



# Frontend Web Development: VueJS

Pertemuan #3

Kamis, 11 Maret 2021

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# Silabus (1)

## HTML, CSS, JS (#1)

- Perkenalan
- Alur materi dan target capaian
- Konsep dasar pengembangan aplikasi web

## Frontend Development (#2-3)

- Apa, mengapa, bagaimana
- VueJS & Buefy

# Silabus (2)

## Backend Development & Integration (#4-5)

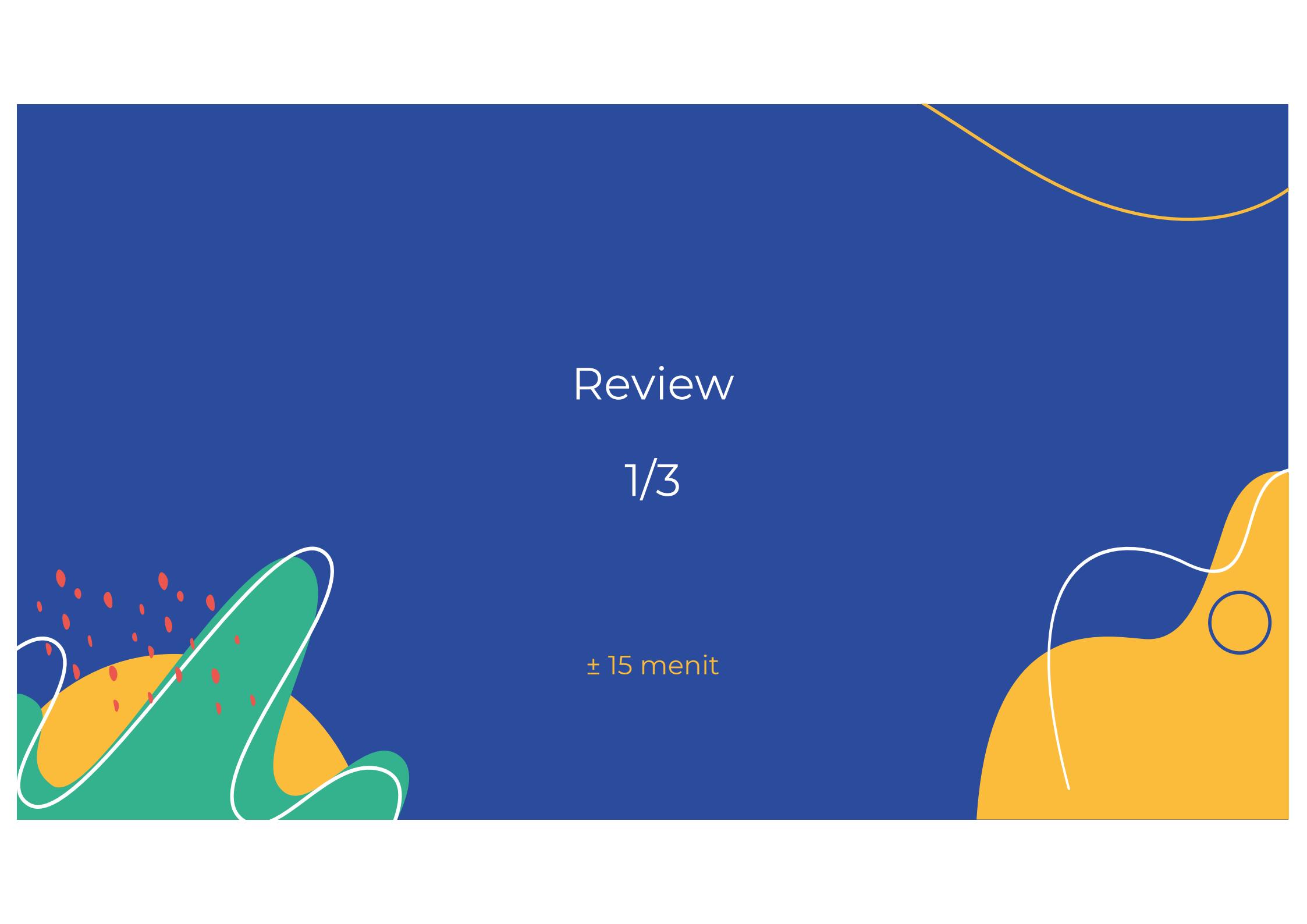
- Apa, mengapa, bagaimana
- Konsep dasar API (Application Programming Interface)
- Google Firebase
- Menghubungkan frontend dan backend dalam membangun aplikasi web

## Wrap Up (#6)

- Review
- What's next
- Penutup

# Hari Ini

- Review ± 15 menit
- Popular Front-End JavaScript Framework ± 10 menit
- Coding Tutorial: VueJS + Buefy ± 60 menit

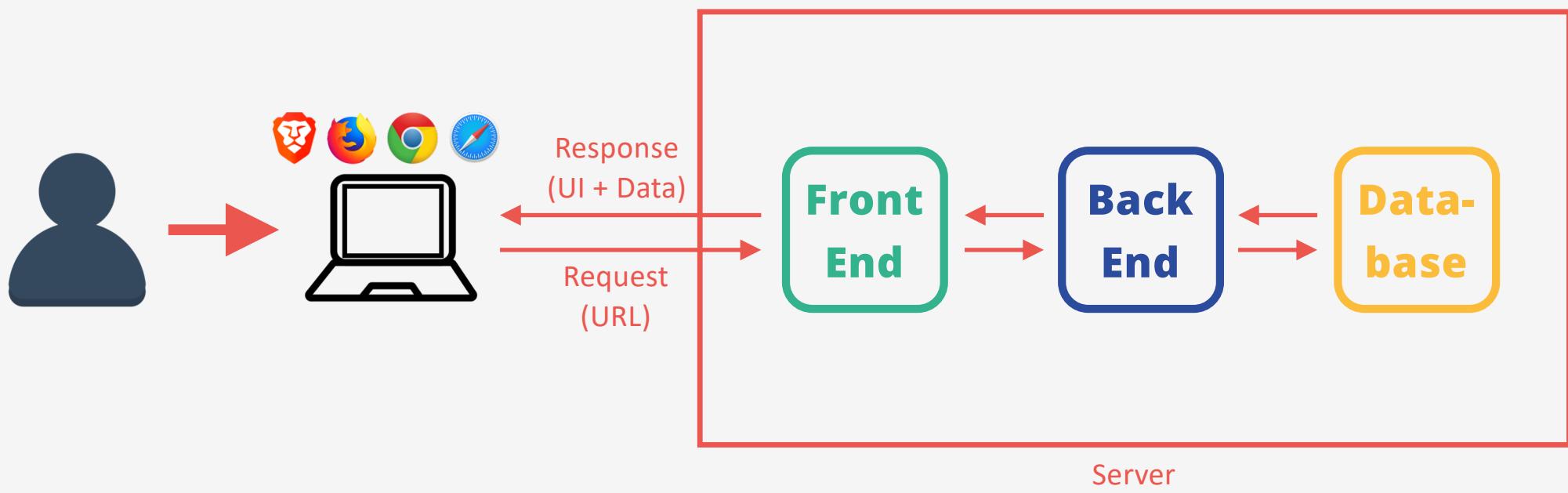


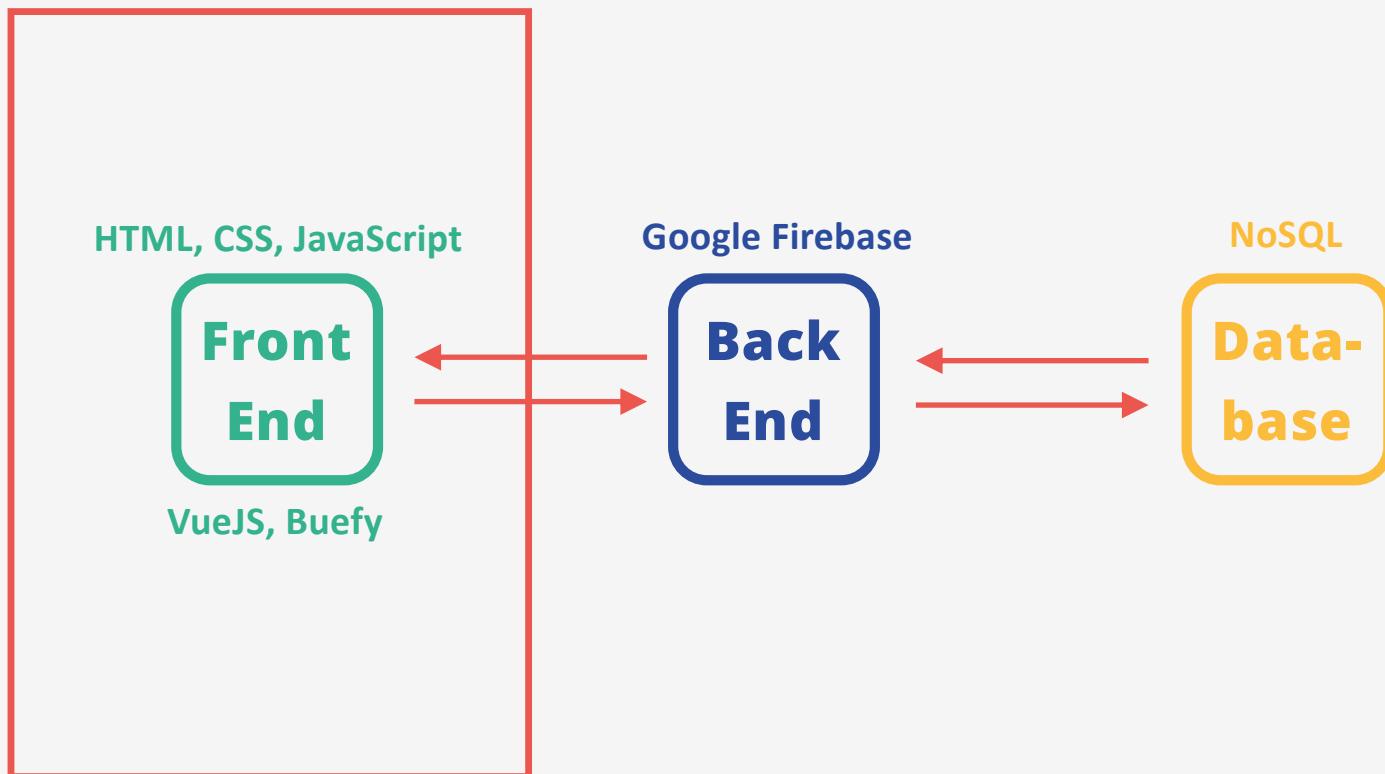
Review

1/3

± 15 menit

# Web Application: **How it Works**







HTML, CSS, JavaScript

Front  
End

VueJS, Buefy

Apa fungsi HTML, CSS, dan JS dalam pengembangan web?

# Static Websites

Memulai dari 0:

- Membuat halaman-halaman HTML yang menentukan konten dan struktur website
- Menggunakan CSS untuk mengatur styling pada website
- Menggunakan JavaScript untuk mengatur behavior elemen-elemen pada website

Memulai dengan sebuah Bootstrap template:

- Cari template website yang diinginkan
- Download template dan jalankan di komputer sendiri
- Ubah code HTML, CSS, JS sesuai kebutuhan

# Download Materi dari GitHub

## Yang belum pernah download:

- Buka terminal/command prompt
- Pindah ke direktori dimana materi akan disimpan
  - Contoh: `cd ..../Desktop/webdev/`
- Download materi
  - `git clone https://github.com/arusl/introduction-to-web-development.git`

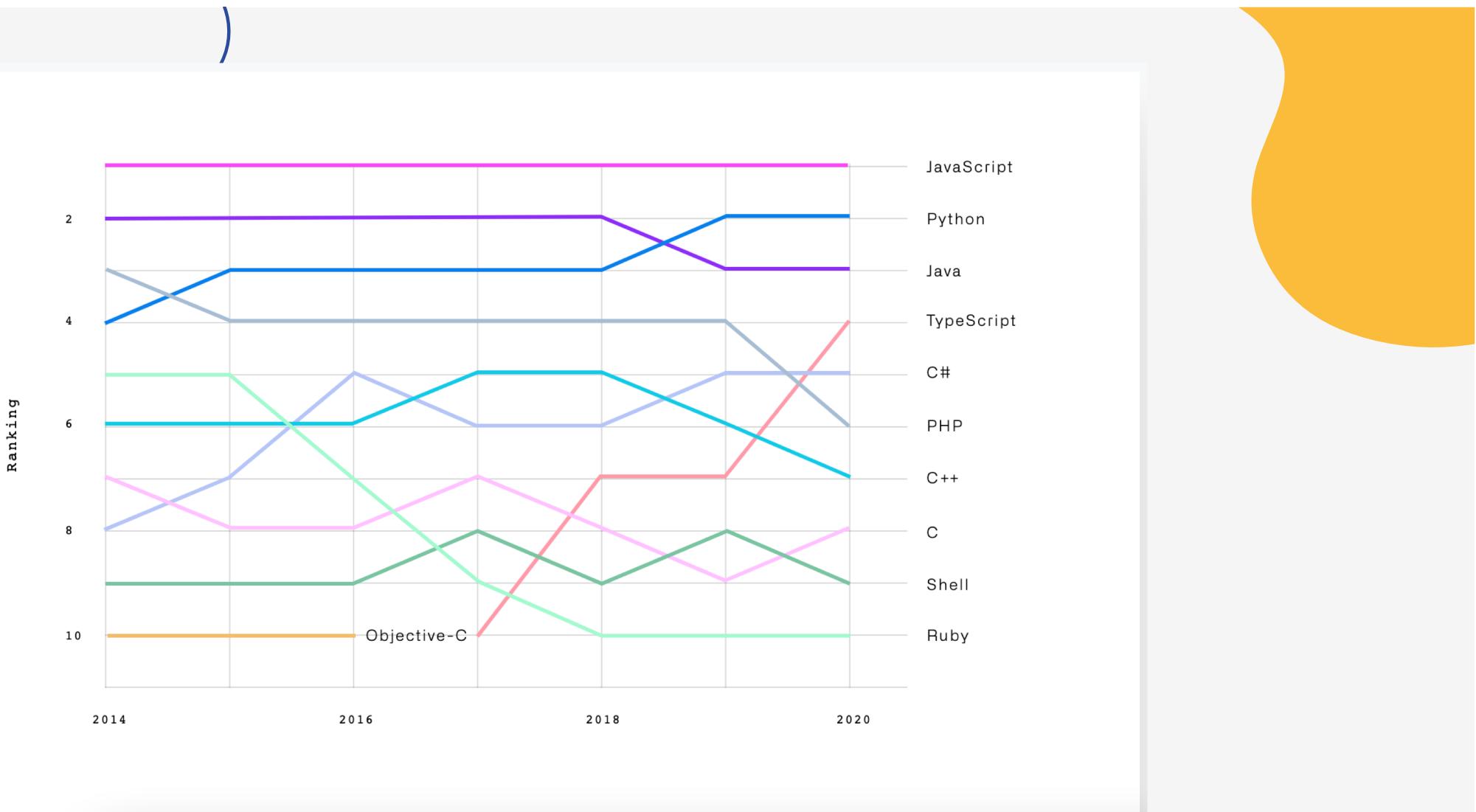
## Yang sudah pernah download:

- Buka terminal/command prompt
- Pindah ke direktori dimana materi sebelumnya disimpan
  - Contoh: `cd ..../Desktop/webdev/introduction-to-web-development`
- Tarik materi baru:
  - `git pull`
- Git pull error karena ada file yang sudah pernah diubah di komputer kita?
  - `git stash` (membuang perubahan yang ada, dipertimbangkan dahulu)

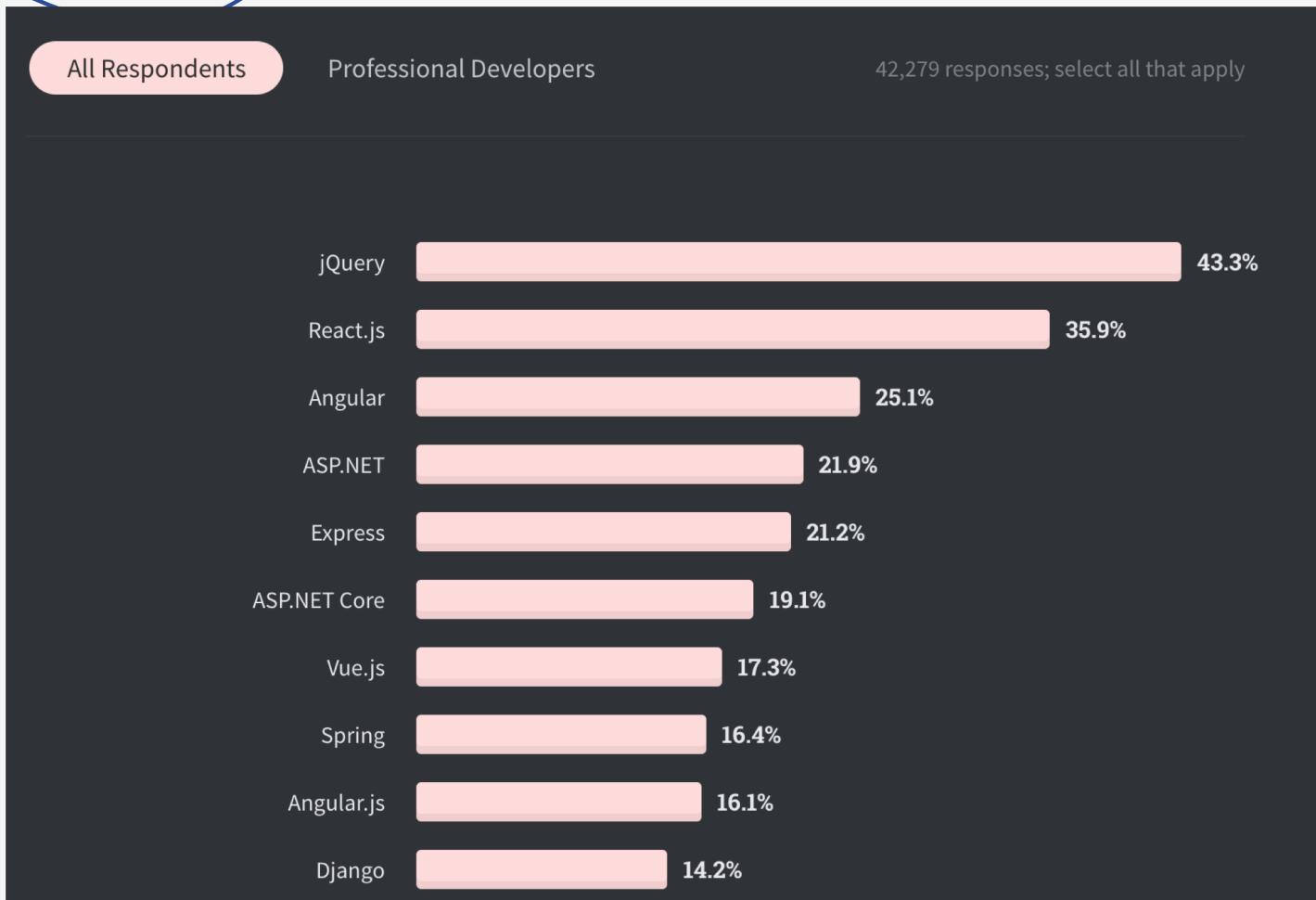
# Popular Front-End JavaScript Frameworks

2/3

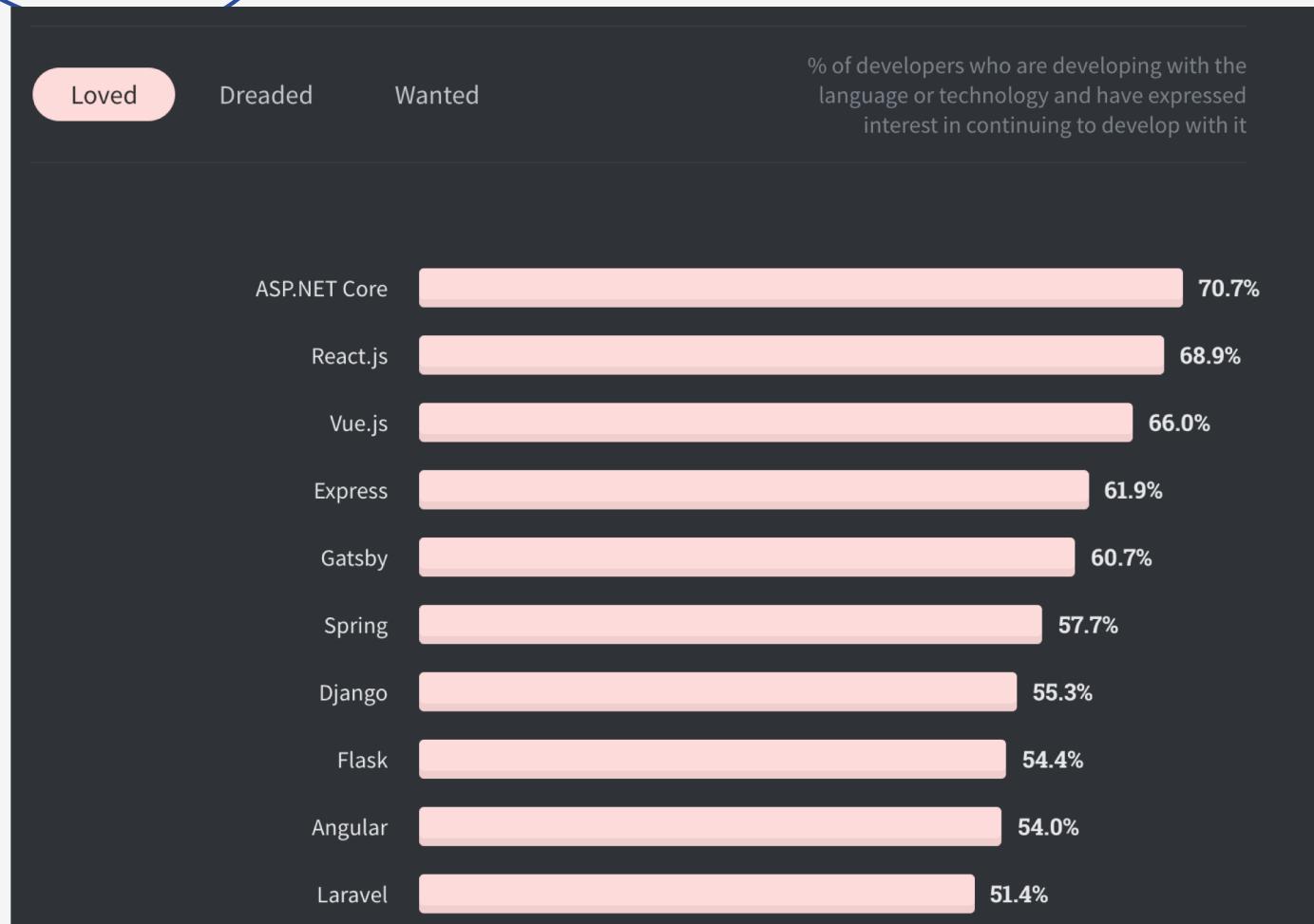
± 10 menit



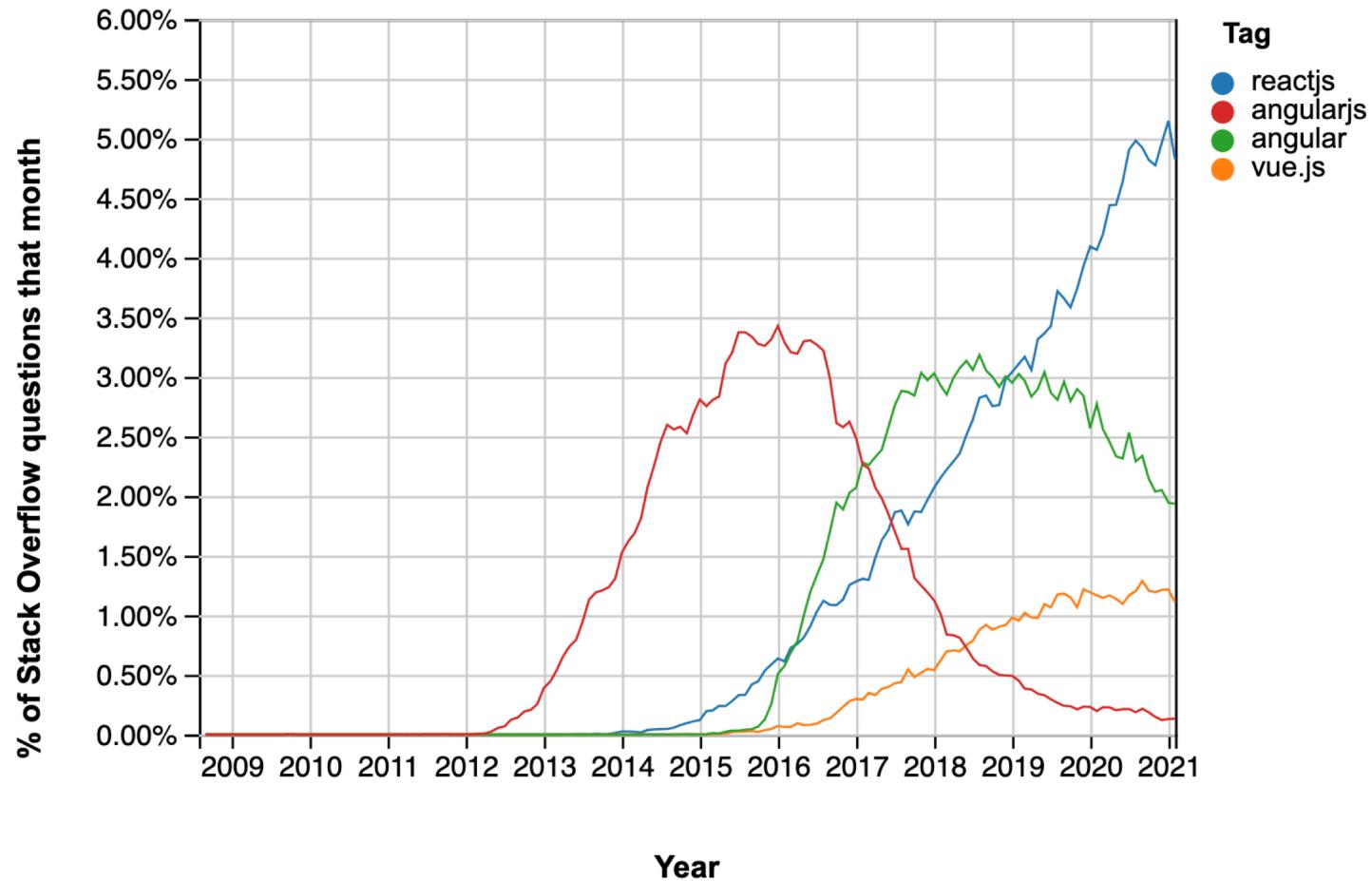
Source: <https://octoverse.github.com/>



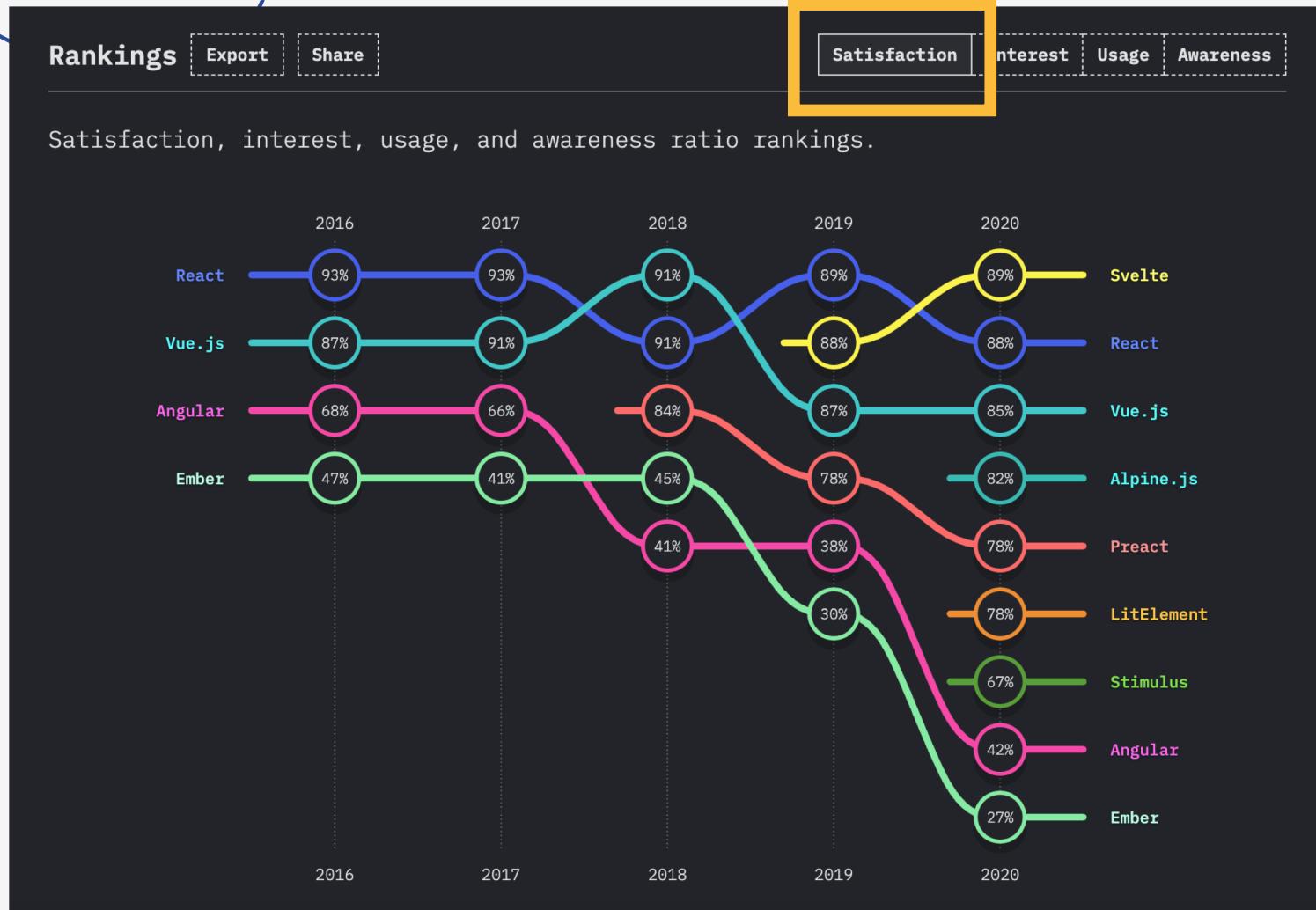
Source: <https://insights.stackoverflow.com/survey/2020#technology-web-frameworks-all-respondents2>



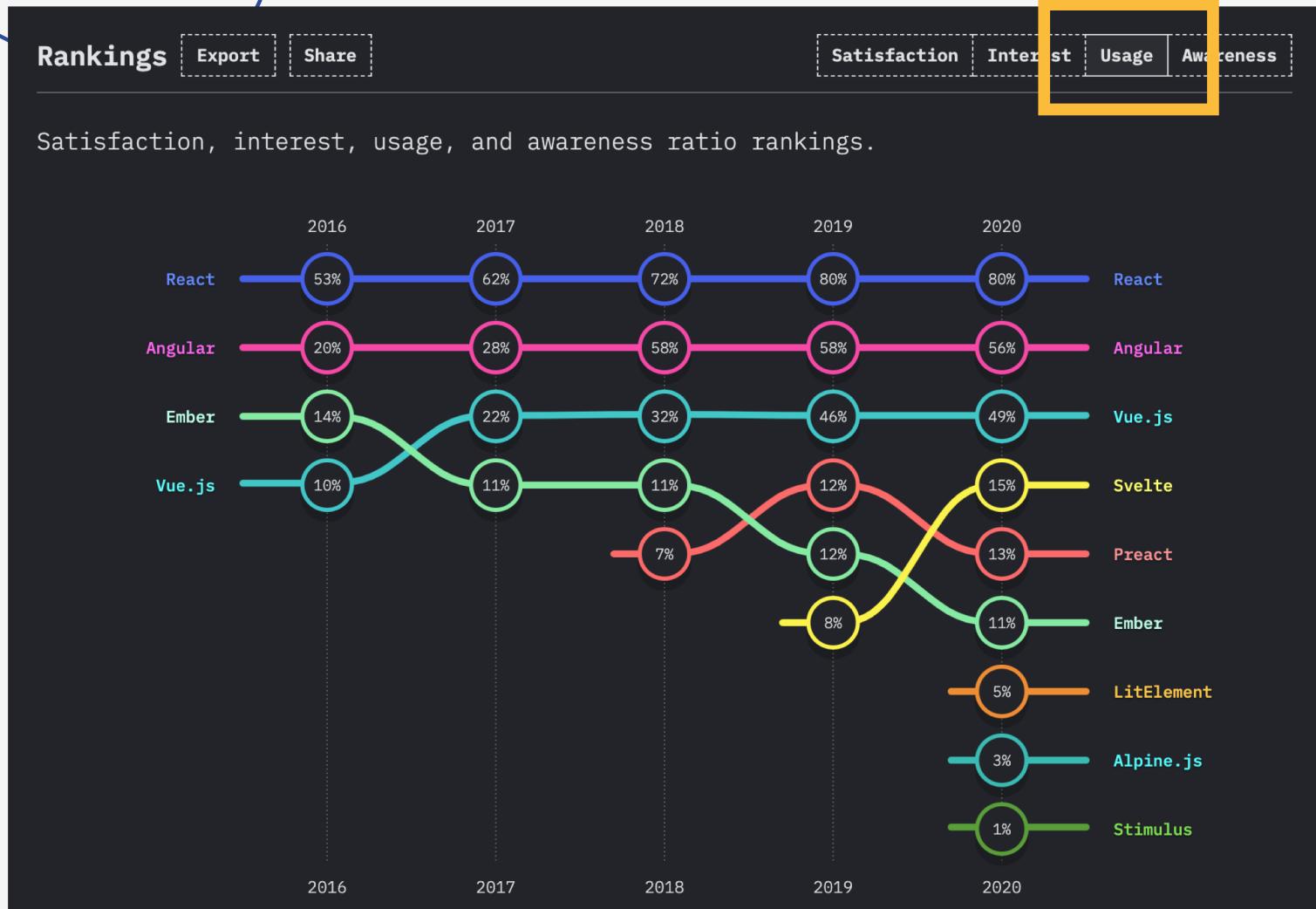
Source: <https://insights.stackoverflow.com/survey/2020#technology-most-loved-dreaded-and-wanted-web-frameworks>



Source: <https://insights.stackoverflow.com/trends?tags=reactjs%2Cvue.js%2Cangular%2Cangularjs>



Source: <https://2020.stateofjs.com/en-US/technologies/front-end-frameworks/>



Source: <https://2020.stateofjs.com/en-US/technologies/front-end-frameworks/>

# **VueJS + Buefy**

<https://vuejs.org/>

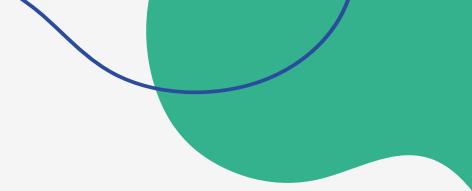
<https://buefy.org/>

VueJS untuk kontrol behavior aplikasi, Buefy sebagai penyedia komponen user interface (button, grid system, navigation bar, dsb.)

# Coding Tutorial: VueJS + Buefy

3/3

± 60 menit



**Requirements:** Visual Studio Code + Web Browser



# VueJS: Installation

Buka terminal/command prompt:

- Ketik: `npm --version` → bila tidak ada, install NodeJS
- Ketik: `vue --version` → bila tidak ada, install VueJS

```
(base) andreRs-MacBook-Pro:vue-projects andrer$ vue --version
@vue/cli 4.5.8
(base) andreRs-MacBook-Pro:vue-projects andrer$ npm --version
6.14.8
(base) andreRs-MacBook-Pro:vue-projects andrer$ []
```

Download and Install NodeJS: <https://nodejs.org/en/download/>

Install VueJS (<https://vuejs.org/v2/guide/installation.html>):

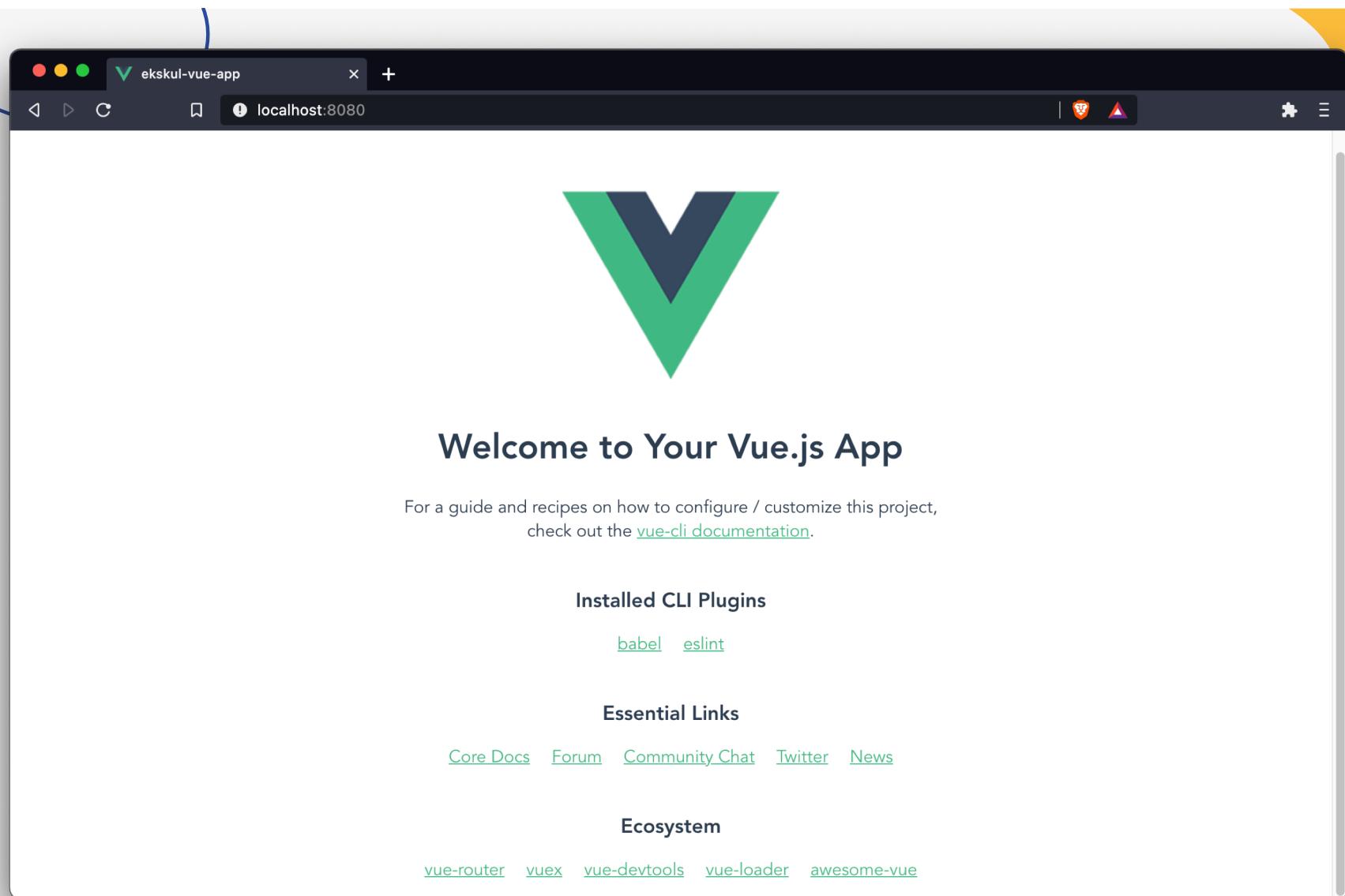
- Buka terminal/command prompt
- Ketik: `npm install -g vue` atau `sudo npm install -g vue` (mac/linux)

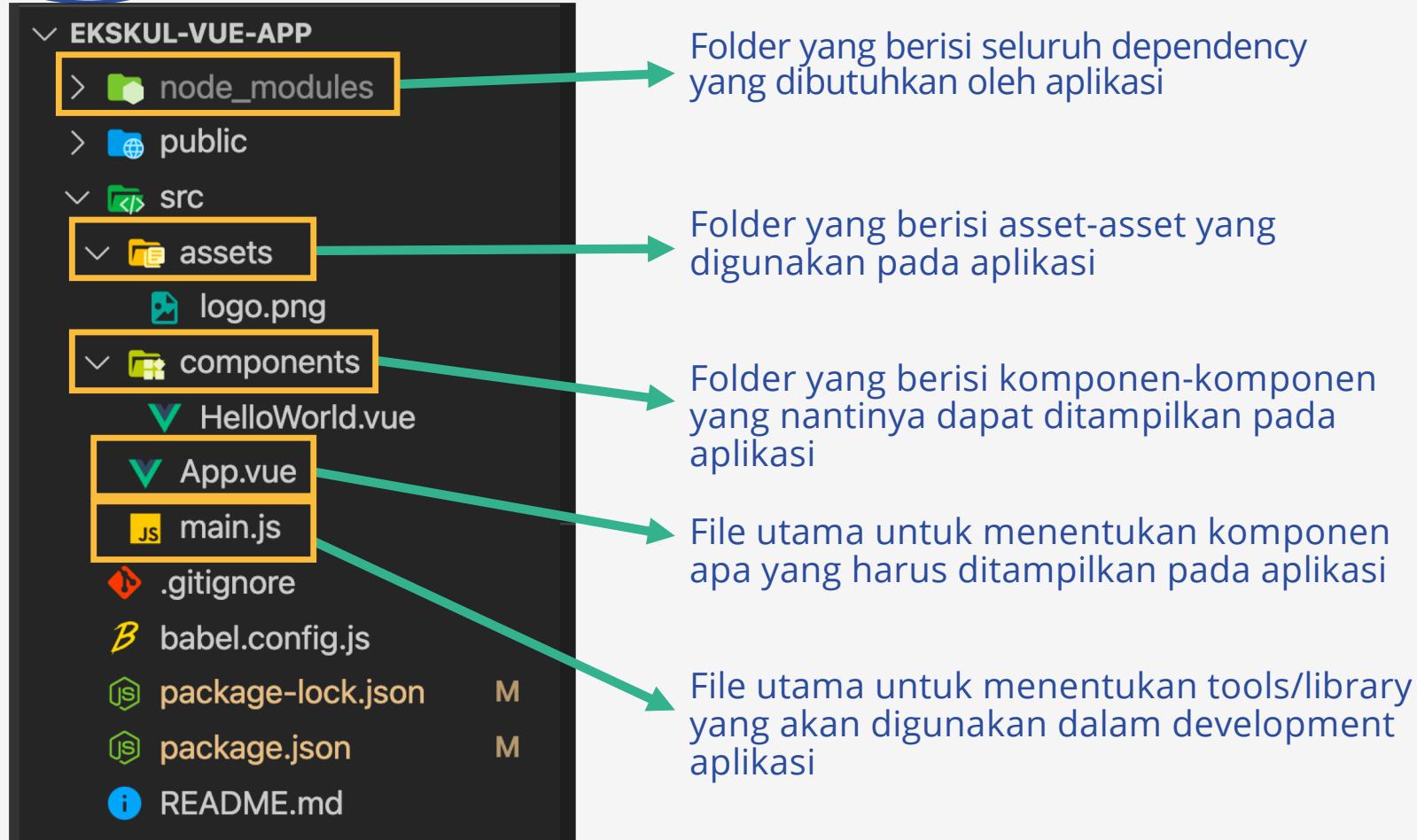
# VueJS: Create a New Project

Buka terminal/command prompt:

- Ketik: `vue create nama-aplikasi`
- Pilih: > Default ([Vue 2], babel, eslint)
- Tunggu sampai selesai, lalu
  - Ketik: `cd nama-aplikasi`
  - Ketik: `npm run serve`

Menggunakan web browser, ketik dan buka  
`http://localhost:8080` untuk melihat aplikasi Vue yang baru saja dibuat.





The screenshot shows the Visual Studio Code interface with the following details:

- Explorer View:** Shows the project structure under "EKSKUL-VUE-APP". The "src" folder contains "assets" (with "logo.png"), "components" (with "HelloWorld.vue"), and "App.vue".
- Open Editors:** The "App.vue" file is the active editor, highlighted with a yellow box.
- Code Editor:** The content of "App.vue" is displayed:

```
src > App.vue > {} "App.vue"
1  <template>
2  |   <div id="app">
3  |   |   
4  |   |   <HelloWorld msg="Welcome to Your Vue.js App"/>
5  |   </div>
6  </template>
7
8  <script>
9  import HelloWorld from './components/HelloWorld.vue'
10 export default {
11   name: 'App',
12   components: {
13     HelloWorld
14   }
15 }
16 </script>
17
18 <style>
19 #app {
20   font-family: Avenir, Helvetica, Arial, sans-serif;
21   -webkit-font-smoothing: antialiased;
22   -moz-osx-font-smoothing: grayscale;
23   text-align: center;
24   color: #2c3e50;
25   margin-top: 60px;
26 }
27 </style>
28
29 |
```
- Status Bar:** Shows the current branch ("master\*"), file statistics ("0 △ 0"), and various status icons (Live Share, ESLINT, Prettier).

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer View:** Shows the project structure under "EKSUL-VUE-APP". The "components" folder contains "HelloWorld.vue", "App.vue", "main.js", ".gitignore", "babel.config.js", "package-lock.json", "package.json", and "README.md".
- Open Editors:** The "HelloWorld.vue" file is currently open in the main editor area.
- Editor Area:** The code for "HelloWorld.vue" is displayed. The first few lines are:

```
<template>
<div class="hello">
  <h1>{{ msg }}</h1>
  <p>
```
- Code Snippet:** A large portion of the code is a placeholder from the Vue CLI template, starting with "For a guide and recipes on how to configure / customize this project," followed by links to documentation and ecosystem projects.
- Status Bar:** At the bottom, the status bar shows "master\*" as the branch, "Live Share" as the active extension, and other settings like "Spaces: 2", "UTF-8", "LF", "Vue", "ESLINT", "Prettier", and file status indicators.

VS Code screenshot showing the `HelloWorld.vue` file open in the editor. The file content is as follows:

```
src > components > ▼ HelloWorld.vue > {} "HelloWorld.vue" > □ template > □ div.hello > □ p
31  </template>
32
33  <script>
34  export default {
35    name: 'HelloWorld',
36    props: {
37      msg: String
38    }
39  }
40</script>
41
42 <!-- Add "scoped" attribute to limit CSS to this component only -->
43 <style scoped>
44 h3 {
45   margin: 40px 0 0;
46 }
47 ul {
48   list-style-type: none;
49   padding: 0;
50 }
51 li {
52   display: inline-block;
53   margin: 0 10px;
54 }
55 a {
56   color: #42b983;
57 }
58</style>
```

# Installing Dependencies

Buka terminal/command prompt pada direktori aplikasi:

- Ketik: `npm install buefy` → untuk menggunakan komponen UI yang disediakan Buefy (<https://buefy.org/>)
- Ketik: `npm install vue-router` → untuk berpindah halaman (<https://router.vuejs.org/>)

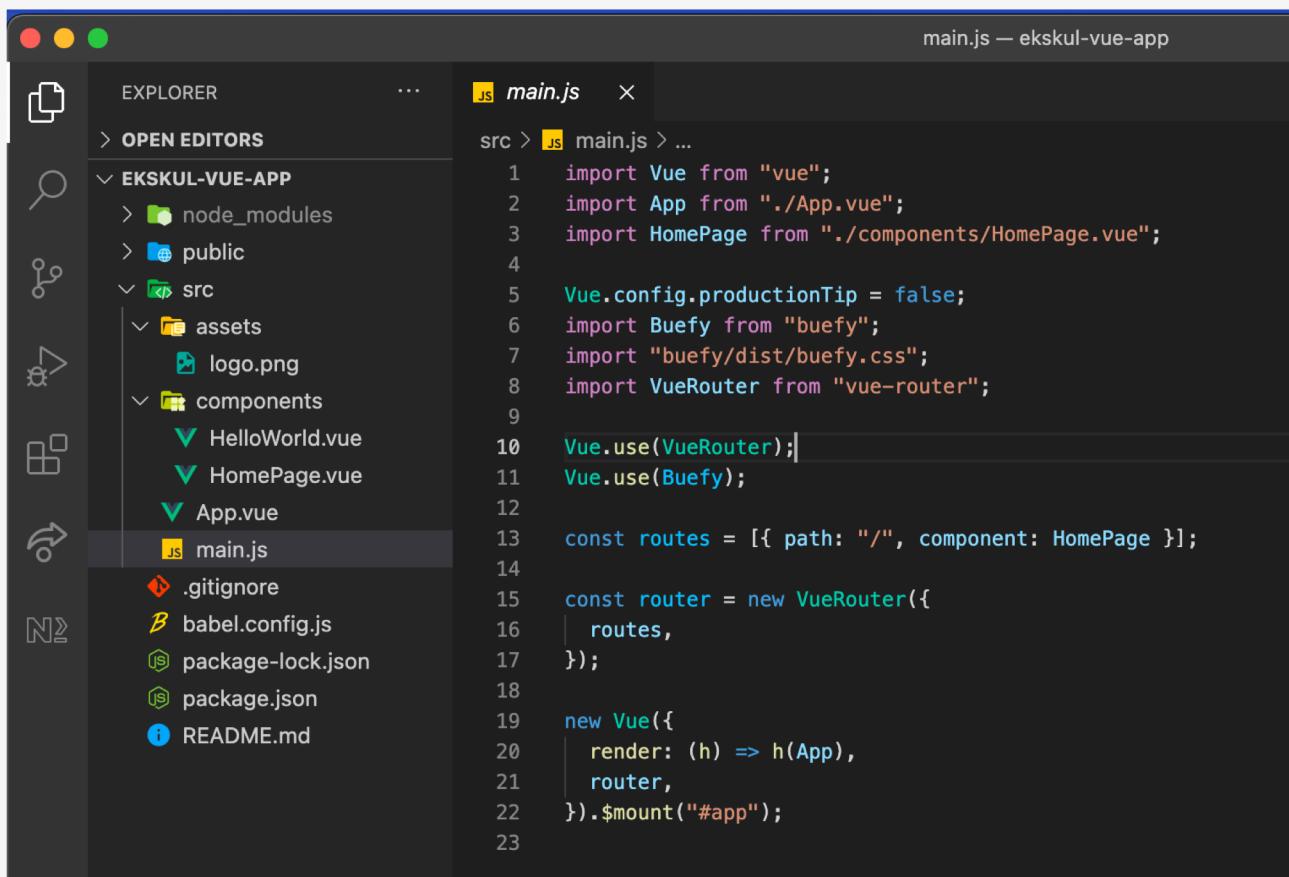
```
(base) andreRs-MacBook-Pro:ekskul-vue-app andrer$ npm install vue-router
+ vue-router@3.5.1
updated 1 package and audited 1321 packages in 5.717s

74 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

(base) andreRs-MacBook-Pro:ekskul-vue-app andrer$ █
```

# Using Buefy and Vue Router



A screenshot of the Visual Studio Code interface. The title bar shows "main.js — ekskul-vue-app". The left sidebar is the Explorer view, showing the project structure:

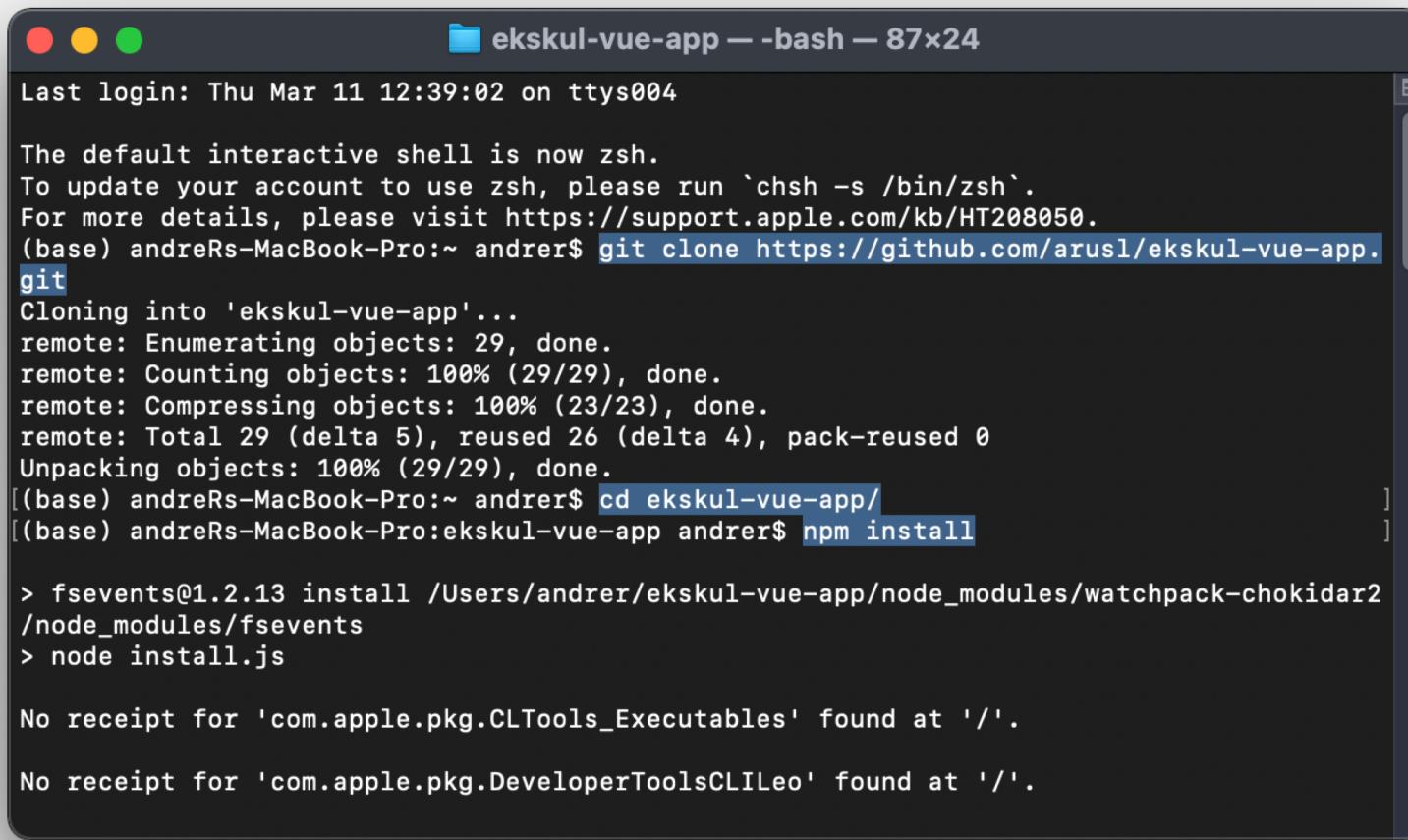
- node\_modules
- public
- src
  - assets (logo.png)
  - components
    - HelloWorld.vue
    - HomePage.vue
    - App.vue
  - main.js
- .gitignore
- babel.config.js
- package-lock.json
- package.json
- README.md

The main editor area displays the content of the main.js file:

```
src > main.js > ...
1 import Vue from "vue";
2 import App from "./App.vue";
3 import HomePage from "./components/HomePage.vue";
4
5 Vue.config.productionTip = false;
6 import Buefy from "buefy";
7 import "buefy/dist/buefy.css";
8 import VueRouter from "vue-router";
9
10 Vue.use(VueRouter);
11 Vue.use(Buefy);
12
13 const routes = [{ path: "/", component: HomePage }];
14
15 const router = new VueRouter({
16   routes,
17 });
18
19 new Vue({
20   render: (h) => h(App),
21   router,
22 }).$mount("#app");
23
```

# Coding Tutorial: VueJS + Buefy

# Git Clone: Sample Code



```
Last login: Thu Mar 11 12:39:02 on ttys004

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
(base) andreRs-MacBook-Pro:~ andrer$ git clone https://github.com/arusl/ekskul-vue-app.
git
Cloning into 'ekskul-vue-app'...
remote: Enumerating objects: 29, done.
remote: Counting objects: 100% (29/29), done.
remote: Compressing objects: 100% (23/23), done.
remote: Total 29 (delta 5), reused 26 (delta 4), pack-reused 0
Unpacking objects: 100% (29/29), done.
[(base) andreRs-MacBook-Pro:~ andrer$ cd ekskul-vue-app/
][(base) andreRs-MacBook-Pro:ekskul-vue-app andrer$ npm install
]

> fsevents@1.2.13 install /Users/andrer/ekskul-vue-app/node_modules/watchpack-chokidar2
/node_modules/fsevents
> node install.js

No receipt for 'com.apple.pkg.CLTools_Executables' found at '/'.

No receipt for 'com.apple.pkg.DeveloperToolsCLILeo' found at '/'.
```

# Git Clone: Sample Code

```
The project needs your help! Please consider supporting of core-js on Open Collective or Patreon:  
> https://opencollective.com/core-js  
> https://www.patreon.com/zloirock  
  
Also, the author of core-js ( https://github.com/zloirock ) is looking for a good job -  
)  
  
> ejs@2.7.4 postinstall /Users/andrer/ekskul-vue-app/node_modules/ejs  
> node ./postinstall.js  
  
Thank you for installing EJS: built with the Jake JavaScript build tool (https://jakejs.com/)  
  
added 1321 packages from 981 contributors and audited 1321 packages in 18.973s  
  
74 packages are looking for funding  
  run `npm fund` for details  
  
found 0 vulnerabilities  
  
(base) andreRs-MacBook-Pro:ekskul-vue-app andrer$ npm run serve
```

ekskul-vue-app

localhost:8080

Home Page

Class Name

Instructor Name

Class Type

Free Class  Paid Class

Add

Introduction to Web Development

Building a Solid Community

Instructor: Nathanael Pribady (free)

# Pertemuan Berikutnya

Backend Development: Google Firebase



# Thank You!

Buefy elements:

- <https://buefy.org/documentation/>
- Navbar, Container, Collapse, Field, Toast, and many more

Vue Router:

- <https://router.vuejs.org/>