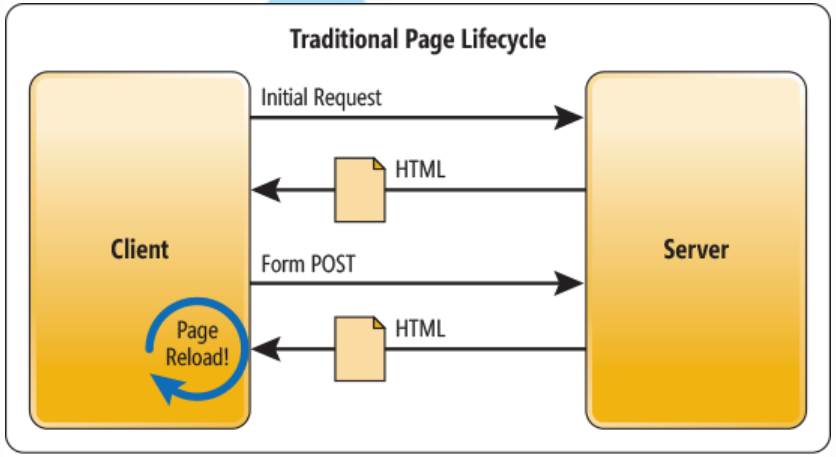
Module 3 Day 17

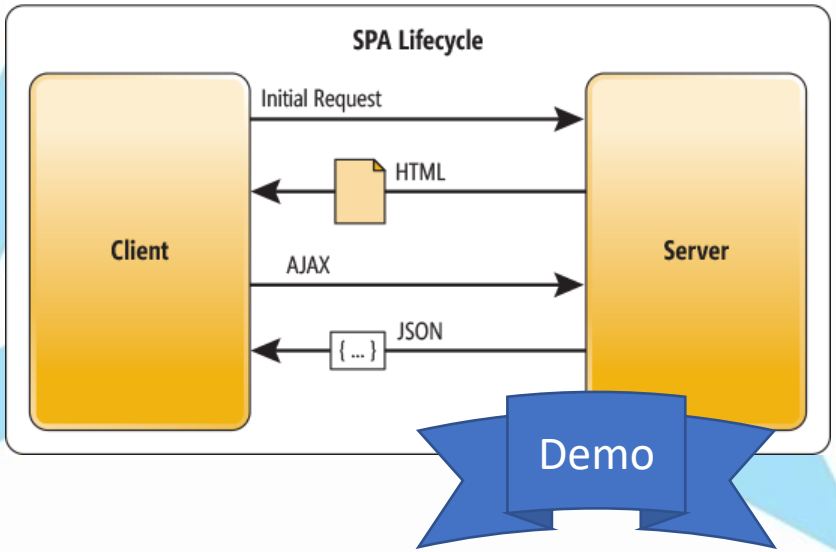
Vue Router

SPA vs. Traditional Architectures

- Traditional (e.g., Asp.NET MVC)
  - Client requests new pages as user navigates
  - Browser refreshes page
  - Routing* on server determines what server resources to load
- Single-Page Application
  - Initial request loads application
  - Sections of the app page are replaced as user navigates
  - DOM is updated; page never fully refreshes
  - Routing* on client determines what content to load into page sections

** Routing – associating a URL with code to run*





Demo

Single-Page Applications (SPA)

- Interacts with the user by dynamically rewriting the current page rather than loading entire new pages from a server.
  - Avoids interruption of the user experience between successive pages
  - Behaves more like a desktop application
- All code – HTML, JavaScript, and CSS – is retrieved with a single page load
  - Or the appropriate resources are dynamically loaded as necessary, in response to user actions
- The page does not reload at any point in the process
  - Nor does control transfer to another page
- History API can be used to provide the perception of separate logical pages
  - So that user can still use the Back button and Bookmarks
- Often involves dynamic communication with web server behind the scenes

The Router Project

- Router/index.js
  - Defines routes
- main.js
  - Include the router when the Vue root instance is created
- src/views folder
  - Contains .vue components which are "views". These can be "routed to"
- App.vue
  - <router-link to=""> tag creates works like an anchor (minus the page reload)
    - "to" value can be a route or an object containing a name
  - <router-view /> is the placeholder to render the View component

Defining Routes – router/index.js

```
routes: [
  {
    path: '/',
    redirect: {
      name: 'users'
    }
  },
  {
    path: '/users',
    name: 'users',
    component: Users
  },
  {
    path: '/users/:user_id',
    name: 'user',
    component: User
  },
```

Dynamic Routing

- : indicates a "dynamic segment"

  /user/:id

  - The value will be in this.$route.params.id
- A route can have more than one dynamic segment

  /user/:user_id/post/:post_id
- You can get the values from the $route object

Route pattern	Matching path	$route.params
/user/:user_id/post/:post_id	/user/101/post/555	{ user_id: 101, post_id: 555 } $route.params.user_id

Navigating a route

In HTML	In JavaScript	Notes
<router-link :to="{ name: "user", params={user_id: 5} }">	this.$router.push({ name: "user", params={user_id: 5} });	Normal navigation to next page.
<router-link :to="{ name: "user", params={user_id: 5} }" replace>	this.$router.replace({ name: "user", params={user_id: 5} });	Does not put the current page in the history stack.
	this.$router.go(n)	Goes to the n-th entry in the stack from here. +n means forward n pages; -n means backward n pages.

- When using router-link, class will be added if the link is active
  - router-link-active
  - router-link-exact-active

Vue Component Lifecycle

- This slide for awareness only at this point
- You can "hook" lifecycle events and run code
- E.g., get data from the server on created()