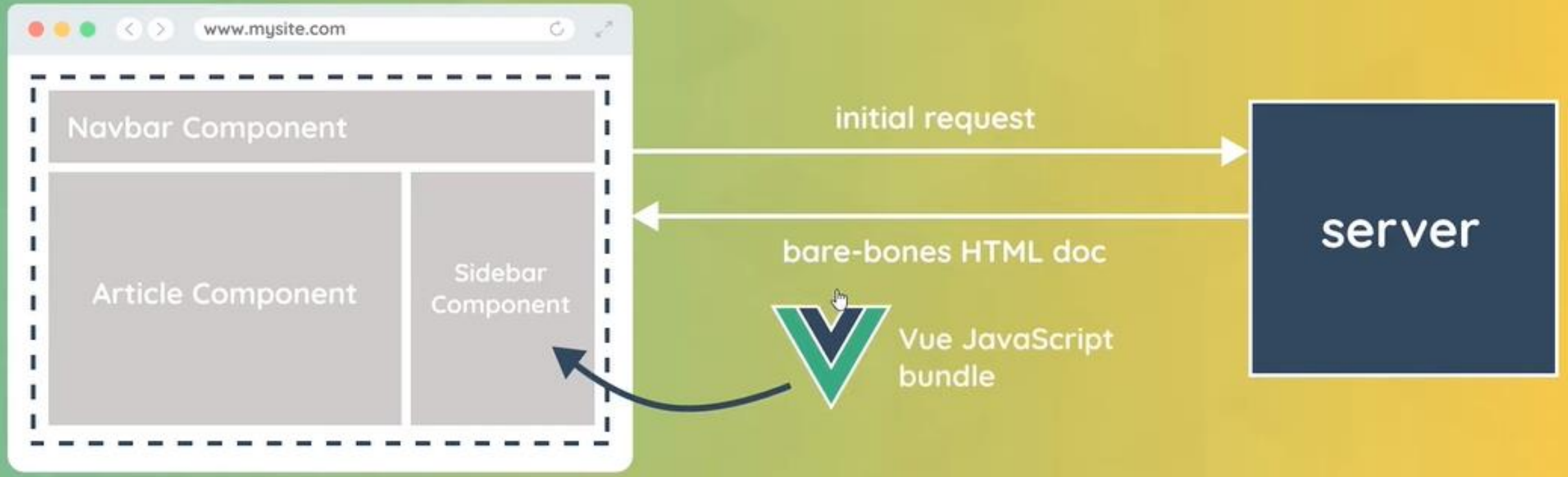
The Vue CLI

In this Vue 3 tutorial we'll use the Vue CLI to boilerplate a larger Vue project for us, which will ultimately contain multiple components & pages. We'll talk about vue files, templates & template refs too.

Also we'll dive deeper into making larger Vue.js projects with the Vue CLI - including how to pass data (props) between components, how to emit custom events, how to work with slots & how to use Teleport - a brand new Vue 3 feature.

Vue Websites

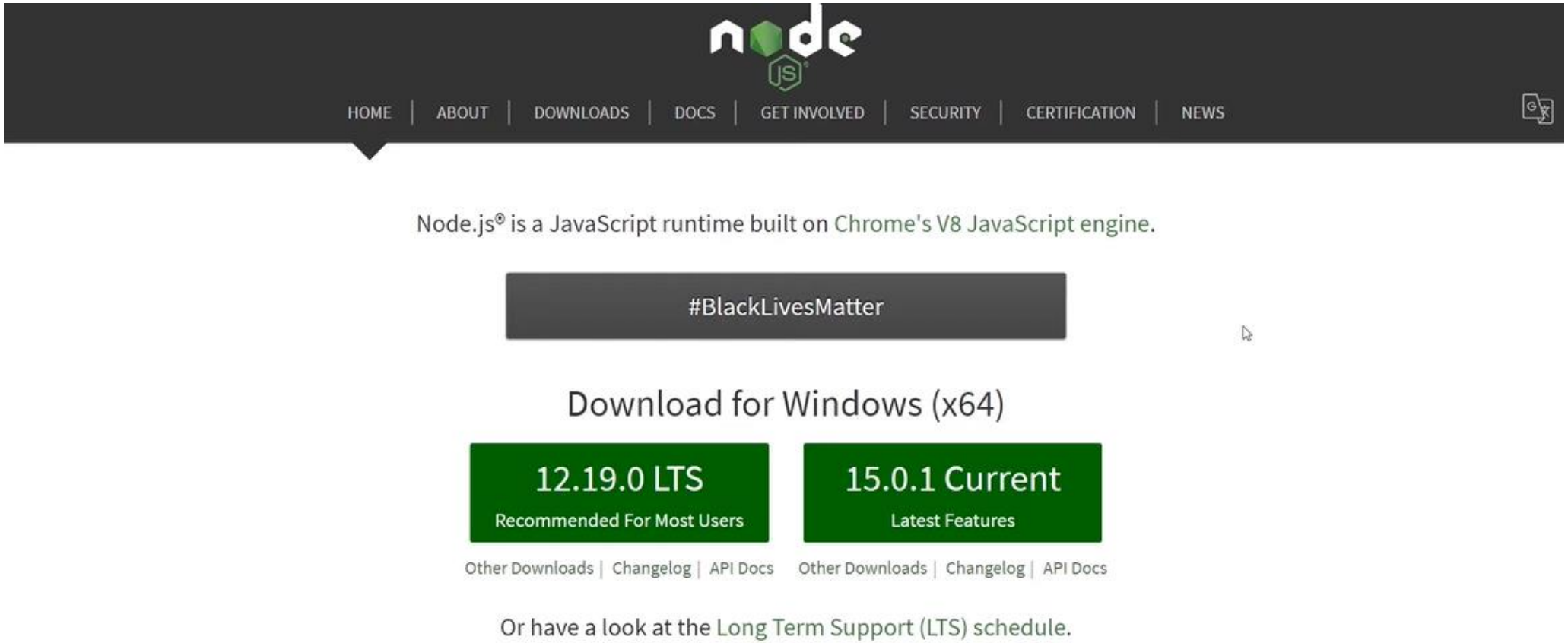


Vue Websites

- Use modern JavaScript features
- Provides us with a live-reload dev server
- Optimize our code for production

Using the Vue CLI

Install NodeJS

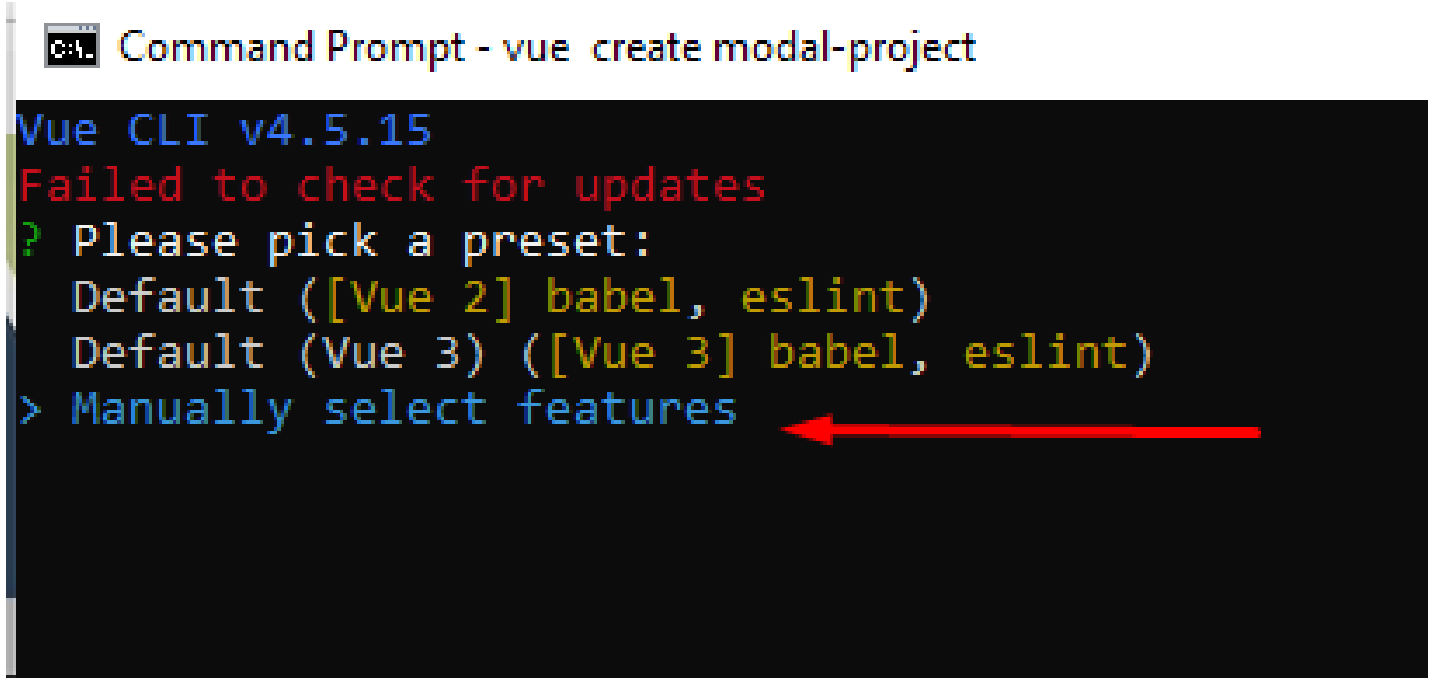


Open cmd and write next commands:

- node –v
- npm install -g @vue/cli
- cd Documents
- cd TutsVue
- vue create modal-project

Choose row 'Mannually select features'

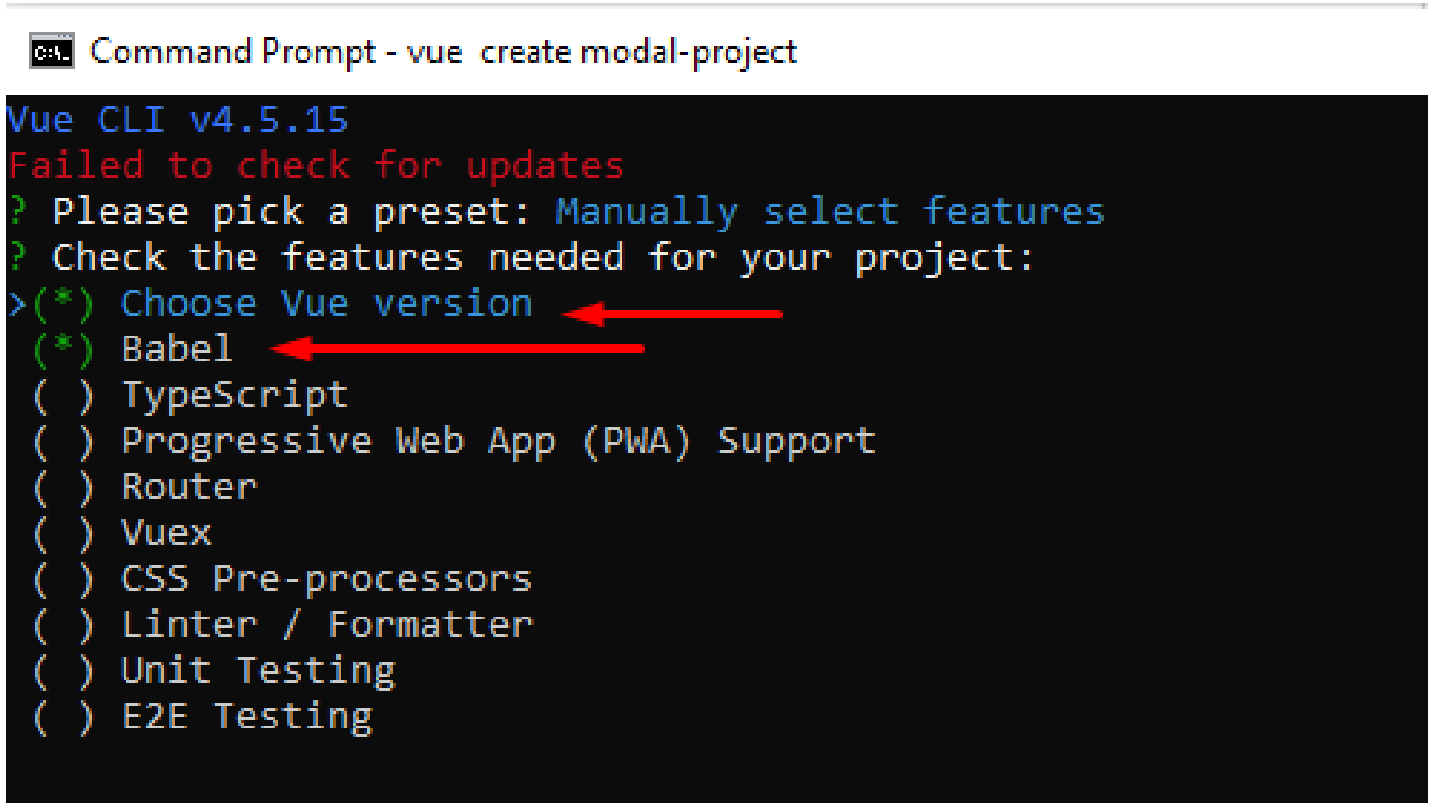
and click 'Enter'



Select

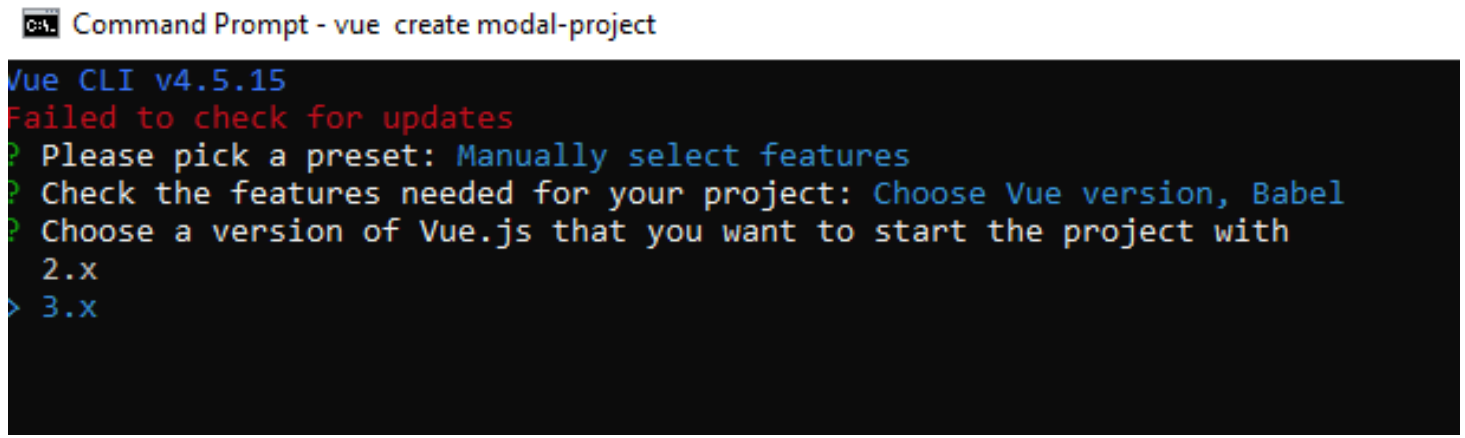
- Choose Vue version
- Babel

Click 'Enter'



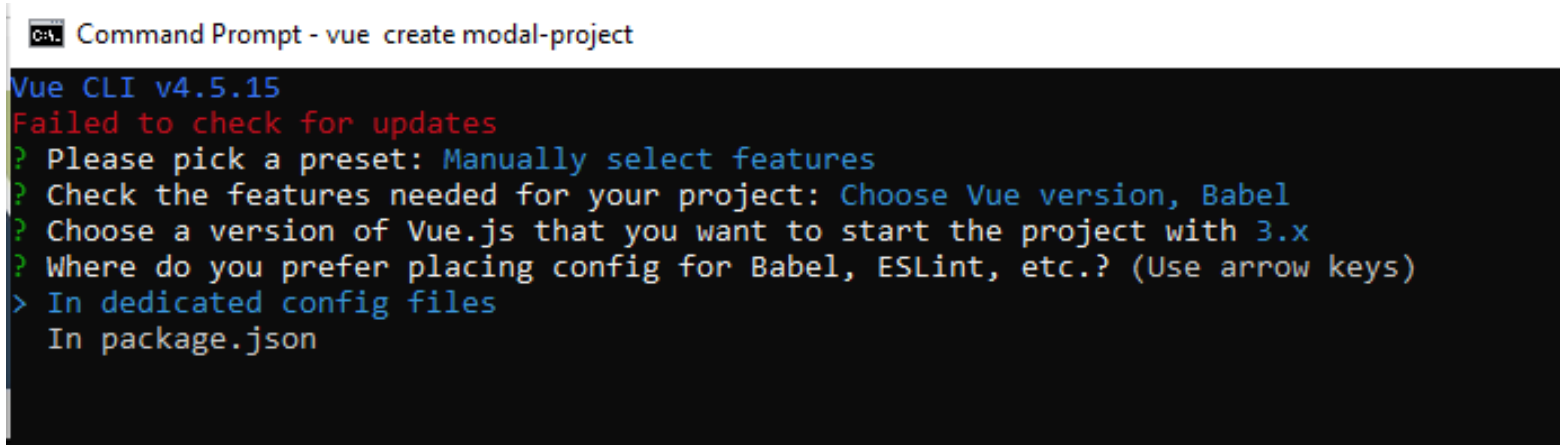
Select 3.x

Click 'Enter'



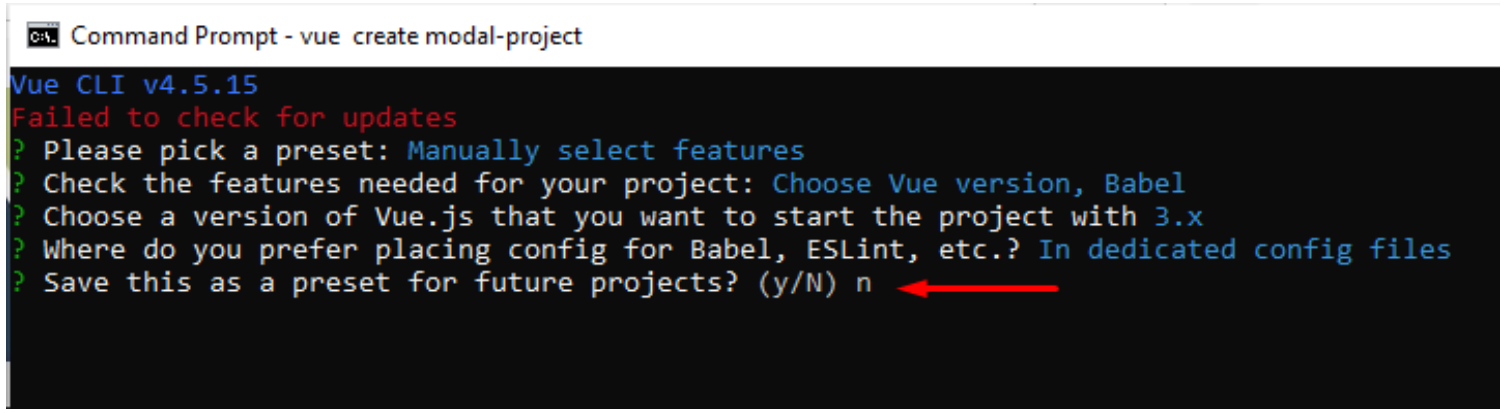
Select row
'In dedicated config files'

Click 'Enter'



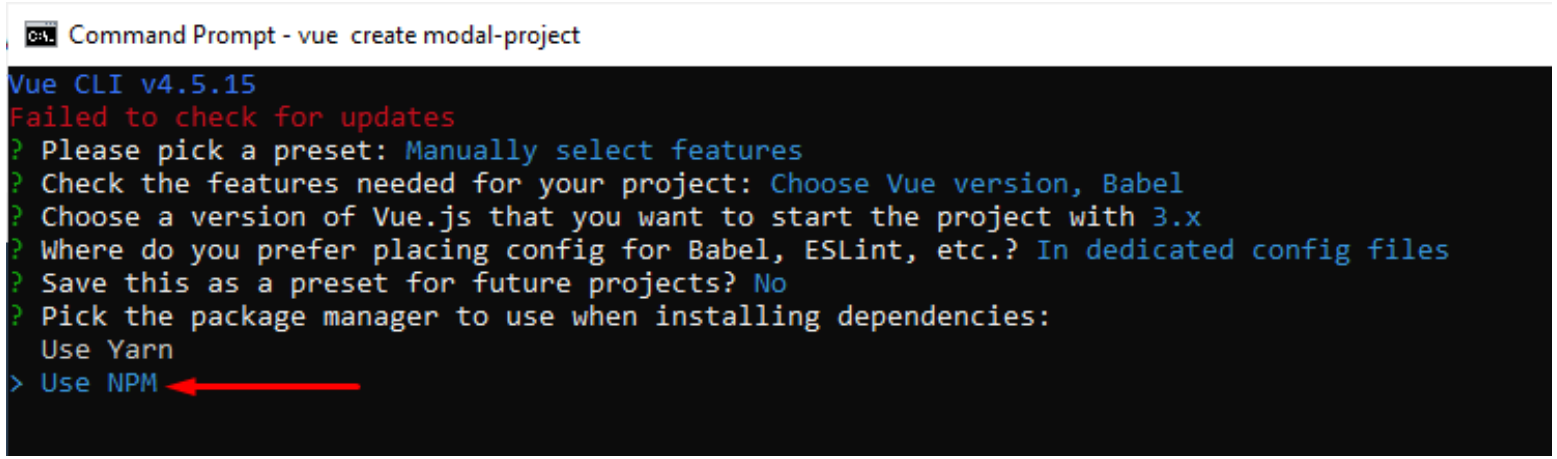
Write 'n'

Click 'Enter'



Select row
'Use NPM'

Click 'Enter'

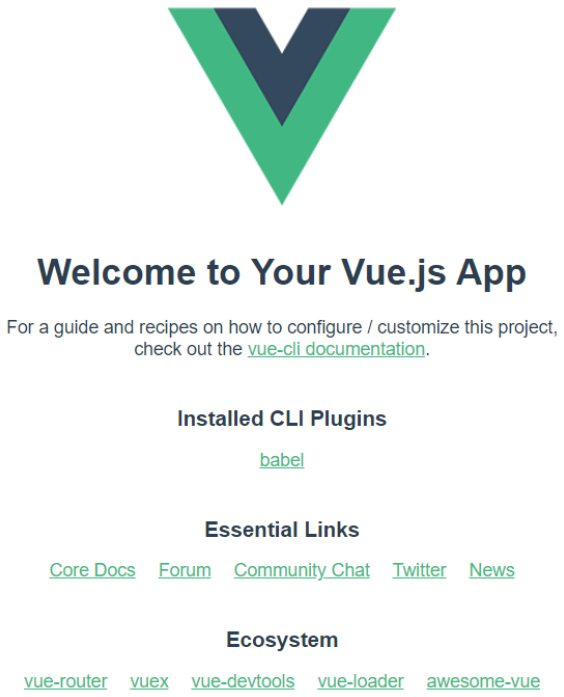


write next commands in cmd:

- cd modal-project
- code .

write in the Terminal and go to http://localhost:8081/

- npm run serve



Vue Files & Templates

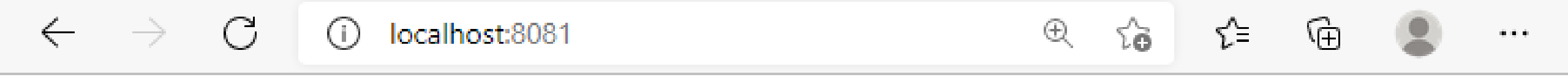
Edit file App.vue

App.vue

```vue
<template>
  <!-- <h1>My First Vue App!</h1> -->
  <h1>{{ title }}</h1>
</template>

<script>
import HelloWorld from './components/HelloWorld.vue'

export default {
  name: 'App',
  data() {
    return {
      title: 'My First Vue App!'
    }
  }
}
</script>

<style>
#app {
  font-family: Avenir, Helvetica, Arial, sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
  text-align: center;
  color: #2c3e50;
  margin-top: 60px;
}

h1 {
  border-bottom: 1px solid #ddd;
  display: inline-block;
  padding-bottom: 10px;
}

</style>
```

Change code

Add code



My First Vue App!

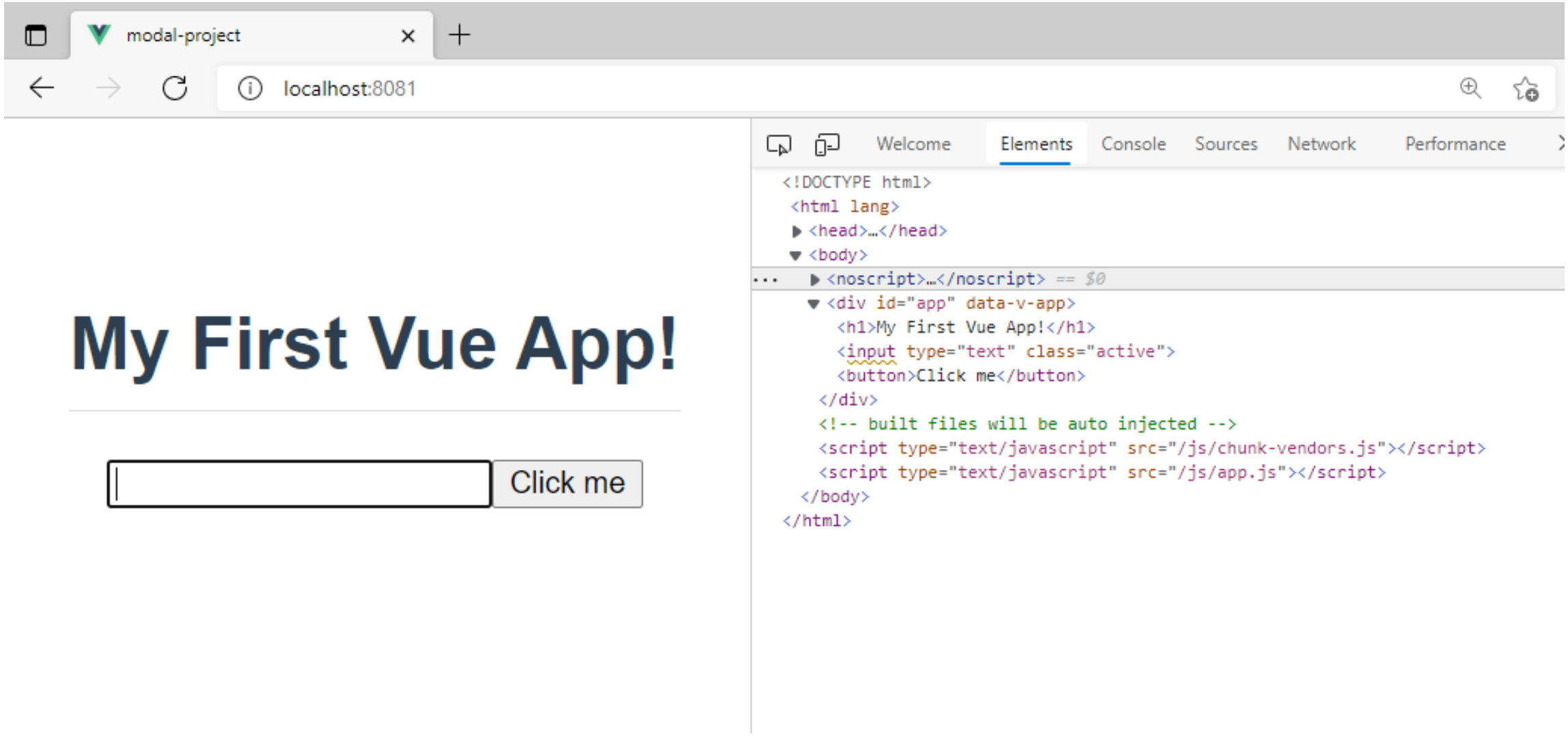
Template Refs

Edit file App.vue

App.vue

```
<template>
  <h1>{{ title }}</h1>

  <input type="text" ref="name">
  <button @click="handleClick">Click me</button>

</template>

<script>
import HelloWorld from './components/HelloWorld.vue'

export default {
  name: 'App',
  data() {
    return {
      title: 'My First Vue App!'
    }
  },

  methods: {
    handleClick(){
      console.log(this.$refs.name)
      this.$refs.name.classList.add('active')
      this.$refs.name.focus()
    }
  }

}
</script>

<style>
...
</style>
```

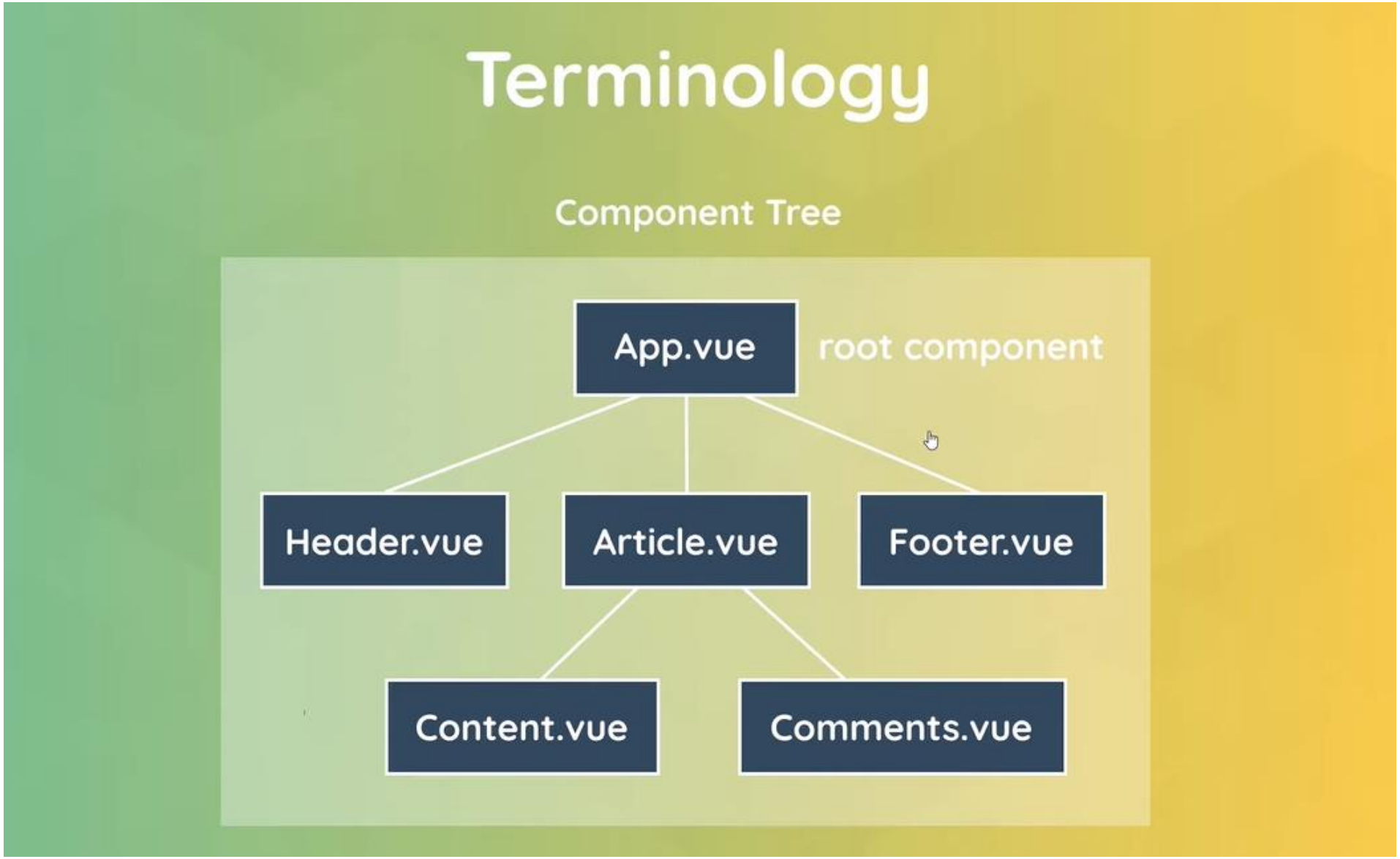
Add code


modal-project
localhost:8081
My First Vue App!
Click me
Welcome
Elements
Console
Sources
Network
Performance
<!DOCTYPE html>
<html lang>
<head>…</head>
<body>
<noscript>…</noscript> == $0
<div id="app" data-v-app>
<h1>My First Vue App!</h1>
<input type="text" class="active">
<button>Click me</button>

<!-- built files will be auto injected -->
<script type="text/javascript" src="/js/chunk-vendors.js"></script>
<script type="text/javascript" src="/js/app.js"></script>
</body>
</html>

Multiple Components

Terminology



Remove file **HelloWorld.vue** from folder **components**
Create file **Modal.vue** in the folder **components**

Modal.vue

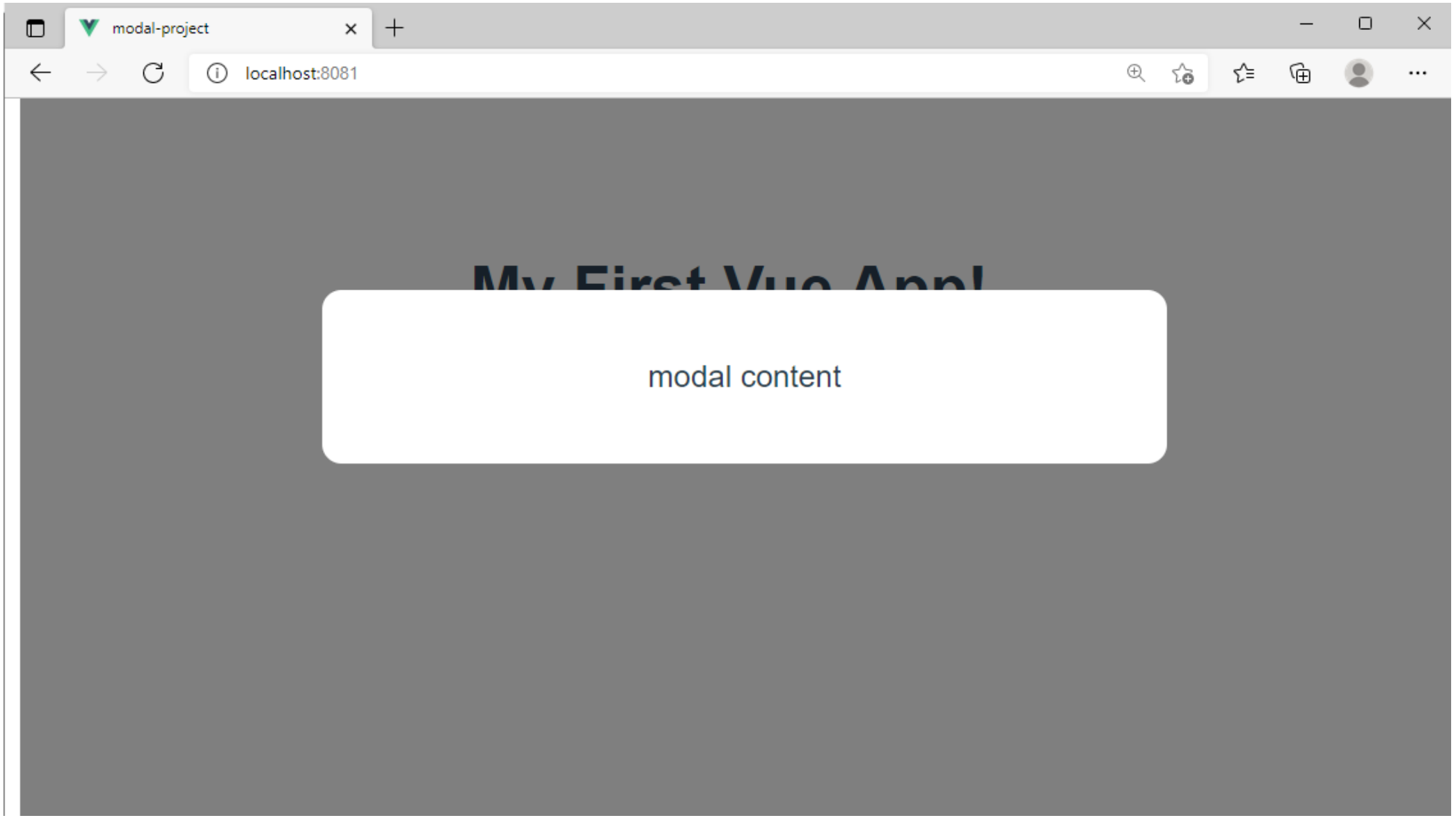
```
<template>
  <div class="backdrop">
    <div class="modal">
      <p>modal content</p>
    </div>
  </div>
</template>

<style>
  .modal {
    width: 400px;
    padding: 20px;
    margin: 100px auto;
    background: white;
    border-radius: 10px;
  }
  .backdrop {
    top: 0;
    position: fixed;
    background: rgba(0,0,0,0.5);
    width: 100%;
    height: 100%;
  }
</style>
```

Modify file App.vue

App.vue

```
<template>
  <h1>{{ title }}</h1>

  <Modal />

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',

  components: { Modal },

  data() {
    return {
      title: 'My First Vue App!'
    }
  }
}
</script>

<style>
...
</style>
```

Add code


modal-project
localhost:8081
My First Vue App!
modal content

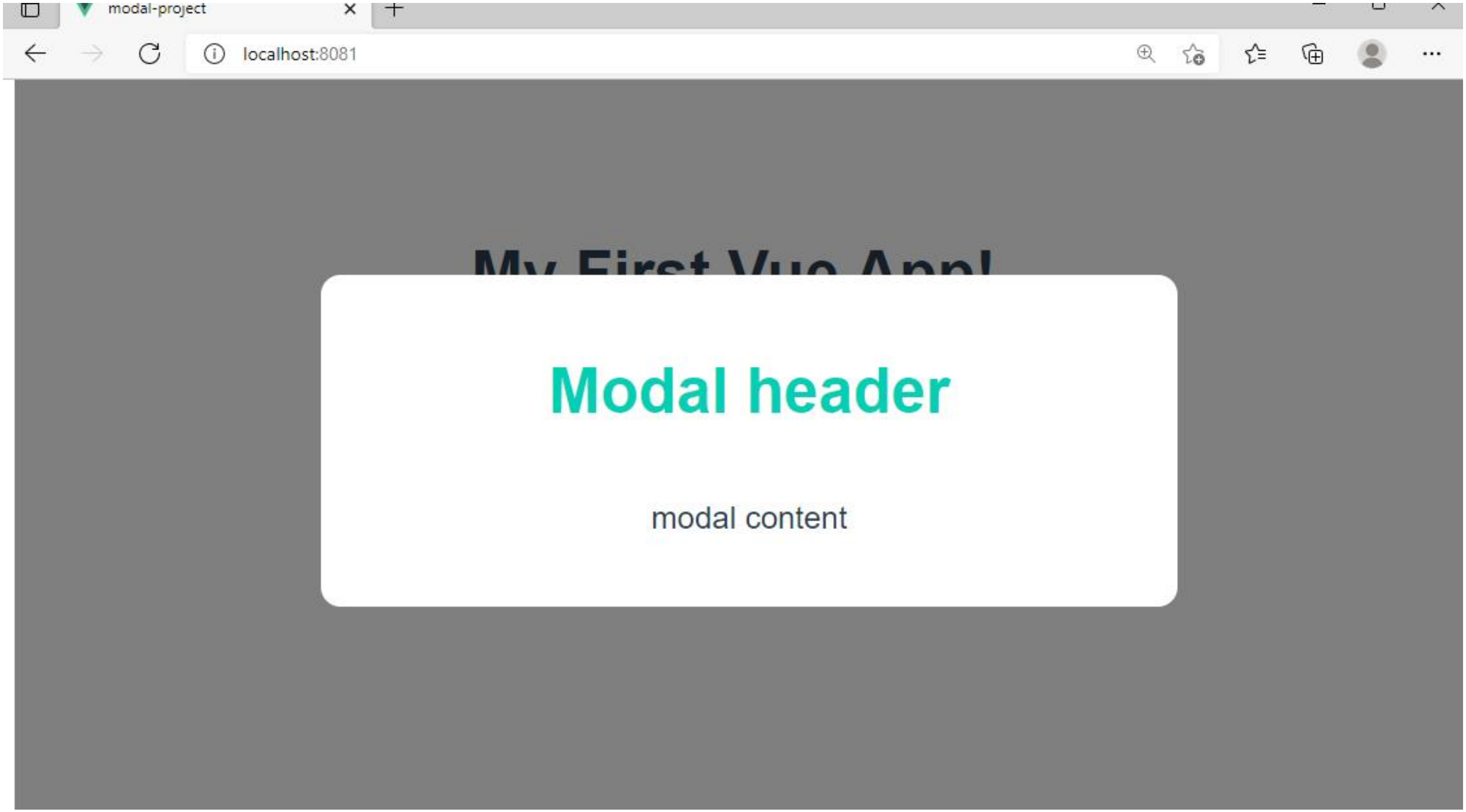
Scoped & global CSS

Modify file **Modal.vue** in the folder **components**

Modal.vue

```
<template>
  <div class="backdrop">
    <div class="modal">
      <h1>Modal header</h1>
      <p>modal content</p>
    </div>
  </div>
</template>

<style>
  .modal {
    width: 400px;
    padding: 20px;
    margin: 100px auto;
    background: white;
    border-radius: 10px;
  }
  .backdrop {
    top: 0;
    position: fixed;
    background: rgba(0,0,0,0.5);
    width: 100%;
    height: 100%;
  }

  .modal h1 {
    color: #03cfb4;
    border: none;
    padding: 0;
  }

</style>
```

Add code


modal-project
localhost:8081
My First Vue App!
Modal header
modal content

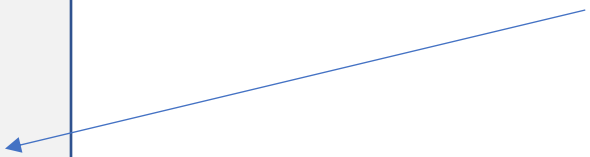
Create file **global.css** in the folder **assets**

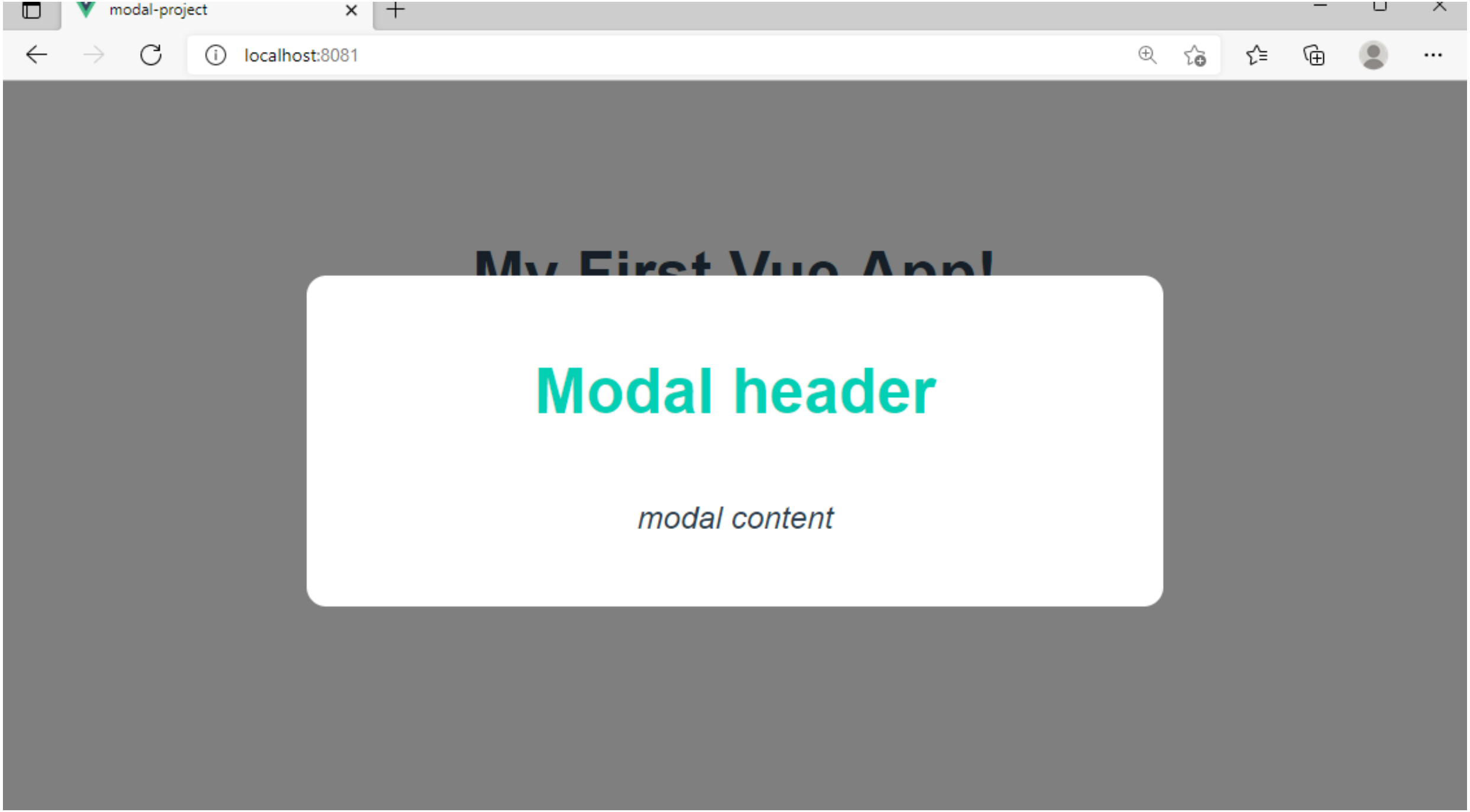
```
body {
    margin: 0;
  }
  p {
    font-style: italic;
  }
```

Modify file **main.js** in the folder **assets**

```
import { createApp } from 'vue'
import App from './App.vue'

// global styles
import './assets/global.css'

createApp(App).mount('#app')
```

Add code



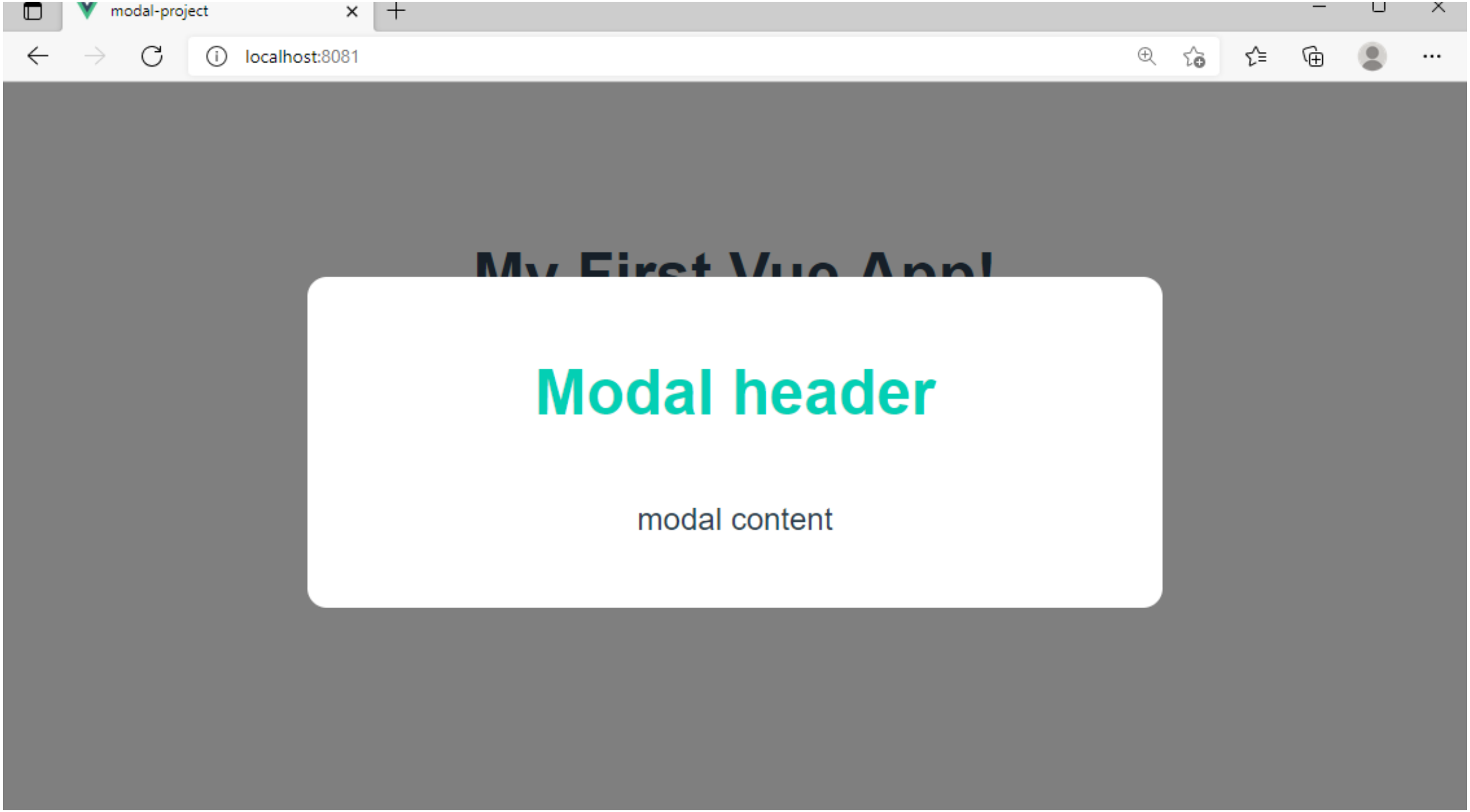

modal-project
localhost:8081
My First Vue App!
Modal header
modal content

Modify file **Modal.vue** in the folder **components**

Modal.vue

```
<template>
  <div class="backdrop">
    <div class="modal">
        <h1>Modal header</h1>
        <p>modal content</p>
    </div>
  </div>
</template>

<style>
  .modal {
    width: 400px;
    padding: 20px;
    margin: 100px auto;
    background: white;
    border-radius: 10px;
  }
  .backdrop {
    top: 0;
    position: fixed;
    background: rgba(0,0,0,0.5);
    width: 100%;
    height: 100%;
  }
  .modal h1 {
    color: #03cfb4;
    border: none;
    padding: 0;
  }

  .modal p {
    font-style: normal;
  }

</style>
```

Add code


modal-project
localhost:8081
My First Vue App!
Modal header
modal content

Props

Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>

  <p>Welcome...</p>
  <!-- <Modal heading="Sign up for the Giveaway!" text="Grab your ninja swag for half price!" /> -->
  <Modal :heading="heading" :text="text" theme="sale" />

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',

  components: { Modal },

  data() {
    return {
      title: 'My First Vue App!',

      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!'

    }
  }
}
</script>

<style>...</style>
```

Add code

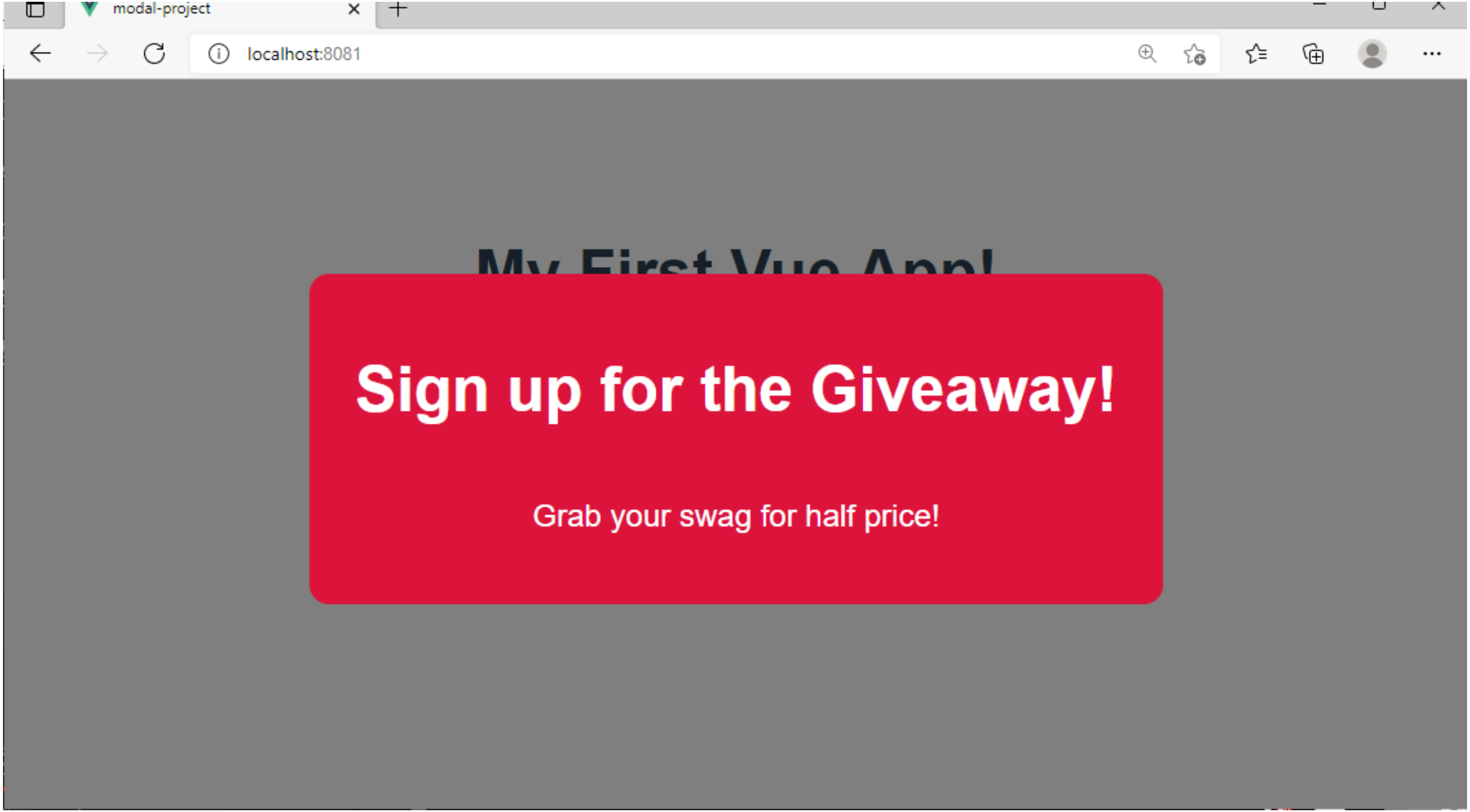
Modify file **Modal.vue**

Modal.vue

```
<template>
  <div class="backdrop">

    <div class="modal" :class="{ sale: theme === 'sale' }">
      <h1>{{ heading }}</h1>
      <p>{{ text }}</p>
    </div>

  </div>
</template>

<script>
export default {
  props: ['heading', 'text', 'theme']
}
</script>

<style>
  .modal {...}
  .backdrop {...}
  .modal h1 {...}
  .modal p {...}

/* sale styles */
  .modal.sale {
    background: crimson;
    color: white;
  }
  .modal.sale h1 {
    color: white;
  }

</style>
```

Modify code

Add code


modal-project
localhost:8081
My First Vue App!
Sign up for the Giveaway!
Grab your swag for half price!

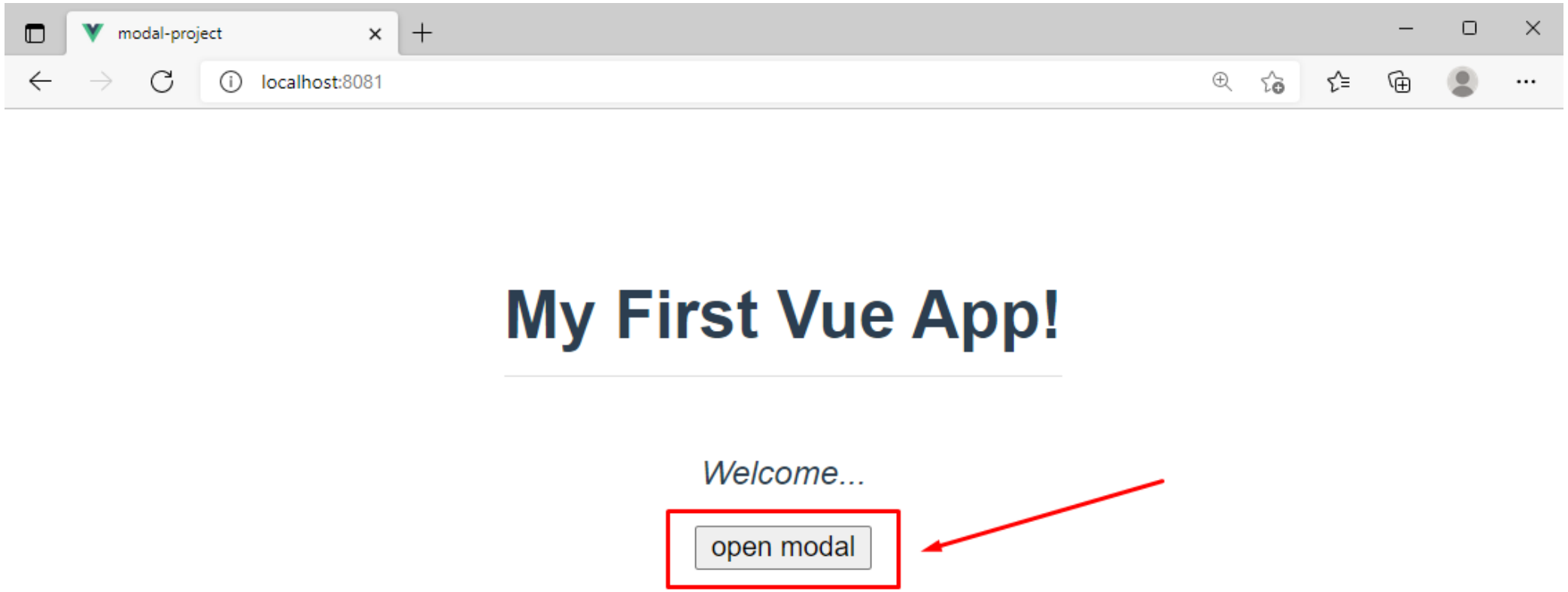
Emitting Custom Events

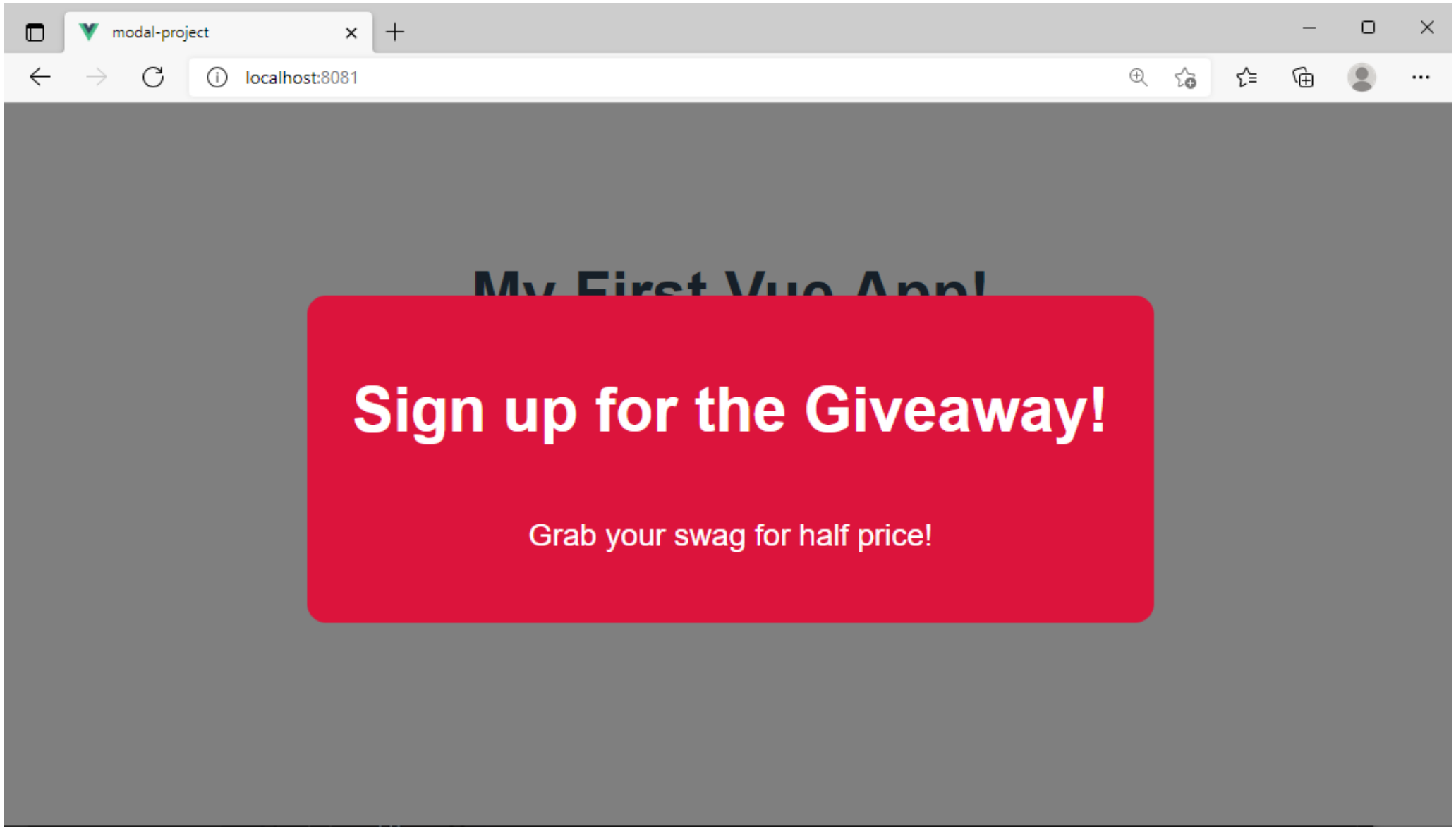
Modify file **App.vue**

App.vue

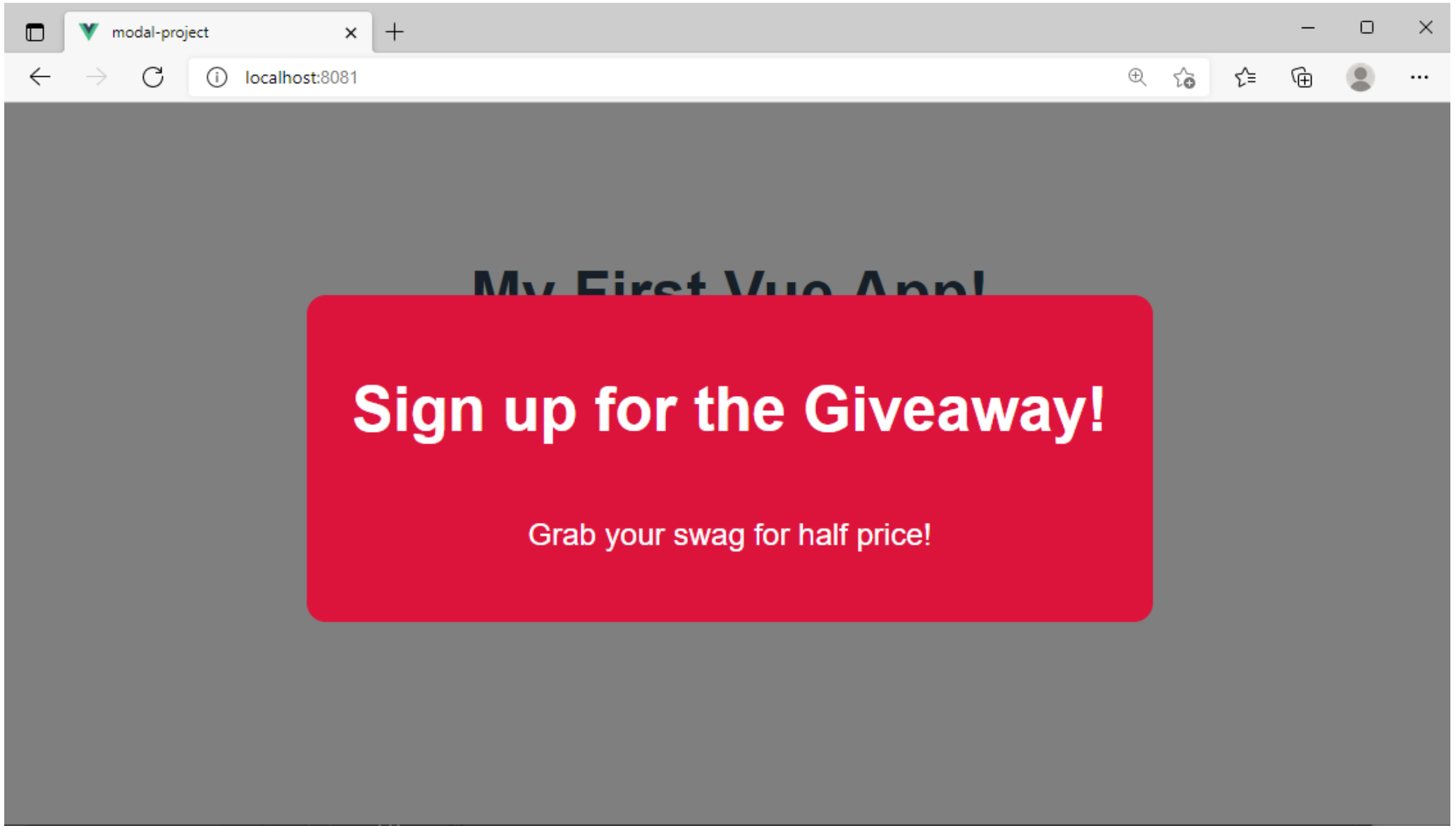
```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>

  <div v-if="showModal">
    <Modal :heading="heading" :text="text" theme="sale" @close="toggleModal" />
  </div>
  <button @click="toggleModal">open modal</button>

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!',

      showModal: false,

    }
  },

  methods: {
  toggleModal() {
    this.showModal = !this.showModal
  }
}
}
</script>

<style>...</style>
```

Add code


modal-project
localhost:8081
My First Vue App!
Welcome...
open modal


modal-project
localhost:8081
My First Vue App!
Sign up for the Giveaway!
Grab your swag for half price!

Click on the window



Modify file **App.vue**

App.vue

```
<template>
  <div class="backdrop" @click="closeModal">
    <div class="modal" :class="{ sale: theme === 'sale' }">
      <h1>{{ heading }}</h1>
      <p>{{ text }}</p>
    </div>
  </div>
</template>

<script>
export default {
  props: ['heading', 'text', 'theme'],

  methods: {
    closeModal() {
      this.$emit('close')
    }
  }

}
</script>

<style>...</style>
```

Add code

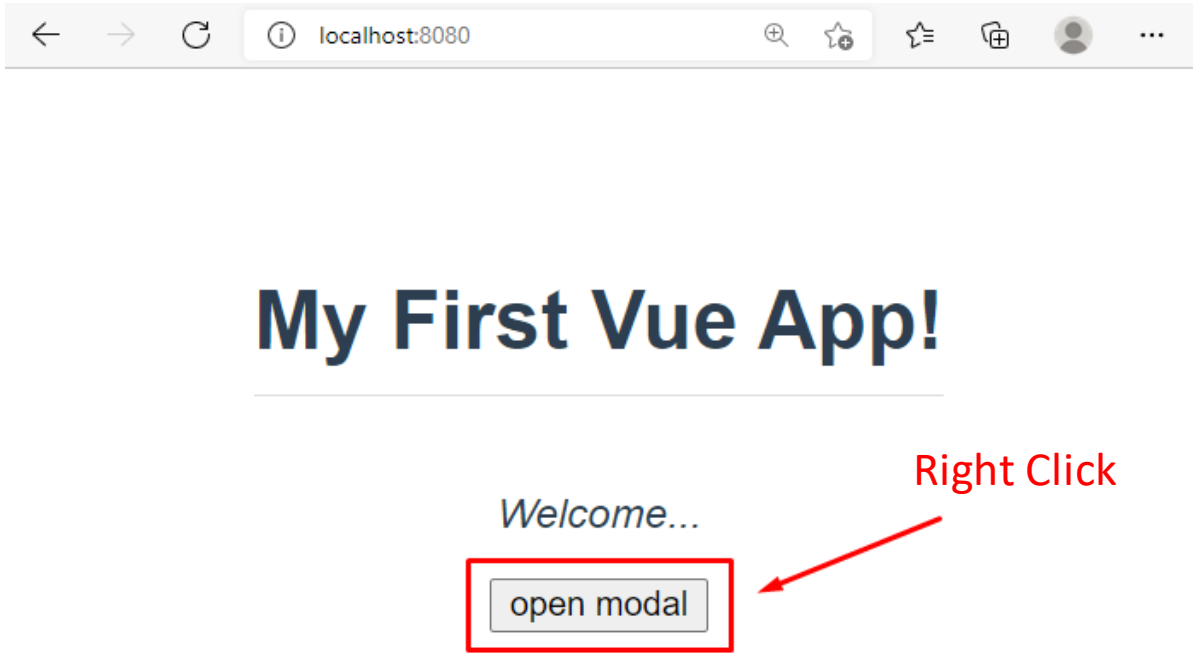
Click Event Modifiers

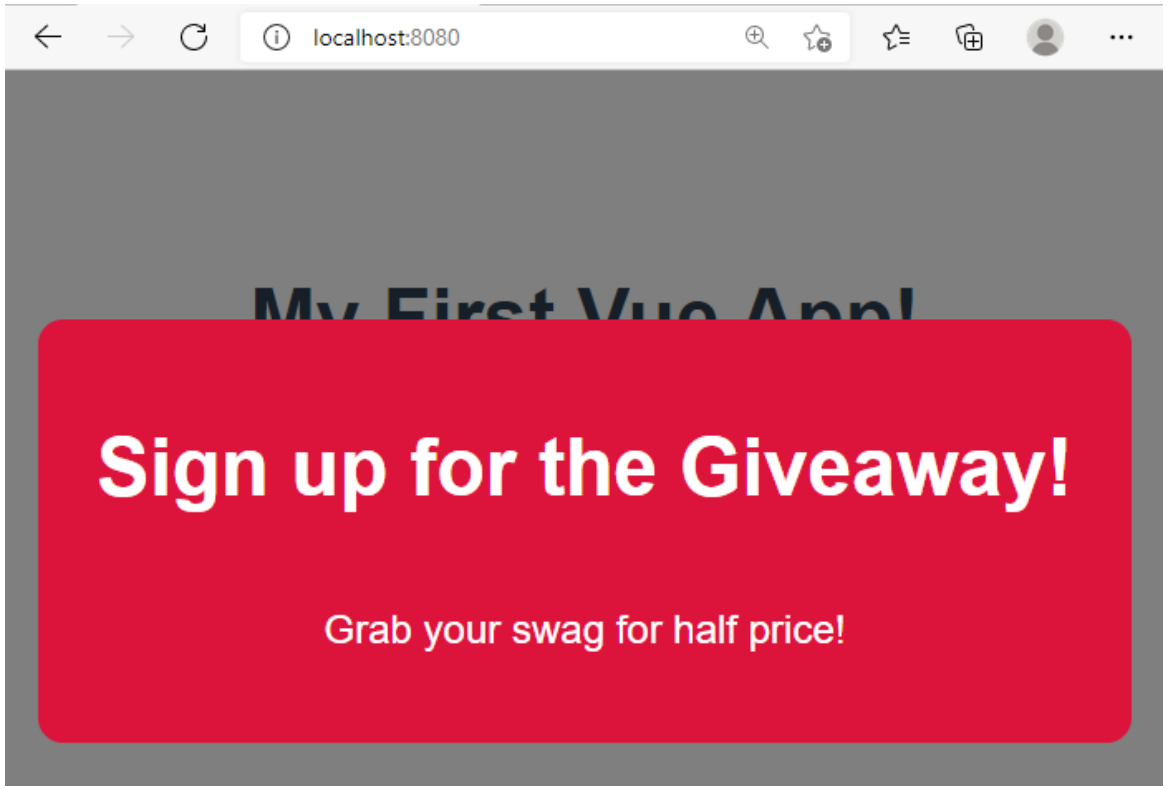
Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">
    <Modal :heading="heading" :text="text" theme="sale" @close="toggleModal" />
  </div>

  <button @click.right = "toggleModal">open modal</button>

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!',
      showModal: false,
    }
  },

    methods: {
    toggleModal() {
      this.showModal = !this.showModal
    }
  }

}
</script>

<style>
...
</style>
```

Add code


localhost:8080
My First Vue App!
Welcome...
open modal
Right Click


localhost:8080
Sign up for the Giveaway!
Grab your swag for half price!

Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">
    <Modal :heading="heading" :text="text" theme="sale" @close="toggleModal" />
  </div>

  <button @click.alt = "toggleModal">open modal</button>

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!',
      showModal: false,
    }
  },

    methods: {
    toggleModal() {
      this.showModal = !this.showModal
    }
  }

}
</script>

<style>
...
</style>
```

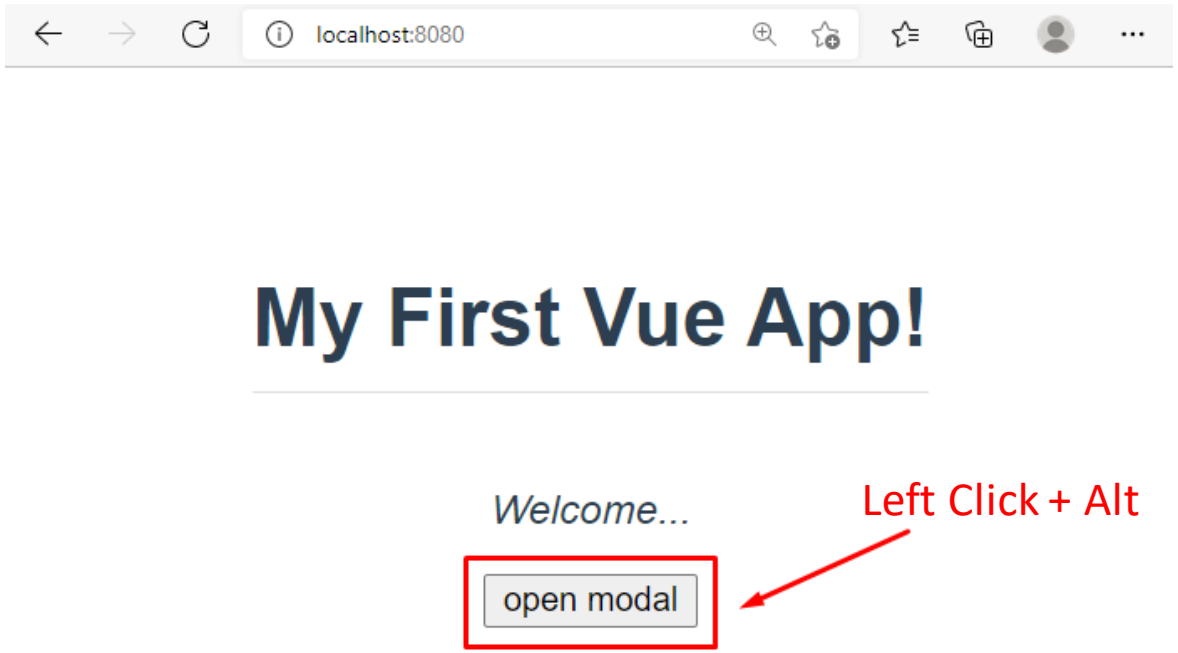
Modify code

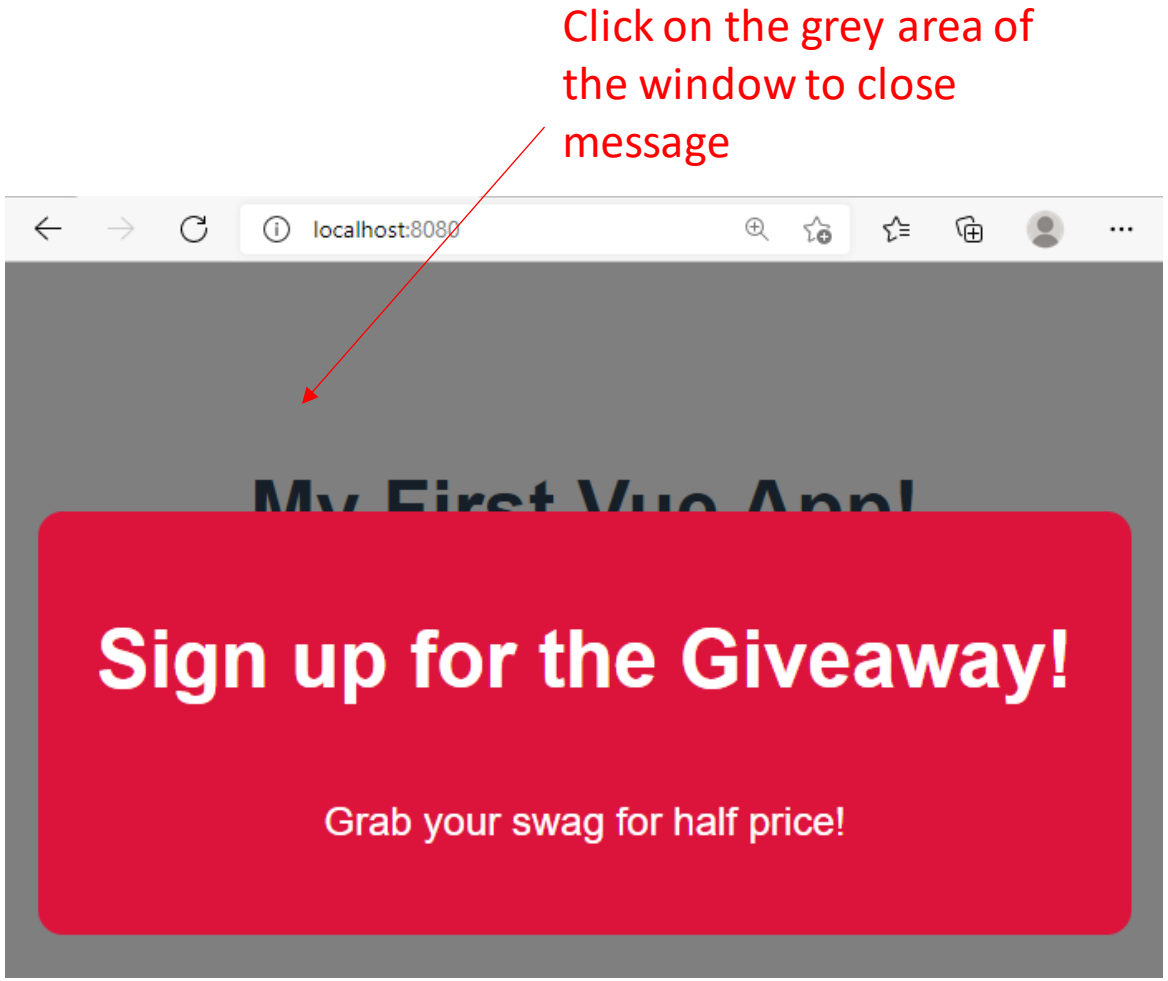
Modify file **Modal.vue**

Modal.vue

```
<template>

  <div class="backdrop" @click.self ="closeModal">

    <div class="modal" :class="{ sale: theme === 'sale' }">
      <h1>{{ heading }}</h1>
      <p>{{ text }}</p>
    </div>
  </div>
</template>

<script>
export default {
  props: ['heading', 'text', 'theme'],

    methods: {
    closeModal() {
      this.$emit('close')
    }
  }
}
</script>

<style>...</style>
```

Add code


localhost:8080
My First Vue App!
Welcome...
open modal
Left Click + Alt

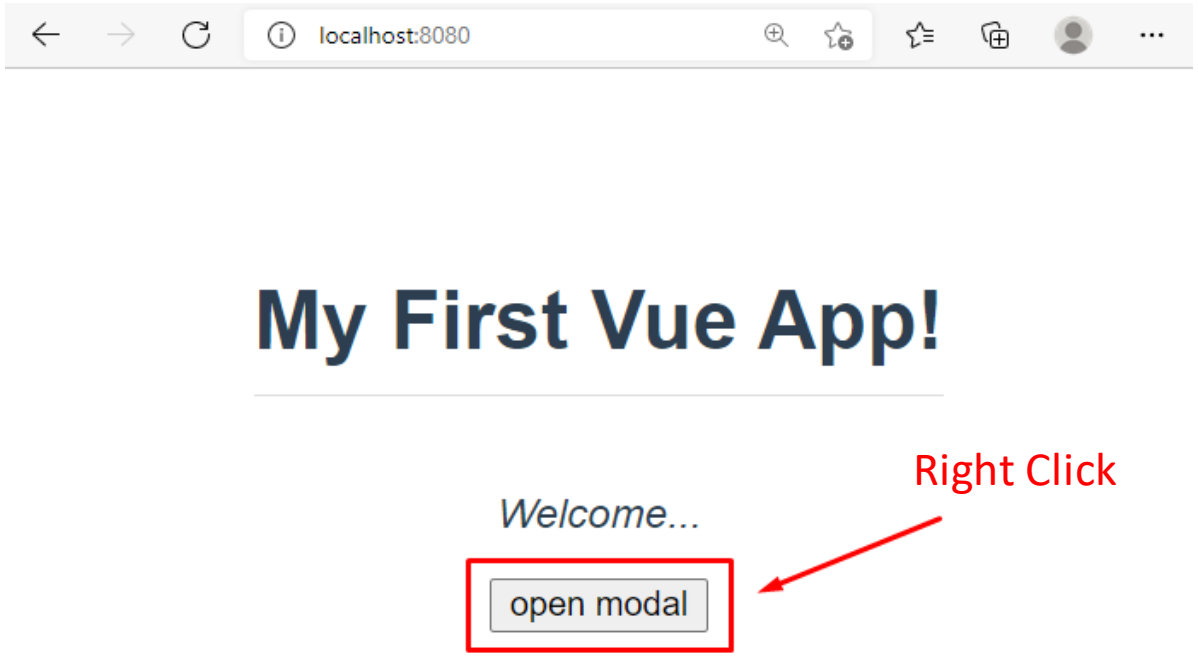

Click on the grey area of the window to close message
localhost:8080
Sign up for the Giveaway!
Grab your swag for half price!

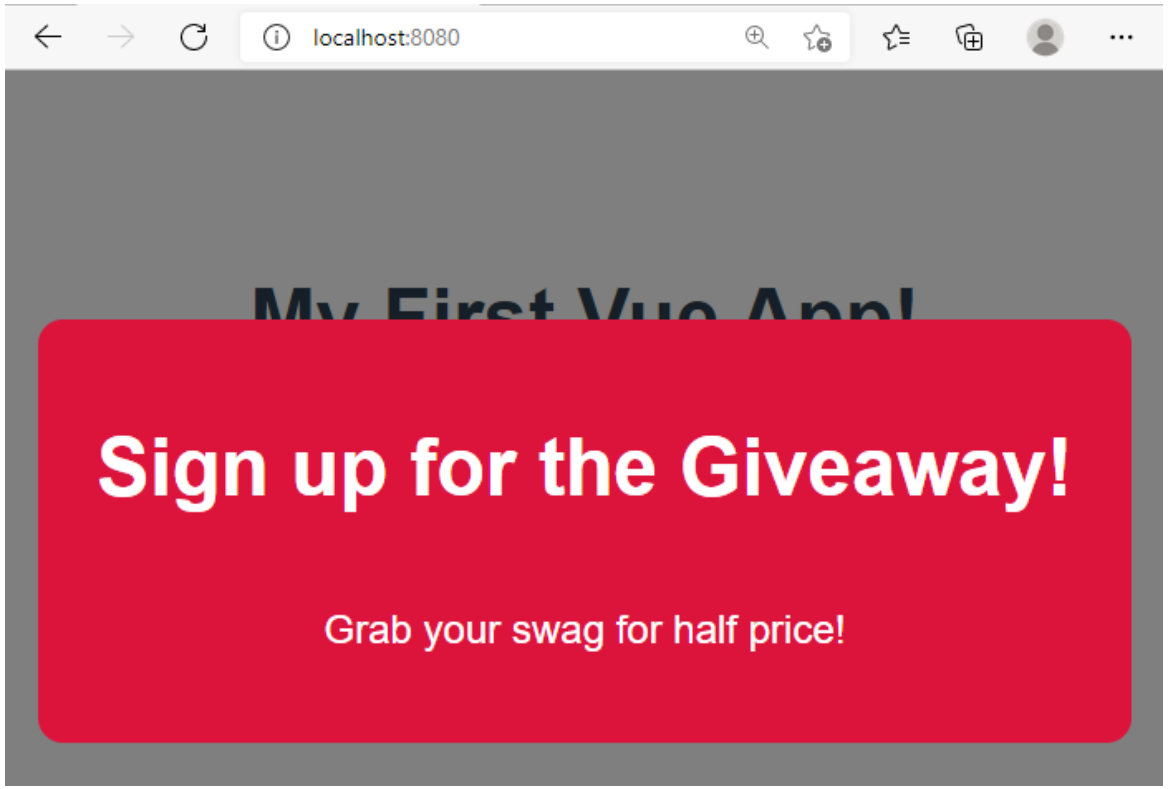
Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">
    <Modal :heading="heading" :text="text" theme="sale" @close="toggleModal" />
  </div>

  <button @click.right = "toggleModal">open modal</button>

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!',
      showModal: false,
    }
  },

    methods: {
    toggleModal() {
      this.showModal = !this.showModal
    }
  }

}
</script>

<style>
...
</style>
```

Add code


localhost:8080
My First Vue App!
Welcome...
open modal
Right Click


localhost:8080
Sign up for the Giveaway!
Grab your swag for half price!

Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">
    <Modal :heading="heading" :text="text" theme="sale" @close="toggleModal" />
  </div>

  <button @click.alt = "toggleModal">open modal</button>

</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      heading: 'Sign up for the Giveaway!',
      text: 'Grab your swag for half price!',
      showModal: false,
    }
  },

    methods: {
    toggleModal() {
      this.showModal = !this.showModal
    }
  }

}
</script>

<style>
...
</style>
```

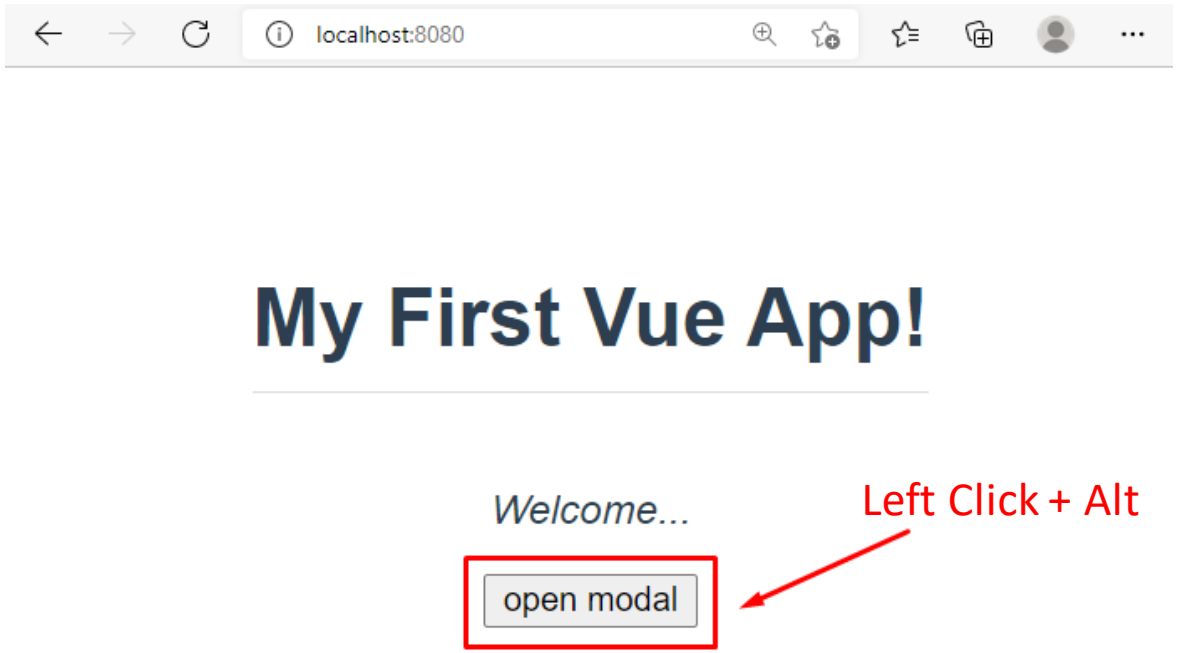
Modify code

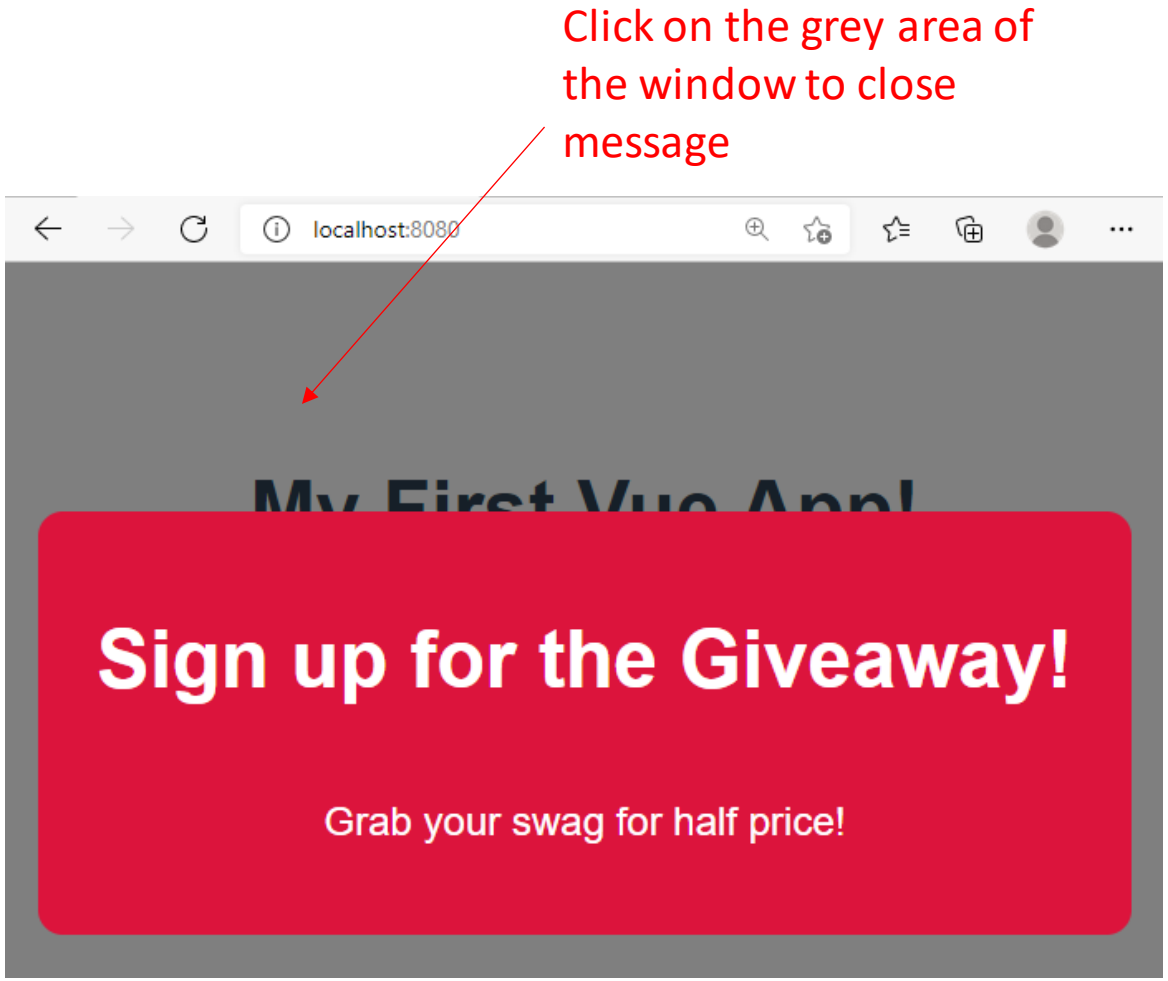
Modify file **Modal.vue**

Modal.vue

```
<template>

  <div class="backdrop" @click.self ="closeModal">

    <div class="modal" :class="{ sale: theme === 'sale' }">
      <h1>{{ heading }}</h1>
      <p>{{ text }}</p>
    </div>
  </div>
</template>

<script>
export default {
  props: ['heading', 'text', 'theme'],

    methods: {
    closeModal() {
      this.$emit('close')
    }
  }
}
</script>

<style>...</style>
```

Add code


localhost:8080
My First Vue App!
Welcome...
open modal
Left Click + Alt


Click on the grey area of the window to close message
localhost:8080
Sign up for the Giveaway!
Grab your swag for half price!

Challenge

Creating Another Modal

Challenge

1

create an extra button to open a different modal

2

use the same modal component but pass in a different template (slot)

3

use a different method (e.g. toggleModalTwo) and data (e.g. showModalTwo)

Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">

    <Modal theme="" @close="toggleModal">
      <template v-slot:links>
        <a href="#">Sign Up now</a>
        <a href="#">More Info</a>
      </template>
      <h1>Sign up for the Giveaway!</h1>
      <p>Grab your swag for half price!</p>
    </Modal>

  </div>

  <button @click.alt="toggleModal">open modal</button>

  <button @click="toggleModalTwo">open challenge modal</button>
</template>

<script>
...
</script>

<style>
...
</style>
```

Add code

1

create an extra button to open a different modal

Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>
  <div v-if="showModal">
    <Modal theme="" @close="toggleModal">
      <template v-slot:links>
        <a href="#">Sign Up now</a>
        <a href="#">More Info</a>
      </template>
      <h1>Sign up for the Giveaway!</h1>
      <p>Grab your swag for half price!</p>
    </Modal>
  </div>

  <div v-if="showModalTwo">
    <Modal @close="toggleModalTwo">
      <h1>Sign up to the Newsletter</h1>
      <p>For updates and promo codes!</p>
    </Modal>
  </div>

  <button @click.alt="toggleModal">open modal</button>
  <button @click="toggleModalTwo">open challenge modal</button>

</template>

<script>
...
</script>

<style>
...
</style>
```

Add code

2

use the same modal component but pass in a different template (slot)

Modify file **App.vue**

App.vue

```
<template>
...
</template>

<script>

import Modal from './components/Modal.vue'

export default {
  name: 'App',
  components: { Modal },
  data() {
    return {
      title: 'My First Vue App!',
      showModal: false,

      showModalTwo: false,

    }
  },
    methods: {
    toggleModal() {
      this.showModal = !this.showModal
    },

    toggleModalTwo() {
      this.showModalTwo = !this.showModalTwo
    }

  }
}
</script>

<style>
...
</style>
```

Add code

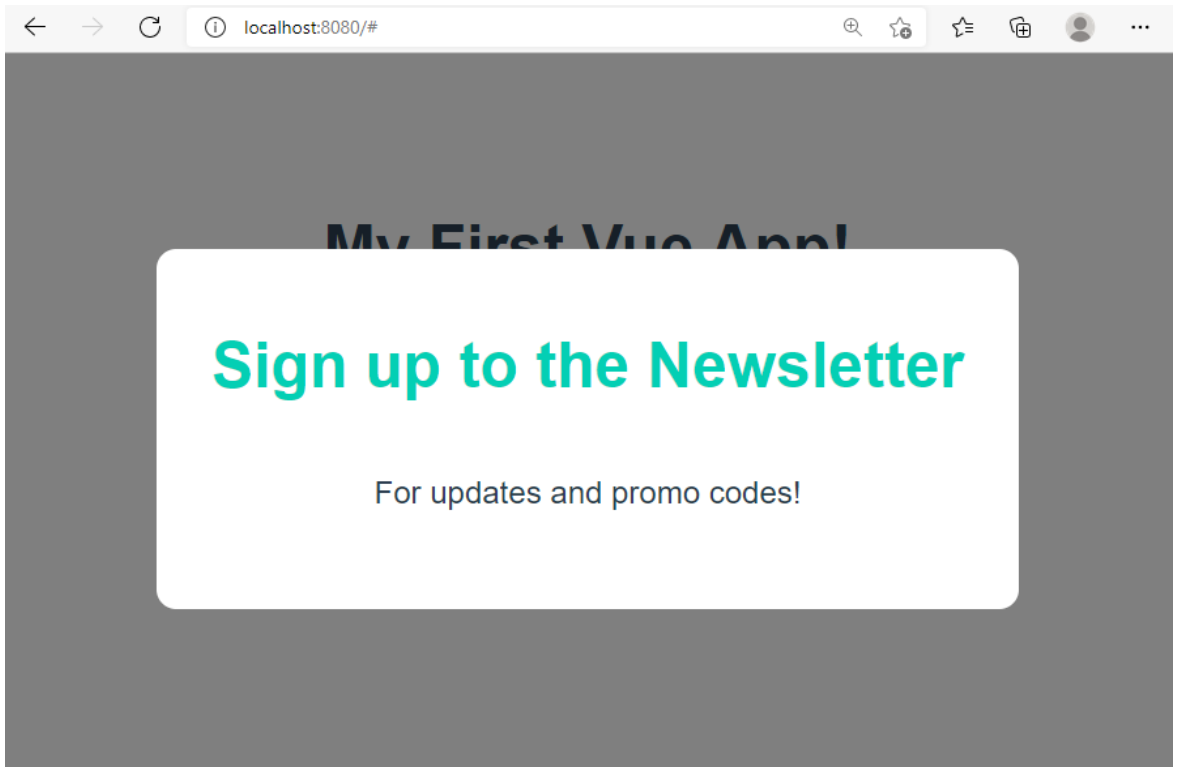
3

use a different method (e.g. toggleModalTwo) and data (e.g. showModalTwo)

My First Vue App!

Welcome...

open modal | open challenge modal



Using Teleport

Modify file **index.html**

index.html

```
<!DOCTYPE html>
<html lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,initial-
scale=1.0">
    <link rel="icon" href="<%= BASE_URL %>favicon.ico">
    <title><%= htmlWebpackPlugin.options.title %></title>
  </head>
  <body>
    <noscript>
      <strong>We're sorry but <%= htmlWebpackPlugin.options.title %>
doesn't work properly without JavaScript enabled. Please enable it to
continue.</strong>
    </noscript>
    <div id="app"></div>
    <!-- built files will be auto injected -->

    <div id="modals"></div>

  </body>
</html>
```

Add code

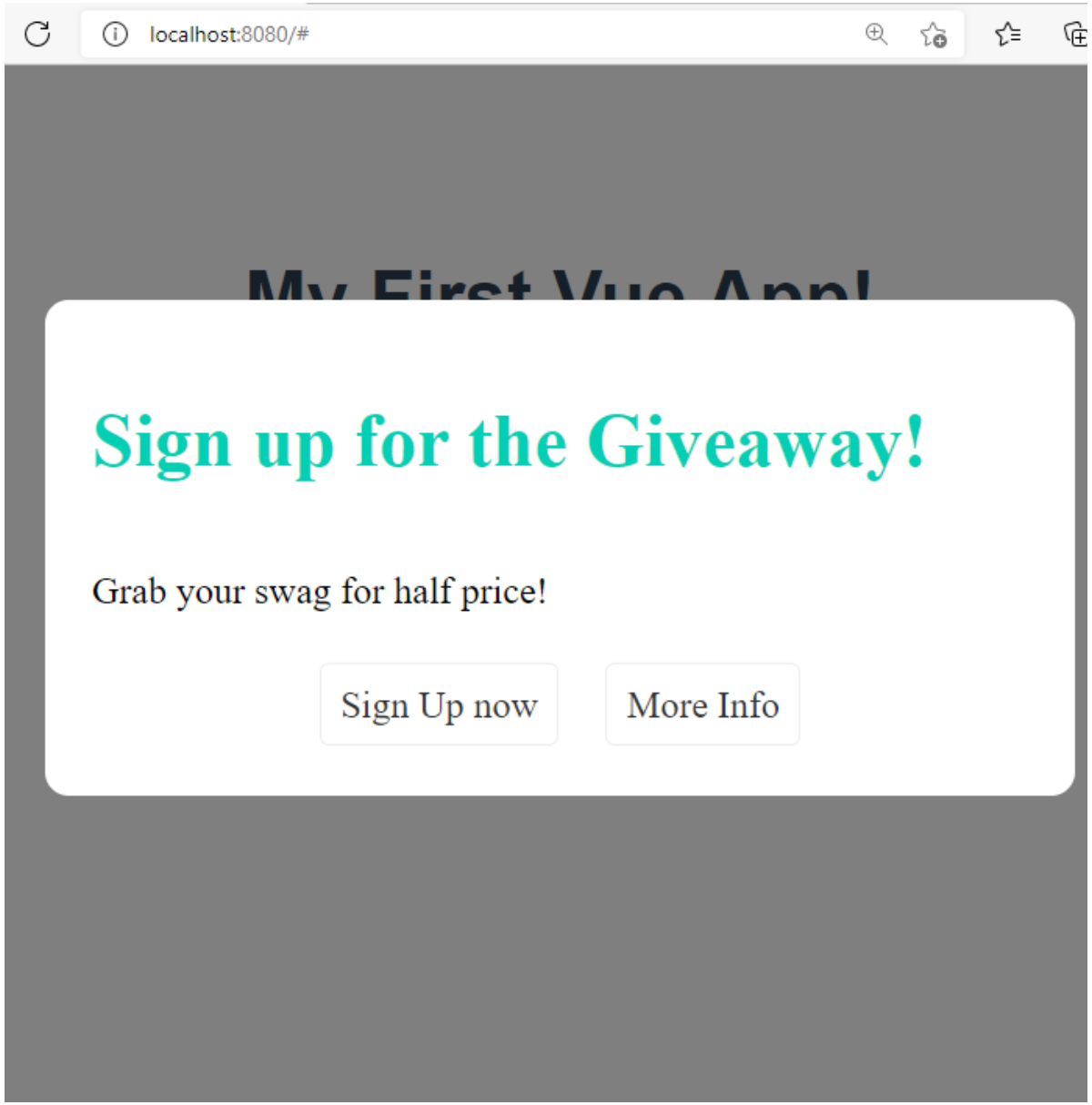
Modify file **App.vue**

App.vue

```
<template>
  <h1>{{ title }}</h1>
  <p>Welcome...</p>

  <teleport to="#modals" v-if="showModal">

    <Modal theme="" @close="toggleModal">
      <template v-slot:links>
        <a href="#">Sign Up now</a>
        <a href="#">More Info</a>
      </template>
      <h1>Sign up for the Giveaway!</h1>
      <p>Grab your swag for half price!</p>
    </Modal>

  </teleport>

  <teleport to="#modals" v-if="showModalTwo">

    <Modal @close="toggleModalTwo">
      <h1>Sign up to the Newsletter</h1>
      <p>For updates and promo codes!</p>
    </Modal>

  </teleport>

  <button @click.alt="toggleModal">open modal</button>
  <button @click="toggleModalTwo">open challenge modal</button>

</template>

<script>
...
</script>

<style>
...
</style>
```

Modify code

Modify code


localhost:8080/#
My First Vue App!
Sign up for the Giveaway!
Grab your swag for half price!
Sign Up now
More Info

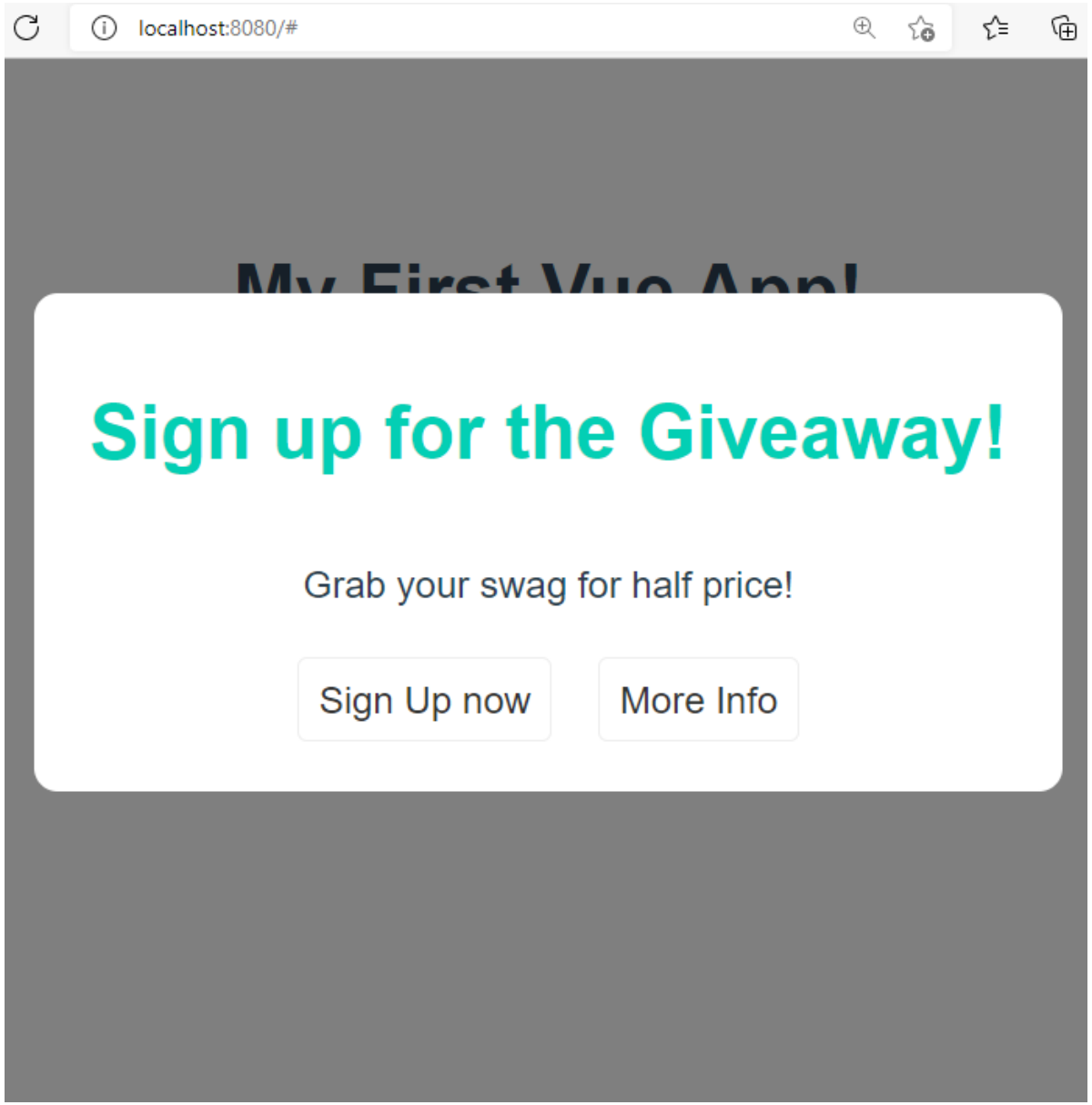
localhost:8080/#
My First Vue App!
Sign up to the Newsletter
For updates and promo codes!

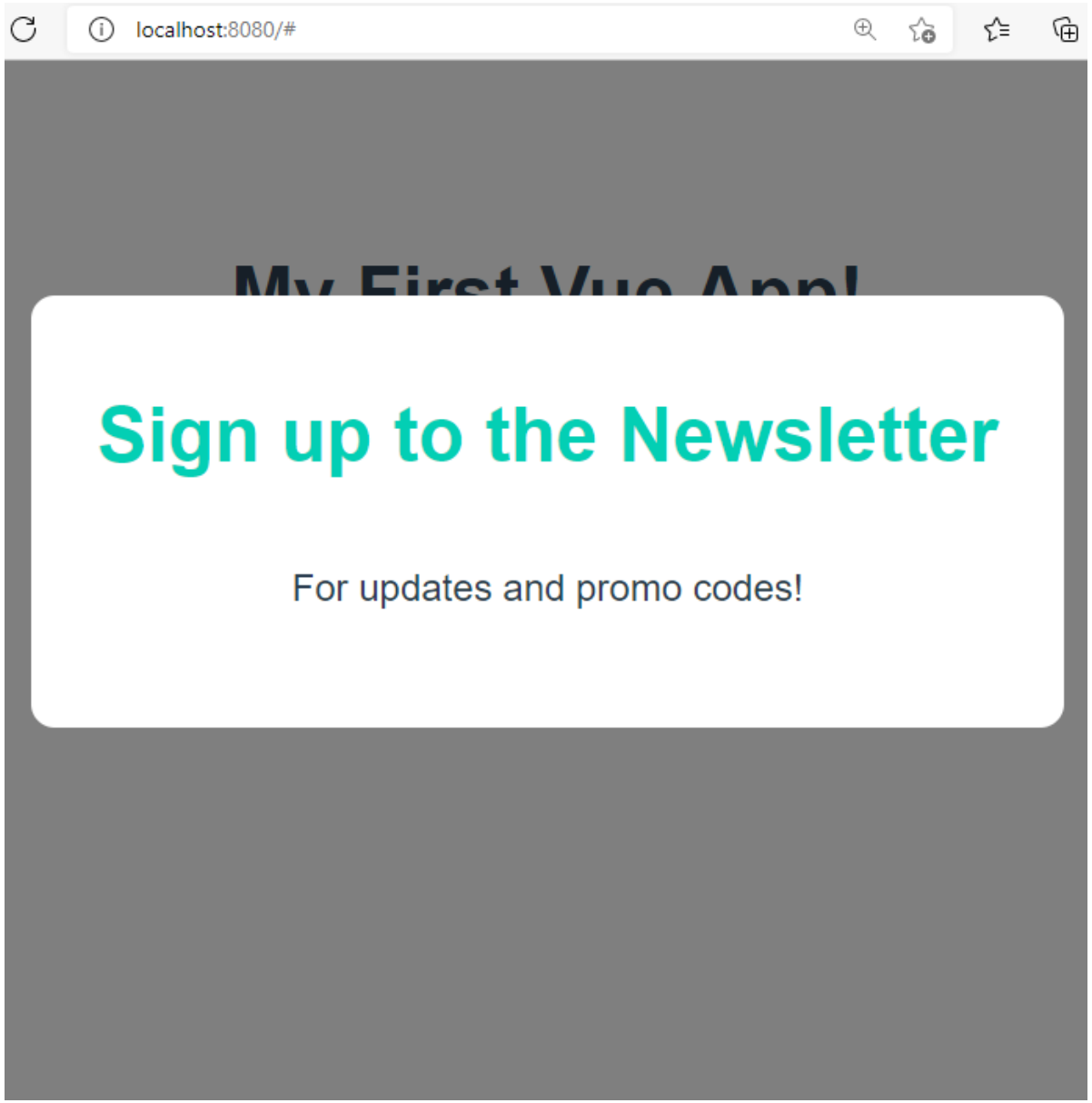
Modify file **App.vue**

App.vue

```
<template>
...
</template>

<script>
...
</script>

<style>
#app, #modals {

  font-family: Avenir, Helvetica, Arial, sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
  text-align: center;
  color: #2c3e50;
  margin-top: 60px;
}
h1 {
  border-bottom: 1px solid #ddd;
  display: inline-block;
  padding-bottom: 10px;
}
</style>
```

Add code


localhost:8080/#
My First Vue App!
Sign up for the Giveaway!
Grab your swag for half price!
Sign Up now
More Info


localhost:8080/#
My First Vue App!
Sign up to the Newsletter
For updates and promo codes!