

MSc. Enterprise Software Systems

Module: Enterprise Web Development

Website: <https://reader.tutors.dev/course/ewd-2023-setu>

Overview

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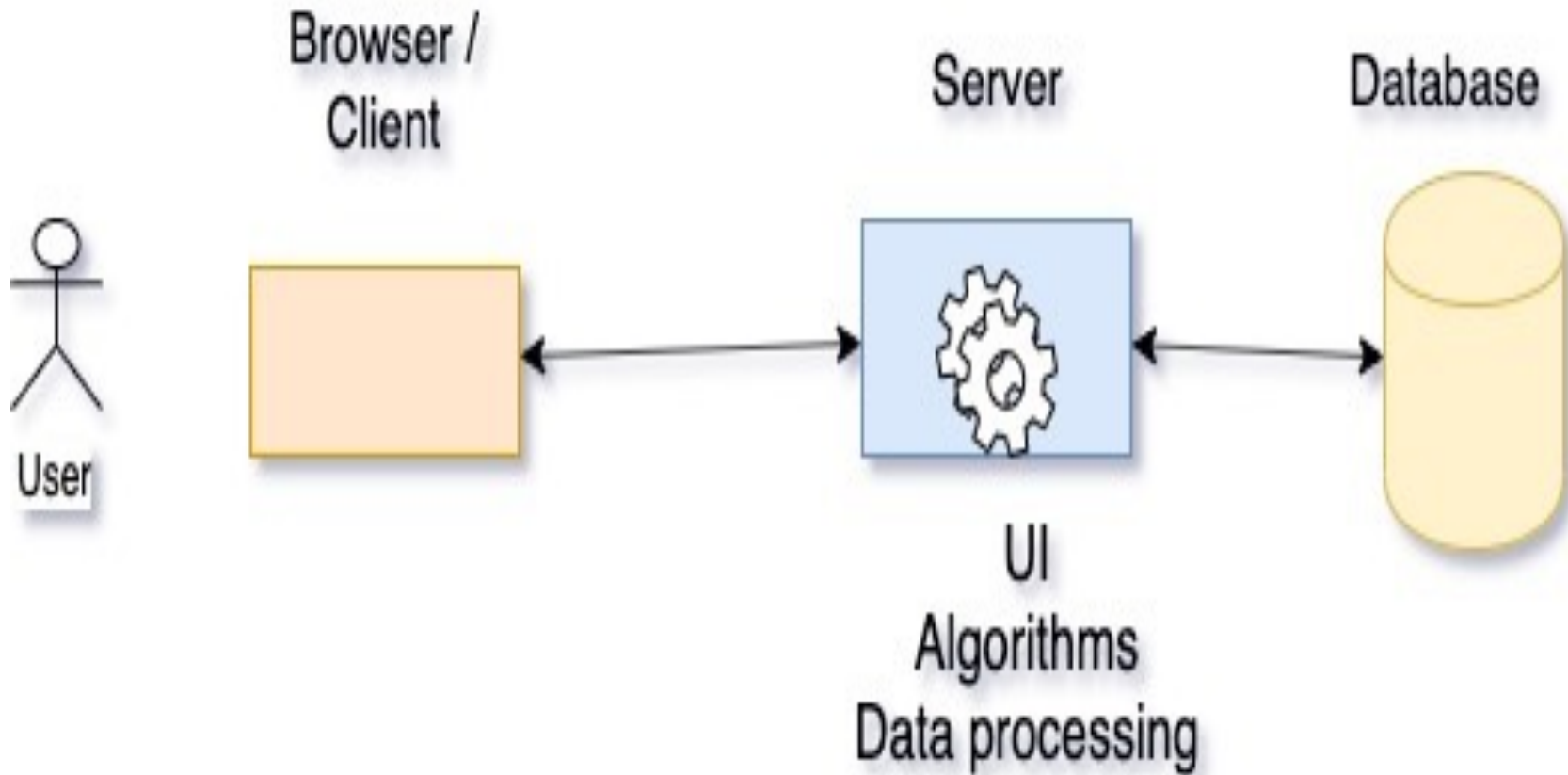
TL;DR

**Design, implement, and deploy,
performant, secure, client-side
rendering Web apps using industry-
standard frameworks and tools.**

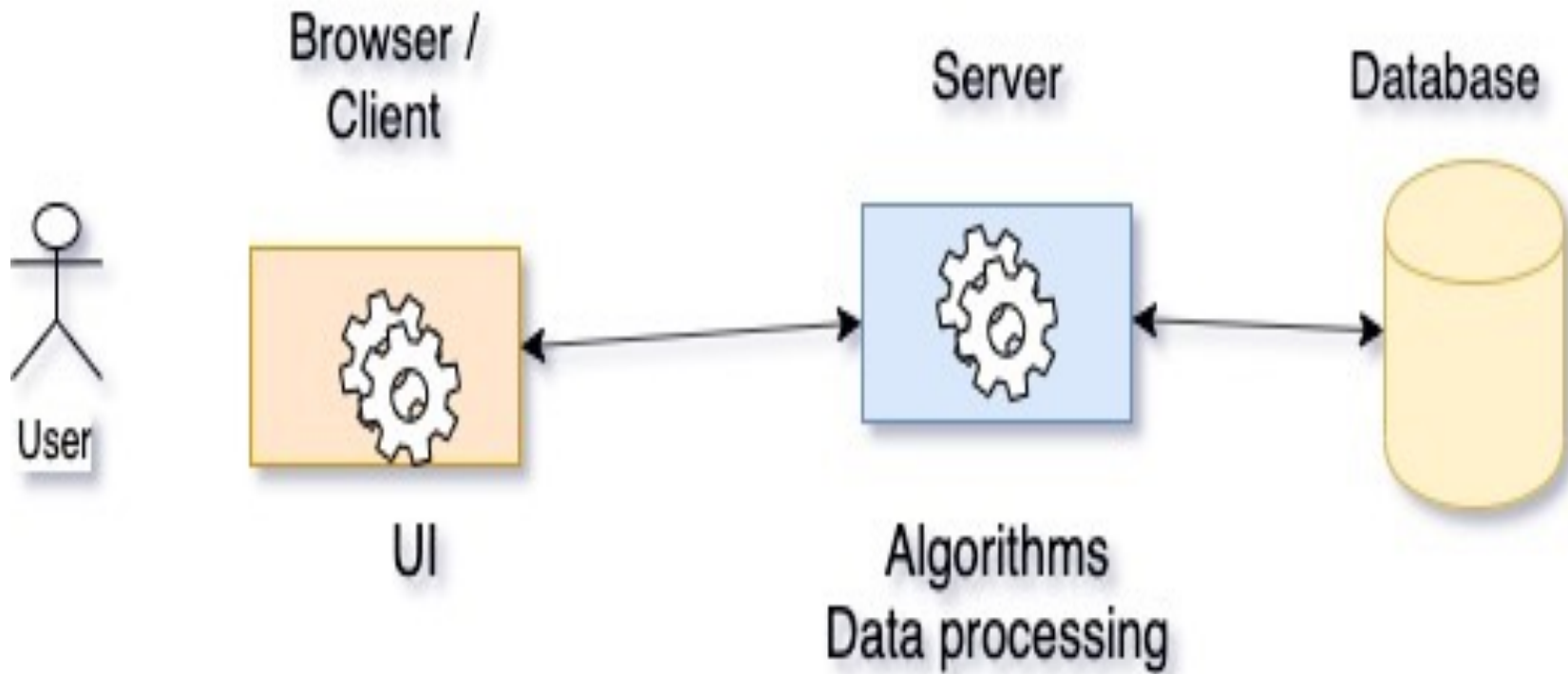
Agenda

- Context.
- This module's focus
- Software installation requirements

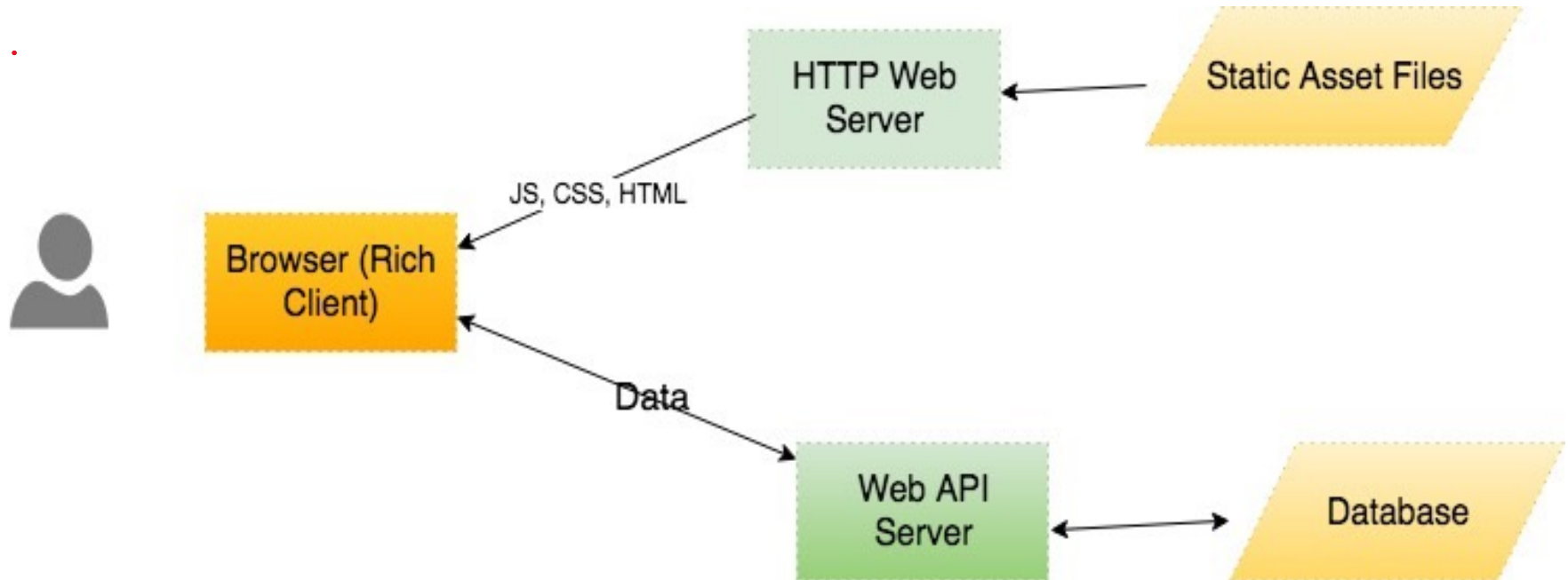
Web Apps Architecture – Server-Side Rendering (SSR)



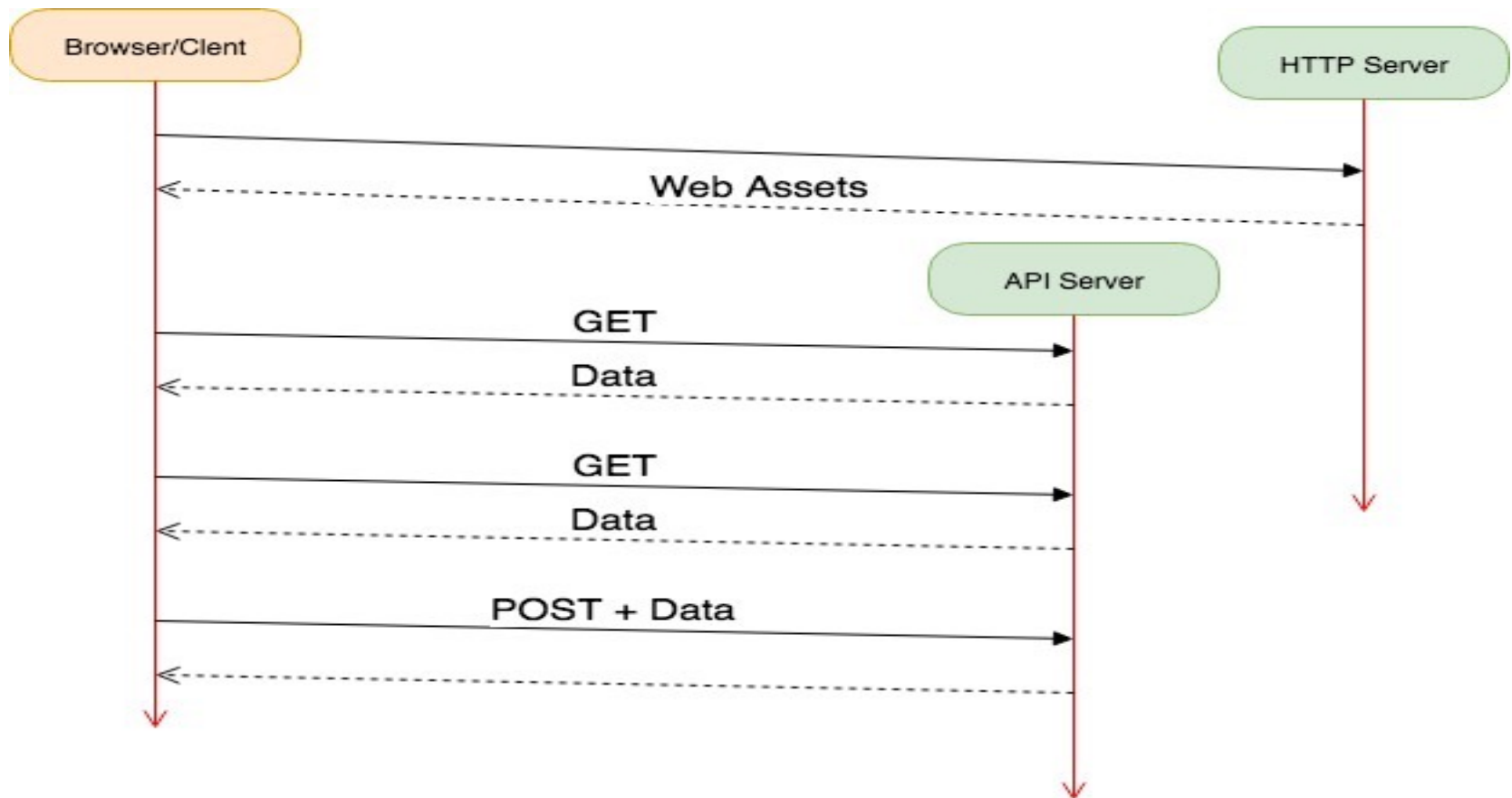
Web Apps Architecture – Client-Side Rendering (CSR)



CSR Web Apps - Architecture



CSR Web Apps – HTTP Communications flow



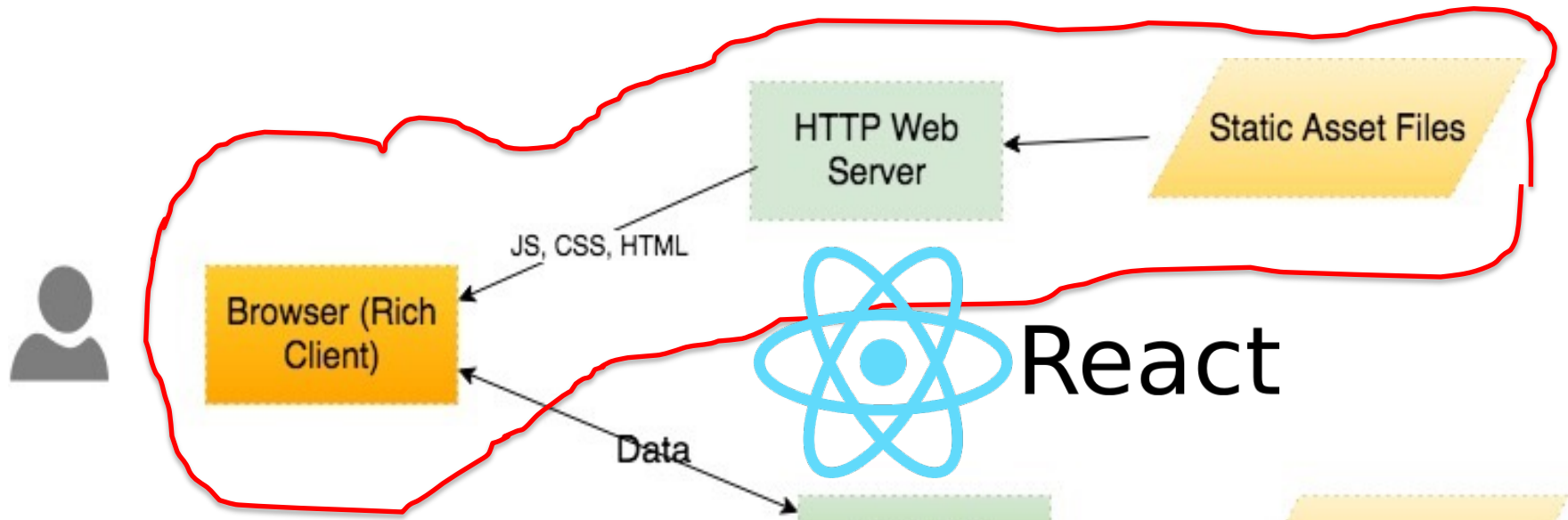
CSR Web Apps - Evolution.

1. **Early Examples: Gmail (2004), YouTube (1st generation)**
 - **Disadvantage:**
 - **Poor developer experience (DX) – code bloat; poor maintainability; browser inconsistencies.**
 - **Lacked addressability (Key principle of the web).**
2. **Jquery – A cross-platform JavaScript library to simplify the client-side scripting of HTML pages. (2006)**
 - **Adv.: Better developer productivity; reduced code bloat**
 - **Disadvantages:**
 - **Lacked Addressability.**
 - **Poor code maintainability (spaghetti code).**
3. **Single Page App (SPA) *frameworks*. (2010 ish)**
 - **Support addressability; Improved DX; Improved maintainability.**

Agenda

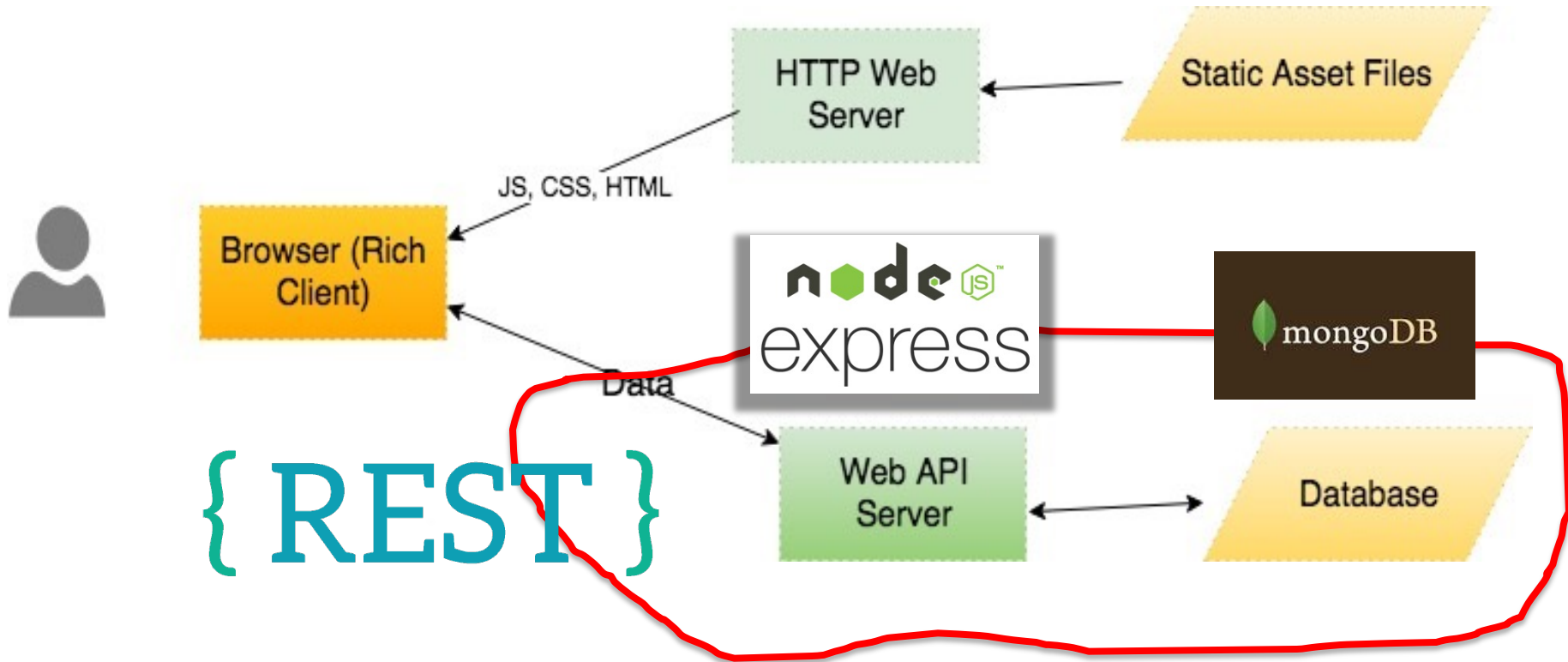
- Context. ☒
- This module's focus

Our Technology stack - Client.



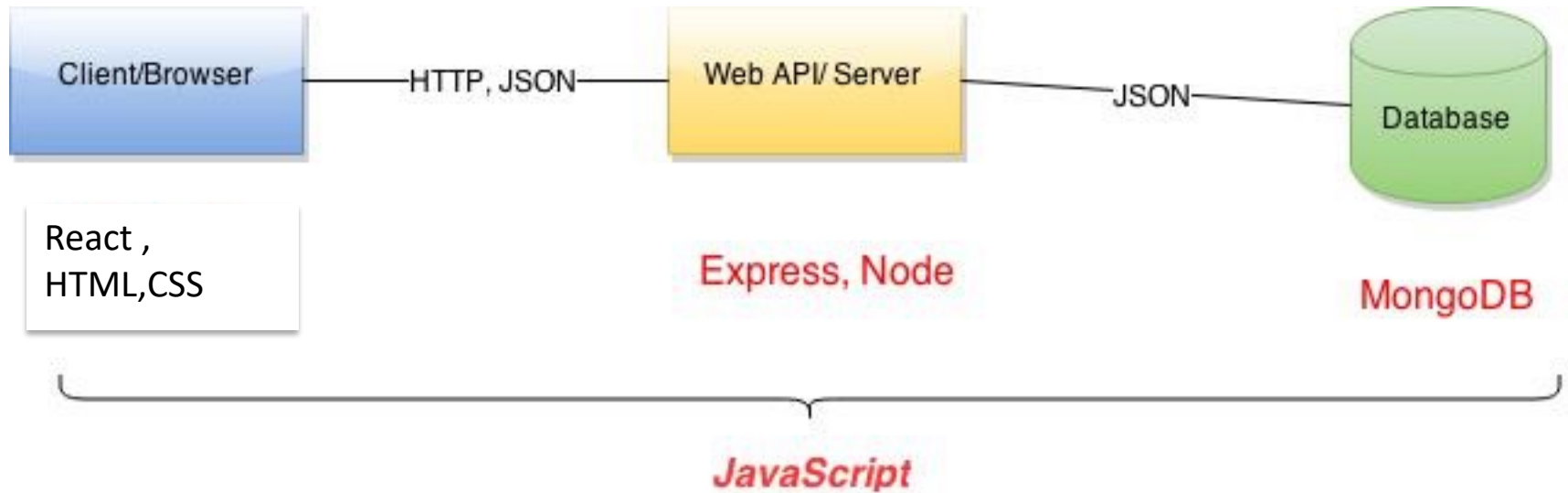
A JavaScript library for building user interfaces

Our Technology stack - Server.



MERN Technology stack.

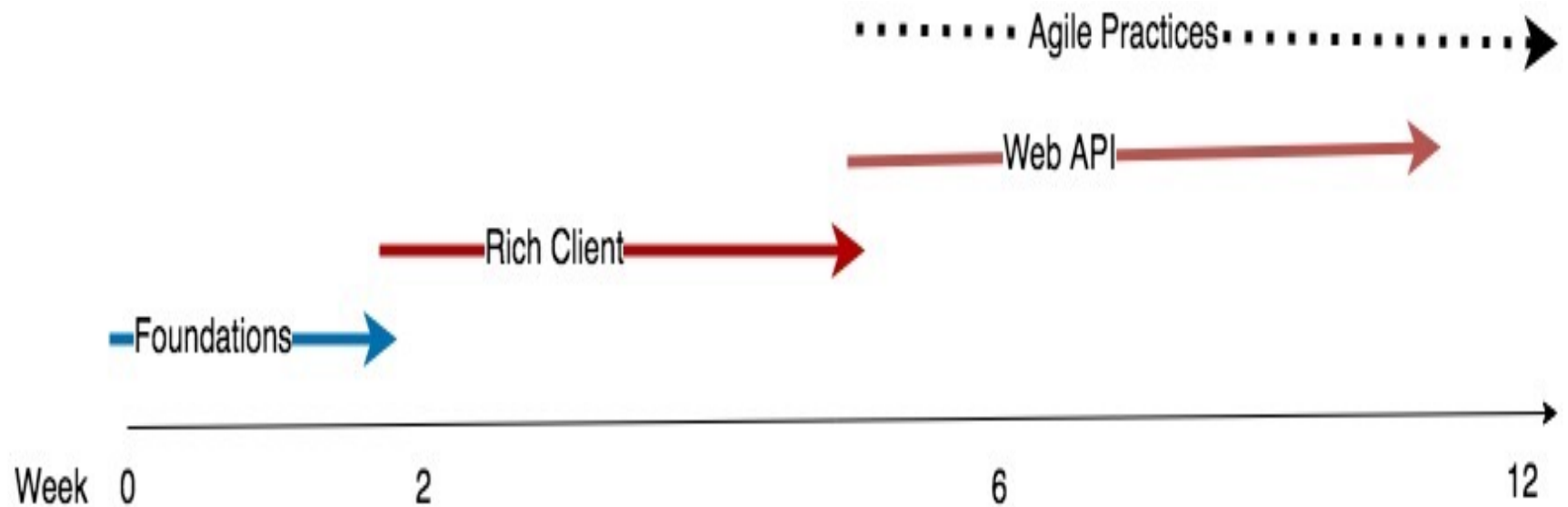
(MERN - Mongo, Express, React, Node)



Industry-standard Frameworks.



Outline schedule

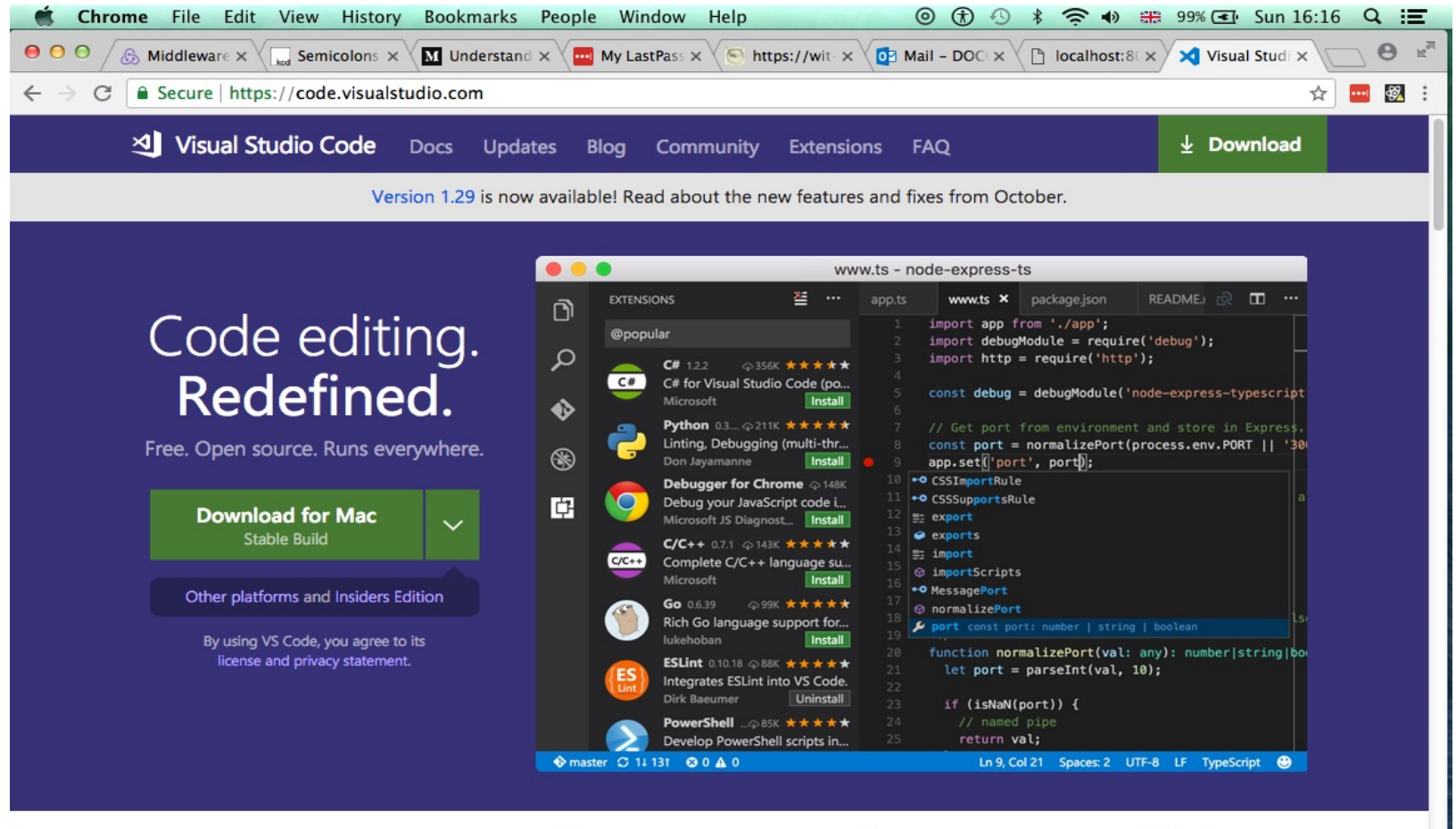


Agenda

- Context. ☒
- This module's focus
 - Single Page Apps, using React ☒
 - Web APIs, using Node and MongoDB ☒
- Software Installation Requirements

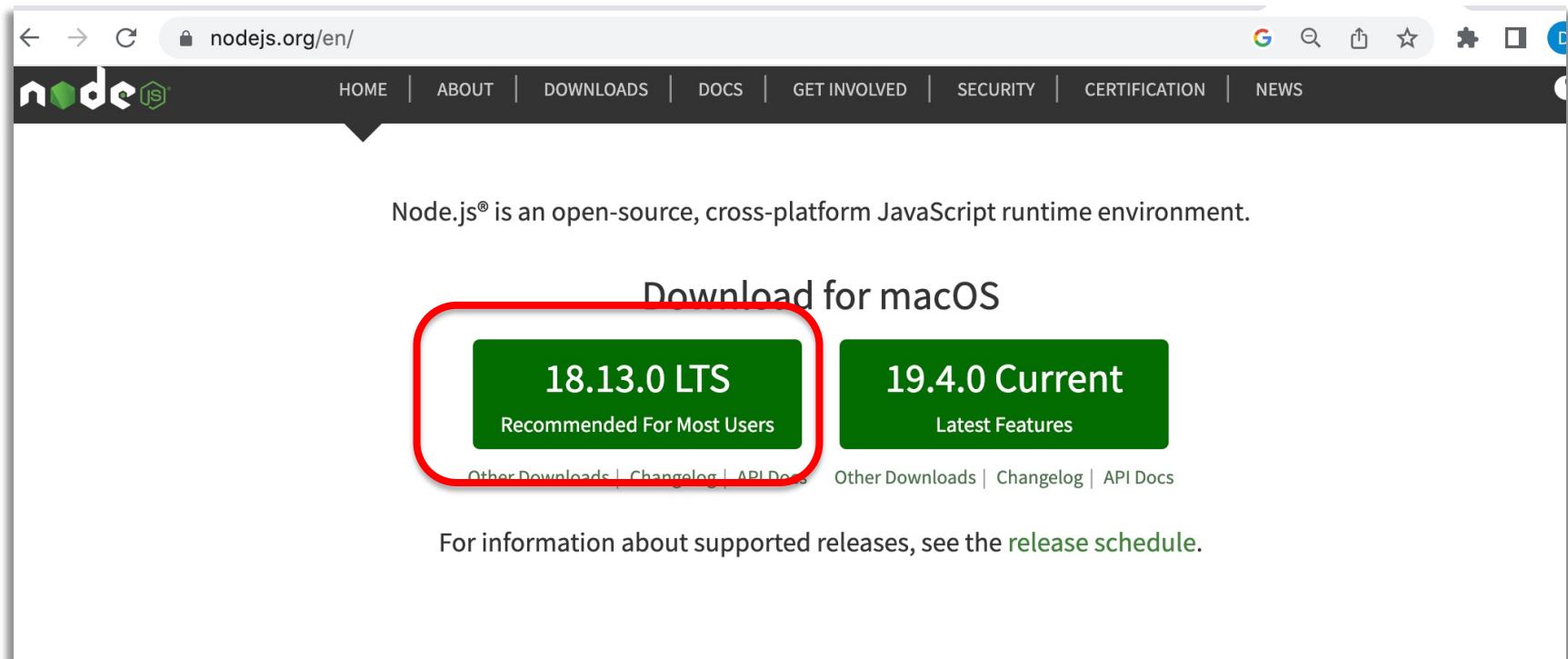
Text Editor

(Not a heavyweight IDE, thankfully)



Node.js

(A JavaScript runtime platform)



Git

git --distributed-even-if-your-workflow-isnt

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.

 **Learn Git in your browser for free with Try Git.**

About
The advantages of Git compared to other source control systems

Documentation
Command reference pages, Pro Git book content, videos and more

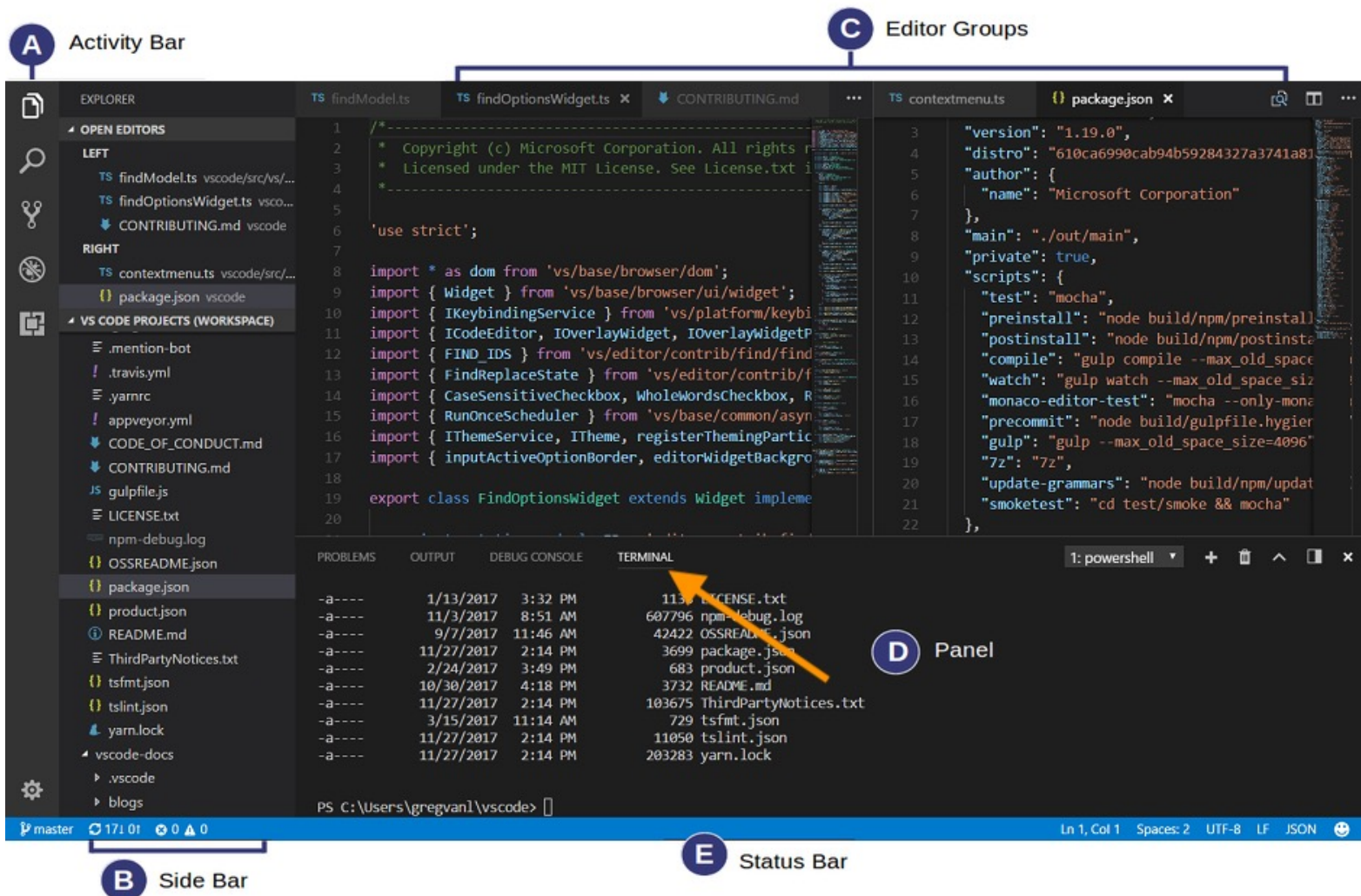
Latest source Release
2.15.1

Line 33, Column 76
51 console.log(acar.owner + " drives a " + acar.type.make);
52
35 misspelled words Spaces: 4 Markdown

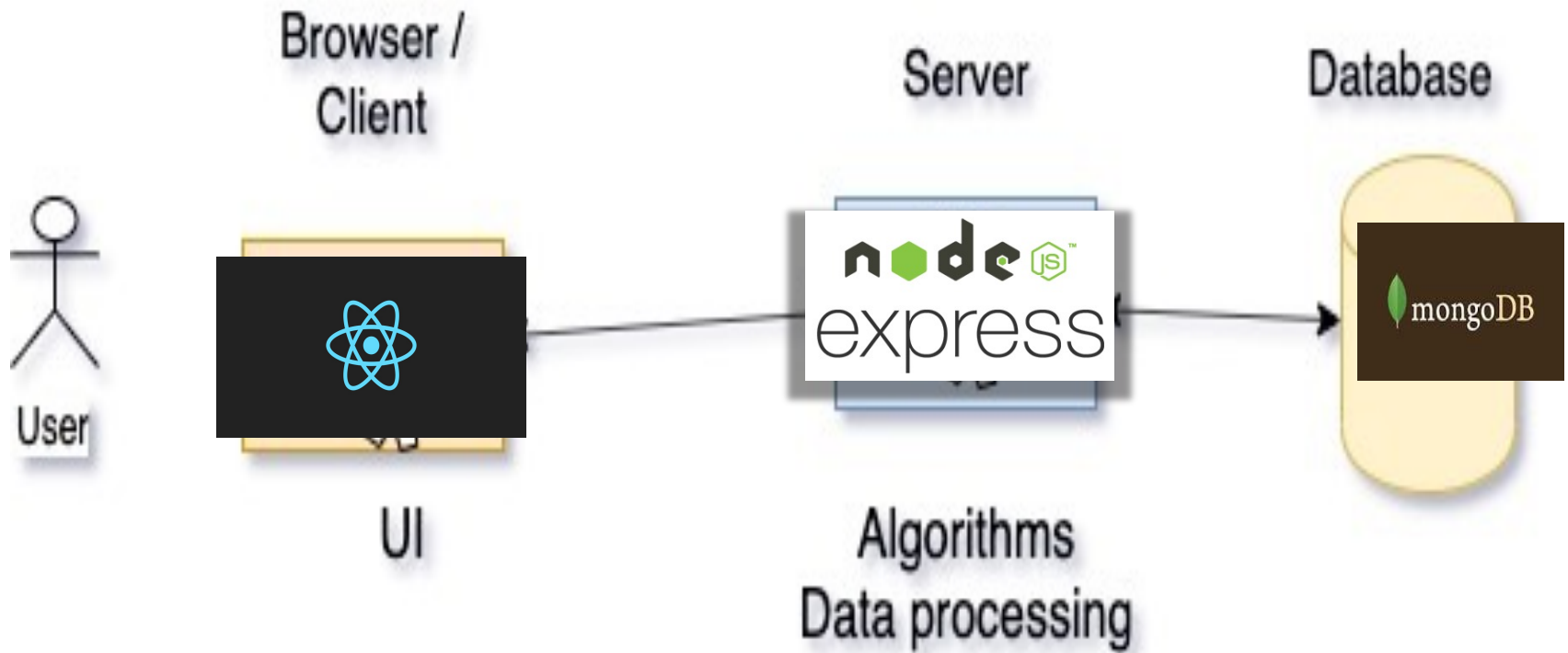
GUI clients and binary releases for all major platforms.

Get involved! Bug reporting, mailing list, chat, development and more

VS Code's Integrated Terminal.



Full-Stack Developer



Summary.

- **Two models of web apps:**
 - **Server Side Rendering (SSR)**
 - **Client Side Rendering (CSR)**
- **CSR model has evolved:**
 - **Unmaintainable JS codebase to SPA framework based codebase**
 - **No addressability to addressable**
- **Server-side.**
 - **From SSR web applications to Web APIs.**
- **NoSQL databases.**

