



Backend Web Development (1)

Pertemuan #4
Kamis, 25 Maret 2021

Andre Rusli

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
- Backend + Database ± 10 menit
- Coding Tutorial: VueJS + Buefy + Firebase ± 60 menit

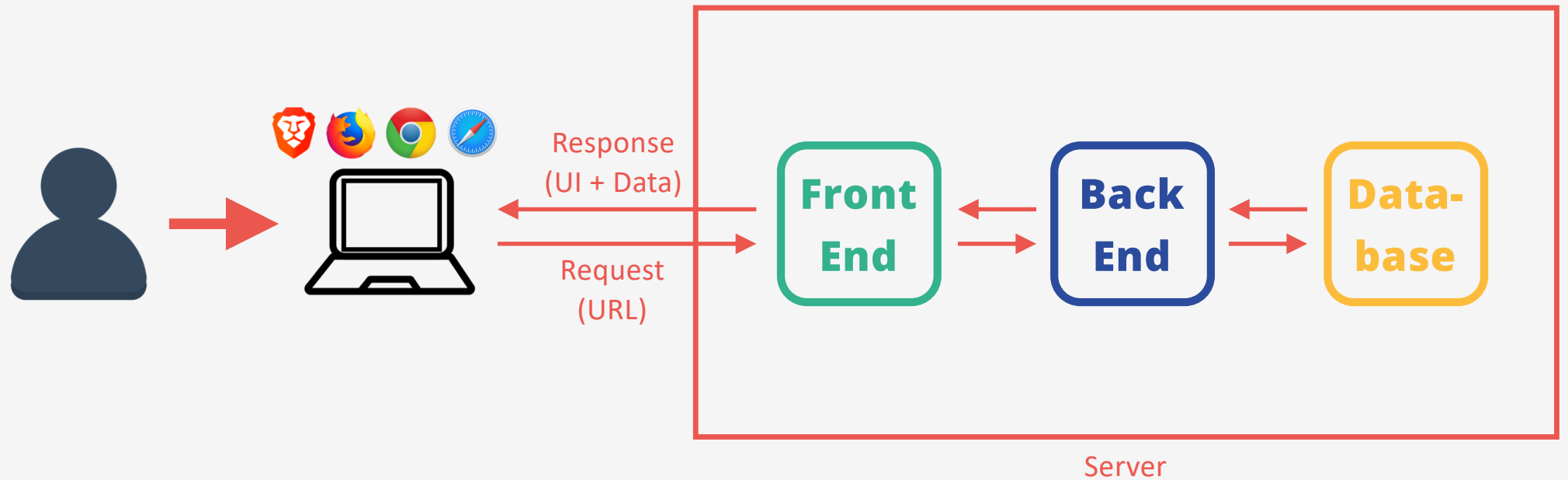


Review

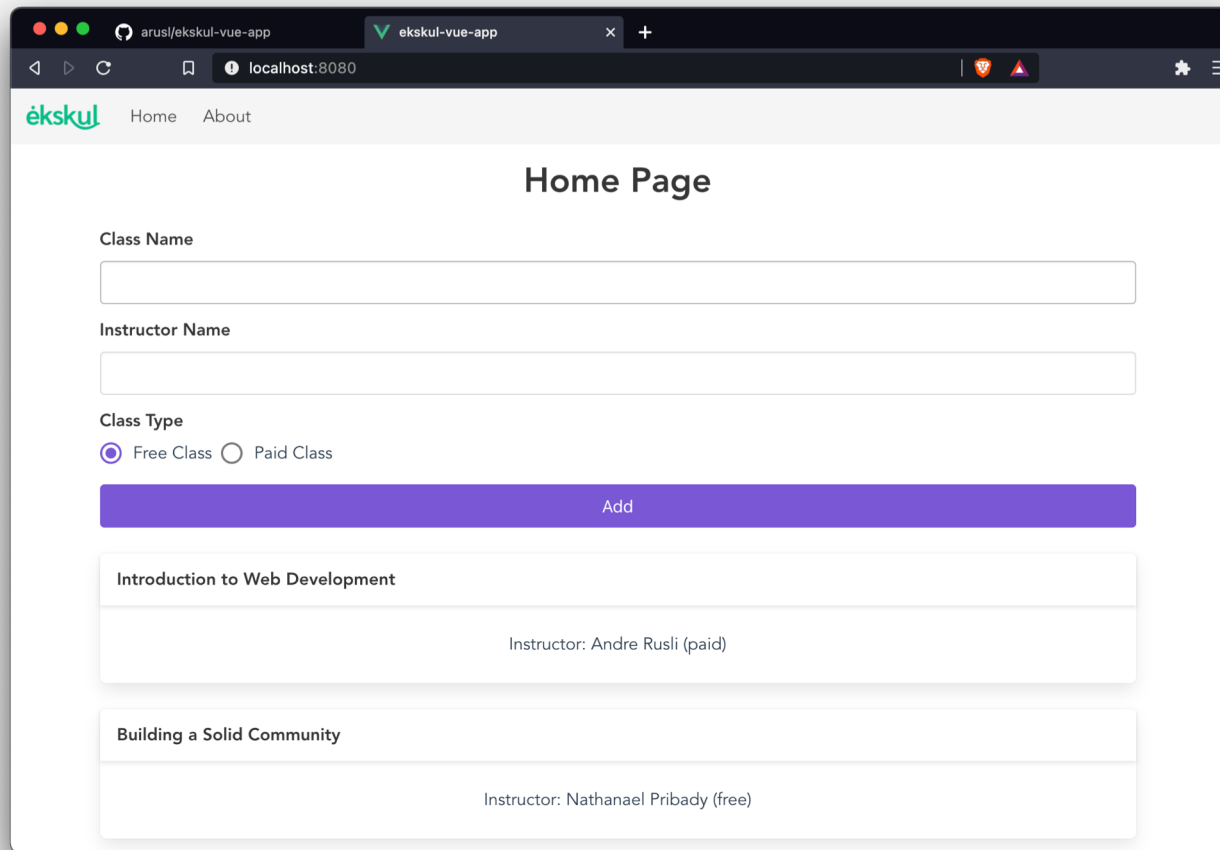
1/3

± 15 menit

Web Application: How it Works



Lanjutan Aplikasi Pertemuan 3



The screenshot shows a web browser window with the URL `localhost:8080`. The application is titled "ekskul" and has a navigation bar with "Home" and "About" links. The main content area is titled "Home Page" and contains a form to add a new class. The form has three input fields: "Class Name", "Instructor Name", and "Class Type". The "Class Type" field has two radio buttons: "Free Class" (selected) and "Paid Class". Below the form is a purple "Add" button. Below the button is a list of existing classes, each with a title and an instructor name.

Class Name

Instructor Name

Class Type

☒ Free Class ☐ Paid Class

Add

Introduction to Web Development

Instructor: Andre Rusli (paid)

Building a Solid Community

Instructor: Nathanael Pribady (free)

Lanjutan Aplikasi Pertemuan 3

Buka terminal, lalu jalankan:

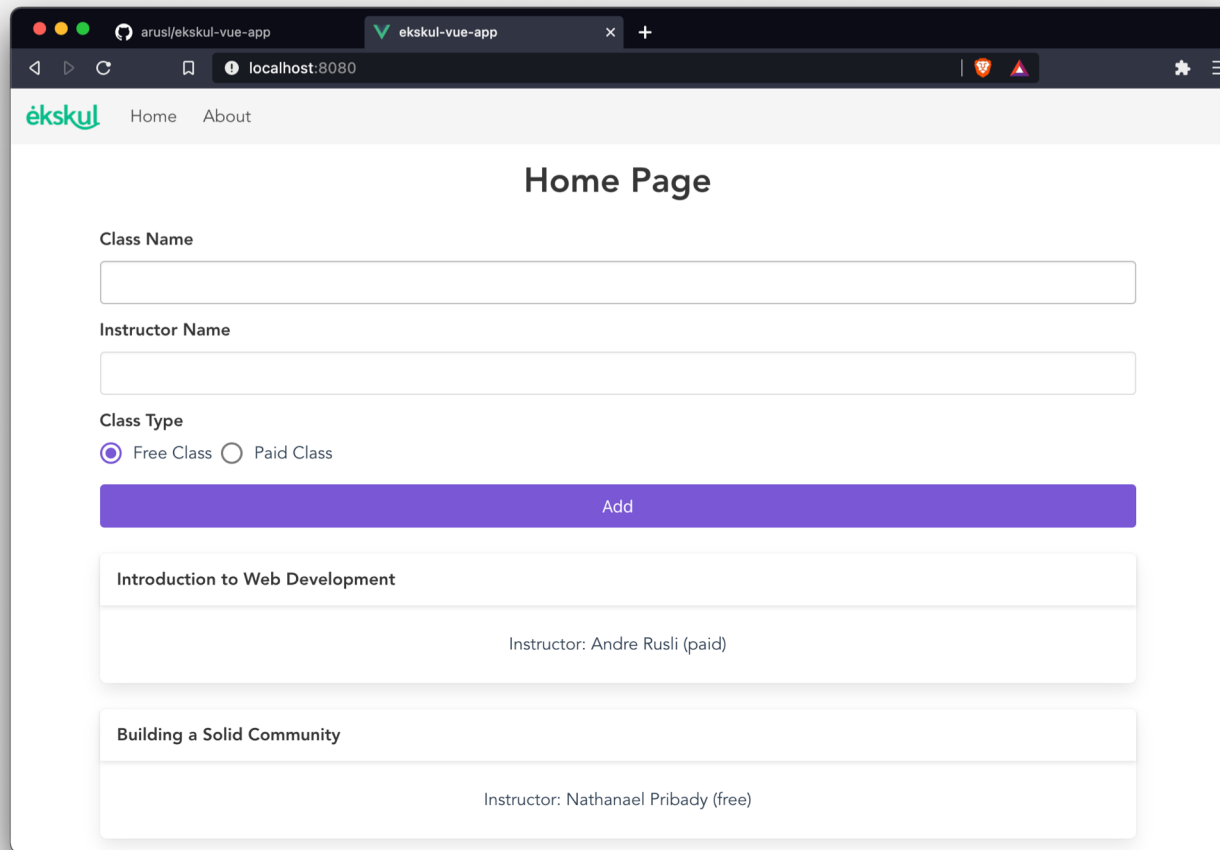
1. `git clone https://github.com/arusl/ekskul-vue-app.git`
2. `cd ekskul-vue-app`
3. `npm install`
4. `npm run serve`
5. Buka browser dan akses `http://localhost:8080/`

Backend Application & Database

2/3

± 10 menit

Lanjutan Aplikasi Pertemuan 3



The screenshot shows a web browser window with the URL `localhost:8080`. The application is titled "ekskul" and has a navigation bar with "Home" and "About" links. The main content area is titled "Home Page" and contains a form to add a new class. The form has three input fields: "Class Name", "Instructor Name", and "Class Type". The "Class Type" field has two radio buttons: "Free Class" (selected) and "Paid Class". Below the form is a purple "Add" button. Below the button is a list of existing classes, each with a title and an instructor name.

ekskul Home About

Home Page

Class Name

Instructor Name

Class Type

☒ Free Class ☐ Paid Class

Add

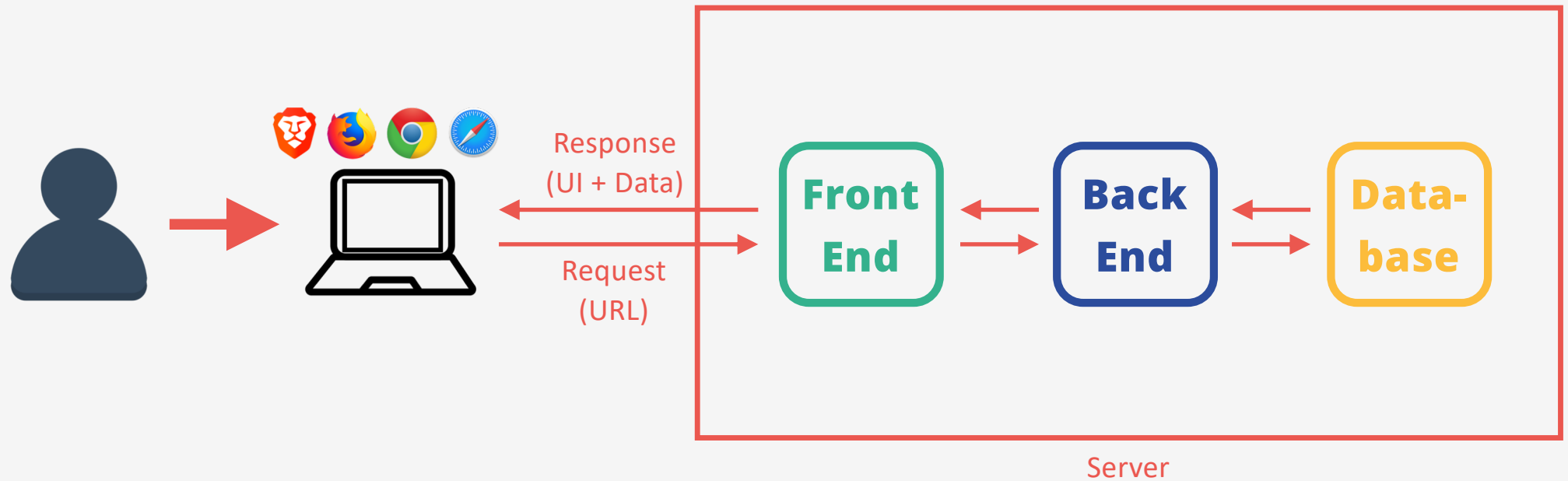
Introduction to Web Development

Instructor: Andre Rusli (paid)

Building a Solid Community

Instructor: Nathanael Pribady (free)

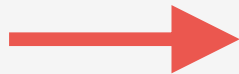
Web Application: How it Works



Database / Basis Data

Secara umum ada dua tipe, SQL dan NoSQL

ID	Nama	Umur	Alamat
1112	Andre	87	Jakarta
...
2224	Rusli	12	Tangerang



```
students: {  
  1112: {  
    nama: "Andre",  
    umur: 87,  
    alamat: "Jakarta",  
  },  
  ...,  
  2224: {  
    nama: "Rusli",  
    umur: 12,  
    alamat: "Tangerang",  
  },  
}
```



Firestore Realtime Database

ekskul-vue-app-default-rtdb



classes



-MWcdYbn1-S0mS9bi_En



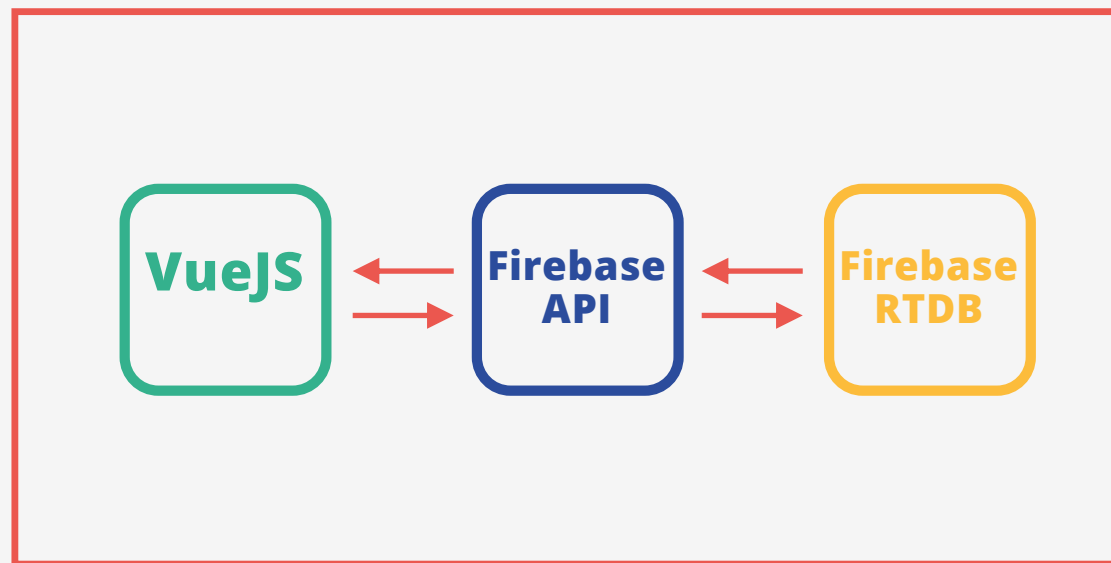
className: "Introduction to Web Development"

classType: "paid"

instructorName: "Andre Rusli"

<https://console.firebase.google.com/>

<https://firebase.google.com/docs/database>



Server

Coding Tutorial: VueJS + Buefy + Firebase

3/3

± 60 menit

Firestore Realtime Database: How To

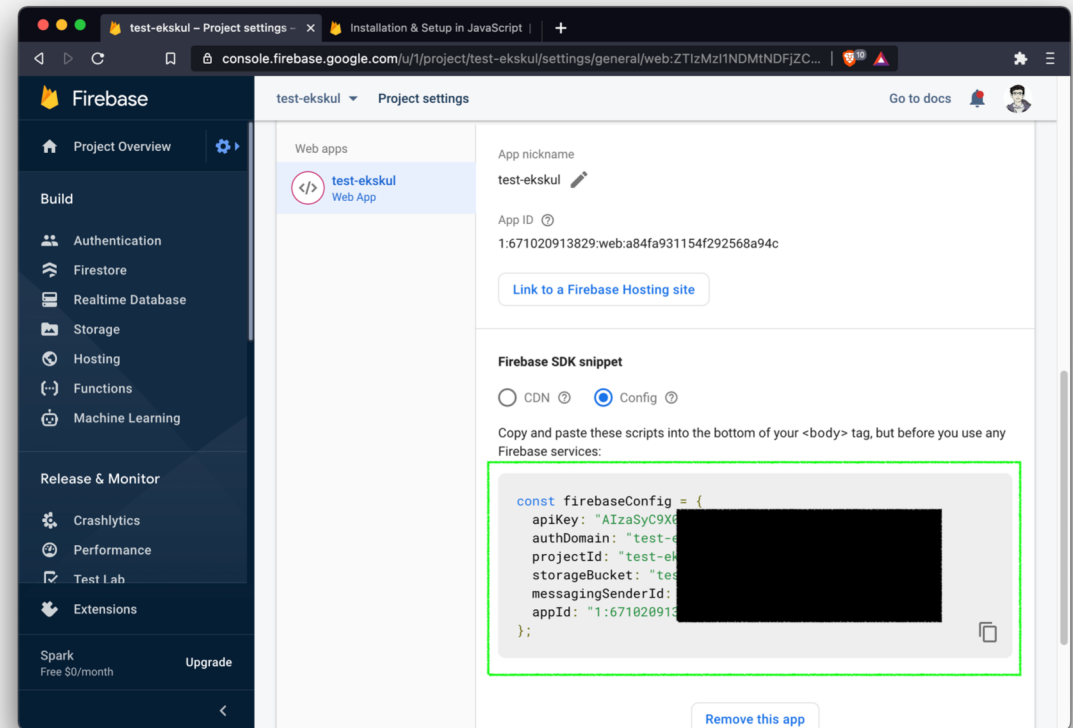
1. Login ke akun Google, lalu buka <https://console.firebase.google.com/>
2. Buat projek baru (pada tutorial kali ini, uncheck menu Google Analytic)
3. Daftarkan nama web app pada Console Firebase
4. Klik menu Firestore Realtime Database pada *side menu*, lalu buat database baru dengan pilihan "Start in test mode"

Firestore Realtime Database (RTDB) sudah siap digunakan

<https://firebase.google.com/docs/database/web/start>

Menggunakan Firebase RTDB pada Vue App

1. Pada bagian Project Setting console Firebase, copy potongan kode **config** seperti yang dapat dilihat pada gambar di kanan
2. Pada aplikasi vue anda, jalankan **> npm install firebase**
3. Buat file baru pada projek Vue, lalu paste **config** firebase yang telah di copy sebelumnya. Lalu export objek Firebase RTDB seperti yang dapat dilihat pada potongan kode di slide berikutnya.



Menggunakan Firebase RTDB pada Vue App

```
firebase.js — ekskul-vue-app
JS firebase.js ×
src > JS firebase.js > [🔗] firebaseConfig > 🔗 storageBucket
1  import firebase from "firebase";
2
3  // Your web app's Firebase configuration
4  var firebaseConfig = {
5    apiKey: "AIzaSyA...",
6    authDomain: "ekskul-vue-app.firebaseio.com",
7    databaseURL: "https://ekskul-vue-app-default-rtdb.firebaseio.com",
8    projectId: "ekskul-vue-app",
9    storageBucket: "ekskul-vue-app.appspot.com",
10   messagingSenderId: "1018931222222",
11   appId: "1:1018931222222:web:...",
12 };
13 // Initialize Firebase
14 firebase.initializeApp(firebaseConfig);
15
16 // Get a reference to the database service
17 const fdb = firebase.database();
18
19 export { fdb };
20
```



Coding Tutorial: VueJS + Buefy + Firebase

<https://firebase.google.com/docs/database/web/start>





Challenge

- Kembangkan aplikasi Vue sesuai kebutuhan dan keinginan sendiri, lalu integrasikan dengan Firebase Realtime Database untuk penyimpanan data
- Lanjutkan aplikasi ekskul-vue-app dengan menambahkan fitur-fitur atau halaman lain. Kreasikan halaman About sesuai keinginan anda.

Kita showcase beberapa hasilnya pertemuan terakhir.





Pertemuan Berikutnya

Backend Development: Google Firebase (2)

- Load/refresh data
- Delete/edit data



Thank You!

Vue Router:

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

Firebase:

- <https://console.firebase.google.com/>
- <https://firebase.google.com/docs/database>