

The logo for mmsd llc, with 'mmsd' in blue and 'llc' in green, positioned in the top right corner of the dark left panel.

mmsd llc



MM SOFTWARE DEV CASE STUDY

QUARTERLY QUESTIONS
AMERICAN BOARD OF OPHTHALMOLOGY



CASE STUDY: QUARTERLY QUESTIONS

THE AMERICAN BOARD OF
OPHTHALMOLOGY'S APPLICATION TO
MAINTAIN AND PERIODICALLY TEST
DOCTOR KNOWLEDGE-BASED
CERTIFICATIONS



Case Study: Quarterly Questions

Problem:

- The American Board of Ophthalmology had an existing Quarterly Questions application
 - Description
 - Quiz Ophthalmologists on their current knowledge in core Ophthalmologic knowledge, as well as in their chosen specialty in Ophthalmology
 - Track their scores on these knowledge-based questions, as well as a specified number of questions based on medical publication articles
 - Allow them to use this platform as proof of their knowledge for medical certification
 - Challenges
 - Application is a complete redesign with new features and data elements, but needs to be able to coexist side-by-side with the current application during a phased rollout
 - Addition of rich reporting against physician results in SQL database represented a big challenge
 - Requests
 - Use fully provided design and specific functionality requested to implement technical solution
 - Use expertise and experience to suggest additional functionality
 - Improve existing database without interrupting current application functionality
- The board came to MMSD for a proposal



Case Study: Quarterly Questions

American Board of Ophthalmology

Dashboard History Insights ?

My Progress | #1234
Certified through Dec 31, 2027

Quarterly Questions

What is Quarterly Questions?

The American Board of Ophthalmology's Quarterly Questions program brings the future of assessment in clinical knowledge to today's Maintenance of Certification (MOC) program. Both a learning activity and an assessment tool, the Quarterly Questions program invites you to answer questions in increments throughout the 10-year cycle in order to measure practice-related knowledge in a longitudinal manner.

Each yearly edition of the Quarterly Questions program assesses the everyday clinical knowledge essential to the practice of ophthalmology and promotes the application of new knowledge from recent peer-reviewed journal articles.

You've Completed 3 of 5 Years of Quarterly Questions

○ 2020 ✓ 2019 ✓ 2018 ✓ 2017

For 2018, you are required to pass 60% of the knowledge-based questions (Quarters 1 & 2) and complete a total of 10 questions on article-based questions (Quarter 3). You must answer at least 8 article-based questions correct in order to claim CME.

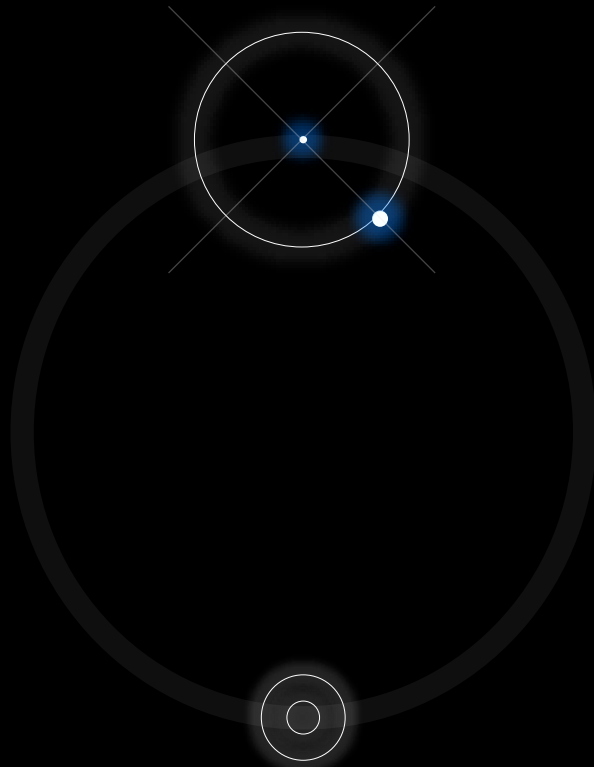
Quarter 1

✓ 5/5	Core Questions Answer multiple choice questions dealing with Core Ophthalmologic knowledge. You will have 60 seconds to answer each question.	Your score: 80% Your peers: 51%
✓ 15/15	Subspecialty Questions Answer multiple choice questions dealing with your choice of a subspecialty in clinical Ophthalmologic knowledge. You will have 60 seconds to answer each question.	Your score: 93% Your peers: 89%

Quarter 2

✓ 5/5	Core Questions Answer multiple choice questions dealing with Core Ophthalmologic knowledge. You will have 60 seconds to answer each question.	Your score: 100% Your peers: 89%
✓ 15/15	Subspecialty Questions Answer multiple choice questions dealing with your choice of a subspecialty in clinical Ophthalmologic knowledge. You will have 60 seconds to answer each question.	Your score: 100% Your peers: 89%

- Design
 - The customer provided us with fully developed design files and assets
 - Although this makes it easier in the design phase, this always presents additional challenges.
 - Work needed to be done when design elements didn't always quite work
 - New users have no progress, so showing how many questions they have answered, or their score, can be discouraging.
 - Presented the customer with some more user-friendly options for some designed messaging.
- Programming
 - Back end engineering is done using secure engineering principles.
 - Site is built in C# and MVC against a SQL Server database
 - Site functionality had to use current database, and any enhanced functionality could not disturb that current app
- Security
 - Sensitive medical data, high security needs.



METHODOLOGY

HOW WE WORK FOR YOU

Methodology

Process that produces

Discovery



- We work with you to fully define the problem and the solution
- We won't move past this step until we are confident that we all understand the desired outcome of the project.

Design



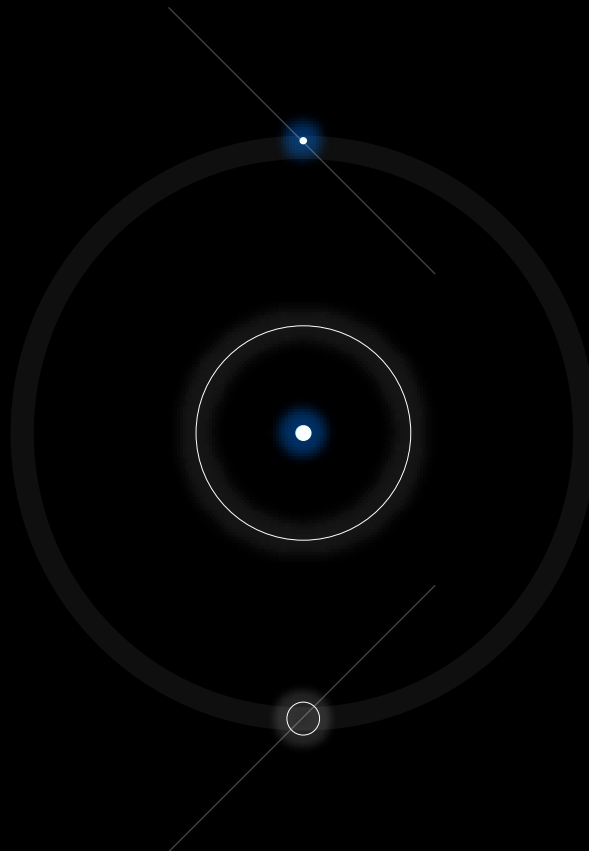
- We can work with design aesthetics that you provide, or we can develop a design in-house
- If you provide the design, we will implement a pixel-perfect solution for you
- If we design, we will provide you with a set of options and work with you to find the perfect design

Engineering

- Secure software development built on solid engineering principles
- Pre-negotiated delivery of your software product, whether on your infrastructure, or ours

Clients






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THANK YOU

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