

Team 2 - Project 3

Software Architecture

For simplicity, we are using a 3-tier software architecture to prototype our application. We want it to be easy to access and complete questionnaires *and* easy for us and anyone else to add new questionnaires by passing a file with information about the questionnaire arranged in a specific format. The easiest way to allow our program to create quizzes using templated information is by separating the program's functionality from the unique information within each questionnaire. Similarly, the simplest way to have an interface that the user and the program interact with is to separate the functionality of creating questionnaires and questions from the interface the user interacts with within the home screen or a question screen.

Separating the workflow into three tiers is natural for this use case. It allows us to write the least amount of code to make infinitely many questionnaires is to have a framework with predefined templates for creating new questionnaires, passing in information in a way that the framework is designed to understand each time we want to add a new quiz and have the interface represent any updates in the number of questionnaires and the content being displayed while taking a questionnaire. Each time a new questionnaire is added, the number of questionnaires is updated, and the home page shows the questionnaire in a new button that begins the new questionnaire if clicked. Each time a user answers a question within the questionnaire, the latest data is updated within the new questionnaire instance, editing the final result, which is displayed to the user upon the quiz.