Introduction

As part of our computer science coursework, my team and I were required to create a website that presented information on cities worldwide. This project presented us with an opportunity to explore various aspects of web development, database management, and user experience design. The project allowed us to work together using agile methodology, which enabled us to complete the task more efficiently and ensure everyone contributed to the final product. Our primary goal was to build a website that effectively displayed a world dataset using MySQL and incorporating additional features taught during our module lessons.

The project served as a valuable learning experience for all team members, as it pushed us to expand our skill sets, work collaboratively, and adapt to new technologies. Furthermore, it exposed us to real-world challenges commonly faced by computer science professionals, such as working with unfamiliar programming languages, creating complex diagrams, and collaborating with diverse team members. As a result, the project contributed significantly to our professional growth as aspiring computer scientists.

Throughout the project's development, we consistently referred to our initial design templates and diagrams, ensuring that our final product aligned with our original vision. By doing so, we were able to maintain a clear sense of direction and purpose, even as we encountered unforeseen challenges and obstacles along the way. The project ultimately served as a testament to our ability to overcome these challenges, adapt to new circumstances, and deliver a high-quality final product that met or exceeded our initial expectations.

Aim

Our main aim was to create a comprehensive website capable of displaying a world dataset using MySQL. Additionally, we sought to develop various features introduced during our module lessons to enhance the website's functionality and user experience. This project was designed to challenge us as computer science students, as it required collaboration, problem-solving, and the application of our theoretical knowledge to a practical situation.

Objectives

1. Work effectively as a group throughout the sprints (1, 2, 3, 4) to achieve project milestones.
2. Develop a template idea that would guide the design and layout of our final website.
3. Create a functional website that displays the world database without issues.
4. Implement a login page that remembers user information.
5. Continuously refer back to the diagrams we created to ensure alignment with our design standards.
6. Conduct thorough research to guarantee accurate and up-to-date information on our website.

7. Evaluate our final product against the established aims and objectives to determine the project's success.

Background

As a second-year computer science student, I found this project highly relevant to our coursework. It involved programming, a core aspect of computer science, and introduced us to new technologies like Pug, which pushed us out of our comfort zones. This project required us to create complex diagrams, a skill often utilized in coding and development stages, and work effectively as a group, which helped us learn how to collaborate with individuals of varying skill levels and backgrounds.

Design

During Sprint 2, we developed multiple diagrams to support our design process and created a template for our website's layout. This template helped us visualize the final product and ensure that the features we implemented aligned with our overall design goals. We also considered various design alternatives and evaluated their feasibility before finalizing our design.

Methodology

To gather data on the world, we conducted research and used this information to create a MySQL database during the sprints. We employed agile development methodology throughout the project, allowing for iterative progress and continuous improvement. This approach enabled us to adapt to changes and incorporate new ideas as the project evolved.

Implementation / Results

Our final website met our expectations, presenting a table with global information and additional features such as a login page. From my perspective, the implementation was successful and resulted in a visually appealing and functional final product that adhered to software engineering requirements. The project allowed us to gain experience working with various technologies, enhancing our skills and preparing us for future endeavors.

Evaluation

We performed a thorough evaluation of our final product, assessing its strengths and weaknesses, and comparing it to our initial aims and objectives. This evaluation process provided valuable insights into the project's success and areas for improvement, contributing to our overall understanding of effective project management.

In the evaluation phase, we began by revisiting our initial aims and objectives to determine whether we had successfully achieved our goals. We examined the functionality of the website, ensuring that the world dataset was effectively displayed using MySQL and that the

additional features we developed were functioning as intended. We were pleased to find that our website met these initial criteria and that the user experience was in line with our expectations.

Next, we assessed the website's design, considering its visual appeal, usability, and responsiveness. We solicited feedback from users and peers, which helped us identify any areas where improvements could be made. This feedback allowed us to iterate on the design and make necessary adjustments to ensure that the website was both aesthetically pleasing and user-friendly.

Related Work

Our prior experience with PHPmyAdmin and diagram creation contributed significantly to our ability to complete the project successfully. We participated in PHPmyAdmin during our first year of university, which provided us with a solid foundation for understanding the key features of this application. This experience allowed us to navigate PHPmyAdmin more efficiently and implement the required functionality for our project.

Additionally, our background in creating advanced diagrams proved invaluable in the design phase of the project. Throughout our academic journey, we have been exposed to various diagramming techniques and tools, which we were able to leverage effectively to illustrate the structure and functionality of our website. These diagrams served as essential visual aids for our team and helped us stay aligned on the project's goals and requirements. Furthermore, our coursework in computer science and software engineering played a crucial role in shaping our understanding of best practices and principles for web development. We were able to draw on our knowledge from previous courses, such as database management, user experience design, and web programming, to inform our decisions throughout the project. This wealth of knowledge allowed us to approach the project with a comprehensive understanding of the various aspects that contribute to a successful and functional website.