“ManageCare“

medical system

Mapping the project requirements

https://github.com/ruan65/capstone2014

Android Capstone Project 2014

1. Basic Project Requirement:	App supports multiple users via individual user accounts

Yes, indeed. Here lines 48-52 I'm adding user loading their credentials from DB

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/clients_access/WebSecurityConfig.java

2. Basic Project Requirement:	App contains at least one user facing function available only to authenticated users

Yes, actually a lot of them. You just can not open App without enter login and password

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/LoginActivity.java

3. Basic Project Requirement:	App comprises at least 1 instance of each of at least 2 of the following 4 fundamental Android components: •Activity •BroadcastReceiver •Service •ContentProvider

I have Activities, 3 BroadcastReceivers and Service for handling them.

https://github.com/ruan65/capstone2014/tree/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/broadcast_receivers

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/services/GcmIntentService.java

4. Basic Project Requirement:	App interacts with at least one remotely-hosted Java Spring-based service

Yes, here the code for Spring-based servises

https://github.com/ruan65/capstone2014/tree/master/main_web_service

5. Basic Project Requirement:	App interacts over the network via HTTP

Actually via HTTPS. Here are my Spring Controller handling http requests from Android App

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/clients_access/PatientsMobileController.java

6. Basic Project Requirement:	App allows users to navigate between 3 or more user interface screens at runtime

Yes indeed.

7. Basic Project Requirement:	App uses at least one advanced capability or API from the following list (covered in the MoCCA Specialization): multimedia capture, multimedia playback, touch gestures, sensors, animation.

Yes I playback ring-tone when notifications received or alerts pop-ups. I allow user to use standard or custom.
Code from line 43
https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/res/xml/preferences.xml

8. Basic Project Requirement:	App supports at least one operation that is performed off the UI Thread in one or more background Threads of Thread pool.

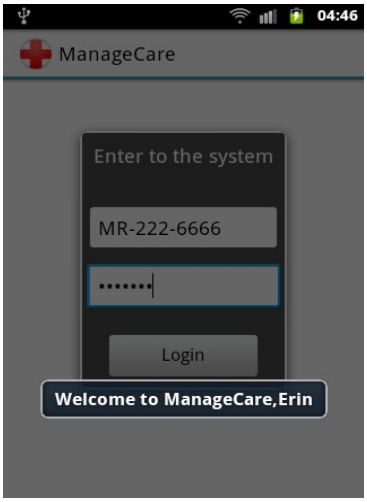
Yes I do all my network communications using background Threads
Here couple tasks examples (from line 228)

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/CheckInActivity.java

1. Functional Description and App Requirement:	App identifies a *Patient* as a user with first name, last name, date of birth, a (unique) medical record number, and possibly other identifying information). A patient can login to their account.

Yes, here Is my controller for identifies user. It uses credentials that he/she entered in the Android device. If “success” server sends back to user data, that allow him/her to reach the services . Server side identification (from line 32):

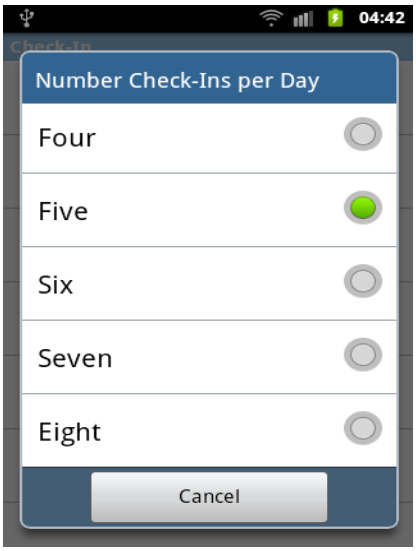
https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/clients_access/PatientsMobileController.java



2. Functional Description and App Requirement:	App defines a *Reminder* as an alarm or notification which can be set to patient-adjustable times (at least four times per day).

Here is an Activity class where I handle all this logic for different types of users (Patient – needs Check-In alerts, Medic – does not need them (lines 88, 95 etc.).

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/SettingsActivity.java



3. Functional Description and App Requirement:	A *Reminder* triggers a *Check-In*, which is defined by the app as a unit of data associated with a *Patient*, a date, a time, and that patient's responses to various questions (items 4-8) at that date and time.

Yes, you can see CheckIn class here:
https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/entities/questions/CheckIn.java

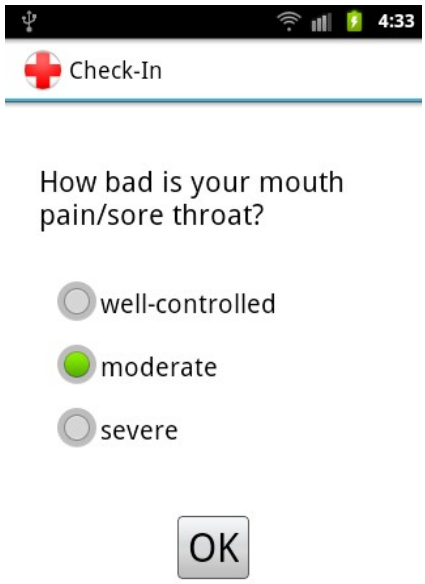
And here you can see how Check-In looks like inside Patient document in the Mongodb database:

https://github.com/ruan65/capstone2014/blob/master/examples/data_structure_patient.js

And here is the code where I start scheduling Check-In alerts (from line 101)
https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/SettingsActivity.java

4. Functional Description and App Requirement:	Check-In includes the question, “How bad is your mouth pain/sore throat?” to which a patient can respond, “well-controlled,” “moderate,” or “severe.

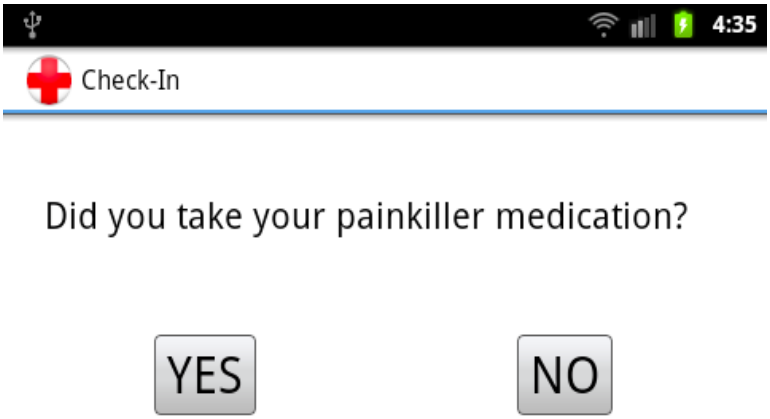
Yes (see above) and screen-shot:



https://github.com/ruan65/capstone2014

5. Functional Description and App Requirement:	Check-In includes the question, “Did you take your pain medication?” to which a Patient can respond “yes” or “no”.

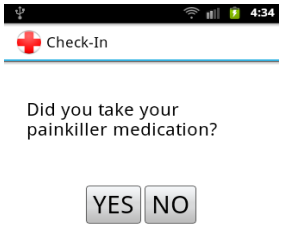
Yes (see #3) and screen-shot:

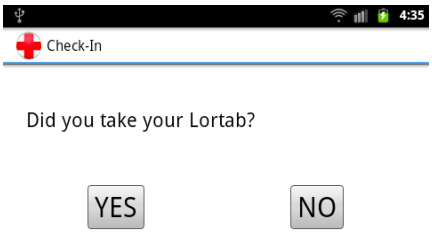


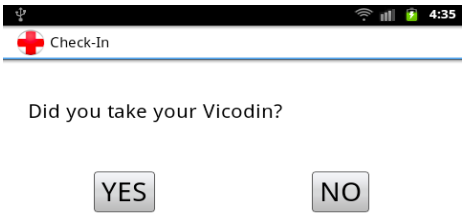
6. Functional Description and App Requirement:	A Check-In for a patient taking more than one type of pain medication includes a separate question for each medication (e.g., “Did you take your Lortab?” followed by “Did you take your OxyContin?”). The patient can respond to these questions with “yes” or “no.”

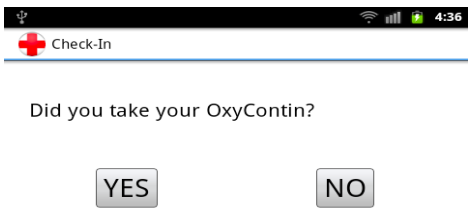
Yes, see data structure "clarifyingQuestionsNeeded" : true, "clarifyingQuestions" :

https://github.com/ruan65/capstone2014/blob/master/examples/data_structure_patient.js





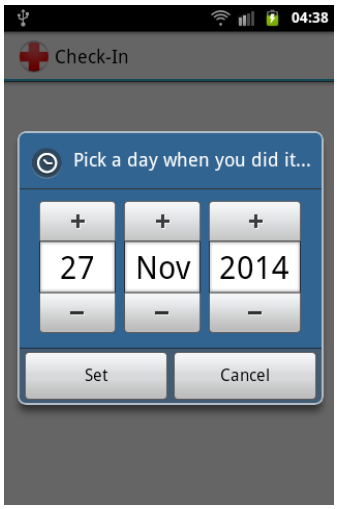


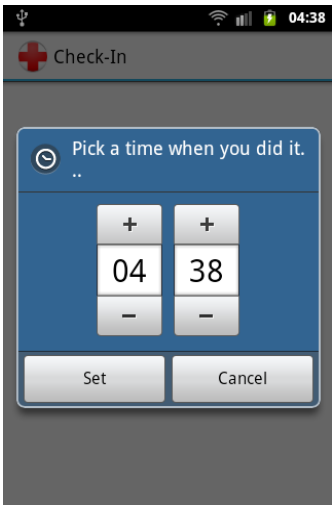


7. Functional Description and App Requirement:	During a Check-In, if a patient indicates he or she has taken a pain medication, the patient will be prompted to enter the time and date he or she took the specified medicine.

Yes this class include a logic for all of it (from line 76):

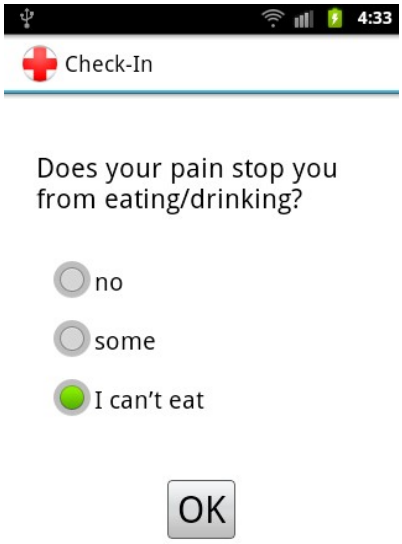
https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/CheckInActivity.java





8. Functional Description and App Requirement:	During a Check-In, the patient is asked “Does your pain stop you from eating/drinking?” To this, the patient can respond, “no,” “some,” or “I can’t eat.

Yes:



9. Functional Description and App Requirement:	App defines a Doctor as a different type of user with a unit of data including identifying information (at least first name, last name, and a unique doctor ID) and an associated list of Patients that the doctor can view a list of. A doctor can login.

Yes, here is the class for doctors:

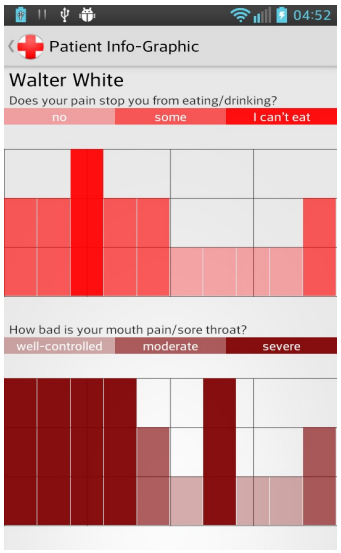
https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/entities/peronalities/Medic.java

And here is the code where my Android App decides “who is who” and is he “logged in” and choose a behavior (line 54):

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/LoginActivity.java

10. Functional Description and App Requirement:	App allows a patient's Doctor to monitor Check-Ins, with data displayed graphically. The data is updated at some appropriate interval (perhaps when a Check-In is completed).

Yes,



Code:
https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/activities/PatientInfoGraphicActivity.java

here is code where I send answered Check-In back to web service (I used springframework for Android) :

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/helpers/NetworkOperations.java

And here I immediately write answers to DB (line 95):

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/clients_access/PatientsMobileController.java

11. Functional Description and App Requirement:	A doctor can search for a given Patient's Check-In data by the patient's name (an exact text search hosted server-side). Note: Non-exact text searching is not required (e.g. you don't have to suggest, "Did you mean…")

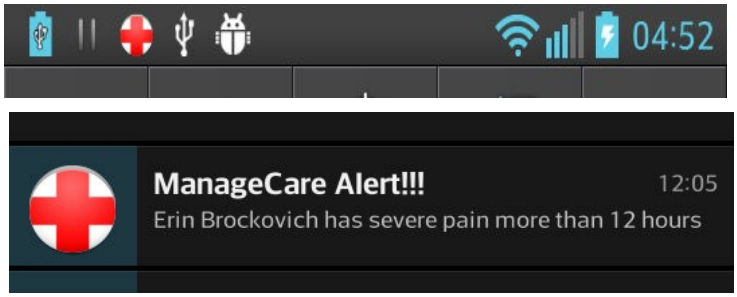
Yes, here is the code where I'm querying DB getting answered Check-Ins for sending it to the doctor Android App (line 135):

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/data/mongodb/MongoDBRequests.java

From line 16 I form a query using aggregation function of mongodb driver.

13. Functional Description and App Requirement:	A doctor is alerted if a patient experiences 12 of "severe pain," 16 or more hours of "moderate" or "severe pain" or 12 hours of "I can't eat."

Yes,



Here (from line 90 I'm checking if there is something wrong, and if it is, I send notification to patient's Doctor)

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/clients_access/PatientsMobileController.java

14. Functional Description and App Requirement:	A patient's data should only be accessed by his/her doctor(s) over HTTPS.

Yes, I configured my web-service to use https (line 28)

https://github.com/ruan65/capstone2014/blob/master/main_web_service/src/main/java/com/ruan/managecare/Application.java

And here on the line 166 I say to android to understand https and ignore the fact that ssl certificate is unauthorized.

https://github.com/ruan65/capstone2014/blob/master/android_mobile_patient_client/app/src/main/java/com/ruan/managecarenew/helpers/NetworkOperations.java

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Thanks for your time.

If there are any questions ruan65@gmail.com