Referensi Cepat Vue.js

Template, reaktivitas, komponen, Composition API, router

Sintaks Template

Teks dan Ekspresi

```
<span>{{ message }}</span>
<span>{{ count + 1 }}</span>
<span>{{ ok ? 'Yes' : 'No' }}</span>
<span v-html="rawHtml"></span>
```

Direktif

`{{ expr }}`	Interpolasi teks
`v-bind:attr / :attr`	Ikat atribut ke ekspresi
`v-on:event / @event`	Pasang event listener
`v-model`	Binding dua arah (form)
`v-if / v-else-if / v-else`	Rendering kondisional
`v-show`	Toggle CSS display (tetap di DOM)
`v-for`	Rendering daftar
`v-slot / #name`	Konten slot bernama

Binding Atribut

```
<img :src="imageUrl" :alt="desc" />
<div :class="{ active: isActive }"></div>
<div :style="{ color: textColor }"></div>
<button :disabled="isLoading">Submit</button>
```

Reaktivitas

ref (Primitif)

```
import { ref } from 'vue'

const count = ref(0)
console.log(count.value)  // 0
count.value++             // pembaruan reaktif
```

reactive (Objek)

```
import { reactive } from 'vue'

const state = reactive({ count: 0, name: 'Vue' })
state.count++  // tidak perlu .value
```

ref vs reactive

`ref()`	Semua tipe; akses via **`.value`** di script
`reactive()`	Hanya objek/array; akses properti langsung
`Template`	Keduanya auto-unwrap (tidak perlu **`.value`**)
`Destructure`	**`reactive`** kehilangan reaktivitas; gunakan **`toRefs()`**

Computed dan Watcher

Properti Computed

```
import { ref, computed } from 'vue'

const items = ref([1, 2, 3, 4, 5])
const evenItems = computed(() =>
  items.value.filter(n => n % 2 === 0)
)
```

Nilai computed di-cache dan hanya dievaluasi ulang saat dependensi berubah

Watcher

```
import { ref, watch, watchEffect } from 'vue'

const query = ref('')

// Pantau sumber tertentu
watch(query, (newVal, oldVal) => {
  console.log(`Changed: ${oldVal} → ${newVal}`)
})

// Lacak dependensi secara otomatis
watchEffect(() => {
  console.log(`Query is: ${query.value}`)
})
```

Opsi Watch

`immediate: true`	Jalankan callback segera saat dibuat
`deep: true`	Pantau mendalam objek bersarang
`flush: 'post'`	Jalankan setelah pembaruan DOM
`once: true`	Dipicu sekali lalu berhenti

Komponen

Single-File Component (SFC)

```
<script setup>
import { ref } from 'vue'
const count = ref(0)
</script>

<template>
  <button @click="count++">{{ count }}</button>
</template>

<style scoped>
button { font-size: 1.2em; }
</style>
```

Mendaftarkan Komponen

```
<!-- Auto-import dengan <script setup> -->
<script setup>
import MyButton from './MyButton.vue'
</script>

<template>
  <MyButton label="Click me" />
</template>
```

Blok SFC

`<script setup>`	Composition API (disarankan)
`<template>`	Template HTML
`<style scoped>`	CSS berskope ke komponen
`<style module>`	CSS Modules (objek $style)

Props dan Event

Mendefinisikan Props

```
<script setup>
const props = defineProps({
  title: String,
  count: { type: Number, default: 0 },
  items: { type: Array, required: true }
})
</script>
```

Emit Event

```
<script setup>
const emit = defineEmits(['update', 'delete'])

function handleClick() {
  emit('update', { id: 1, value: 'new' })
}
</script>
```

Penggunaan di Komponen Induk

```
<ChildComponent
  :title="pageTitle"
  :count="total"
  @update="handleUpdate"
  @delete="handleDelete"
/>
```

v-model pada Komponen

```
<!-- Induk -->
<CustomInput v-model="search" />

<!-- CustomInput.vue -->
<script setup>
const model = defineModel()
</script>
<template>
  <input :value="model" @input="model = $event.target.value" />
</template>
```

Slot

Slot Default

```
<!-- Card.vue -->
<template>
  <div class="card">
    <slot>Konten fallback</slot>
  </div>
</template>

<!-- Penggunaan -->
<Card><p>Konten kustom di sini</p></Card>
```

Slot Bernama

```
<!-- Layout.vue -->
<template>
  <header><slot name="header" /></header>
  <main><slot /></main>
  <footer><slot name="footer" /></footer>
</template>

<!-- Penggunaan -->
<Layout>
  <template #header><h1>Judul</h1></template>
  <p>Konten utama</p>
  <template #footer><span>Footer</span></template>
</Layout>
```

Scoped Slot

```
<!-- List.vue -->
<ul>
  <li v-for="item in items" :key="item.id">
    <slot :item="item" />
  </li>
</ul>

<!-- Penggunaan -->
<List :items="todos">
  <template #default="{ item }">
    <span>{{ item.text }}</span>
  </template>
</List>
```

Referensi Cepat Vue.js

Composition API

Fungsi Composable

```
// useMouse.js
import { ref, onMounted, onUnmounted } from 'vue'

export function useMouse() {
  const x = ref(0)
  const y = ref(0)
  function update(e) {
    x.value = e.pageX
    y.value = e.pageY
  }
  onMounted(() => window.addEventListener('mousemove', update))
  onUnmounted(() => window.removeEventListener('mousemove', update))
  return { x, y }
}
```

Menggunakan Composable

```
<script setup>
import { useMouse } from './useMouse'

const { x, y } = useMouse()
</script>
<template>
  <p>Mouse: {{ x }}, {{ y }}</p>
</template>
```

provide / inject

```
// Induk
import { provide, ref } from 'vue'
const theme = ref('dark')
provide('theme', theme)

// Keturunan (kedalaman berapa pun)
import { inject } from 'vue'
const theme = inject('theme', 'light') // default
```

Router (Vue Router)

Definisi Route

```
import { createRouter, createWebHistory } from 'vue-router'

const router = createRouter({
  history: createWebHistory(),
  routes: [
    { path: '/', component: Home },
    { path: '/about', component: About },
    { path: '/user/:id', component: User },
  ]
})
```

Navigasi di Template

```
<router-link to="/">Home</router-link>
<router-link :to="{ name: 'user', params: { id: 1 } }">
  User 1
</router-link>
<router-view />
```

Navigasi Programatik

```
import { useRouter, useRoute } from 'vue-router'

const router = useRouter()
const route = useRoute()

router.push('/about')
router.push({ name: 'user', params: { id: 1 } })
console.log(route.params.id)
```

Fitur Route

`/user/:id`	Segmen dinamis (**`route.params.id`**)
`name: 'user'`	Route bernama untuk navigasi programatik
`children: [...]`	Route bersarang
`beforeEnter`	Navigation guard per route
`meta: { auth: true }`	Metadata kustom untuk guard
`redirect: '/new-path'`	Redirect route

Lifecycle Hook

Urutan Hook

`onBeforeMount`	Sebelum render DOM awal
`onMounted`	DOM siap (ambil data, tambah listener)
`onBeforeUpdate`	Sebelum state reaktif me-render ulang DOM
`onUpdated`	Setelah re-render DOM
`onBeforeUnmount`	Sebelum komponen dihancurkan
`onUnmounted`	Pembersihan (hapus listener, timer)

Penggunaan

```
<script setup>
import { onMounted, onUnmounted } from 'vue'

onMounted(() => {
  console.log('Komponen ter-mount')
})

onUnmounted(() => {
  console.log('Pembersihan di sini')
})
</script>
```

Daftar dan Kondisional

v-for

```
<li v-for="item in items" :key="item.id">
  {{ item.name }}
</li>
<li v-for="(item, index) in items" :key="item.id">
  {{ index }}: {{ item.name }}
</li>
<div v-for="(val, key) in obj" :key="key">
  {{ key }}: {{ val }}
</div>
```

Selalu gunakan :key dengan v-for untuk pembaruan DOM yang efisien

v-if vs v-show

`v-if`	Render kondisional (tambah/hapus dari DOM)
`v-else-if`	Rantai else-if
`v-else`	Cabang fallback
`v-show`	Toggle **`display: none`** (tetap di DOM)

Gunakan v-show untuk toggle sering, v-if untuk perubahan jarang

Contoh Kondisional

```
<div v-if="status === 'loading'">Memuat...</div>
<div v-else-if="status === 'error'">Error!</div>
<div v-else>{{ data }}</div>
```

Penanganan Form

Dasar v-model

```
<input v-model="text" />
<textarea v-model="message"></textarea>
<input type="checkbox" v-model="checked" />
<select v-model="selected">
  <option value="a">A</option>
  <option value="b">B</option>
</select>
```

Modifier v-model

`v-model.lazy`	Sinkron pada **`change`** bukan **`input`**
`v-model.number`	Auto-typecast ke angka
`v-model.trim`	Auto-trim spasi

Modifier Event

`@click.prevent`	Panggil **`preventDefault()`**
`@click.stop`	Panggil **`stopPropagation()`**
`@click.once`	Dipicu paling banyak sekali
`@keyup.enter`	Hanya pada tombol Enter
`@submit.prevent`	Cegah pengiriman form default