

Spike Projects Information.

For all projects in the Solution:-

- This is based on the Asp.net core v5 MVC template in VS.
- Vue.js Pack 2019 extension is also installed in VS to help with intellisense etc.

Spike One Project (Vue 2 & Vuex 3)

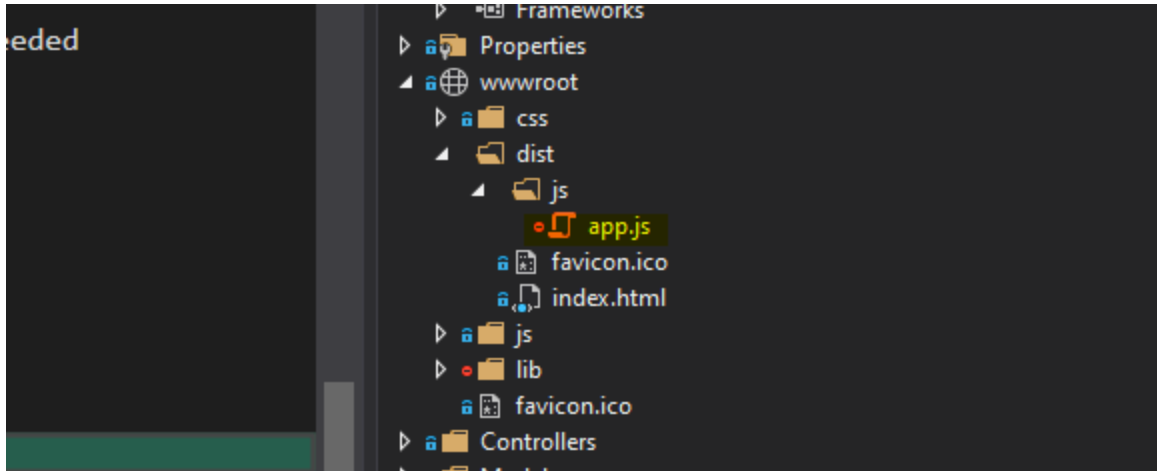
General Information

Has the following functionality:-

- Proper integrated Vue components into Razor pages in the MVC.
- Use of Vuetify style package.
- Use of Axios package for basic API calls.
- Use of Vuex for state management ****Removed now - all file refs have either been excluded or commented out**** as was causing error and components not to load into cshtml files.
- Nested components structures demo.
- Can do rudimentary debugging in chrome and breakpoints under the webpack folder in the source window.
- Vue.js dev tools chrome extension installed and works ok for component analysis.
- No webpack dependencies at all.
- Controlled by vue.vonfig.js authored by the vue cli at initial set up.
- Vue is detected by the debug chrome tools
- <http://localhost:8084/Home/> (npm run watch in developer powershell)
- HMR not working with the watch flag.
- No webpack.config.js over rides are done in vue.config.js

But not ideal Issues:-

- Does not have separate bundling files output at mo just one output, need to look at this:-



- Does not have hot module loading working also.

To debug:

- Choose either project run or dotnet option from debugging in VS.
- Then open a terminal window off the project right click menu.
- Enter - npm run watch
- In chrome developer tools disable cache to see edit changes from IDE reload on page refresh as HMR not working yet.
- Then I should be able to navigate around the website, edit components in IDE and save file changes, the npm watch will recompile the output, then need to hit refresh to see changes made visible.

Other Concerns

Introduced vuex now gets errors in the console that can't seem to find suitable solutions to. Components on cshtml files will not load as a consequence now, although this was working before trying to introduce vuex state management. Tried to back out the install of vuex package dependency now, but won't get npm built in the terminal window, get dependency errors inside node_modules. Tried to nuke node_modules, to reinstall from scratch, but still get errors. Really frustrated with this.

Issues & Errors

```
21%  No issues found  mike-p, 4 days ago | 1 author, 3 changes
C:\Users\Mike\Source\Repos\VueCoreSpikeOne\package.json
Buffer Graph: JSON (TextBuffer)

Output
Show output from: Debug

'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.Net.Http.Headers.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Html.Abstractions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.ComponentModel.Annotations.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Metadata.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Diagnostics.Abstractions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.IO.Pipelines.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Cryptography.X509Certificates.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
Microsoft.Hosting.Lifetime: Information: Application started. Press Ctrl+C to shut down.
Microsoft.Hosting.Lifetime: Information: Hosting environment: Development
Microsoft.Hosting.Lifetime: Information: Content root path: C:\Users\Mike\Source\Repos\VueCoreSpikeOne\
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.WebUtilities.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Cryptography.Primitives.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Http.Extensions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Net.WebSockets.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Principal.Windows.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
Uncaught TypeError: Object(...) is not a functionYou are running Vue in development mode.
Make sure to turn on production mode when deploying for production.
See more tips at https://vuejs.org/guide/deployment.html
The thread 0x1575c has exited with code 0 (0x0).
The thread 0x16644 has exited with code 0 (0x0).
The thread 0x11488 has exited with code 0 (0x0).
The thread 0xc9c has exited with code 0 (0x0).
The thread 0xd528 has exited with code 0 (0x0).
The thread 0x128bc has exited with code 0 (0x0).
|
```

```
C:\Users\Mike\Source\Repos\VueCoreSpikeOne\package.json
Buffer Graph: HTML (TextBuffer)

Output
Show output from: Debug

'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.StaticFiles.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.Net.Http.Headers.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Html.Abstractions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.ComponentModel.Annotations.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Metadata.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Diagnostics.Abstractions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.IO.Pipelines.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Cryptography.X509Certificates.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
Microsoft.Hosting.Lifetime: Information: Application started. Press Ctrl+C to shut down.
Microsoft.Hosting.Lifetime: Information: Hosting environment: Development
Microsoft.Hosting.Lifetime: Information: Content root path: C:\Users\Mike\Source\Repos\VueCoreSpikeOne\
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.WebUtilities.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Cryptography.Primitives.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.Http.Extensions.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Net.WebSockets.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Principal.Windows.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
Uncaught TypeError: Object(...) is not a functionYou are running Vue in development mode.
Make sure to turn on production mode when deploying for production.
See more tips at https://vuejs.org/guide/deployment.html
The thread 0x5 has exited with code 0 (0x0).
The program 'JavaScript debug adapter: about:blank (about:blank)' has exited with code -1 (0xffffffff).
Uncaught TypeError: Object(...) is not a functionYou are running Vue in development mode.
Make sure to turn on production mode when deploying for production.
See more tips at https://vuejs.org/guide/deployment.html
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Buffers.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just My Code' is disabled.
The thread 0x14298 has exited with code 0 (0x0).
The thread 0x14b74 has exited with code 0 (0x0).
The thread 0x13b4c has exited with code 0 (0x0).
|

Call Stack Exception Settings Immediate Window Error List Output Breakpoints Locals Watch 1
Ready
```

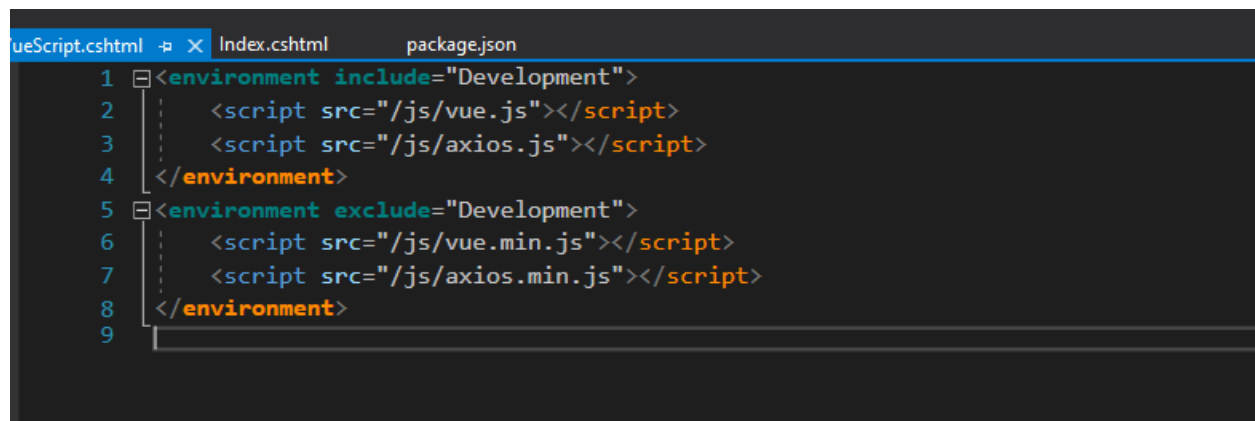

Spike Two Project (Vue 2)

General Information

- Simplest strategy. Vue is added as a pure javascript dependency. Kind of old school approach using vanilla js files. Also same for axios.
- No packages at all. Installs were done by Nuget then manually copying js files into wwwroot lib.
- Basically allows each razor to host its own Vue instance.
- Vue developer tools works and detects vue.js as referenced in the browser.
- No use of '.vue' components.
- Currently no state management usage with Vuex, possibly have to rely on the underlying session state.

Setup Information

This was also using a strategy of a partial view dropping the vue library dependencies into the razor files that needed them.



```
Index.cshtml  package.json
1 <environment include="Development">
2   <script src="/js/vue.js"></script>
3   <script src="/js/axios.js"></script>
4 </environment>
5 <environment exclude="Development">
6   <script src="/js/vue.min.js"></script>
7   <script src="/js/axios.min.js"></script>
8 </environment>
9
```

```
VueScript.cshtml | Index.cshtml | package.json
1  @{
2      ViewData["Title"] = "Home Page";
3  }
4
5  <div class="text-center">
6      <h1 class="display-4">Welcome To Vue Spike Two</h1>
7      <div id="vueMain">
8
9
10         {{ message }}
11
12     </div>
13 </div>
14
15 @section scripts {
16
17     <partial name="_VueScript" />
18     <script>
19         var app = new Vue({
20             el: '#vueMain',
21             data: {
22                 message: 'Hello Vue.js i hope!'
23             }
24         });
25
26
27         app.mount("#app");
28
29     </script>
30 }
```

Issues & Errors

```
121%  No issues found  mike.p.8 days ago | 1 author, 1 change
C:\Users\Mike\Source\Repos\VueCoreSpike\VueMVC\SpikeTwo\Views\Home\Index.cshtml
Buffer Graph: RazorCoreCSSharp (TextBuffer)

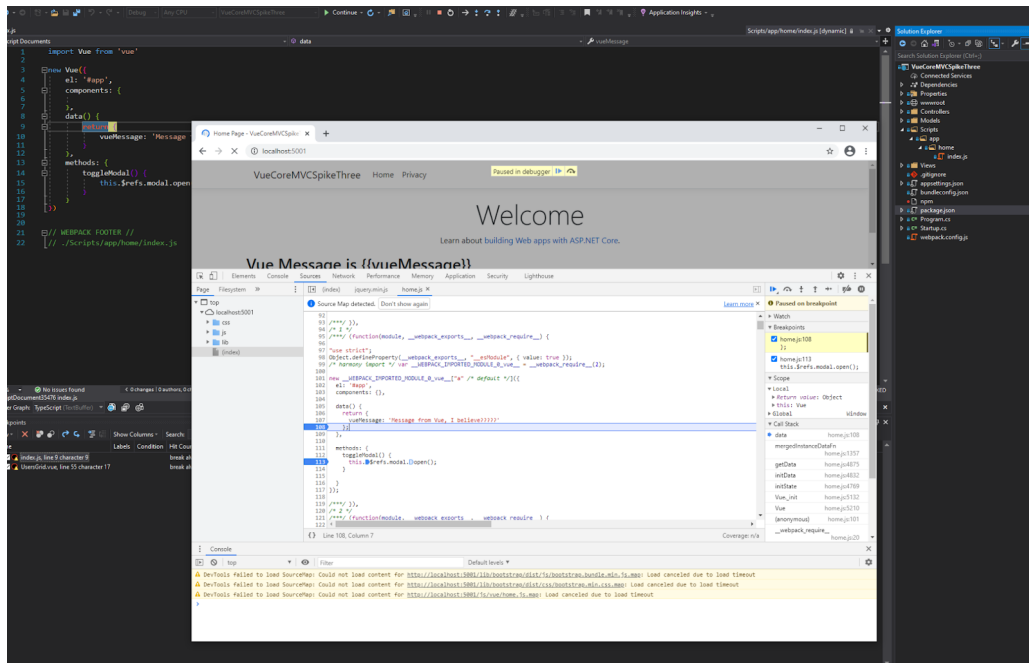
Output
Show output from: Debug
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Security.Cryptography.X509Certificates.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
Microsoft.Hosting.Lifetime: Information: Application started. Press Ctrl+C to shut down.
Microsoft.Hosting.Lifetime: Information: Now listening on: http://localhost:44322
Microsoft.Hosting.Lifetime: Information: Application started. Press Ctrl+C to shut down.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Security.Cryptography.Primitives.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\Microsoft.AspNetCore.WebUtilities.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Security.Cryptography.Primitives.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.AspNetCore.App\5.0.5\System.Security.Cryptography.Primitives.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Net.WebSockets.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Security.Principal.Windows.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
Could not read source map for https://localhost:44322/js/axios.js: Unexpected 404 response from https://localhost:44322/js/axios.map
You are running Vue in development mode.
Make sure to turn on production mode when deploying for production.
See more tips at https://vuejs.org/guide/deployment.html
'iisexpress.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\5.0.5\System.Buffers.dll'. Skipped loading symbols. Module is optimized and the debugger option 'Just my code' is disabled.
The thread 0x1483c has exited with code 0 (0x0).
The thread 0x0b50 has exited with code 0 (0x0).
The thread 0x14d74 has exited with code 0 (0x0).
The thread 0x15004 has exited with code 0 (0x0).
The thread 0x14c38 has exited with code 0 (0x0).
The thread 0x18008 has exited with code 0 (0x0).
The thread 0x1430c has exited with code 0 (0x0).
The thread 0x7720c has exited with code 0 (0x0).
```

Some axios source map error noted.

Spike Three Project (Vue 2)

General Information

- This project was taken from a walk through setup, quite old resource 2017.
<https://medium.com/corebuild-software/vue-js-and-net-mvc-b5cede228626>
- Primary purpose was to get debugging working, hitting breakpoints in VS IDE and chrome developer tools.
- Downside using old packages for webpack, vue, vuetify etc.
- No state management Vuex package in use.
- Most complex to get up and running.
- Kinda need lots of webpack knowledge to work with.
- Need to create an index.js file for each razor page in the relevant script output path. Webpack will then bundle out a named equivalent js file into the wwwroot folder.
- Tried to upgrade some of the packages then hit countless errors (see other doc - MVC & Vue Project setup) with dependency issues. Something to bare in mind in future.
- Project is run by selecting the dropdown for the project itself, rather than using IISExpress.
- Vue is detected on page but, cant load information in chrome dev tooling.



Spike Four Project (Vue 3 & Vuex 4)

General Information

- Using vue cli and vue 3 version
- In chrome Vue developer tools doesn't work
- Can't get components to show in cshtml with a new way to createApp in vue 3.
- If using npm server all works ok in the browser (see link below).

The mechanism for creating a Vue instance has changed in Vue 3, this maybe why we can't get components to load. Further investigation on a file by file basis between the Spike Project One and this one, the only difference of consideration is the way we bootstrap a Vue instance in the main.js. This new approach is a change in Vue 3, which is still deemed to be in preview change and some dependent packages like Vetify are not yet updated against it. But we could be hampered with issues when we go from Vue 2 to Vue 3 in a future upgrade.

Tried to implement Bootstrap-Vue into this project and dot dependency errors, so had to back out changes.

Operation

In VS Code:-

- Open in vs code
- Type - npm run serve
- Vue loads nicely in the browser, no errors.

In VS:-

In terminal window
Type npm run build
Then F5 it

Or

Type npm run build
Then dotnet run dev

```

npm ERR! A complete log of this run can be found in:
npm ERR! C:\Users\Mike\AppData\Roaming\npm-cache\_logs\2021-05-05T11_07_27_295Z-debug.log
PS C:\Users\Mike\Source\Repos\VueCoreSpike\VueCoreMVCSpikeFour> npm run serve

> vuecoremvcspikefour@0.1.0 serve C:\Users\Mike\Source\Repos\VueCoreSpike\VueCoreMVCSpikeFour
> vue-cli-service serve

INFO Starting development server...
98% after emitting CopyPlugin

DONE Compiled successfully in 1840ms

App running at:
- Local: http://localhost:8084/
- Network: http://192.168.1.155:8084/

Note that the development build is not optimized.
To create a production build, run npm run build.

```

<http://localhost:8084>

Issues & Errors

So tried to import some styling eg Bootstrap Vue
Then get get errors and warnings:-

```

C:\Users\Mike\Source\Repos\VueCoreSpike\VueCoreMVCSpikeFour>npm run serve

> vuecoremvcspikefour@0.1.0 serve C:\Users\Mike\Source\Repos\VueCoreSpike\VueCoreMVCSpikeFour
> vue-cli-service serve

INFO Starting development server...
98% after emitting CopyPlugin

WARNING Compiled with 1 warning

warning in ./node_modules/bootstrap-vue/esm/vue.js

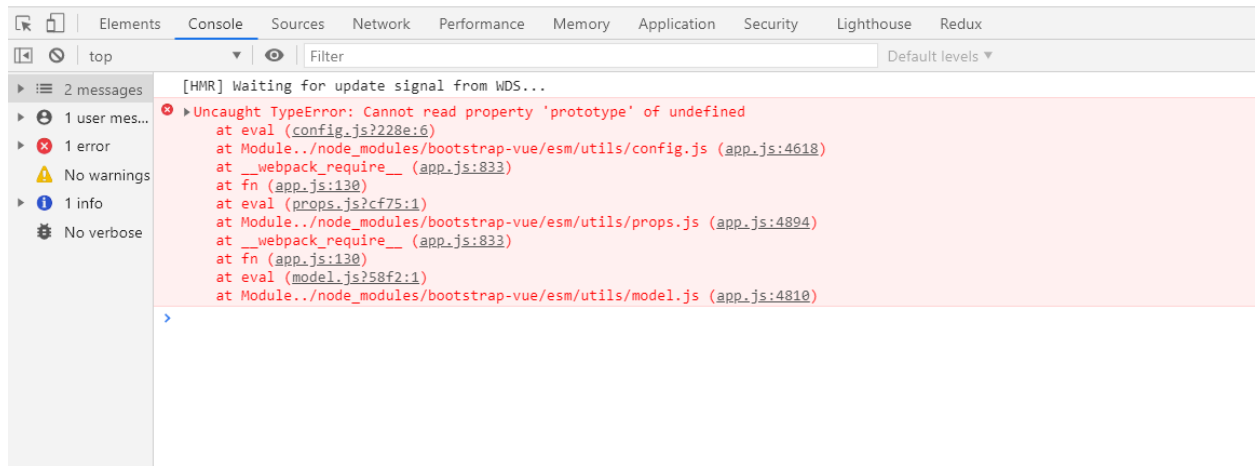
"export 'default' (reexported as 'Vue') was not found in 'vue'

App running at:
- Local: http://localhost:8084/
- Network: http://192.168.1.155:8084/

Note that the development build is not optimized.
To create a production build, run npm run build.

```

And in browser error:



Had to back it out.

Spike Five Project (Vue 2 & Vuex 3)

General Information

- Taken from a DotNet show.
- Package ref's out of date.
- Uses Vue 2 (and packages dependencies bit dated therefore).
- Try to get Vuex 3 going.
- Use of complex webpack for build output.
- Watch for vue file changes when running "npm run dev" via the webpack.config file, but still has to refresh the page for changes to be seen.
- Vue router intercepts also to then push the browser to the vue app, this can be shown in Vue developer chrome extension.
- Vue chrome extension detects and works ok.
- Debugging works ok in the browser.

Operation

1. In terminal window type - npm run dev
2. Then hit F5 in VS.
3. Changes to any vue apps are rendered into the wwwroot folder, allowing a page refresh to see them.

To Do

Get Vuex going inside it.

Issues & Errors

Upgrading packages could break build and razor integration as experienced in Spike 4.

Spike Six Project (Vue 3 & Vuex 4)

General Information

- Build with vue cli integration into MVC core template.
- Attempt of a multi-page variation of a Vue app.
- Use of 'vue' components to build up singular instances of a vue app in the MVC project.
- Managed to get shared state between the instances going.
- Watch works on editing a vue component, just then need to do a page refresh.
- Use of partial view option for vue js files.

To Do

Get Routing working

Issues & Errors

Sometimes Vue devtools doesn't seem to work in the browser.

Debugging for some reason is not as reliable as in Vue 2 setup.

Some inbuilt components seem a bit dodgy at the moment as not a full blown release of Vue 3 is stable yet. So get warnings, which lead to errors, eg datepicker in the console and nested component issues.

Conclusions

Project spike One is using Vue 2.6.11 not vue 3 (which is still classed as in preview mode). Project spike Four uses Vue 3, but cannot get the components to show in razor pages, even using the same strategy as in project One, and get no errors to tell me why embedded Vue components won't show in cshtml files.

Upgrading packages can prove tricky with dependency errors occurring in console and rendering, leading to components not working. But this is a general problem always regarding working with npm packages and their inter dependencies.

I generally don't think there is an ideal option here. Even with vanilla js approach which is most straightforward and simple to orchestrate, you lack state management functionality, as each razor is using its own Vue instance.