

# Western Pennsylvania Bible Quizzing

## Executive Summary

### Community Partner

Tim Daigle

### Consulting Team

Christine Kim

Ricky Ma

Gabriela Tellez

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## Project Description

### Project Opportunity

The main concern that Western Pennsylvania Bible Quizzing faced was the issue of sustainability over time. The first issue of sustainability was through the organization's technological platforms. The original Quiz Generator application ran on an outdated software that could cause future unsolvable issues and bugs as dependencies become deprecated. The second issue of sustainability was through student engagement. The popularity of Bible quizzing has been decreasing in the past few years, meaning that less students are getting exposure to the study of Scripture. Solving this issue would help Bible Quizzing expand so that more children are able to partake in this program. Since a large part of Bible quizzing also involves team building and unity, it is important to help Bible Quizzing to grow their vibrant community.

### Project Vision

The proposed solution consisted of three main parts. The first and most essential part of the plan was to update the Quiz Generator application to the latest version of Rails. Additionally, interactions in the interface needed to be implemented since some were originally missing, requiring the developer to directly interact with the database console to execute those specific functionalities. Following this portion of the project, the next planned aspect of the project was to create an API for the Quiz Generator, which would allow for users to create quizzes with questions without having to interact with the interface. The final part of the plan was a central website for all the information pertinent to users, as WPA Bible Quizzing did not have such a website. Integrating the API with this site would allow quizzers to create practice quizzes without needing to interact with the interface.

The primary stakeholders for this project would be Tim, Prof H, and the rest of the leadership board that manages Western PA, along with the coaches, quizzers, and churches who participate in the program. The value of the solution is that it would greatly improve the sustainability of the organization, improving the ease of maintenance and accessibility through the Quiz Generator and API, and accessibility of information to all users through the central site.

## Project Outcomes

The completed outcomes consist of the Quiz Generator application, Quiz Generator API, and central website. The focus of the first portion of the project was to update the software and syntax of the original Quiz Generator application used by the organization, in addition to adding some

functionalities to the interface to allow users to create new quizzing sections, quiz years, and year books. This was specifically needed as this process was originally done directly in the database console. This particular solution allows non-technical users to be able to carry out these operations as well. The Quiz Generator API allows external users to generate a quiz just from providing a title, data, number of quizzes, new sections, and review sections to include in the quiz. This will allow future applications to access and generate quizzes. Finally, the last part of the project outcomes is a central website, consisting of 19 pages, providing stakeholders of the organization with quizzing resources, announcements, and opportunity to interact with other users through discussion boards.

## **Project Deliverables**

The deliverables for this project include the three parts of the solution discussed previously. Those being the Quiz Generator application, Quiz Generator API, and the central website. Our community partner has been given all login credentials needed to have administrative access to Quiz Generator and the central site. For the sake of future maintenance and development, the Github repositories for the Quiz Generator application and API have been given to our community partner. Additionally, to assist future users of the solutions, user manuals for each solution have been provided. Documentation for future maintenance and development has also been provided, in addition to a list of outstanding issues. Finally, each of the crucial features of each part of the solution has been presented to our community partner.

## **Recommendations**

Moving forward, the team recommends that WPA Bible Quizzing continue to invest in increasing engagement on the centralized website. This can be accomplished by continuously creating discussion posts to allow students to engage with one another and with the Bible. This will support their mission, which is to connect students with God by expanding their knowledge of the Bible. It will also help get students more excited and involved with Bible Quizzing outside of the weekly practices, increasing the popularity of Bible Quizzing. Our team recommends that WPA continues to evolve its technology to continue to reach more quizzers. The API will allow future developers to create an app or website that will further engage students through alternative types of media.

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## **Consulting Team**

**Christine Kim** focused on the design aspects of the solution but also contributed to the technical aspects of the project as well, including wireframing, creating the design for the central site, and backend testing. She is a fourth-year student majoring in Information Systems with an additional major in Human Computer Interaction.

**Ricky Ma** focused on the more technical parts of the solution, including developing the multiple PDF generating functionality for the Quiz Generator application, backend testing, and the creation of announcements and discussion boards for the central site. Ricky is a third-year student majoring in Information Systems with a minor in Human Computer Interaction.

**Gabriela Tellez** also focused on the more technical parts of the solution, including backend testing, developing an API for the main system, and integrating that API into the created central site. She is a fourth-year student majoring in Information Systems with a minor in Engineering Studies.