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Intro to Web Application Architecture

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Assignment 3

Students, Professors, Courses, and Sections using Ember

**Abstract/Executive Summary**

The purpose of this assignment is to create an application which would show the connections between students, professors, courses, and sections while creating the application using Ember.

Using Ember in a similar way to the other web architectures so far used created pages that display the list of each of the requested pieces of information.

There are some differences between Ember and the others used so far, a few of which take away from the appeal of Ember CLI when trying to create an application using an MVC architecture.

**Introduction**

The application that was created, called ‘University,’ used Ember CLI to modify the Ember portions of the application, and Sublime to modify the files directly.

Ember uses the port 4200 as the standard port when running the ember server.

Ember places heavy emphasis upon URL redirection, so each of the requested pieces of data are found at each of the branches matching their name, id: localhost:4200/student for students. These are managed with routes, a feature that is not in other MVC style architectures.

**Method/Measurement**

Ember CLI has become the supported method for creating and modifying web applications in Ember, per the ember.js website.

Because Ember CLI is still fairly recent it has not yet been optimized. There are lots of recommendations that it works better when using it as an administrator, and others recommend using it on systems that are not Windows.

Creating the application initially had a noticeable difference than previous architectures. The first few attempts failed, which may simply be attributed to what other services the system is running. The successful creation though took a great deal longer than other applications that were previously created with other systems.

Every aspect of Ember took a good deal more time than either Ruby on Rails, or Django. Creating routes, creating models, and even starting the server to run it on the local host took longer.

**Results**

Using the Ember Command Line Interface has issues with the functionality unless it is run from a command line that has been started as an administrator. It is stated to improve functionality, as well as improving efficiency.

Starting the server, and visiting the pages for each of the student, professor, courses, and sections, shows the lists that were created for each, displaying the test data in a list, while the model documents shows the linkage between each of these items.

**Additional Learning**

The way to create and use Ember has moved to Ember JS. I found using Ember JS to be a bit cumbersome, and clunky. This change occurred recently, so I do suspect that it will improve over time, but creating the application itself took much longer than the other web application architectures that I have used, Django and Ruby on Rails.

I did not see Ember as a true MVC architecture because you could both have files that were for the models, or create models directly from the routes files, which would then not use the model files at all. This seems to breakdown the MVC structure.

**Conclusion**

Creating the same assignment with this architecture was much more difficult, had a greater learning curve, and was not as pleasant as the previous architectures. It is functional, and displays the lists of students, professors, courses, and sections that were created within the routes files, while the model files display the one-to-one, or one-to-many relationships.

**Feedback for instructor**

Using Ember was much more difficult than RoR or Django, personally I have gained a like for Ruby on Rails and would enjoy getting to use it a bit more.

Trying to use an architecture that takes extended time is difficult to stay focused on the issue at hand. When you start it, it has to wait. On more than one occasion I did get distracted by other work, or simply forgetting that I was working on this project.

**Bibliography**

Informal

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