Health Alert App
Technical Documentation / Maintenance Documentation

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Computer Science 408S

Introduction

This guide is intended to make it easy for developers to build upon the Health Alert application that our team developed for the Computer Science 408S course in the Fall of 2014. The intention here is to give detailed, step-by-step instructions of how to configure the application for further development on a developer's machine and how to customize the database.

Installation

Health Alert is hosted on GitHub at the link https://github.com/duke-compsci408-fall2014/PropelPro.

Getting the application onto your machine

In order to clone the repository on your machine, open up the **Terminal** application follow the directions below:

1. Navigate to the directory in which you hope to install the project with the `cd` command.

2. Type in `git clone https://github.com/duke-compsci408-fall2014/PropelPro.git`

3. The project, and its dependencies, will install into the directory that you have cloned the project into.

Simulating

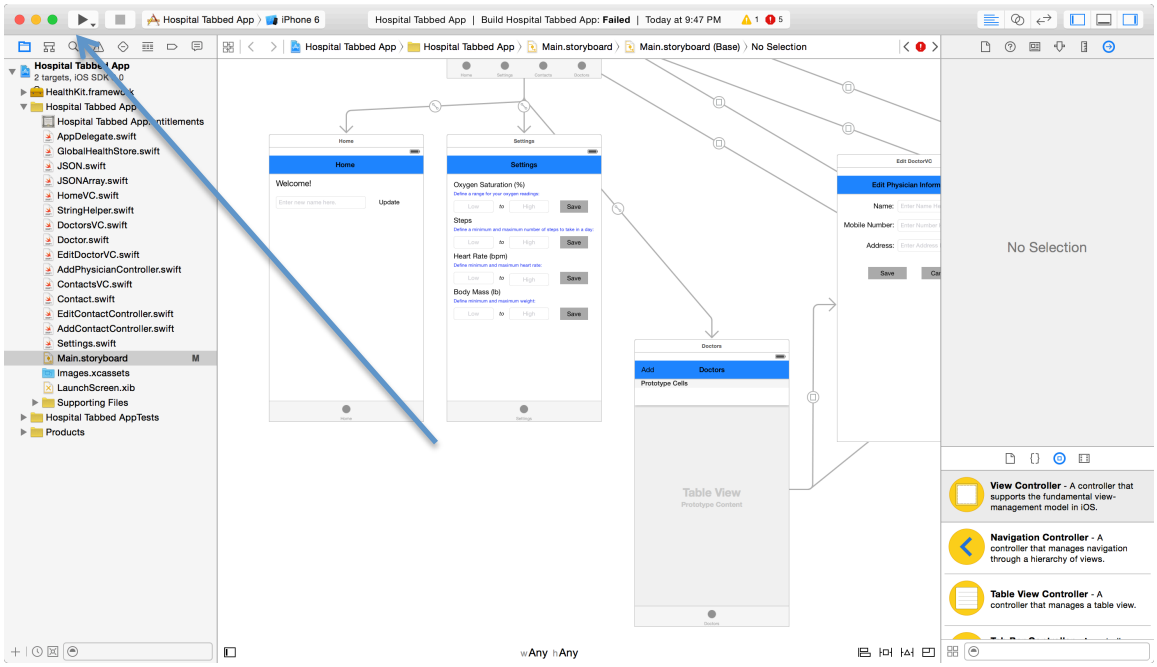
We developed our application using Mac machines using a program called XCode, which is the proprietary software for developing iOS apps. Unfortunately, as of now, this software isn't available for Windows machines.

Download the latest version of XCode here: https://developer.apple.com/xcode/

Once you have installed the latest version of XCode, you will be able to open up the file HospitalTabbedApp.xcodeproj on your machine.

There is a lot going on when you open up XCode. We aren't going to delve into the specifics here, mainly because Apple has already created a great introduction to using the software. You can find that tutorial here: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/

You will now be able to run a local simulation of the Health Alert App! Simply navigate to the play button in the top left hand corner of the screen and press down on it. Voila! Your app is now running on your device.



Press the play button above to run the simulation locally.

Deployment

The deployment of this application requires an Apple Developer Account. We've deployed the first version of the app store with our Duke University account. However, any future releases will not be able to be made with this account due to the fact that this license is reserved for educational use only.

For more information about deploying an app to the App Store, and how to set up a developer account with Apple, please visit https://developer.apple.com/library/ios/documentation/IDEs/Conceptual/AppDistributionGuide/Introduction/Introduction.html

Technological Dependencies

This application depends on a wide variety of third-party services besides the client-facing native iOS app to function properly. Below, we attempt to give a comprehensive overview of all of the technologies that power Health Alert:

Data Server – all of our data is stored in a MySQL database hosted by the Duke Office of Instructional Technology's Co-Lab database at http://colab-sbx-211.oit.duke.edu and

includes many different components. All of the code for this data server is located in the file folder “Database” located in the main directory of the project.

- The query language, as mentioned above, is MySQL, a standard query language. Currently, the project is only configured to be compatible with a MySQL database but this could be extended by future developers to work on other platforms, such as PostgreSQL or a no-SQL database such as MongoDB.

- All of our database queries are written in PHP files, which are found in the Database folder. For example, if you navigate to /database/doctors/insert.php, you will find a file that contains code to insert a new doctor into the database. Similar functionality is available for removing, selecting, and updating a record from the Doctor table. The files for Patients, Bounds, Stats, etc all contain similar functionality and are extendible in similar ways. The script to create the SQL database is contained in the file /database/health_alertdb.sql and needs to be run if migrating to a different server environment.

- The server itself is hosted via Bitnami with the Duke OIT office’s server. We are currently working on making the code extendible to work with various other server configurations.

- The application itself interacts with the web server via API calls. For example, if you were to navigate to /HospitalTabbedApp/DoctorsVC.swift, you would find a variable called urlStr which is the endpoint on the Bitnami Co-Lab server where these API calls are made.

Resources:
- Duke Co-Lab Technical Resources: http://dev.colab.duke.edu
- Bitnami Documentation: https://wiki.bitnami.com

Twilio Server – the notifications portion of the application leverages the Twilio API to send messages and make phone calls to the contacts of the user. All of this code is on a Heroku server, and all files containing this notification information can be found in /Twilio Code.

Resources:
- Twilio API: http://www.twilio.com/docs/api/rest
- Heroku API: https://devcenter.heroku.com/categories/platform-api

Contact

If we have missed anything here, or you are in need of clarification, please feel free to email us at ehg7@duke.edu and we will try to get back to you as soon as possible, even after the semester is over.