

Knight Foundation School of Computing and Information Sciences

Pediatric Emergency Medicine Application

Students: Hector Ramirez

Mentor: Jean Hannan and Bruce Quinn

Instructor: Dr. Masoud Sadjadi, Florida International University

Problem

For health care workers in Emergency and Urgent care medicine, the need for quick communication and clear medical information is vital to saving patients lives. Among these health care workers are physicians assistants, residents in pediatric, nurse practitioners, emergency medicine and family medicine residency students, and physicians who are providing intensive care to ill and hurt children daily.

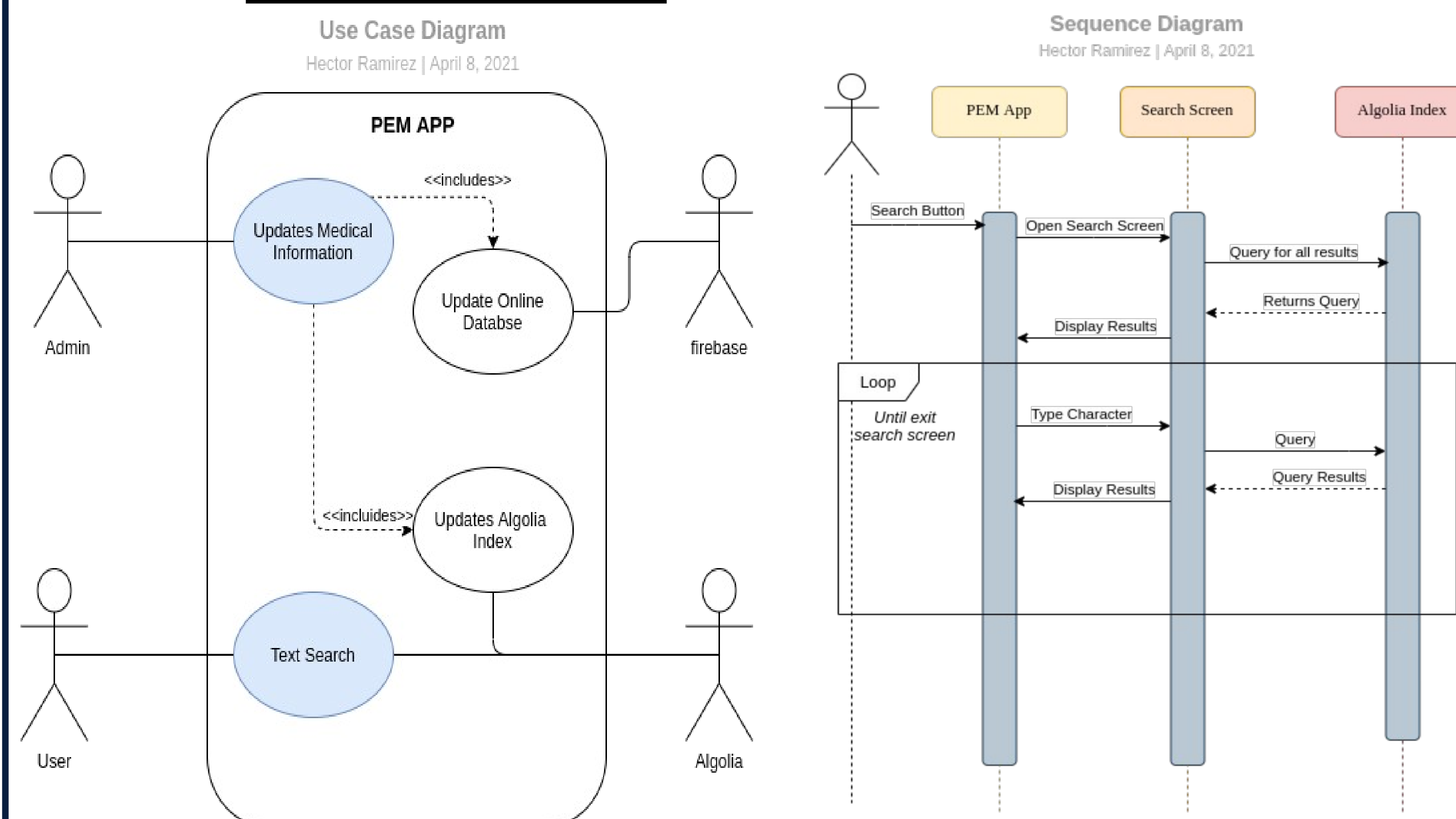
Current System

This is the fourth version of the PEM (Pediatric Emergency Medicine) Application. This project started 3 semesters ago. The current system has an improved home screen with a modern attractive look. The chat feature is now functional with multiple rooms. The user can store picture documents on their profile. The Search feature has been improved not only to search by category name but to implement full text search.

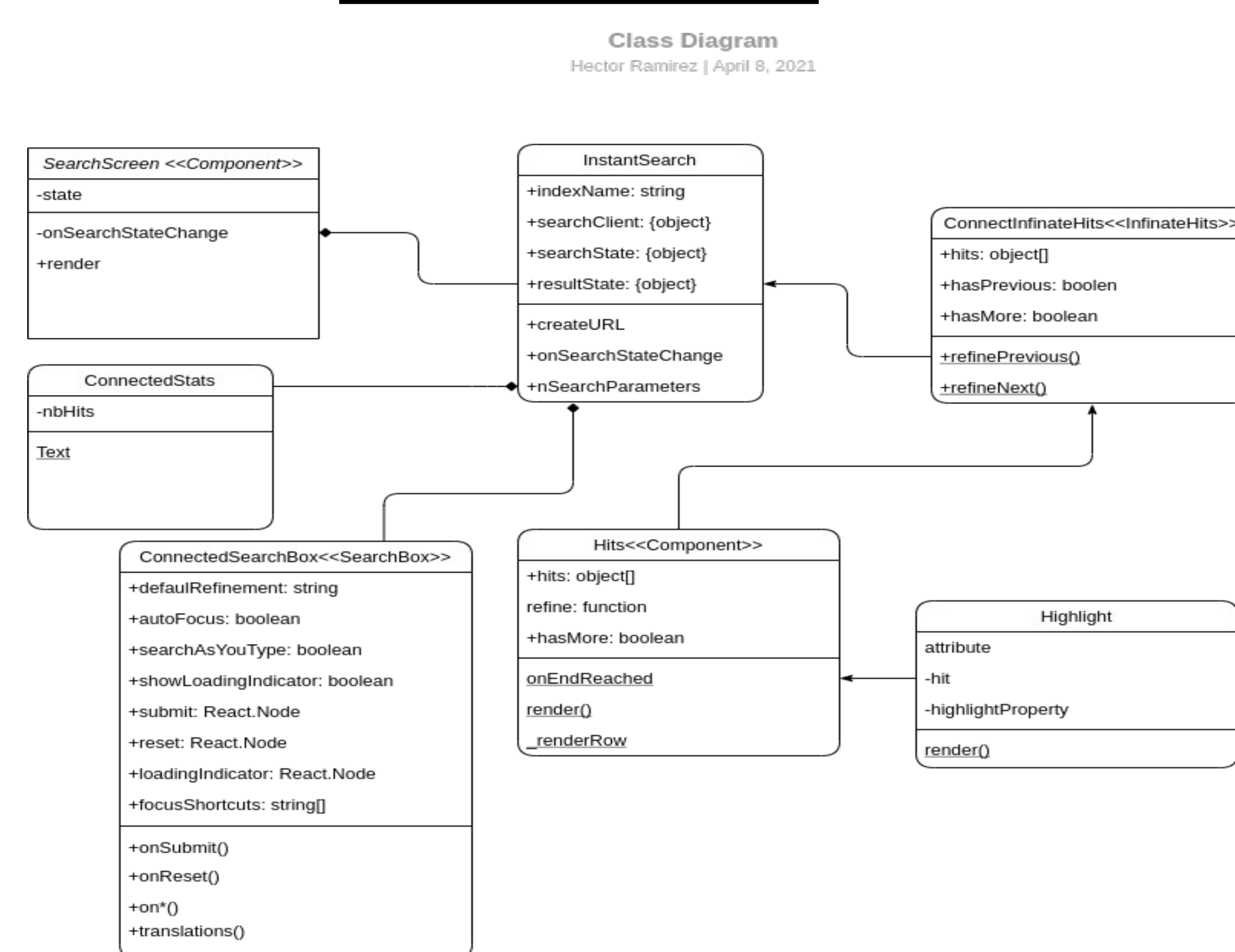
Requirements

- Intuitive condensed User interface for search results.
- Allow users to navigate to the search result's expanded view to better read the information.
- Allow Search results to be expanded, for quick glance at the information.
- Provide search results as the user types.
- Connect Application to Algolia as the search result provider.
- Create a database index for the search.
- Highlight the matching words on the application screen
- Create an internal solution to update search indices without a cloud function which requires paid membership.

System Design



Object Design



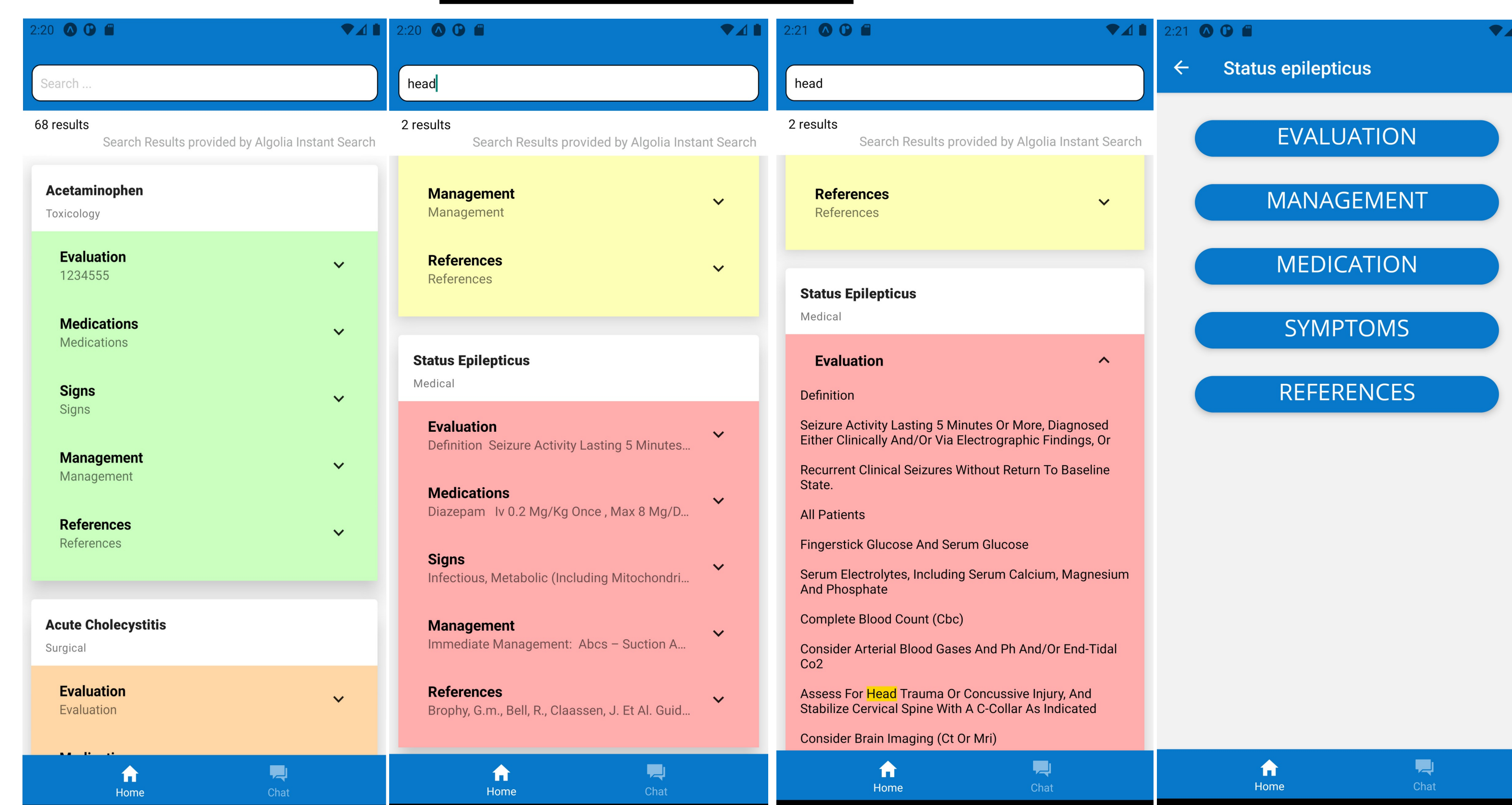
Implementation



Verification

In order to verify that the feature worked as intended we ran several tests. Testing was completed on both physical devices and virtual devices in order to accommodate newer devices as well as emulate older devices. Testing was also completed to make sure the work around to update Algolia Instant Search indices are updated as soon as the administrator updates any medical category, thus ensuring that each user has the most up to date information without any extra work from the administrator.

Screenshots



Summary

With the improvements made during the Spring term, the Pediatric Emergency Medicine Application has successfully fulfilled the shortcomings from the last semester and continued development. This tool will improve the emergency pediatric department environment by providing quickly reliable and secure access to vital information. Communicating with colleges, saving important certifications and instant search result on every health care worker's hand.

Acknowledgment

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