

MyPHR Android Application

Team CSB

Jaskaran Bansal
Holly Kirkham-Mowbray
Giles Munn
Charles Thomas





Project Motivation

- Created for adolescent females with Turner Syndrome
- Improve patient knowledge and awareness of their condition
- Promote self advocacy in monitoring and managing their health
- Prepare users for their transition from paediatric to adult care



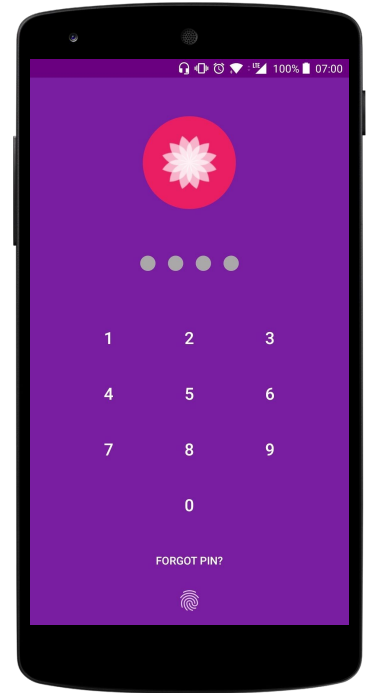
Product Features





Authentication

- Confidentiality and security
- PIN verification
- Fingerprint verification
- Security questions for resetting PIN

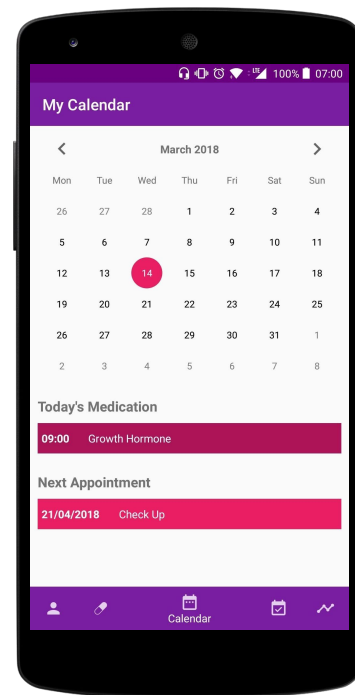




Calendar



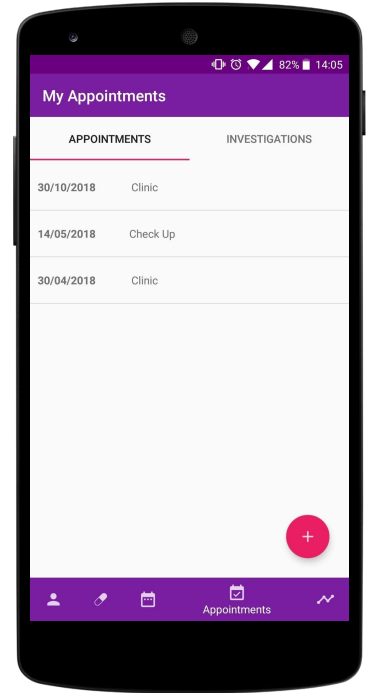
- Overview of all medications and appointments
- Add and view all sick days
- View the day's medication reminders, and the next upcoming appointment





Appointment Management

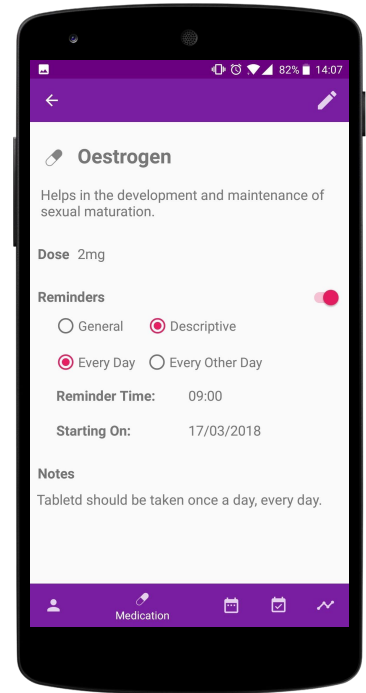
- A record of past appointments and investigations
- A schedule of upcoming appointments and investigations
- Note questions and other takeaways
- Enable reminders to receive notifications





Medication Management

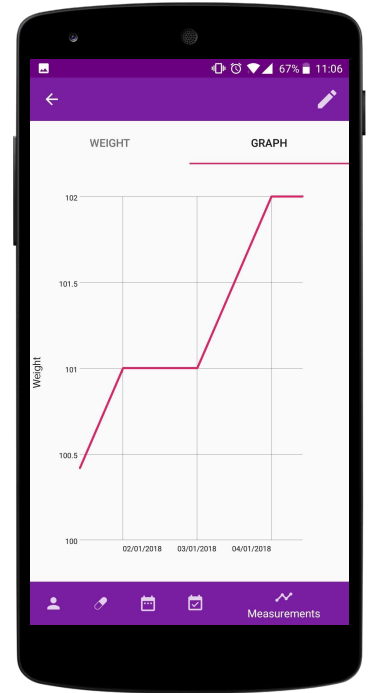
- A record of current medications
- Description, dose and notes
- Enable reminders to receive notifications





Medical Metrics

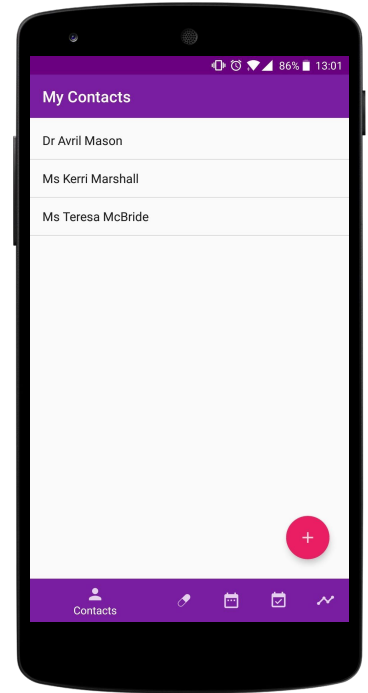
- A record of body measurements
- Ability to view these measurements as graphs
- Dynamically updated as values are added/removed





Contact Information

- Record of hospital staff which the user may want to contact
- Access contact information such as email and phone number
- Make a note of any additional information





Technical Features





Software Platform

- Java or Kotlin programming language
- ReactNative vs native Android
- Programmer familiarity with Java





Notifications

- Reminders for appointments and medications
- Frequency set by user
- Can be descriptive or vague for privacy

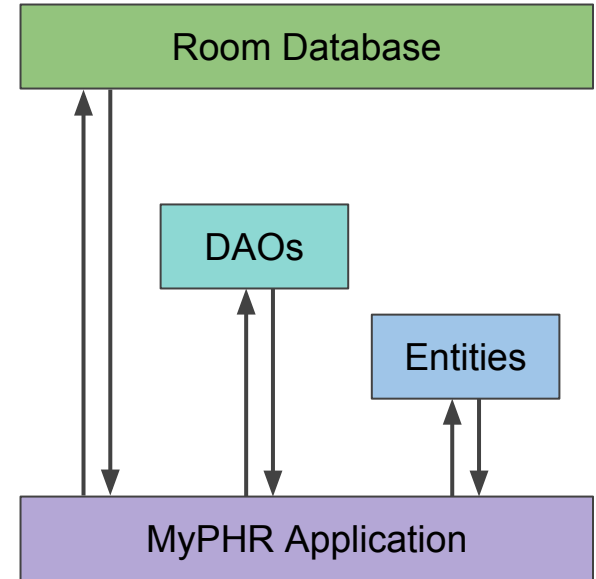
 **MyPHR** • Appointment • now ^

Doctors appointment - 27/03, 10:15
Queen Elizabeth University Hospital.



Database

- Uses the Room Persistence Library as an abstraction layer over SQLite
- Data Access Objects were used within the code to read and write data to the database
- Entities for Appointments, Medication, Contacts, Measurements, etc





Technical Challenges





Notifications

- Notification structure differing in Android versions
- Android Doze preventing crucial information getting through

 MyPHR • Reminder • now ^





















New reminder

You have a new reminder.



Continuous Integration

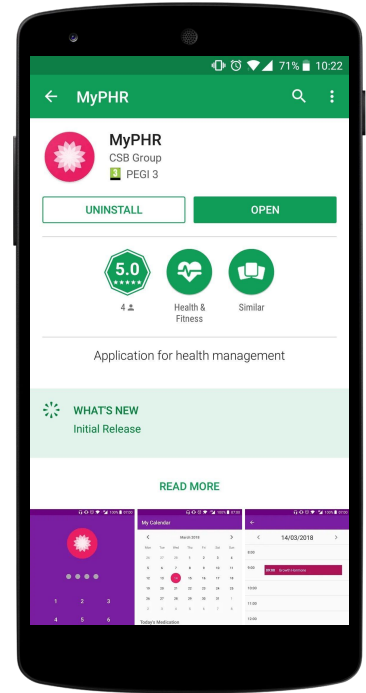
- Utilised GitLab CI tools to build and test MyPHR
- Allowed broken builds to be discovered immediately to ensure the application always functioned
- Issues in running instrumented tests as an emulator or physical device was required

 failed	#366 by 	 dev-smallis...  24526659  Fixed tests to account for upd...	  	 00:05:10  2 weeks ago
 passed	#365 by 	 dev-smallis...  effe6121  Update navigation bar on pag...	  	 00:12:39  2 weeks ago



Deployment

- Discretion of direct delivery to patients
- Ease of official Google Play Store release





Future Work





Online Storage

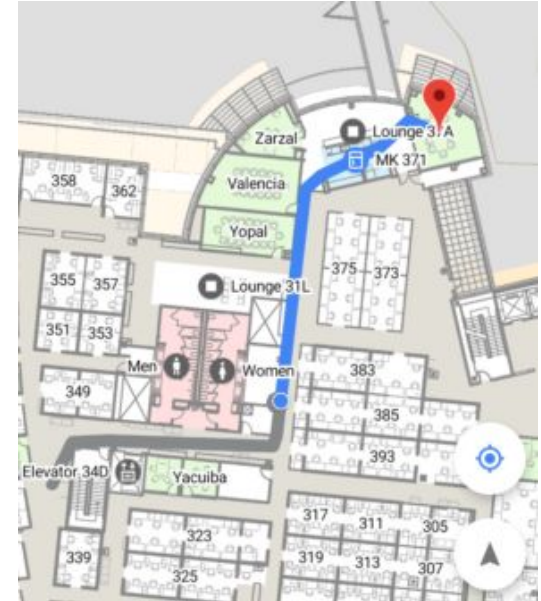
- Online sync of data to the cloud
- Allows for data to be transferred across devices
- Allows parents and doctors to be able to access records





Hospital Directions

- In-app location system to find hospital rooms
- Helpful for when users have appointments in different wards
- Idea was brought up late into development





Live Demonstration

