

Vue 3 Introduction



Vue JS



Vue

Sebelum mengetahui Vue 3, alangkah baiknya mengetahui apa itu Vue atau Vue.js. **Vue** atau **Vue.js** adalah javascript framework atau sebuah kerangka kerja open source yang membangun antarmuka pengguna (UI - User Interface) dan aplikasi halaman yang bersifat tunggal (SPA - Single Page Application).

Vue dibuat oleh **Evan You** pada tahun 2013 dan dirilis pada tahun 2014.

Vue

Versi terbaru dari Vue (versi sebelumnya yaitu Vue 2) yang ditulis ulang dari awal dengan TypeScript oleh tim Vue.



Vue

Apa yang berubah pada Vue3 ?

- vue instance apps are now created with `createApp()`
- “data” must now always be a method
- component, directive & third-party modules are registered on “app” instead of Vue global object
- Transitions: `v-enter` is now `v-enter-from`
- Vue router: router is now created with `createRouter()`, transitions work differently
- vuex: store is now create with `createStore()`



Vue

- contoh pada v2 dan v3

```

basic-app-v2 > cd app.js > ...
1  Vue.component('the-button', {
2    template: '<button @click="updateMessage">Click me</button>',
3    methods: {
4      updateMessage() {
5        this.$emit('update');
6      },
7    },
8  });
9
10 new Vue({
11   el: '#app',
12   data: {
13     message: 'This works in Vue 2!',
14   },
15   methods: {
16     changeMessage() {
17       this.message = 'Will it work in Vue 3?';
18     },
19   },
20 });
21
basic-app-v3 > cd app.js > | app
1  const app = Vue.createApp({
2    data() {
3      return { message: 'This works in Vue 2!' };
4    },
5    methods: {
6      changeMessage() {
7        this.message = 'Will it work in Vue 3?';
8      },
9    },
10 });
11
12 app.component('the-button', {
13   emits: ['update'],
14   template: '<button @click="updateMessage">Click me</button>',
15   methods: {
16     updateMessage() {
17       this.$emit('update');
18     },
19   },
20 });
21
22 app.mount('#app');
  
```

Vue

- contoh pada v2 dan v3

```

}

.box-fade-enter,
.box-fade-leave-to {
  opacity: 0;
  transform: translateY(-30px);
}

.box-fade-enter-active,
.box-fade-leave-active {
  transition: all 0.3s ease;
}

.box-fade-enter-to,
.box-fade-leave {
  opacity: 1;

```

```

17 | .box-fade-enter-from,
18 | .box-fade-leave-to {
19 |   opacity: 0;
20 |   transform: translateY(-30px);
21 | }
22 |
23 | .box-fade-enter-active,
24 | .box-fade-leave-active {
25 |   transition: all 0.3s ease;
26 | }
27 |
28 | .box-fade-enter-to,
29 | .box-fade-leave-from {
30 |   opacity: 1;
31 |   transform: translateY(0);

```

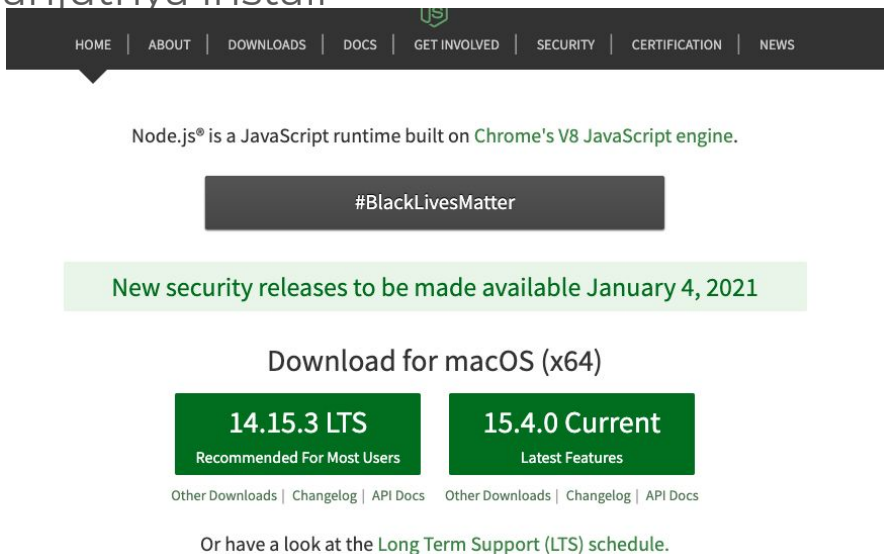
Vue

New feature :

- <teleport> component
- fragments
- composition API may be used to replace options API
- vue was internally re-written with Typescript

Vue

Kunjungi website resmi [Node.js](https://nodejs.org/), kemudian pilih Download (disarankan untuk memilih download versi LTS). selanjutnya install



The screenshot shows the Node.js website's download section. At the top is a dark navigation bar with links: HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, CERTIFICATION, and NEWS. Below the navigation bar, a text line states "Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine." followed by a "#BlackLivesMatter" button. A green banner below that reads "New security releases to be made available January 4, 2021". The main heading is "Download for macOS (x64)". There are two green buttons: "14.15.3 LTS" labeled "Recommended For Most Users" and "15.4.0 Current" labeled "Latest Features". Below these buttons are links for "Other Downloads | Changelog | API Docs" for both versions. At the bottom, it says "Or have a look at the Long Term Support (LTS) schedule."

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | CERTIFICATION | NEWS

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.

#BlackLivesMatter

New security releases to be made available January 4, 2021

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14.15.3 LTS
Recommended For Most Users

15.4.0 Current
Latest Features

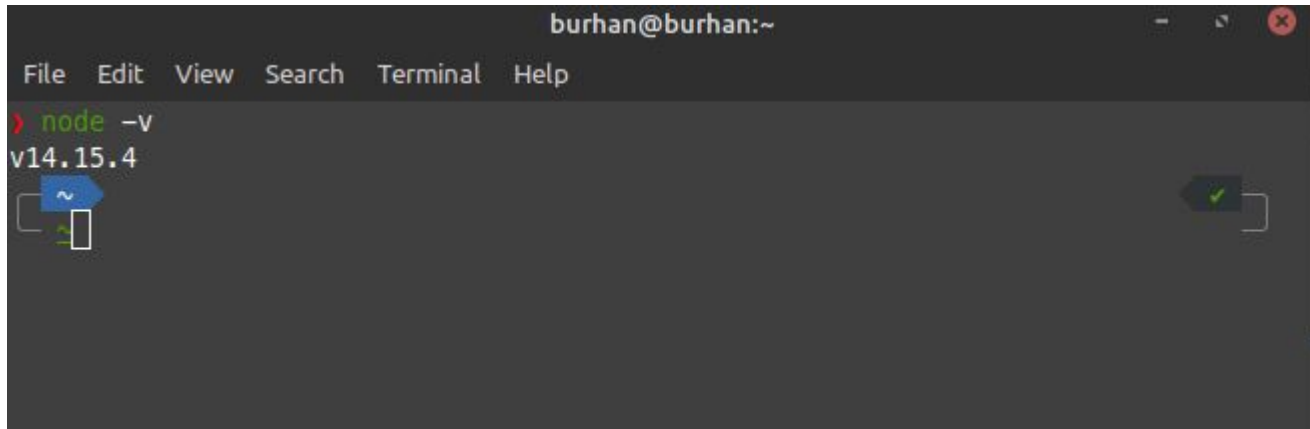
Other Downloads | Changelog | API Docs Other Downloads | Changelog | API Docs

Or have a look at the Long Term Support (LTS) schedule.



Vue

setelah install cek pada terminal `$node -v` untuk memastikan node js sudah terinstall

A screenshot of a terminal window with a dark background. The title bar at the top reads 'burhan@burhan:~'. Below the title bar is a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows a command prompt with a red prompt character, followed by the command 'node -v' in green. The output 'v14.15.4' is displayed in green. Below the output, there is a blue arrow pointing right, a green checkmark, and a white cursor. The terminal window has standard window controls (minimize, maximize, close) in the top right corner.

```
burhan@burhan:~  
File Edit View Search Terminal Help  
> node -v  
v14.15.4
```



Instalasi Vue JS



Vue

Instalasi Vue dapat dilakukan dengan beberapa cara, yaitu:

1. Menggunakan CDN
2. Menggunakan npm
3. Menggunakan CLI

Vue

CDN

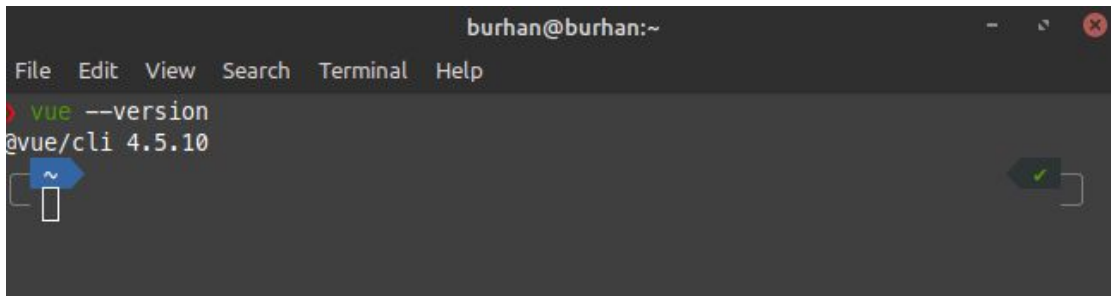
Paste script dibawah ini pada file HTML:

```
<script src="https://unpkg.com/vue@next"></script>
```

Vue

NPM

- Buka terminal
- Lakukan perintah “\$ npm install vue@next”
- Tunggu sampai proses instalasi selesai
- Kemudian periksa versi vue yang terinstal dengan “vue --version”



```
burhan@burhan:~  
File Edit View Search Terminal Help  
$ vue --version  
@vue/cli 4.5.10
```

Vue

CLI

- Buka terminal
- Lakukan perintah “npm install -g @vue/cli”
- Jika anda menggunakan yarn lakukan perintah ini:
“yarn global add @vue/cli”

Vue Component

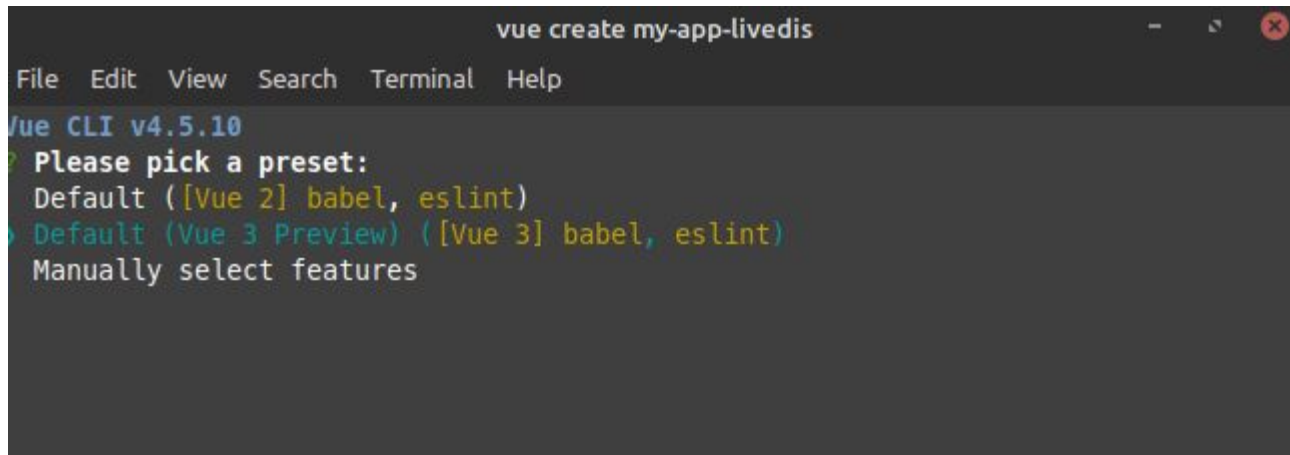


Vue

Sebelum membuat component, silahkan untuk membuat project terlebih dahulu dengan cara:

- Buka terminal, jalankan perintah “vue create [nama aplikasi anda]”

Contoh *vue create my-app-livedis*

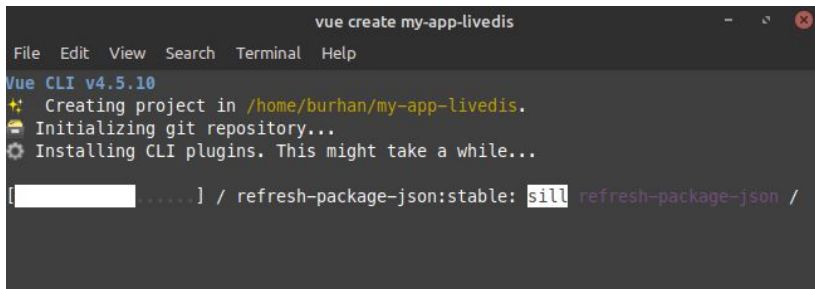


```
vue create my-app-livedis
File Edit View Search Terminal Help
Vue CLI v4.5.10
? Please pick a preset:
  Default ([Vue 2] babel, eslint)
  > Default (Vue 3 Preview) ([Vue 3] babel, eslint)
  Manually select features
```



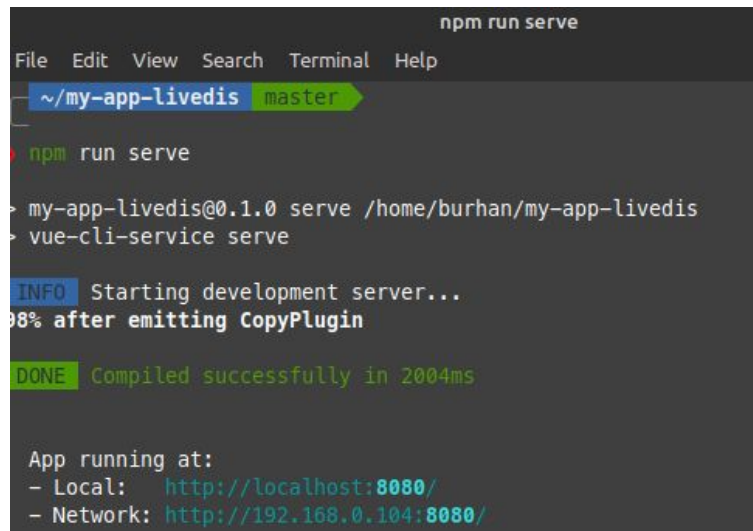
Vue

- Pilih “Default (Vue 3 Preview) ([Vue 3] babel, eslint)”
- Tunggu hingga proses create project selesai
- Jika sudah selesai, silahkan lakukan:
 1. cd “project anda”
 2. Npm run serve



```
vue create my-app-livedis
File Edit View Search Terminal Help
Vue CLI v4.5.10
✳ Creating project in /home/burhan/my-app-livedis.
📦 Initializing git repository...
⚙ Installing CLI plugins. This might take a while...

[ ] / refresh-package-json:stable: sill refresh-package-json /
```



```
npm run serve
File Edit View Search Terminal Help
~/my-app-livedis master
npm run serve

my-app-livedis@0.1.0 serve /home/burhan/my-app-livedis
vue-cli-service serve

INFO Starting development server...
88% after emitting CopyPlugin

DONE Compiled successfully in 2004ms

App running at:
- Local: http://localhost:8080/
- Network: http://192.168.0.104:8080/
```

Vue

- Jika sudah melakukan “npm run serve”
- Buka browser, kemudian masukan url <http://localhost:8080/>
- Maka akan tampil seperti ini:



Welcome to Your Vue.js App

For a guide and recipes on how to configure / customize this project,
check out the [vue-cli documentation](#).

Installed CLI Plugins

[babel](#) [eslint](#)

Essential Links

[Core Docs](#) [Forum](#) [Community Chat](#) [Twitter](#) [News](#)



Vue

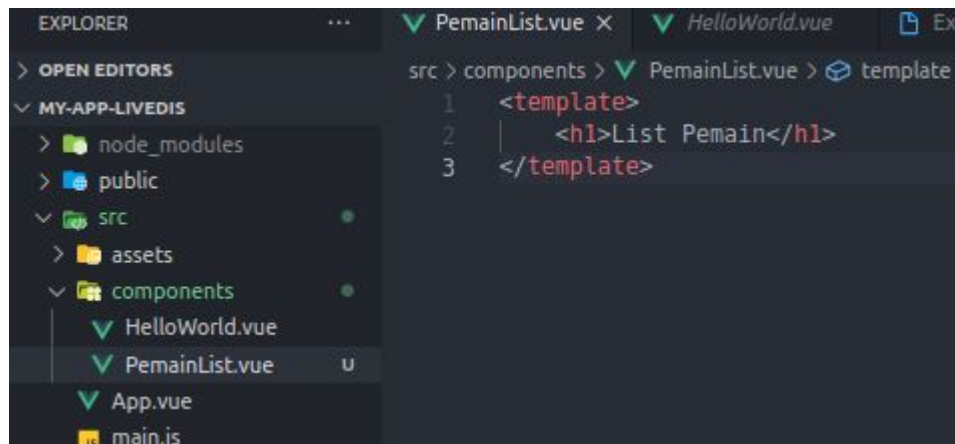
- Masuk kedalam project anda *src/components/* buat nama component anda *PemainList.vue*
- Isi file *PemainList.vue* anda dengan:

```
<template>
  <h1>List Pemain</h1>
</template>
```

- Kemudian buka file *App.vue*
- Import component yang telah anda buat:
import PemainList from './components/PemainList.vue'

Vue

PemainList.vue



The screenshot shows the Visual Studio Code interface. On the left, the Explorer sidebar displays the project structure for 'MY-APP-LIVEDIS'. The 'components' folder is expanded, showing 'HelloWorld.vue', 'PemainList.vue' (which is selected), and 'App.vue'. The main editor area shows the 'PemainList.vue' file open, displaying its 'template' section. The code in the template is as follows:

```
src > components > PemainList.vue > template
1  <template>
2    <h1>List Pemain</h1>
3  </template>
```



Vue

- Kemudian buka file *App.vue*
- Import component yang telah anda buat:
import PemainList from './components/PemainList.vue'

```
<script>
import PemainList from './components/PemainList.vue';
|
```

- Ganti *HelloWorld* pada component menjadi *PemainList*

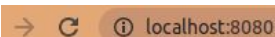
```
export default {
  name: 'App',
  components: {
    PemainList
  }
}
```

Vue

- Untuk menampilkan component yang telah dibuat, ubah template yang ada pada *App.vue*

```
<template>
  <PemainList />
</template>
```

- Jika sudah, silahkan lihat tampilan browser anda akan terlihat seperti:



List Pemain



Manipulasi data pada component

Conditional statement v-if (v-else-if, v-else) & v-show



v-if (v-else-if, v-else)

components > PemainList.vue

```
src > components >  PemainList.vue >  template
1  <template>
2    <h1>List Pemain</h1>
3    <h4>Posisi: {{posisi}}</h4>
4    <ul v-if="posisi === 'CB'">
5      <li>{{ nameCB }}</li>
6    </ul>
7    <ul v-else-if="posisi === 'GK'">
8      <li>{{ nameGK }}</li>
9    </ul>
10   <ul v-else>
11     <li>Pemain tidak ditemukan</li>
12   </ul>
13 </template>
```

```
<script>
import { ref } from "vue"
export default {
  setup() {
    const nameCB = ref("David Alaba");
    const nameGK = ref("Manuel Neuer");
    const posisi = ref("GK");

    return { nameCB, nameGK, posisi }
  }
}</script>
```

Manipulasi data pada component

Looping dengan v-for



v-for

Ubah file pada
components > PemainList.vue ,
menjadi:

```
<template>
  <h1>Data pemain</h1>
  <ul>
    <li v-for="pemain in dataPemain" :key="pemain.id">
      <div><strong>Nama :</strong> {{ pemain.name }}</div>
      <div><strong>Posisi :</strong> {{ pemain.posisi }}</div>
      <hr />
    </li>
  </ul>
</template>
```

```
<script>
import { ref } from "vue"
export default {
  setup() {
    const dataPemain = ref([
      {
        id: 1,
        name: "Manuel Neuer",
        posisi: "GK"
      },
      {
        id: 2,
        name: "David Alaba",
        posisi: "CB"
      },
      {
        id: 3,
        name: "Robert Lewandowski",
        posisi: "CF"
      }
    ])

    return { dataPemain }
  }
}</script>
```

v-for

Maka tampilan pada localhost anda akan seperti:

<http://localhost:8080/>

Data pemain

Nama : Manuel Neuer
Posisi : GK

Nama : David Alaba
Posisi : CB

Nama : Robert Lewandowski
Posisi : CF



Manipulasi data pada component

Data binding



Data Binding

components > PemainList.vue

Tambahkan script dibawah pada baris dibawah ini sebelum html tag <hr>:

```
<div style="margin: 15px 0px;">
<strong>Edit Nama :</strong> <input type="text" v-model="pemain.name">
</div>
```

Data Binding

Maka tampilan pada localhost anda akan seperti:

<http://localhost:8080/>

←

→

↻

localhost:8080

Data pemain

- Nama : Manuel Neuer

Posisi : GK

Edit Nama :
- Nama : David Alaba

Posisi : CB

Edit Nama :
- Nama : Robert Lewandowski

Posisi : CF

Edit Nama :