

Main ideas

- Single-File Components (*.vue) encapsulates the component's logic (JavaScript), template (HTML), and styles (CSS) in a single file
- Options API beginner-friendly by abstracting away the reactivity details and enforcing code organization via option groups

Note: there exists also the composition API

Create an app with Vite

```

npm create vue@latest
Need to install the following packages:
create-vue@3.8.0
Ok to proceed? (y) y
Vue.js - The Progressive JavaScript Framework
Project name: ... place_on
Add TypeScript? ... No / Yes
Add JSX Support? ... No / Yes
Add Vue Router for Single Page Application development? ... No / Yes
Add Pinia for state management? ... No / Yes
Add Vitest for Unit Testing? ... No / Yes
Add an End-to-End Testing Solution? ... No
Add ESLint for code quality? ... No / Yes
Add Prettier for code formatting? ... No / Yes
Scaffolding project in C:\Unif\master1\Q1\projet_integre\code\placeon_fr...
Done. Now run:
  cd place_on
  npm install
  npm run format
  npm run dev
  
```

To install npm you might need Node.js: <https://nodejs.org/en>
 router, ESLint for good code quality and Prettier for code formatting

- npm install : install project dependencies
- npm run format : code formatting (from Prettier)
- npm run dev: starts development server
- vite build: create a production build

Structure

```

<script>
import ChildComp from './ChildComp.vue'
export default {
  data(), computed:, methods:, mounted(), watch:,
  components:, emits:, created()
  {...}
}
</script>
  
```

Where to write vue.js script

Structure (cont)

- <template> ... </template> Where to write the "HTML" code
- <style scoped> ... </style> Where to write the CSS code Applied to elements of the current component only

Script

```

data() {
  return {
    property: value
  }
}
  
```

Properties returned from data() become reactive state and will be exposed on this

```

methods: {
  function() {
    code including this.property
  }
}
  
```

Methods are functions that mutate state and trigger updates. They can be bound as event handlers in templates.

```

mounted() {
  code
}
  
```

Lifecycle hooks are called at different stages of a component's lifecycle. This function will be called when the component is mounted

```

computed: {
  fct() {
    return code
  }
}
  
```

Tracks other reactive state used in its computation as dependencies. It caches the result and automatically updates it when its dependencies change.

```

watch: {
  prop() {
    code
  }
}
  
```

The watch callback is called when prop changes, and receives the new value as the argument

```

components: {
  ChildComp
}
  
```

Register child component



Script (cont)		Other	
inside child component	Child component	<code>{{ property }}</code>	Render dynamic text based on the value of <i>property</i>
<pre>props: { prop: value }</pre>	can accept input from the parent	<code>ref="name"</code>	Template ref: a reference to an element in the template
inside child component	Child component	<code>this.\$refs.name</code>	element will be exposed there Note: only accessible after the component is mounted
<pre>emits: ['eventName'], created() { this.\$emit('eventName', '*additional arg') }</pre>	emits events to the parent	<code><childComp/></code> or <code><childComp>slot content</childComp></code>	Render child component
Directives		<code><childComp :childProp="dataProp"/></code>	Parent can pass the prop to the child just like attributes. To pass a dynamic value, we can also use the v-bind syntax
<code>v-text="prop"</code>	Sets the inner text	<code><childComp @eventName=(arg) => parentProp = arg"/></code>	Parent can listen to child-emitted events using v-on
<code>v-bind:attr="prop" or :attr="prop"</code>	Bind an attribute to a dynamic value: reactive updates attribute	In child template: <code><slot/></code> or <code><slot fallback content </slot></code>	Parent can pass down template fragments to the child
<code>v-on:click="fct" or @click="fct"</code>	Listen to DOM events and execute <i>fct</i> from methods()	<code><slot name='name'> </slot></code>	Specify a name to the slot. By default, the name is 'default'
<code>v-model="prop"</code>	2 way data bounding: automatically syncs the form's value to the bound state	In parent: <code><template v-slot:name> content </template></code>	
<code>v-model.lazy="prop"</code>	updates on change event	Built-in components	
<code>v-model.trim="prop"</code>	removes extra whitespace	<code><KeepAlive></code>	Remembers the state of non-active dynamic components
<code>v-model.number="prop"</code>	always return a number	<code><Teleport></code>	Moves an element to another place in the DOM structure
<code>v-if="prop"</code>	Render only if <i>property</i> is truthy	<code><Transition></code>	Animates an element as it is removed from, or added to, our application with v-if or v-show, or with dynamic components.
<code>v-else, v-else-if</code>		<code><TransitionGroup></code>	Animates elements that are added to our page with v-for
<code>v-for="element in array" :key="element.obj"</code>	Render a list of elements based on <i>array</i>		
<code>v-for="(element, index) in array" :key="element.obj"</code>	Note: always use key		
<code>*array can be replaced by a computed property</code>			
<code>v-once</code>	Sets val once; Never update		
<code>v-show</code>	Toggles display CSS value		
<code>v-html="attr"</code>	Sets the inner HTML		



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