SWE Objectives, Correspondences, and Purpose

Project Description:

OMM Questionnaire Study Bank
Lenny Powell, MD

Overall Osteopathic Manipulative Medicine board exam scores for Rowan University students could use improvement. Students currently get test questions in the form of word documents and do not have an easy way to study and track their progress. This web application aims to offer an easy to use and efficient way of studying in order to fix this problem.

The main outcome will be delivering a complete and scalable application that can be easily used by both students and faculty members. Scalability will be measured through proper design principles and extensive testing.

The deliverables for this project include:
- Initial application layout design
- Working prototype
- Testing results
- Finished application

The milestones for the deliverables are:
- Design the initial layout for the application
- Get a working prototype
- Continuously report tests on features and application performance.
- Have a finished scalable application.

Since this application will be used by students there will be high levels of traffic. Inability to properly test and evaluate performance could influence both the projects' deliverables and schedule. Not having feedback on UI elements from the students that will be using the application can influence the final UI design. Integrating Rowan technology could impact the project Schedule based on communication and ease of integration.

Project Scope
- Revise existing Flutter OMM application to include additional features
  - Text highlighting
  - Text strikethrough
  - Other TBD
- Provide security alternatives for an AWS production environment.

Project Description Summary

The project is focused on creating the "OMM Questionnaire Study Bank" to help students studying for the osteopathic manipulative medicine board exam. Currently, Rowan University students use word documents for test questions, but it's not efficient for studying or tracking progress. The goal is to develop a scalable web application using Flutter to make studying easier and more organized. The main objectives include creating an initial layout design, a prototype, testing, security, and incorporating features like text highlighting and strikethrough.

The purpose of the project is to help Rowan University students study more effectively for the osteopathic manipulative medicine board exam. We aim to revise an existing Flutter application and add new features like text highlighting, strikethrough, and improved tracking of test progress. Currently, students use word documents or Google Forms for questions, so this web app aims to improve access and enhance the study process, making it more efficient for both students and faculty.

The project includes several key deliverables: an initial design, a working prototype, testing, and a final, scalable app. The app will need to handle high traffic and implement security measures like AWS security and protection against SQL injections. Collaborating with project stakeholders, we will address questions about functionality, assets, device compatibility, features, and UI integration. The main goal is to develop the "OMM Questionnaire Study Bank," which supports Rowan University students in preparing for the osteopathic manipulative medicine board exam.

The goal of the project is to revise an existing Flutter OMM application, adding features like text highlighting and strikethrough, among others. Additionally, we'll be focusing on providing security solutions for the AWS production environment, ensuring that the application is both scalable and secure. The aim is to create an efficient and complete study platform for students. For initial steps, meetings with the team, including some key members, will help clarify further details and alignment.

The purpose of the project is to enhance the existing OMM study bank application by adding features like better viewing stats, saving tests, and improved highlighting with strikeout using mouse clicks. It's also crucial to ensure database security to prevent SQL injections, with proper documentation of database changes. The goal is to help students study more efficiently for their osteopathic manipulative medicine board exams, while maintaining a secure and scalable performance for the application. We'll clarify additional details with the client as needed.

The purpose of the project is to enhance an existing OMM study bank application by adding features to help students study more efficiently for their osteopathic manipulative medicine board exams, while ensuring that the app remains secure and scalable. It's also an opportunity to gain hands-on experience in building and scaling a mobile/web application using Flutter, AWS, and secure design practices. Throughout the process, we'll communicate with stakeholders to ensure the deliverables meet the project's goals.

It sounds like our overall purpose is to transform the current study method for OMM board exam questions into a modern, scalable, and secure web application. Here's a breakdown of our main objectives:

1. Improve the Study Process:
    - Replace static Word documents (or disparate Google Forms) with a centralized, interactive study bank that allows students to easily access and track their progress.
2. Enhance User Experience:
    - Revise the existing Flutter application to include new features such as text highlighting, strikethrough, improved viewing of statistics, and a more attractive interface for reviewing past tests.
    - Ensure that the user interface is intuitive and meets the needs of both students and faculty.
3. Ensure Scalability and Security:

- Design the application using proper principles so that it can handle high traffic and be scalable as user numbers grow.
- Implement robust security measures (especially within the AWS environment and the database) to protect against vulnerabilities like SQL injections.

4. Deliver a Complete, Well-Documented Product:
   - Deliverables include an initial design, a working prototype, testing results, and the final application.
   - Document all changes—minor database tweaks and major architectural shifts—with clear records (including ER diagrams when necessary).

5. Collaborate Effectively with Stakeholders:
   - Work closely with Dr. Lenny Powell, Sean McKay, and other project sponsors to ensure that the final product meets the actual needs of its users.
   - Clarify any questions regarding assets, feature prioritization, device support, and the specifics of the new functionalities (e.g., how highlighting and strikeouts should work).

Initial Correspondence:

"Tuesday" 12:30
Zoom Meeting: Include sponsors, team members, and myself

Dr. Leonard (Lenny) Powell:
powellle@rowan.edu

Sean McKay (Application Creator): seanmckay46@gmail.com

From Lenny:

> With regard to the development of the geriatric medicine question bank, I'm including three google form links which I am currently using:
>
> **Geriatrics Clerkship Practice Questions:**
> https://forms.gle/Z4NZdoTs6wrpnJvK9
> **Lifespans Geriatrics Practice Questions:**
> https://forms.gle/Sv3yasM7KcrhnkNy7
> **Geriatrics and Palliative Care Practice Questions:**
> https://forms.gle/MRcFdMGaLvn9mcTCA
>
> **These can really all be included in one bank**. There are questions that overlap between Lifespans Geriatrics and Geriatrics and Palliative Care Practice Questions as these courses are offered to different cohorts of the second year students whereas the clerkship is offered to the third year students.
>
> **Areas of question categorization would be:**
> - urinary incontinence and pressure ulcers
> - comprehensive geriatric assessment and preventive health care
> - aging physiology
> - mistreatment of older adults
> - osteopathic principles and musculoskeletal complaints
> - falls and gait disorders
> - medications, Beers list, and deprescribing
> - mind, cognitive assessment, and capacity assessment
> - aging trends and healthcare delivery

- chronic pain and substance use disorder in older adults
- multi complexity and frailty
- hypertension, diabetes, and thyroid disease

Correspondence from Sean:

I have the github repo with the project in there:
https://github.com/Seanm64/OMMProject-main

Currently it's public, I wanted to try to make it private and share it with the students and you individually to avoid any private keys or anything being leaked, but I checked through and I think I've removed all of them (they would be consolidated into config.py),

Currently here's a list of changes we'd like to see:
 - Viewing Stats (Making them a lot more informative)
 - Viewing Old Tests (Making it look a lot better)
 - Saving a test and going back to it
 - Change highlighting and strikeout features on tests to use mouse clicks
 - Database security within the website (Stopping SQL Injections)
- Any additional changes are encouraged as a learning experience.

Minor changes to the database should be documented as a change list (i.e. changing the length of a string in the database to be longer)
Any major changes (i.e. restructuring, additions) should be well documented and drawn out through an ER diagram.

Questions for Client:

These are our questions so far (Group 6 for OMM Questionnaire Bank):

RED = Prof. Toporski

- Can you provide us with a current app overview (Functionality, audience, etc.)?
    - Good start - see my previous comments
- Are there any assets you could provide that we could use (Images for UI, sound files, etc)?
    - Something you most likely need to bring up with Sean. I believe they are using AWS and (I'm assuming here) they are using an AWS bucket for media. (S3?)
- What devices do we need to provide support for?
    - Since this is a Flutter app, Flutter should be device independent (see https://flutter.dev/multi-platform)
- What are the most important features that should be added as a priority?
    - I'm assuming they want them all… but make sure you know exactly what features they want to add and it wouldn't hurt to have them prioritize.
- Should we add any additional features as options (Show answers/grades upon completion, timers, etc.)
    - Keep the scope "doable" - don't add more to the project
- How and where should the highlighting be used? What colors should we allow to be used?
    - Great question. Same with strike throughs
- What features/areas should remain unchanged from their original state?
    - I'm wondering how the UI and backend will change with the new features