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**What I Learned in My C# Class**

One year ago, I committed to learning an object-oriented language - C# in particular. I knew there would be plenty of opportunity to apply C# skills in my daily work as my company is using the Microsoft stack for its business systems. I learned as much as I could by watching videos, reading tutorials and trying out C# on my own. While it was easy to learn the basics of the language many OOP concepts eluded me. Additionally, it was very difficult to understand how to create a true client facing application instead of just simple example problems i.e. FizzBuzz. Since I had taken certificate courses from UW in the past I knew that the C# certificate offered would be valuable and very useful.

The first quarter, taught by Kevin Ingalls, was very helpful in clearing up some fuzzy understandings I had relating to OOP. I finally understood the difference between and abstract class/methods and an interface and, more importantly, understood when and why they are used. Additionally, I saw the value of using enums as opposed to a list of variables. The instruction relating to class extensions and custom exceptions was surprising as I did not know that was even possible at the time. It was very helpful for Kevin to point out along the way the “gothchas” in the C# language and provide methods for working around them. Kevin did a great job of explaining how to access and understand the .NET libraries as well as adding our own .dlls as library references. His handwritten illustrations were very useful in showing how variables related to their referenced objects. At the conclusion of the class he provided a great explanation of inheritance and polymorphism. I have reviewed the video many times since.

The second quarter was dedicated to creating more advanced client applications than the simple WinForms from the previous quarter. David Figge demonstrated WPF and showed some nice tools for creating forms rather quickly that can look nice with little effort. Under David’s instruction I began to understand that much of the focus for client applications is the handling of events. Databinding is essential for immediate feedback when something has been changed by the user. David elaborated on the importance of placing data into a structure that can be referenced within the application. Additionally, I was introduced to the concept of delegates and shown how useful they are in making the application flexible. While I already understood how to interact with an SQL database using ADO.NET I still pick up a couple things I didn’t know before.

The third and last quarter taught by Randal Root focused on creating C# based web applications. This course taught topics that were completely new to me and as such I learned much. I know understand the division between client side code and server side code: server side code goes out of scope almost immediately unless using the session variable. The differences (and similarities) between GET and POST were made very clear and how to differentiate between the two by using appropriate HTML tags and modifiers. Extending the function and behavior of the client side code is simple when using JQuery and is easy to download and install (or call dynamically) and can be augmented with JavaScript. The usage of debugging techniques make it easier to trouble shoot applications for both C# code and client side JavaScript and JQuery. I am confident that I can build dynamic data driven web application for my company’s internal needs.

This course has taught me many valuable skills. I have no doubt that what I learned will be useful for the remainder of my technology career.