

Project Documentation:

Tournament_Students - Tournament Scoring System

Overview

The Tournament_Students project is a web-based scoring system designed for student activities competitions, including events like running races and quizzes. This platform enables participants to register, log in, view their profiles, and track their scores, which are displayed on a leaderboard.

Technologies Used

- Frontend: HTML, Tailwind CSS
- Backend: PHP
- Styling: Tailwind CSS
- Build Tools: Node.js for managing dependencies and build processes

Software Development Life Cycle (SDLC)

The Software Development Life Cycle (SDLC) was a key framework for building Tournament_Students, helping to manage each stage of development effectively, from initial planning to ongoing maintenance.

Key SDLC Phases Applied

1. Planning
 - Defined the project scope and objectives, such as implementing user registration, score tracking, leaderboard functionality, and profile management. This phase provided a clear roadmap for development and set the project's direction.
2. Requirements Analysis
 - Requirements were gathered and analyzed to ensure Tournament_Students meets user needs. This phase identified core features like scoring, leaderboard displays, user authentication, and event details, laying a solid foundation for the project.
3. Design
 - Created a modular system architecture with a well-structured folder organization, allowing for scalable and maintainable code. This phase involved planning each component's layout, including front-end and back-end integration.
4. Development
 - Implemented the design using PHP for backend logic and Tailwind CSS for styling. Key pages, such as Quiz_PHP.php and Profile.php, were developed independently, ensuring modularity and ease of maintenance.
5. Testing

- Conducted thorough testing to verify that all components function correctly, including user login, score submission, and leaderboard updates. Both functional and usability testing helped enhance the system's stability and user experience.
6. **Deployment**
- Configured the project on a server, setting up necessary databases and ensuring seamless access via a web host or local environment. This phase made the application available for users, allowing them to participate in competitions and view their scores.
7. **Maintenance**
- Ongoing maintenance includes updating the application as needed, addressing issues, and adding features. The modular design enables easy adjustments to scoring methods or additional events as requirements evolve.

Benefits of Using SDLC in the Project

- **Enhanced Project Management:** The SDLC provided a structured approach, making it easier to track progress and complete each phase with a clear focus.
- **Improved Quality Assurance:** Testing at each phase minimized errors, resulting in a stable and user-friendly system.
- **Scalability and Flexibility:** The modular design allows for future expansion without significant restructuring.
- **Risk Reduction:** SDLC reduced unexpected issues, particularly in critical features like score tracking and authentication.

Using SDLC in Tournament_Students enabled the development of a robust, functional, and adaptable scoring system that meets user needs effectively.

Folder Structure

1. Root Directory

- **.vscode/** - VS Code configuration files.
- **assets/** - Contains static files (e.g., images, icons) used across the site.
- **CodeSnap/** - Likely used for code snippets or development assets.
- **includes/** - Holds reusable PHP include files, such as configuration files.
- **node_modules/** - Managed dependencies, including Tailwind CSS.
- **test/** - May contain test scripts for project components.

2. public/

- **handlers/** - PHP scripts that handle backend tasks like form submissions and database interactions.
- **layouts/** - Contains core pages and components:
 - **nav.php** - Structure for navigation bar.
 - **Home.php** - Homepage layout.
 - **index.php** - Main entry file for loading assets and components.
 - **leadBored.php** - Displays leaderboard rankings and scores.

- **Profile.php** - User profile page for updating information.
- **Quiz_PHP.php** - Manages quiz functionality and scoring.
- **SignUp.php** - User registration page.
- **tournament_details.php** - Displays details about events, schedules, and descriptions.

3. src/

- Contains additional scripts or code modules supporting the application.

4. Configuration and Build Files

- **package.json & package-lock.json** - Project dependencies.
- **postcss.config.js & tailwind.config.js** - Tailwind CSS configuration files.
- **LICENSE** - Licensing information for the project.