I spent my time this sprint researching and attempting to implement a CI/CD pipeline based on the recommendation of the professor. We had a meeting with him at the beginning of the sprint to discuss this and he laid out the concepts of having a dev environment and a staging environment. The first part of this was getting everyone set up with their own version of a local database that they could use for their dev environment. A copy of the local database that we got everyone set up with can be found in my sprint 4 documentation folder (memcombdb.mdf and memcombdb\_log.mdf). I used theses files that our group had already created to set everyone up with their own copy.

The second part of the sprint was to get the cd/ci pipeline set up. I knew nothing about it, so I had to do a lot of research about it. Below is a list of links to the sources that I have used so far:

This one had a list of different pipeline options that we could try. I decided that I would give the azure devops a try first and use the rest as backup.

<https://blog.elmah.io/comparing-the-top-6-net-continuous-integration-build-servers/>

I believe that all of the tutorials that I used to attempt to get our pipeline working:

https://www.azuredevopslabs.com/labs/vstsextend/azuredevopsprojectdotnet/

https://www.youtube.com/watch?v=4mlsTzOsppE

https://www.youtube.com/watch?v=NuYDAs3kNV8

https://www.youtube.com/watch?v=\_sUf0wqJYXo

https://www.youtube.com/watch?v=58UfRxxAWhE

https://www.youtube.com/watch?v=S90pG8zDlEA

List of all the links can also be found in the CDCI.txt file in the sprint 4 documentation folder.

I got the cdci pipeline working and I used the windows server that I created for a previous sprint to attempt to do onsite hosting. To do this I ran a script on the server that added the server to a resource pool of servers that I would be able to deploy to. The script can be found in the azure\_agent.txt file. Additionally, I have attached a screenshot of the pipeline that is successfully built and the release that has been deployed to the server. You can see them as release.PNG and pipelinebuild.PNG in the sprint 4 documentation folder.

I was then having issues with the IIS server that the pipeline was deploying to. The deployment was looking good, but I was unable to view the webpages on the server. I believe that this was due to how I had the server configured so I did more research on how to get a asp.net page to work on an IIS server. I am still currently trying to figure out the issues, but I am confident that I will get them sorted out in the next sprint. Here is a list of all the tutorials I used for trying to get the IIS server working:

https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/visual-studio-web-deployment/deploying-to-iis

https://docs.microsoft.com/en-us/visualstudio/deployment/deploying-applications-services-and-components-resources?view=vs-2019

https://docs.microsoft.com/en-us/aspnet/core/getting-started/?view=aspnetcore-3.1&tabs=windows

https://docs.microsoft.com/en-us/aspnet/core/tutorials/publish-to-iis?view=aspnetcore-3.1&tabs=visual-studio

<https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/visual-studio-web-deployment/deploying-to-iis>

You can also find them in the IIS\_Deploy.txt file.