

Shortcomings/Wishlist Document, PyQuest Capstone II

1. Introduction

This document outlines the known limitations of the PyQuest project and identifies potential enhancements that could be implemented in future versions.

2. Current Shortcomings

2.1 Limited Educational Content

The current version of PyQuest contains a limited number of challenges and learning scenarios. Expanding the educational content would improve long-term engagement and learning outcomes.

2.2 Lack of Persistent User Accounts

Although the interface includes login and sign-up components, full backend authentication and persistent user account storage are not implemented in this version.

2.3 No Progress Persistence

Player progress is not saved between sessions. When the browser is closed or refreshed, the user must restart the game.

2.4 Basic User Interface Feedback

The current user interface provides basic feedback. More detailed visual and textual feedback could improve the learning experience.

3. Wishlist and Future Enhancements

3.1 Expanded Curriculum

Future versions of PyQuest could include additional programming concepts such as loops, conditionals, functions, and data structures.

3.2 Backend Integration

Implementing a backend database would enable secure user authentication, saved progress, and personalized learning paths.

3.3 Enhanced Visual and Audio Design

Future improvements could include animations, sound effects, background music, and improved visual transitions.

3.4 Mobile Optimization

Optimizing the application for mobile and tablet devices would increase accessibility and usability.

3.5 Analytics and Reporting

Future versions could track user performance and progress to provide insights for learners and instructors.

4. Conclusion

While PyQuest successfully demonstrates the concept of a game-based learning platform, addressing these shortcomings and implementing wishlist features would significantly enhance the project's educational value and scalability.