

ACTIVITY DESCRIPTION

During the first week of my internship with Cloud9 Infosystems, I was asked to go through various online tutorials to learn C# and .NET technologies. I was asked to develop a small web application which had a functionality for user login and registration. I also had to document all the tutorials I had completed as well as the min-project which I worked upon. My main challenge when I was learning a new technology was understanding the syntax and making sure the program which I had developed was bug-free. To handle this challenge, I started going through the documentation and working my way by writing down the code on paper rather than directly typing the code on the screen. This helped me in getting accustomed to the syntax and understanding the new platform in a better and more productive way.

During the second week of my internship, I worked on creating REST API calls to trigger a Data Factory. The objective of this project was to make a REST API call to a Data Factory to get the data which was hosted in the cloud on to our local machine. My task was to create a REST API endpoint where the data will be displayed. Since I had not worked with project entirely based on REST APIs before, I had to spend a couple of days getting acquainted with the protocol and understanding the different standards followed by the protocol. The major problem which I encountered while working on this project was making sure that the data which was getting pulled from the Data Factory and the one getting displayed on the local machine was consistent. I was able to successfully complete and develop the REST API endpoints by referring to the Microsoft documentation based on REST API's to fulfill my responsibilities.

In the third week of the intern assignment, I was asked to develop an Image Carousel by using HTML, CSS, and jQuery for the company's portal to display the images of the events hosted by the firm. The images were to be displayed in an order of the most recent one's which were

hosted by the company. My task was to fetch the images stored in the database and format the fetched images so that they would fit perfectly within the specified dimensions of the carousel. The first major problem which I encountered was the Image URLs which were stored in the database didn't point to the exact location of the images. I had to fix that first before moving ahead with the rest of the module. The second major roadblock which I came across was displaying the images which I had fetched from the database to be formatted them in such a way that they would fit inside the carousel perfectly. For resolving the first roadblock I made sure that the naming of each Image URL followed a standard convention (Camel Casing Convention) so that there wouldn't be any discrepancy in fetching the images from the database in the future as well. For resolving the second discrepancy I provided a standard height and width dimensions to the carousel so that each image would have only the specified width and height.

The next project which was assigned to me was to add a sorting feature to the "Manage Employees" page in the Company's administrative portal. The sorting button would help in sorting the employees in ascending or descending order based on the names of employees and their date of joining. For implementing this feature, I used jQuery to select the column to be sorted, the list of employees was fetched from the database by making an AJAX call to the SQL database. The main problem which I faced while working for this project was that many employees had their names starting with the same initial letter, in that I had to sort them according to the second letter, in some rare cases I even had to sort the employees according to their last name. The task was successfully completed by designing a jQuery function with two AJAX calls made to the SQL database, one call was used for fetching the names of employees and the other for fetching the dates of joining of each employee.

In the third and Fourth week of the internship, I was assigned with a project to build an Image Gallery Application for our Admin Website. This module required me to develop a functionality where the user could upload the images to a blob container hosted in Azure. Also, the user had to be provided with an option to delete the already uploaded images which were present inside the Azure container. The images which were uploaded to the Azure container would be displayed on the company's main portal. I was responsible for creating a full working module of the application using the technologies (C# and .NET) which I had learnt during the first week of my internship with Cloud9 Infosystems Inc. I faced a total of three roadblocks while implementing this project. Firstly, when I tried uploading an image to the Azure blob container it wouldn't get posted on the cloud, although on my local machine the message would be shown as successful. I fixed this issue by providing a more specific connection string which was used to provide a gateway between the Azure blob container and my local server. The second issue which I faced while working on this project was the size of the images being displayed on the web page, all the images were of different dimensions. I resolved this bug by providing a standard thumbnail size to each of the displayed images. The third roadblock which I encountered while working on the module was while deleting an image. When an image was deleted from my local machine, the same image wouldn't be deleted in the Azure container. This issue was resolved when I provided the correct reference to the blob container in Azure cloud. I was able to carry out the task in a timely manner by taking reference from the online tutorials based on building scalable .NET applications and referring to the documentation written by senior developers from time to time.

ANALYSIS SECTION

During the first week of my internship, I got to learn the basics as well as the advanced concepts of C# and .NET programming. The user login and registration module which I developed in my first week provided me with a hands-on way of working with a technology and further helped in building a solid foundation to implement complex modules in the future. Working with C# also helped me in strengthening my Object-Oriented fundamentals. While working for the second module on REST API's I got the experience of designing a web service from a very basic level and integrating the same in a live project. Working on the image carousel project helped me in developing an understanding of using AJAX calls alongside jQuery and how to implement them in an optimal manner without affecting the integrity and consistency of the data stored in the SQL database. Working on my project to develop an image gallery I first got to learn the basics of Azure Cloud technology and how to deploy web applications in Azure. Secondly, it provided me with an experience of writing production level code by following standardized software engineering principals.

The experience of working with different web development languages such HTML, CSS, jQuery, Ajax etc. during the "Web Programming Languages" class which I had undertaken in my first semester played a vital role in implementing the projects in a successful manner. Also, the preliminary concepts of REST API which were introduced to me in the same class made it easier to develop REST API endpoints for the above specified project. My coursework in "Database Design" also provided me with a strong foundation in understanding of SQL databases and triggering queries for the same.

The experience of working with different web programming languages as well as the understanding of the .NET MVC framework would be beneficial in developing a full-scale software project which is a part of the "Object-Oriented Analysis and Design" course for the

upcoming semester. Also, the habit of documenting each module of the project during the internship would be helpful in keeping different projects and assignment well organized and being more productive in any small or big task I work upon during my coursework. The skills I learned during my internship are some of the most in-demand skills in today's job markets, these would increase my chances of getting a job as a software developer or full stack developer. Also, the coding principals and the development standards which were introduced to me during the internship would be of immense help when I work professionally as a software engineer.