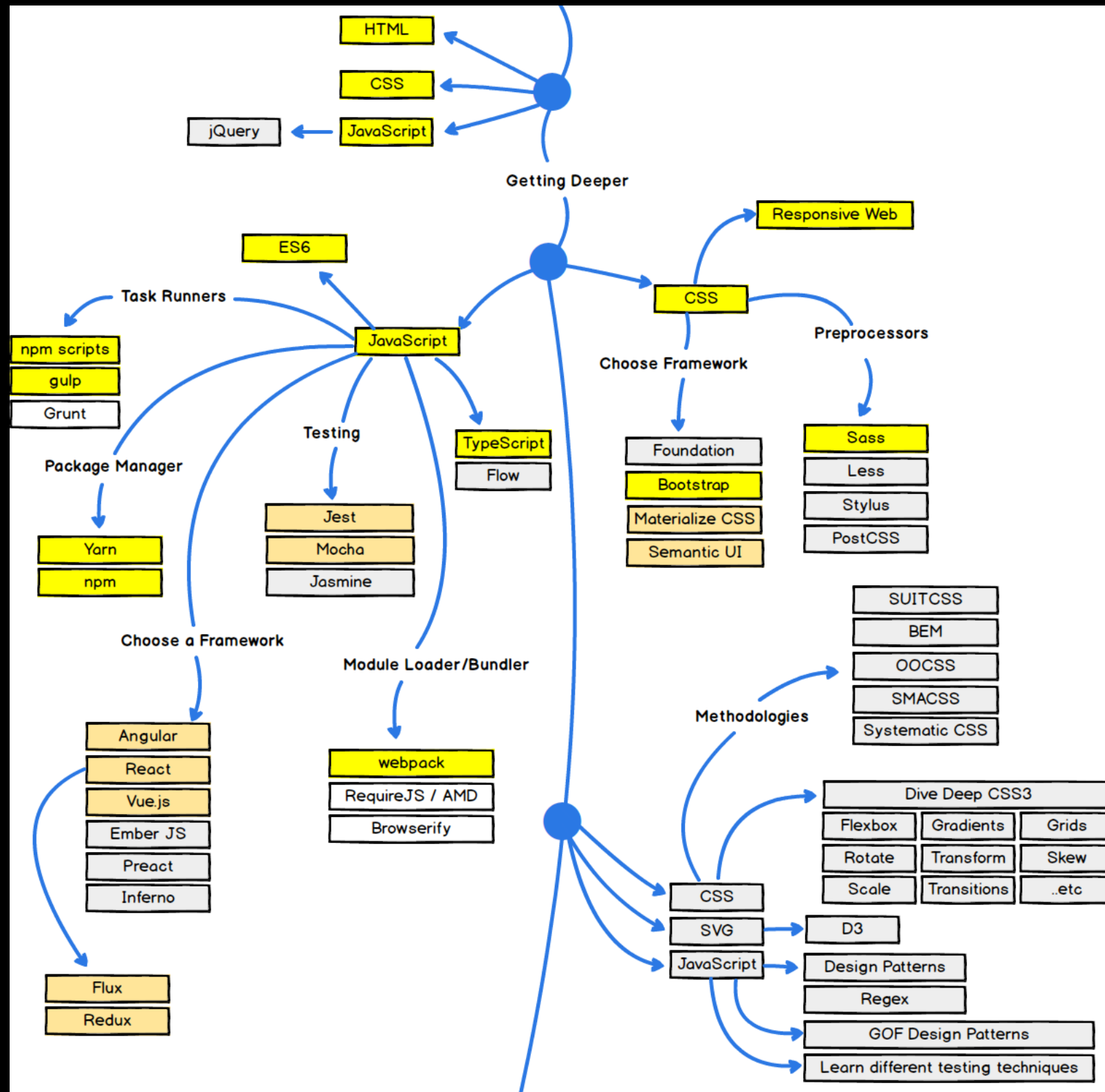# WHAT IS OUR FRONT-END?

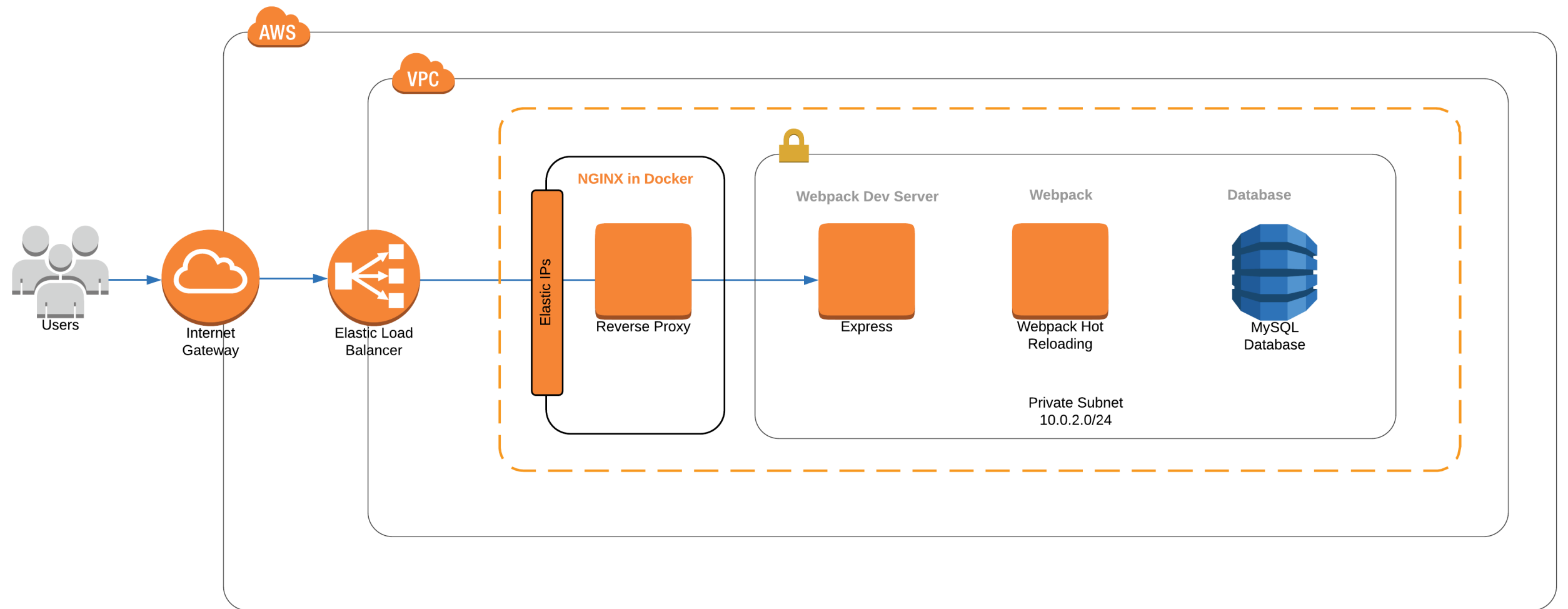WTF?

PLEASE DOWNLOAD AND INSTALL:

- NodeJS - **nodejs.org/**

- Yarn - **yarnpkg.com/**

- Git - **git-scm.com/downloads**

- Chrome - **google.com/chrome/**

- Docker - **docker.com/community-edition**

WHAT IS A FRONT-END DEVELOPER?

WHAT WE'RE GOING TO BUILD

TIME TO GET SET UP

- Run `git clone` https://github.com/NoahLE/workshop-front-end

- `cd` into the directory

- Checkout the starting commit `git checkout 578b94`

- Run `yarn` from your terminal
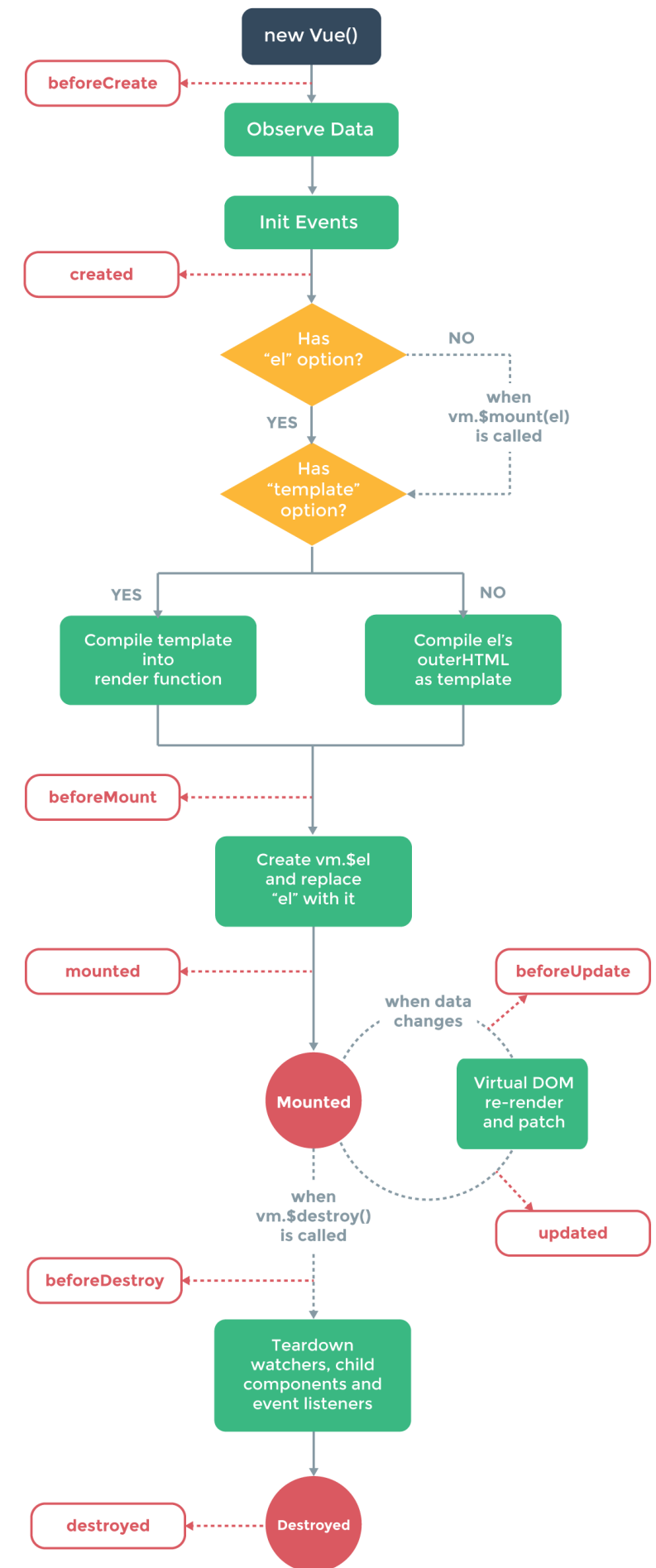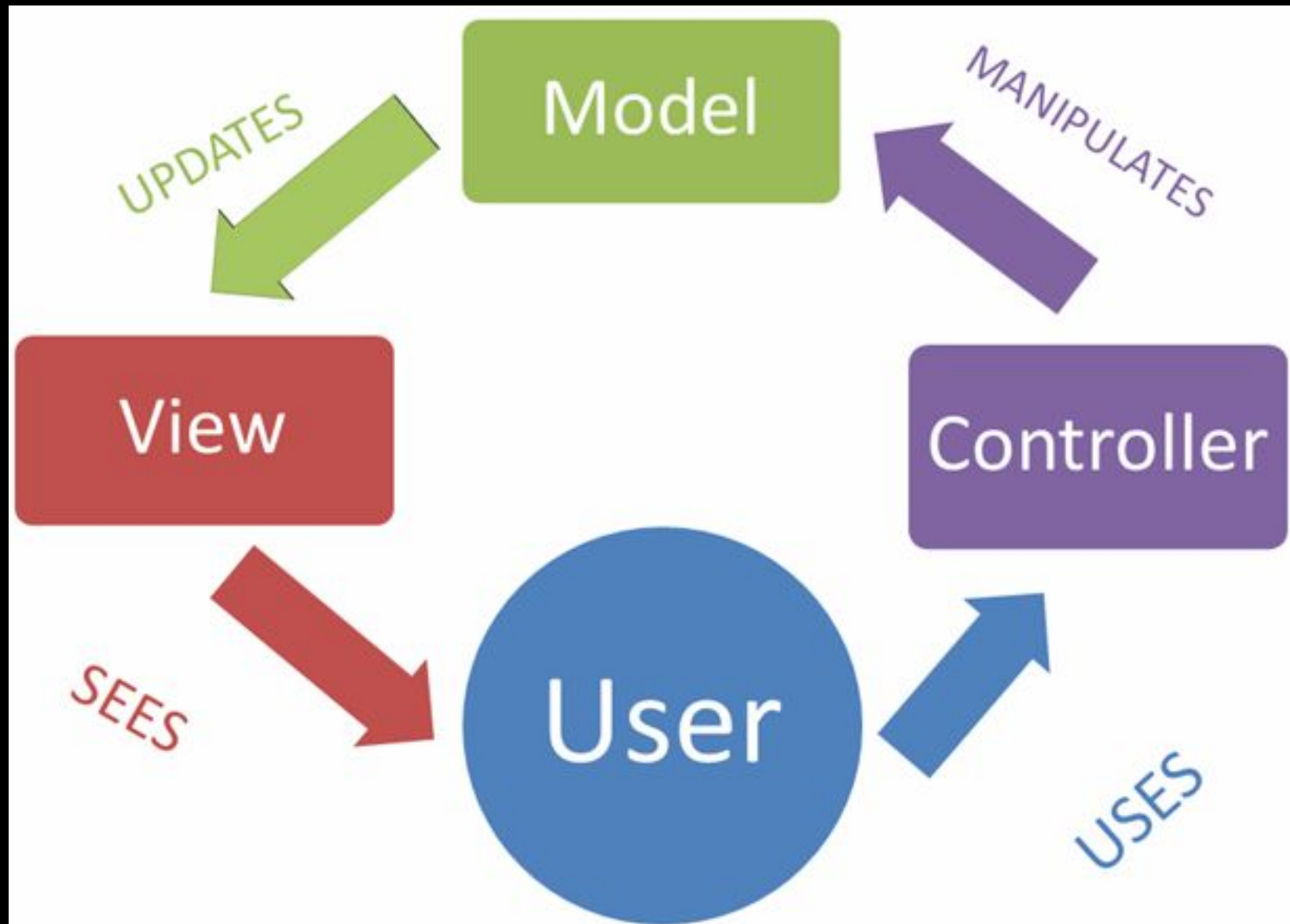
GETTING READY TO GET READY

- Retrieved a copy of the project

- Installed all packages to run the project

- Package managers - NPM vs Yarn

- node_module resolution (project, root, global)

- ECMAScript20## (or ES#) and Babel (transpilation)
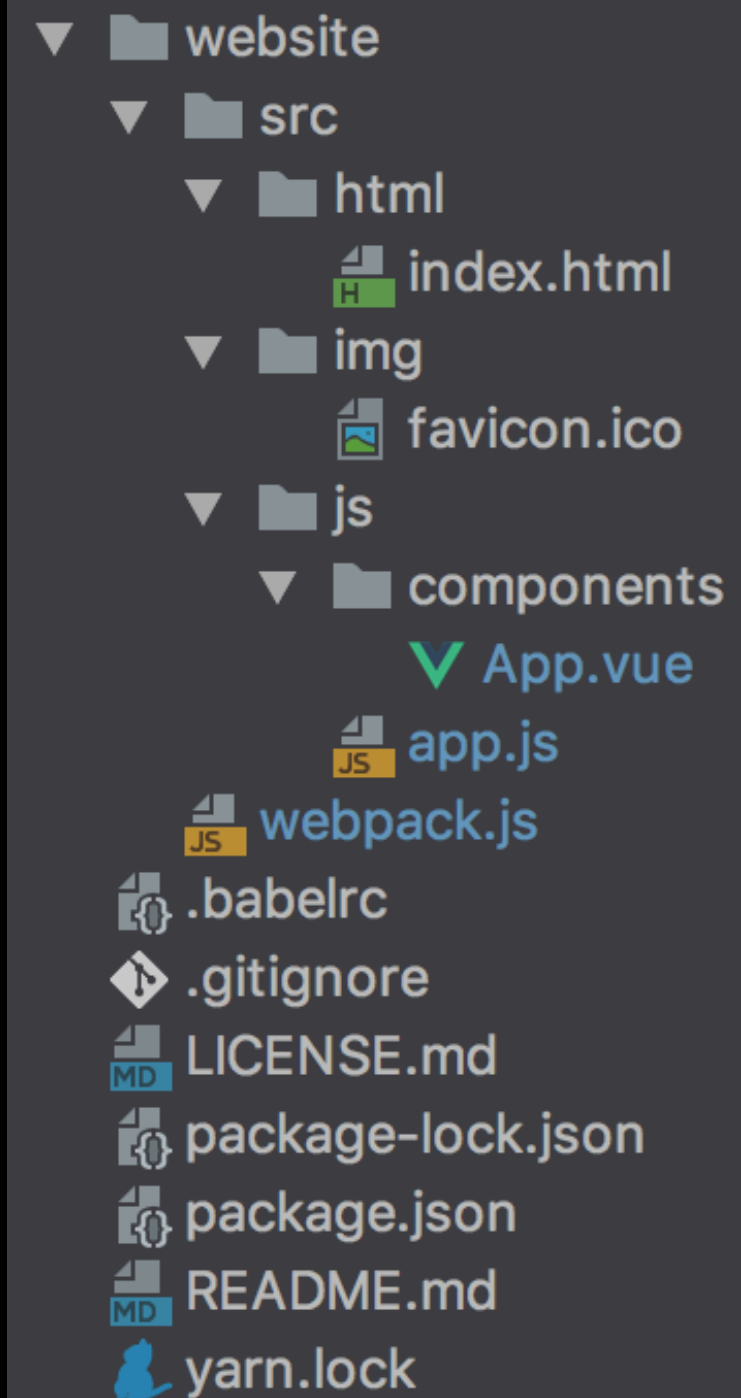
TO SAVE SOME TIME

RUN GIT CHECKOUT CC5541

THE VUE LIFECYCLE

WHAT WE CHANGED

- website/src/html/index.html

- website/src/img/favicon.ico

- website/src/js/components/App.vue

- website/src/js/app.js

- website/webpack.js

- .babelrc

ADD A VUE COMPONENT
(SFC - SINGLE FILE COMPONENT)

```
<template>
  <div>
    <p>I am a sandbox app with HMR!</p>
  </div>
</template>

<script>
  export default {
    name: "App"
  }
</script>

<style scoped>

</style>
```
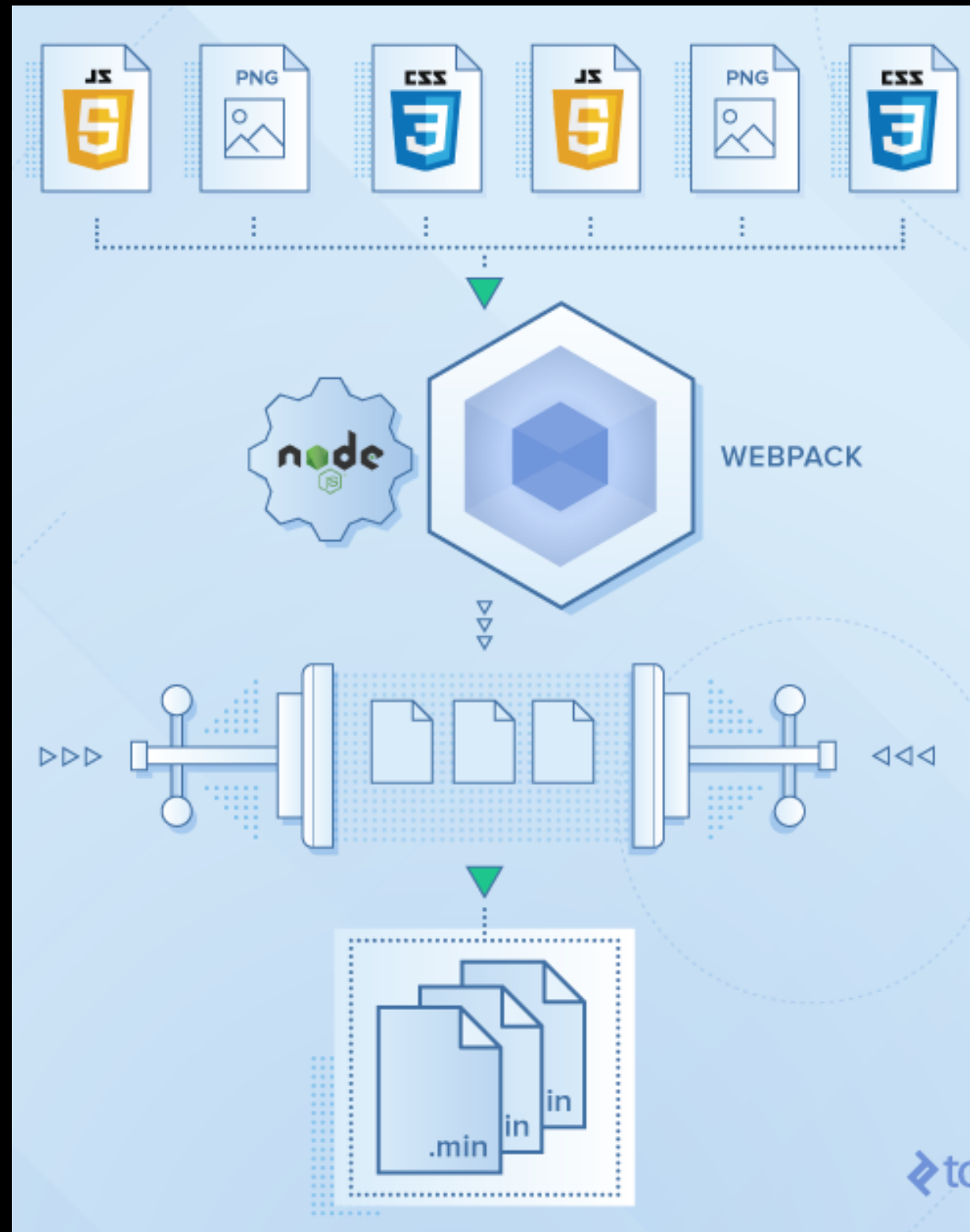
CREATE APP CONTAINER

```javascript
import 'babel-polyfill';
import Vue from "vue";
import App from "./components/App.vue";

let v = new Vue({
  el: "#app",
  template: "<App/>",
  components: {
    App
  },
});
```
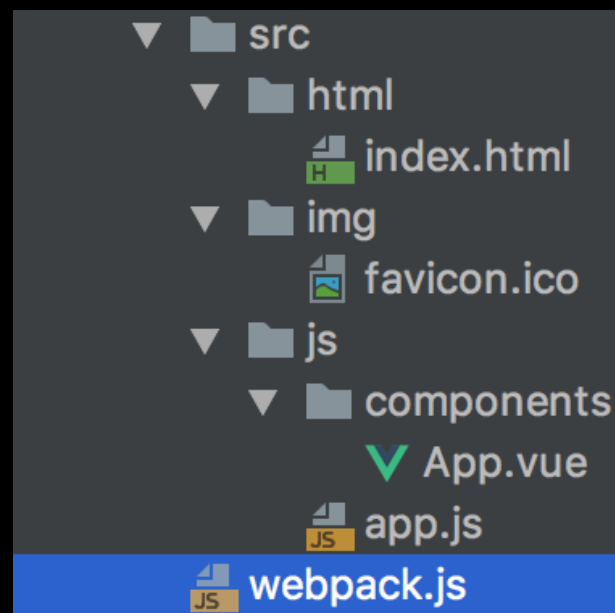
WHAT IS WEBPACK

MODE, CONTEXT, ENTRY, OUTPUT

```javascript
const path = require('path');
const webpack = require('webpack');

module.exports = {
  // ternary operation = arguement ? if true : if false
  mode: process.env.NODE_ENV === 'production' ? 'production' : 'development',
  context: path.join(__dirname, 'src'),
  entry: {
    app: path.join(__dirname, 'src/js/app.js')
  },
  output: {
    filename: 'js/app.js',
    path: path.join(__dirname, 'dist'),
  },
```

```
▼ 📁 src
    ▼ 📁 html
          📄 index.html
    ▼ 📁 img
          🖼 favicon.ico
    ▼ 📁 js
        ▼ 📁 components
              V App.vue
          📄 app.js
  📄 webpack.js
```

```
devtool: 'eval-source-map',
target: 'web',
devServer: {
  contentBase: path.join(__dirname, 'dist'),
  compress: true,
  historyApiFallback: true,
  host: '0.0.0.0',
  hot: true,
  inline: true,
  noInfo: false,
  open: false,
  port: 3000,
  public: 'local.sandbox.com:3000'
},
watchOptions: {
  aggregateTimeout: 300,
  poll: 1000
},
```

RESOLVE OPTIONS

```
resolve: {
  extensions: ['.js', '.css', '.json', '.vue', '.jpg', '.png'],
  modules: [
    'node_modules'
  ],
  alias: {
    'vue$': 'vue/dist/vue.esm.js',
  }
},
```

```
module: {
  rules: [
    {
      test: /\.vue$/,
      loader: 'vue-loader',
      options: {
        loaders: {
          'scss': 'vue-style-loader!css-loader!sass-loader',
          'sass': 'vue-style-loader!css-loader!sass-loader?indentedSyntax'
        },
        hot: true
      }
    },
    {

      test: /\.js$/,
      exclude: /node_modules/,
      use: {
        loader: 'babel-loader',
        options: {
          presets: ['babel-preset-env']
        }
      }
    },
```

```javascript
{
  test: /\.css$/,
  use: [
    process.env.NODE_ENV !== 'production' ?
      'vue-style-loader' :
      MiniCssExtractPlugin.loader,
    'css-loader'
  ],
},
{

  test: /\.(png|jpg|gif|svg)$/,
  loader: 'file-loader',
  options: {
    name: 'img/[name].[ext]',
    objectAssign: 'Object.assign'
  },
}
]
},
```

```javascript
const VueLoaderPlugin = require('vue-loader/lib/plugin');
const HtmlWebpackPlugin = require('html-webpack-plugin');
const CleanWebpackPlugin = require('clean-webpack-plugin');
const MiniCssExtractPlugin = require('mini-css-extract-plugin');
```

```javascript
  plugins: [
    new HtmlWebpackPlugin({
      title: 'Sandbox application',
      template: 'html/index.html',
      filename: 'index.html',
      minify: true,
      appEntryID: 'app',
    }),
    new VueLoaderPlugin({
      transformAssetUrls: {
        video: ['src', 'poster'],
        source: 'src',
        img: 'src',
        image: 'xlink:href'
      }
    }),
    new webpack.NamedModulesPlugin(),
    new webpack.HotModuleReplacementPlugin(),
    new CleanWebpackPlugin(['dist']),
    new MiniCssExtractPlugin({
      filename: 'style.css'
    })
  ]
};
```

MAKING SURE EVERYTHING WORKS

```
~/Programming/zMisc/workshop-office-hours      master ●+      yarn build
yarn run v1.7.0
$ cross-env NODE_ENV=development webpack --config website/webpack.js --progress --hide-modules
clean-webpack-plugin: /Users/nlloyd-edelman/Programming/zMisc/workshop-office-hours/website/dist has been removed.
Hash: 572fa79510feee97d686
Version: webpack 4.16.1
Time: 3715ms
Built at: 07/17/2018 10:11:32 PM
      Asset         Size  Chunks           Chunk Names
 js/app.js      1.92 MiB     app  [emitted]  app
index.html    392 bytes         [emitted]
Child html-webpack-plugin for "index.html":
      1 asset
✨  Done in 5.29s.
```

DOCKERFILE

```dockerfile
FROM node:10.5.0-alpine

WORKDIR /src/

COPY package.json yarn.lock ./
COPY website/ ./website

CMD ["yarn", "build"]
```

.DOCKERIGNORE

```
.dockerignore                    A
```

DOCKER-COMPOSE.YML

```yaml
version: '3.6'
services:

  sandbox-app:
    container_name: 'sandbox-app'
    image: 'sandbox-app'
    build:
      context: .
      dockerfile: docker/app/Dockerfile
    environment:
      - NODE_ENV=development
      - VIRTUAL_HOST=local.sandbox.com
    volumes:
      - ./:/src:delegated
    ports:
      - '3000:3000'
    command: [yarn, 'hot']
```

Fin

Questions?