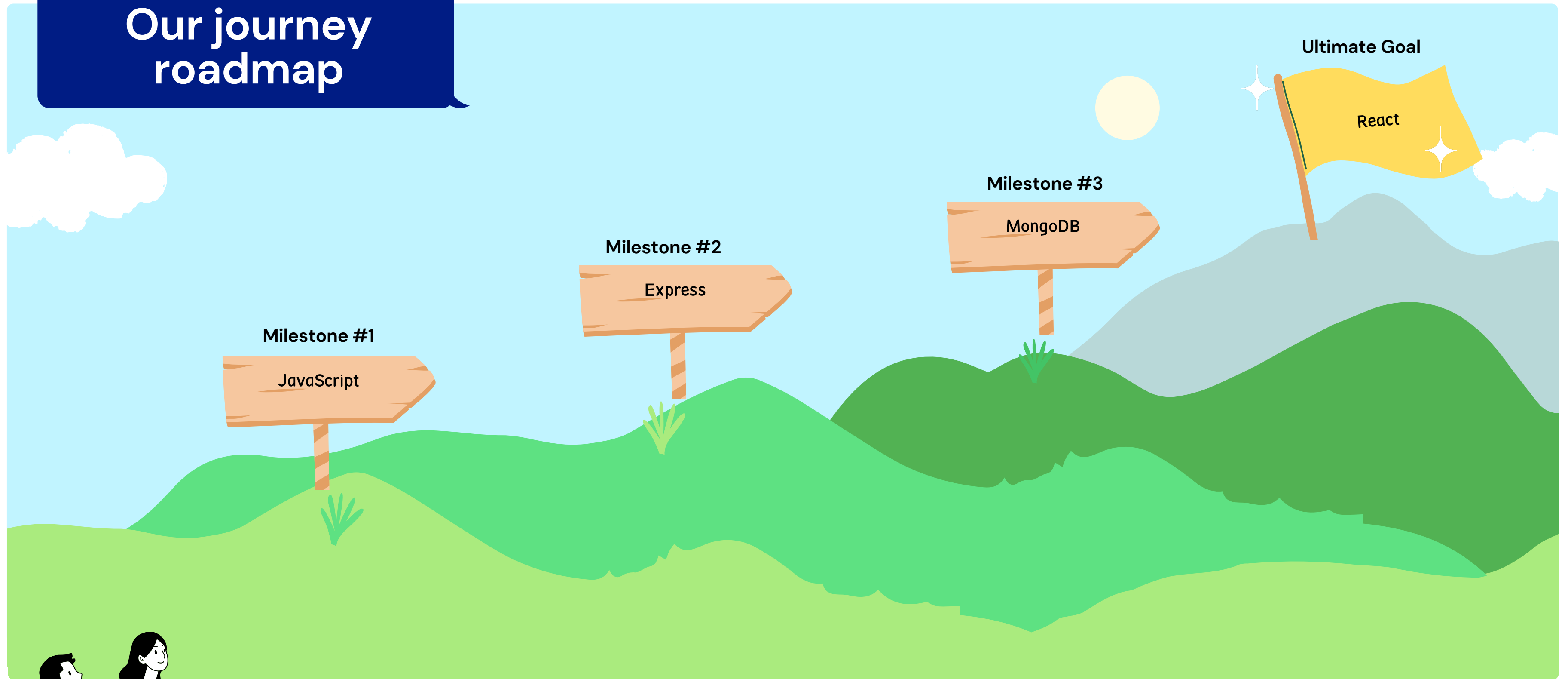


M – MongoDB
E – Express
R – React
N – Node



Start

Our journey roadmap



1

front end including html, css and javascript

How internet works

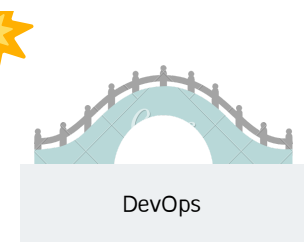
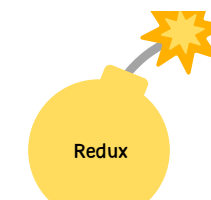
2

Backend NodeJS, ExpressJS and MongoDB

connecting backend with frontend

3

Front End Libraries like ReactJS



HTML & CSS

Basics of Web Development

- 1 Scrimba
- 2 Freecodecamp
- 3 MDN Docs
- 4 W3Schools

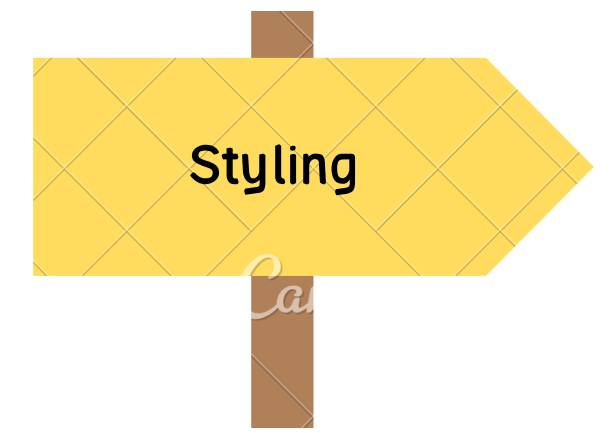
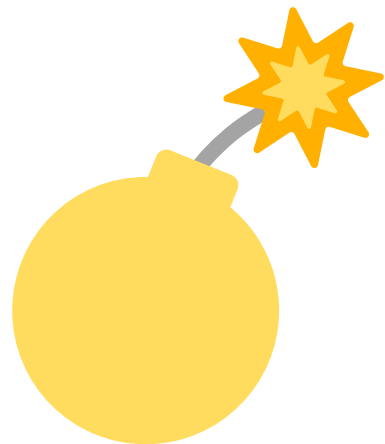
HTML (the Hypertext Markup Language) and **CSS** (Cascading Style Sheets) are two of the core technologies for building Web pages



HTML

HTML, just like the skeleton, has little to do with style & appearance.

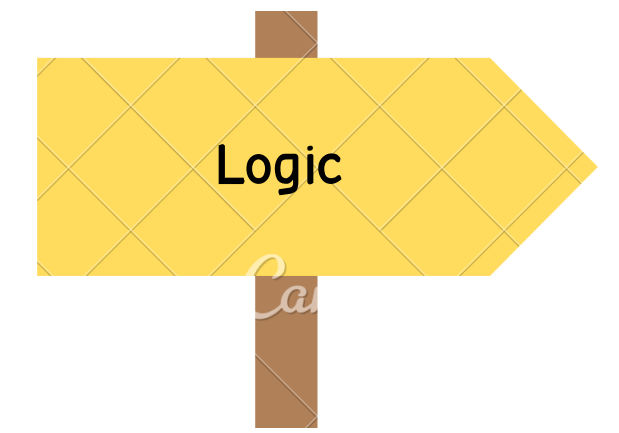
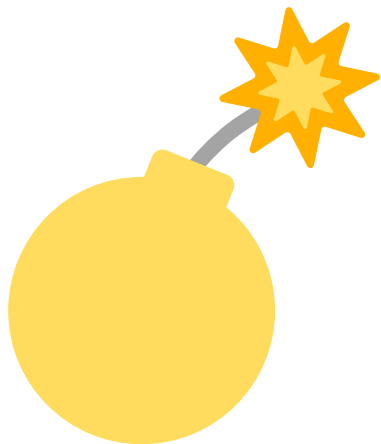
- Anatomy of a web page
- Page metadata
- Elements
- Attributes
- Layout & semantic markup
- Lists
- Emphasising
- Citations & quotes
- Abbreviations
- Details & addresses
- Superscript & subscript
- Adding code snippets
- Times & dates
- Hyperlinks
- Forms
- Tables
- Media
- Responsive enhancements
- Accessibility
- SEO enhancements



CSS

CSS (Cascading Style Sheet) is concerned with the physical appearance of a web page. If we say HTML is the skeleton then CSS is what we see, the body

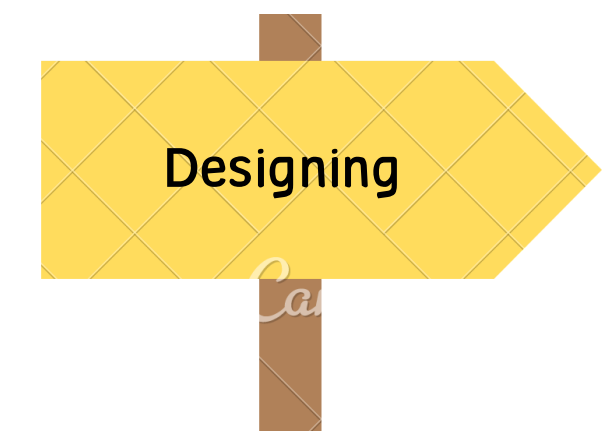
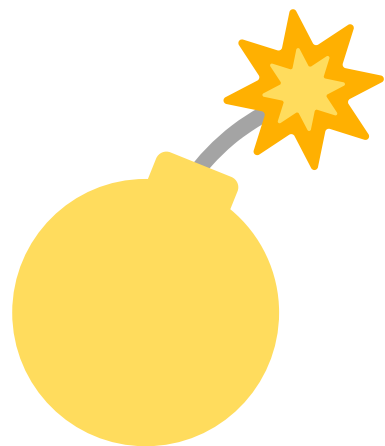
- Language fundamentals
- Selectors
- Inheritance & cascading
- Values & units
- Colors
- States
- The box model
- DOM flow
- Layout
- Alignment
- Positioning
- Sizing
- Spacing
- Fonts & typography
- Images & media
- Media queries
- Responsive design
- Animations & transforms
- Shorthand syntax
- Organisation
- Methodologies
- Debugging styles
- Legacy browsers



JavaScript

JavaScript (JS) gives us the ability to make interactive, feature rich web pages. In its most basic form it allows us to trigger events when certain conditions are met, like when a user clicks a button.

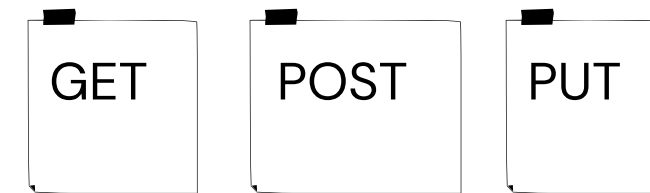
- What is JS & ECMAScript?
- Types & Data structures
- Declarations & scope
- Control flow & Errors
- Targeting & manipulating the DOM.
- Events & UI interaction
- Iterating / Loops
- Functions
- Expressions & operators
- Numbers, maths & dates
- Strings
- Arrays
- Objects & Classes
- More collection types
- Promises & async/await
- Advanced functions
- Modules
- Security
- Debugging
- Legacy browsers



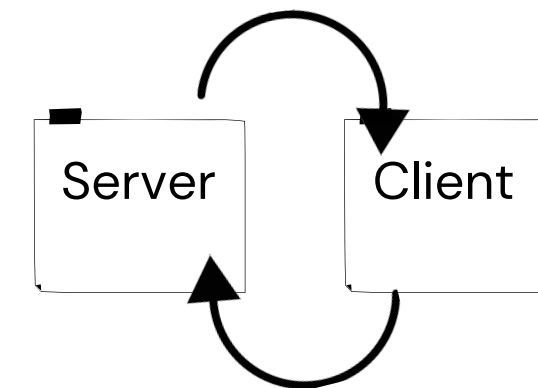
How Web Works

What happens when you view a webpage in a web browser on your computer or phone

1 HTTP Methods



2 Server – Client



NodeJS

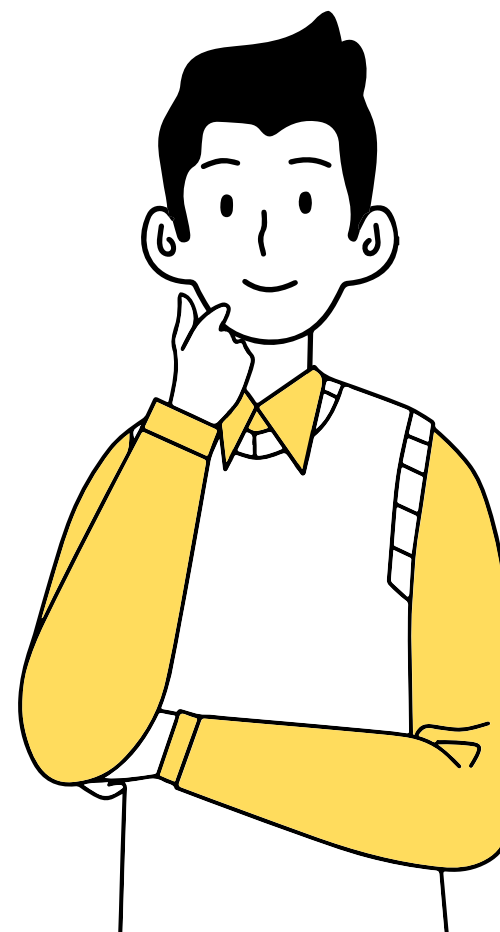
As an asynchronous event-driven JavaScript runtime.

1

Package Manager NPM/Yarn

2

Native APIs – Filesystem, HTTP



Servers with NodeJS

The Node.js framework can be used to develop web servers using the 'http' module

Servers

Express

It is a back end web application framework for Node.js

Database

MongoDB

MongoDB is a source-available cross-platform document-oriented database program



Express VS Node

Feature	Express.js	Node.js
Usage	It is used to build web-apps using approaches and principles of Node.js.	It is used to build server-side, input-output, event-driven apps.
Level of features	More features than Node.js.	Fewer features.
Building Block	It is built on Node.js.	It is built on Google's V8 engine.
Written in	JavaScript	C, C++, JavaScript
Framework/Platform	Framework based on Node.js.	Run-time platform or environment designed for server-side execution of JavaScript.
Controllers	Controllers are provided.	Controllers are not provided.
Routing	Routing is provided.	Routing is not provided.
Middleware	Uses middleware for the arrangement of functions systematically server-side.	Doesn't use such a provision.
Coding time	It requires less coding time.	It requires more coding time.

Additional Stuff

- 1 Authentication and Authorization
- 2 Sessions/ JWT
- 3 Fetch / Axios Libraries

Templating Engines

Pug
EJS
Nunjucks

MongoDB

Mongo
ose.js

API Testing

Postman
VSCode

Libraries

Sockets.io
Passport.js

Projects

Learn By Building Projects

NodeJS

Express

MongoDB

1. Book
directory

Real-time chat
apps

Basic Users
System

Real-time
Collaboration
Apps

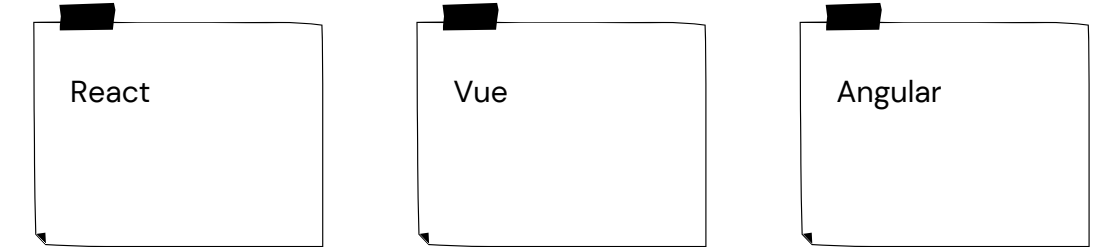
Web Scraper

Complex
Single-Page
Applications

Keep Building

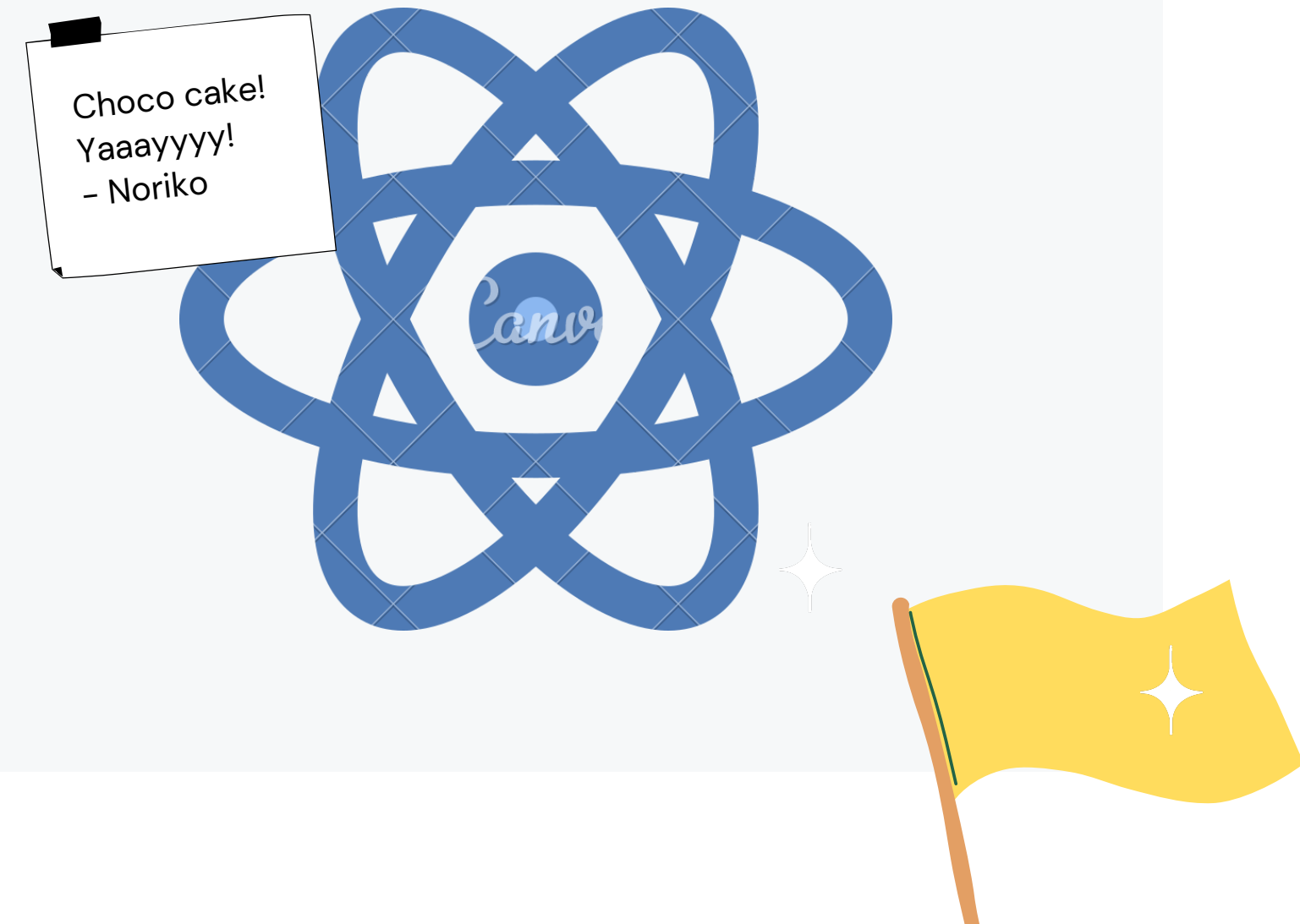
React JS

Front-end JavaScript library for building user interfaces or UI components. It is maintained by Facebook.



React Roadmap

Basics
JSX
Styling
Class Components
Functional Components



1

Hooks

2

State Management – Redux

3

Styling – Chakra UI / Tailwind CSS

4

Next JS

5

Mobile Development – React Native

Thank you!

Keep learning

@gdscdaviet