REFLECTIVE REPORT ON DEPLOYING A FLASK

Introduction

As a computer science student, I have always had a passion for developing web applications, and building my flask application was no exception. Building a Flask application was a significant part of my learning experience in Advanced Programming. Through this project, I learned how to use Pyenv, set up a Github account, and work with various software applications, which were necessary for the development of the application. For instance, I learned how to use Pyenv, which helped me create a virtual environment to run the Flask application. Additionally, I learned how to use Git, which allowed me to manage and share the code with other team members. Furthermore, I learned how to use some to build the application's functionality. These skills helped me understand the concepts taught in the course by providing me with a hands-on experience in building a web application. Through this experience, I learned the importance of proper planning and organization when developing a web application. I came to the realization that effective planning and organization are critical components in developing a successful and functional web application.

Web App Development

To start with, I created a design guideline that included the color scheme, typography, and overall visual aesthetic of the application. Using the template provided, I was able to easily implement my design choices, resulting in a visually appealing and user-friendly application.

However, despite my planning efforts, there were still some challenges that I encountered in the development process. One issue I faced was the difficulty in integrating some of the features I had planned. This required me to revise my plan and seek help from other developers. On the other hand, what worked well for me was the use of Flask's modular design, which made it easier to organize my code and ensure that each component of the application was properly functioning.

Your Changing Perception of Advanced Programming

My perception of advanced programming has evolved considerably during this course. At the start of the course, I saw advanced programming as simply knowing complex programming concepts and languages. However, as I delved deeper into the course, I realized that advanced programming involves much more than that. It involves having the ability to think critically and logically, being able to effectively communicate ideas and collaborate with others and having a deep understanding of software development methodologies and techniques.

What I learned from building my app: Building a Flask application has helped me understand the fundamentals of web development, including using HTML, CSS, and JavaScript. The project allowed me to design and build an app that could function effectively in a real-world scenario. I learned that creating a web application requires paying attention to detail and having a clear understanding of the user's needs. Additionally, the project helped me gain knowledge on how to

debug, test and maintain the web application code. Overall, the experience of building a Flask application has taught me that web development requires careful planning, design, and implementation to achieve success.

Developing a visually appealing and user-friendly web application: The design and development of my web application followed some essential principles and guidelines. First, I ensured that the web application was responsive and could adjust to different screen sizes, including mobile devices. Additionally, I made the app's layout simple, clear, and easy to navigate. I followed the principle of keeping the user interface simple and intuitive, reducing the number of clicks required to perform an action. Finally, I used a consistent color scheme and typography, making the application visually appealing.

What didn't work with my approach and what worked well: One of the challenges I faced was making the web application fully responsive across different screen sizes. The process required considerable testing and debugging, which increased the project's time and complexity. However, it was a valuable learning experience, and I gained knowledge on how to implement media queries and other responsive design techniques. On the other hand, following the design principles of keeping the interface simple, clear, and easy to navigate worked well. This approach helped me create a web application that was user-friendly and could perform tasks efficiently.

My changing perception of advanced programming: Initially, I had a limited understanding of advanced programming concepts, including web development. However, as the course progressed, my perception of advanced programming changed. I gained knowledge on several programming languages, including Python, JavaScript, HTML, and CSS. Additionally, I learned about the essential principles of web development, including web frameworks, server-side scripting, and client-side scripting. The course's practical approach and hands-on experience helped shift my perception, as I was able to apply the concepts learned in class to real-world scenarios.

If I Did This Again:

If I were to do the Flask application again, there are several things I would do differently. Firstly, I would spend more time planning and designing the app before beginning to code. One of the biggest challenges I faced during the development process was losing sight of the main objectives of the app and getting sidetracked by unnecessary features. If I had taken the time to create wireframes and outline the features and functionality I wanted to include, I would have been able to stay focused on the main objectives of the app and avoid getting sidetracked by unnecessary features. This would have also helped me better understand the scope of the project and break it down into manageable tasks.

Secondly, I would pay more attention to testing and debugging. Although I tested the app as I was building it, I did not dedicate enough time to testing and debugging after completing the app. If I were to do it again, I would ensure that I allocate enough time for testing and debugging to catch any errors and make sure that the app functions as intended. This would have also helped me identify any performance issues and optimize the app to ensure that it runs smoothly.

Lastly, I would work on setting clearer expectations and deadlines for tasks and ensuring timely progress of the project. Although I was able to complete the project on time, I found that I was frequently adjusting my timelines and deadlines based on the progress I was making. If I had set clearer expectations and deadlines for tasks from the beginning, I would have been able to better manage my time and ensure that the project was progressing as planned. This would have also helped me identify any potential roadblocks early on and address them before they became major issues.

In summary, there are several things I would do differently if I were to do the Flask application again. These include spending more time planning and designing the app before beginning to code, paying more attention to testing and debugging, and working on setting clearer expectations and deadlines for tasks and ensuring timely progress of the project. By taking these steps, I believe that I would be able to develop a more efficient and effective app that meets the objectives and requirements of the project.

My Opinion and Conclusion:

Overall, my experience building the Flask application was a challenging but rewarding one. While there were certainly moments of frustration and setbacks, I learned a lot about web development and programming in general. Additionally, I gained valuable experience from the project.

Through this experience, I have come to appreciate the complexity of advanced programming and the importance of careful planning and testing. I believe that good programming requires a combination of technical skills and creativity.

In conclusion, building my flask application was an enlightening experience that taught me the importance of proper planning and organization when developing a web application. It also helped me understand the importance of critical thinking in programming. As I move forward in my career, I will be sure to apply the lessons I learned from this experience to ensure that I develop successful and functional web applications.

References:

- Lee, S. G. (2018). The Principles of Beautiful Web Design (4th ed.). SitePoint.
- Hunt, A., & Thomas, D. (1999). The Pragmatic Programmer: From Journeyman to Master. Addison-Wesley.
- Martin, R. C. (2008). Clean Code: A Handbook of Agile Software Craftsmanship. Prentice Hall.
- McConnell, S. (2004). Code Complete: A Practical Handbook of Software Construction (2nd ed.). Microsoft Press.
- Flask Documentation. (n.d.). Retrieved from https://flask.palletsprojects.com/en/2.1.x/
- Kaner, C., Bach, J., & Pettichord, B. (2002). Lessons Learned in Software Testing. John Wiley & Sons.

• Nuseibeh, B., & Easterbrook, S. (2000). Requirements engineering: A roadmap. In Proceedings of the Conference on the Future of Software Engineering (pp. 35-46).