CS 3305-01 Web Programming 2

Instructor: Professor Jim Casale

Name: Ryohei Hayashi

Learning Journal 3

**Summary of the Week**

This week, I focused on understanding the value of server-side programming and aimed to be able to use PHP at an intermediate level. I dedicated significant time to mastering the basics of PHP programming and compared its syntax and logic with other programming languages I have previously studied, including Java, C++, Python, and JavaScript. One of the key aspects of this comparison was understanding the differences and similarities in syntax structure, the handling of variables, and control flow between PHP and these other languages. I worked through practical coding exercises using Udemy tutorials, which allowed me to put theory into practice and see firsthand how PHP functions in various scenarios. Additionally, I focused on setting up a local environment using MAMP to practice server-side programming with PHP. Although this setup process presented some challenges, successfully configuring the local environment helped me better understand the tools and processes required for running PHP-based applications on a server.

In addition to learning the technical aspects of PHP, I explored how PHP is used in real-world applications today. I discovered that PHP plays a critical role in the development of dynamic websites and web applications, making it an essential skill for backend developers. Specifically, PHP is often employed for tasks such as form processing, session management, and database interaction, all of which are necessary for building responsive and functional websites. Furthermore, I learned that popular content management systems (CMS) like WordPress, which powers a significant portion of the world’s websites, are built using PHP. This gave me a broader understanding of the practical applications of PHP and highlighted its importance in the current web development landscape. The knowledge that PHP supports such widely-used platforms helped solidify my motivation to continue learning and improving my skills in this language.

**Personal Reflections**

Throughout this week’s learning experience, I realized that the fundamental concepts of PHP were not entirely new to me, as they closely align with other programming languages I have learned. For example, PHP shares several similarities with JavaScript, particularly in terms of how it handles variables, loops, and functions. This allowed me to apply my prior knowledge and move through the lessons more efficiently. However, despite the familiarity, I encountered challenges when it came to setting up a local environment for running PHP scripts. When using MAMP, I faced issues with Apache not starting as expected. To resolve this, I had to revert to an older version of MAMP and make specific configuration changes, which reminded me that understanding the technical setup is just as important as writing clean code.

Moreover, after successfully completing the exercises and projects in the Udemy tutorial, I felt a strong sense of accomplishment. The act of creating a functional deliverable using PHP made the learning process more concrete, as I could see the tangible results of my efforts. Additionally, while following the tutorial, I took the initiative to modify certain parts of the code to deepen my understanding of the concepts. By experimenting with different approaches, I gained a more in-depth perspective on how PHP operates, which in turn strengthened my confidence in my programming abilities. This sense of achievement was motivating and encouraged me to explore more complex PHP projects in the future.

**Topics Studied in Depth**

This week, I delved deeper into the core syntax and structures of PHP, particularly its similarities and differences with other languages. I focused on the handling of variables, functions, and arrays, which are foundational components of PHP. My experience with JavaScript proved especially helpful, as both languages share similar patterns in how they manage data and control flow. In addition to following the Udemy tutorial, I also engaged in troubleshooting challenges related to setting up my local development environment, which further contributed to my technical growth. These troubleshooting exercises provided me with valuable experience in problem-solving, as I had to identify and fix issues that arose during the environment setup.

**Future Challenges and Goals for Next Week**

Looking ahead to next week, I plan to expand my knowledge of PHP by exploring its integration with databases. Specifically, I aim to learn how to connect PHP with MySQL, which is a critical skill for building dynamic, data-driven applications. Additionally, I plan to practice generating dynamic content, such as images and PDF files, using PHP in conjunction with a database. These tasks will allow me to apply what I have learned about server-side programming in more complex, real-world scenarios. I also intend to continue improving my understanding of advanced PHP functions, focusing on best practices for code efficiency and security. Lastly, I will deepen my understanding of local environment setup, ensuring that I can quickly resolve any issues that arise, thereby improving my workflow as I continue to develop more sophisticated PHP projects.

Word Count: 795