

QuizPower: App Inventor and XAMPP Service Integration

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Motivation

- Retrieval is key to promoting meaningful, long-term learning [1]
- An effective learning activity that incorporates active retrieval is self-quizzing
- Yet learners are not fond of practicing quiz questions

Project Goal

Develop QuizPower app to:

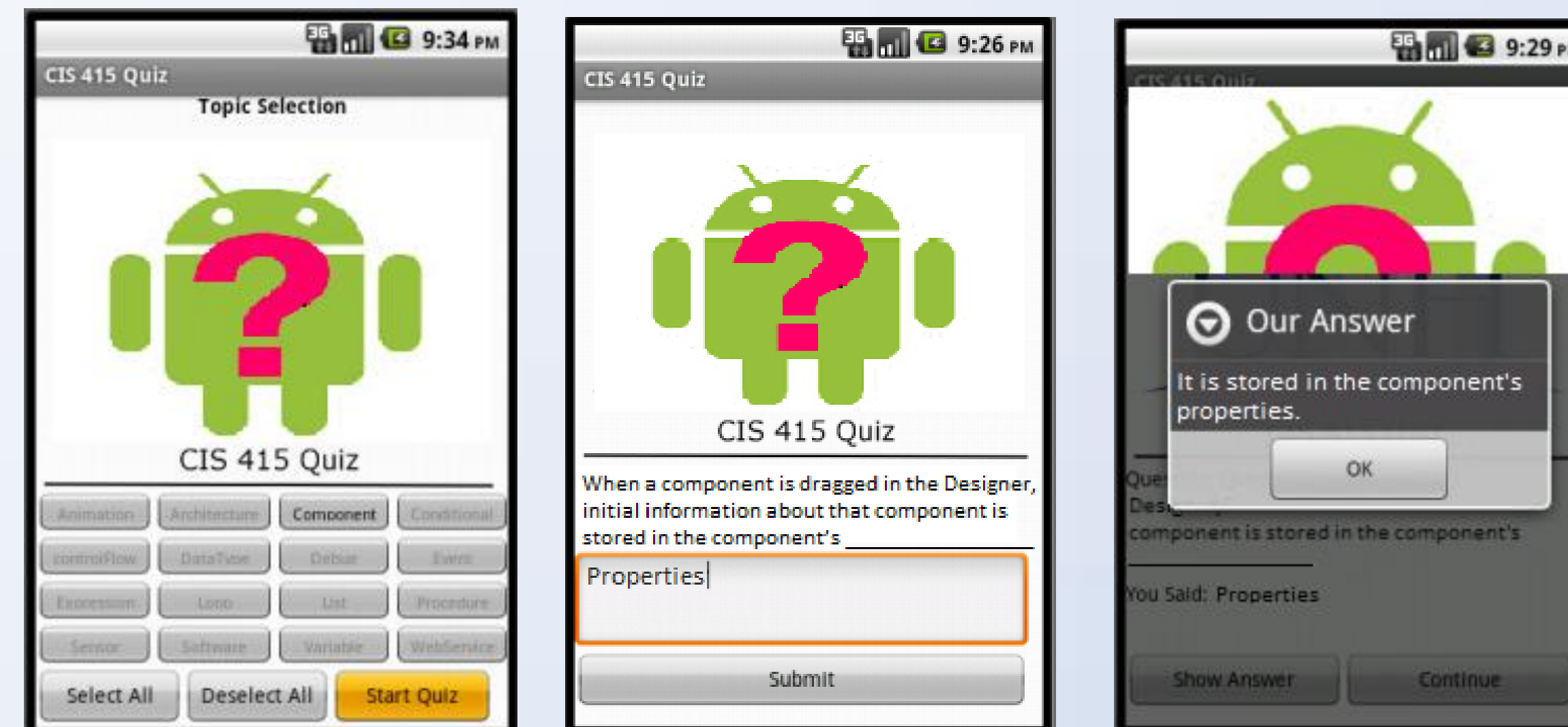
- Guide students to practice with test questions
- Have app exemplar of a creative project with educational relevance in COMP 415 course [2]

Objectives

- Create an interactive quiz mobile app to help students study mobile computing concepts and terms
- Develop QuizPower in App Inventor
- Organize questions by topics in a web data store

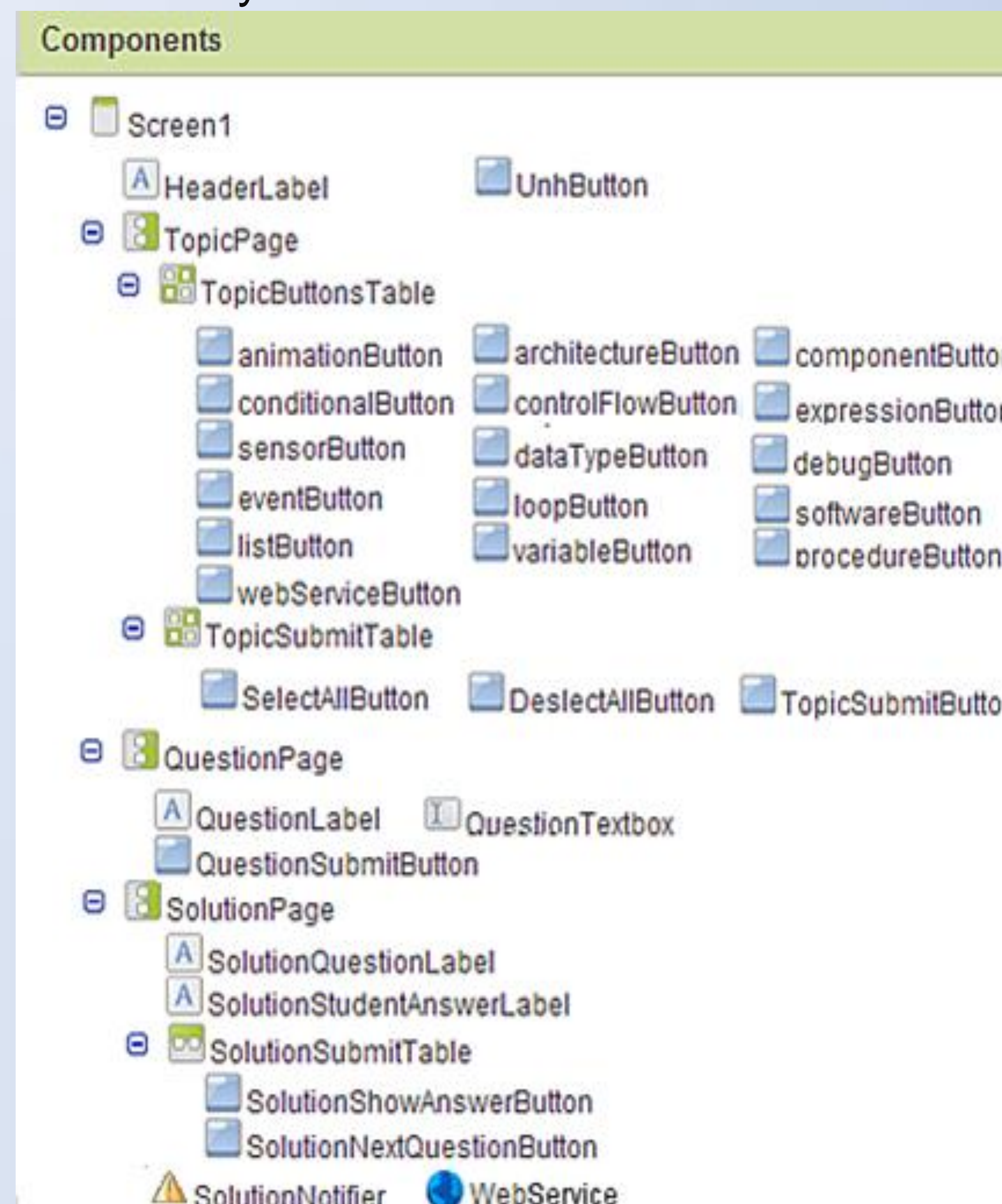
Approach/Methods

- Ten-week agile development process (Spring 2013)
- Two developers: tech consultant in Computing Technology (CIS senior) and course instructor
- Over 80 questions organized by 16 categories (source: COMP 415 worksheets)
- Feedback from 15 students in COMP 415
- MySQL web data store
- Integration of App Inventor and XAMPP services



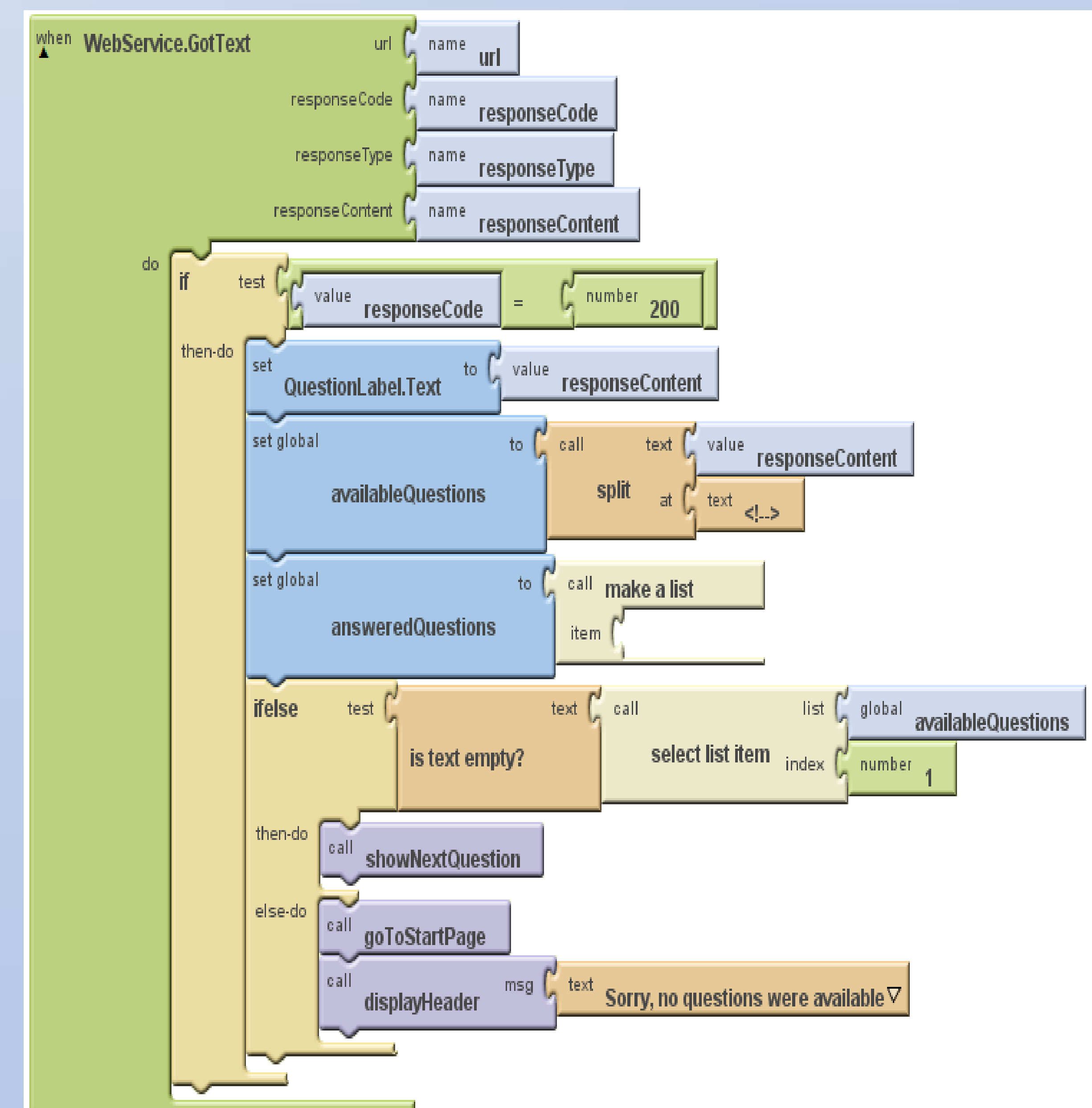
User Experience

- Select topics to create question list
- Retrieve questions in random order
- Self-assess answer quality to remove question from further study if answered correctly



Implementation

- get() method and getText() event handler of the **WebService** components (**Web** type)
- **category** and **question** relational tables
- Web service and data store deployed with XAMPP run-time environment
- PHP script sends back text stream with question list



References

- [1] Karpicke, J. D., & Roediger, H. L. (2008). The critical importance of retrieval for learning. *Science*, 319, 966–968.
- [2] University of New Hampshire. (2013). COMP 415 Mobile Computing First and For Most