Project Executive Summary

Purpose of Application

The application will provide a platform for the aggregation of cancer-related questions, such that patients can find personalized questions to ask their physicians after diagnosis. Questions will be crowd-sourced from patients with the option for users to tag and rate them; this will create a ranking of questions so that patients can choose the ones that are considered most helpful.

Significance of Application

Our application will empower cancer patients by enabling them to visit their physicians with a thorough understanding of what knowledge they hope to obtain from the consultation. The application will additionally make consultations more efficient, since patients will come prepared with questions they already have in mind. Auxiliary features, such as recording ability, will help patients remember the answers and advice given by their physicians during consultation.

Functionality

The application will provide the following core functions:

1. It will provide users with a database of cancer-related questions. Some questions will be provided initially by physicians, but many will be submitted by patients themselves.
2. It will provide a rating system for questions so that the application ranks questions in order of helpfulness.
3. It will provide a tagging system so that users can search for specific ("personalized") questions through tags.
4. It will provide users with a way to "save" questions to their account so that they can be accessed later during the actual consultation.

Auxiliary functions may include the following:

1. Recording functionality so that patients can record answers provided by their physicians during consultation
2. Diary functionality so that patients can keep track of questions asked during specific visits

Technical Considerations

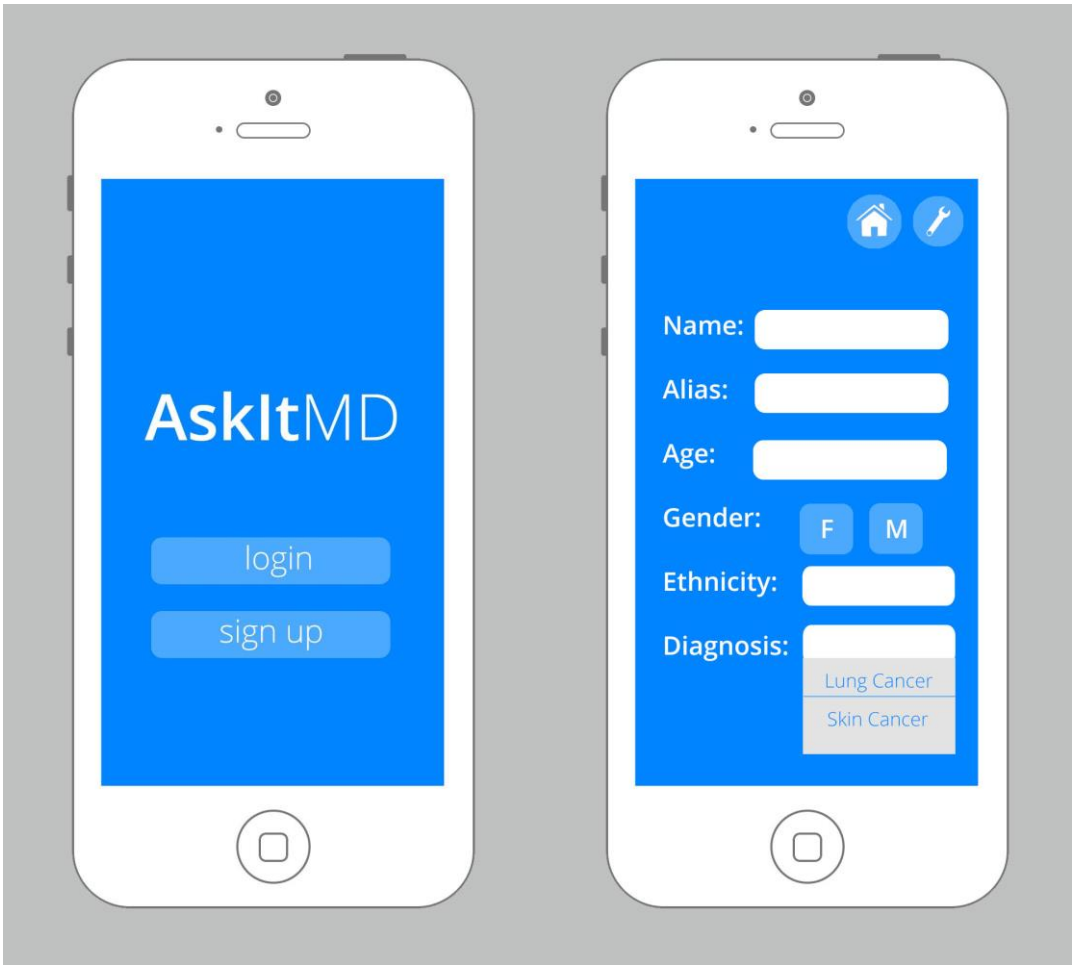
The application will be created as a mobile app supporting all three major platforms: Android, iOS, and Windows Phone. To do this efficiently, we will be using a cross-platform development toolkit called Xamarin. It allows the apps to be written in C# and then compiled into their native code for each platform. This is much better than other cross-platform toolkits which are wrappers around HTML web pages. Using Xamarin will allow us to write libraries once and have them be used across all of the devices. It costs money for the more advanced features that we are looking to use, but it will allow us to deploy on all three platforms within a similar time frame. Student licenses for a year are approximately $99 per developer.

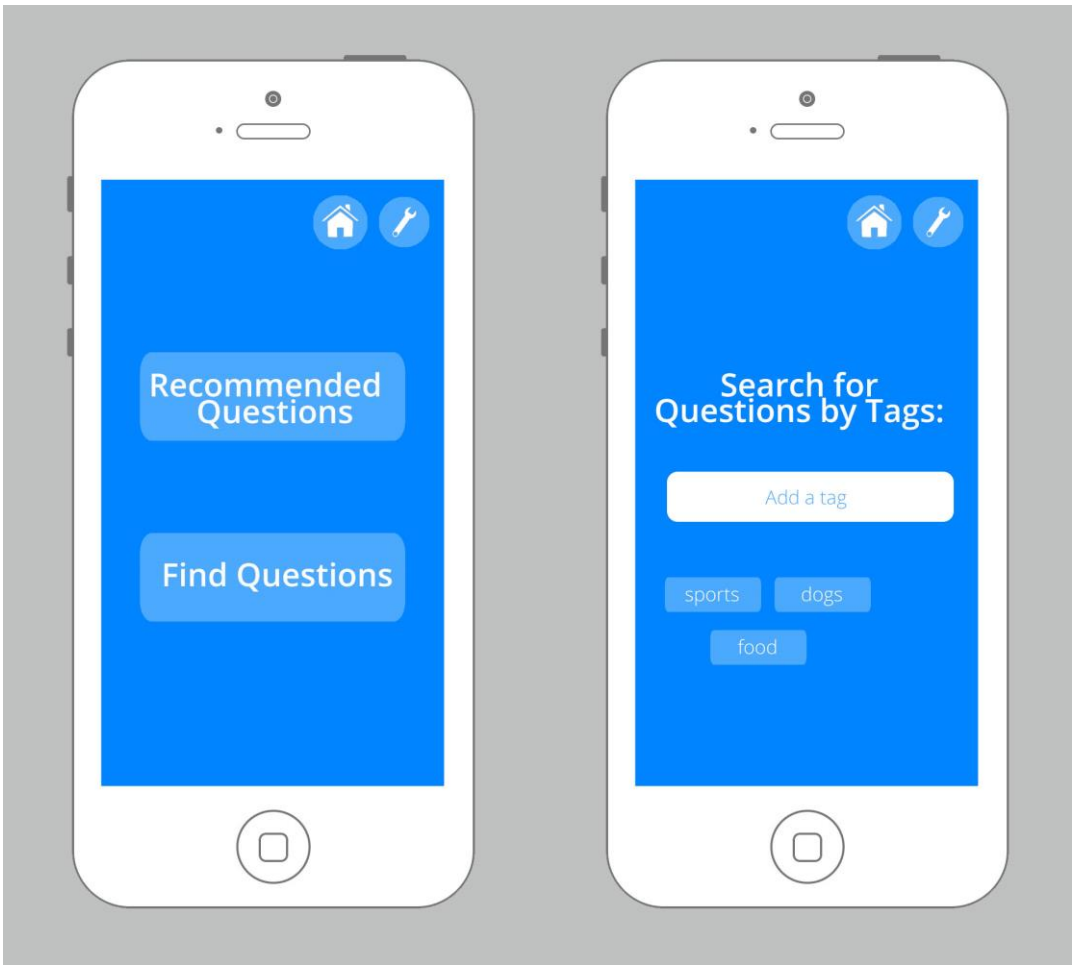
To support the question databases, user profiles and recording of personal information, the use of a database and supporting web service will be required. This will be developed in Node.js which is a

server-side JavaScript library. It provides good scalability and works well for developing APIs such as what we will be creating. This will be hosted on Azure, a cloud-hosted platform, in order to allow the service to scale as the usage grows. This, combined with Node.js, will allow the system to support just the few we will need during the development stages, while making it trivial to scale to thousands of daily users. Azure is paid for monthly and based only on the usage. This means that it will be cheap in the beginning (<$10 /mo) and increase in cost as the usage increases.

Mockups

These are initial mockups of the application, subject to change:

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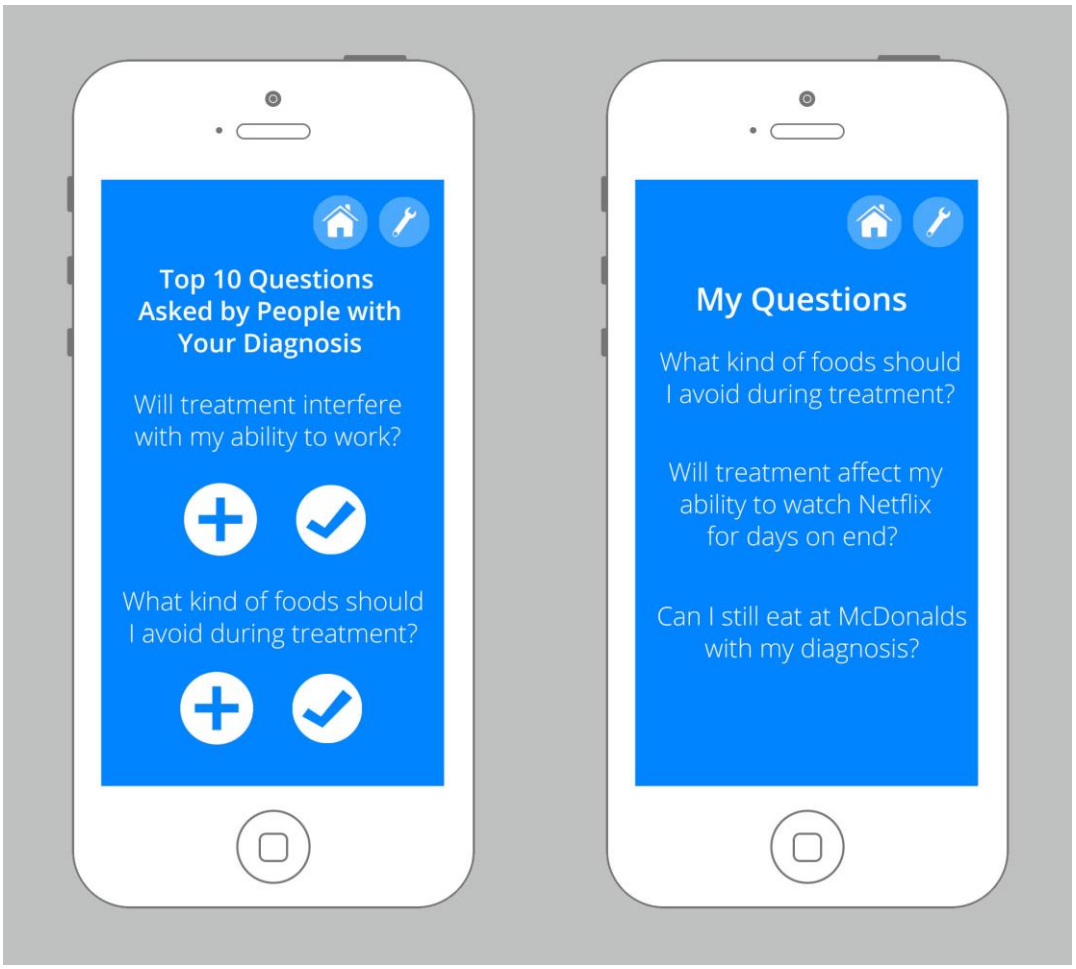
Top 10 Questions Asked by People with Your Diagnosis
Will treatment interfere with my ability to work?
What kind of foods should I avoid during treatment?
My Questions
What kind of foods should I avoid during treatment?
Will treatment affect my ability to watch Netflix for days on end?
Can I still eat at McDonalds with my diagnosis?