

# LeafBank

*An Update* ⚠

Dabin, Omar, Ore, Pat and Steve

**Feedback from Peer Testing Session**

**Progress Made**

**Architecture**

**Challenges**

**Future Steps**

**Q&A**

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**Q&A**

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# Roles

Patrick:	Local Notifications, Database, Login/Register
Dabin:	Remote Notifications, Database, Activities
Omar:	Research Kit, Privacy Considerations, Interface
Steve:	Nav Bar, Medications, Color and Layout
Ore:	Login Screen (not in demo), Interface

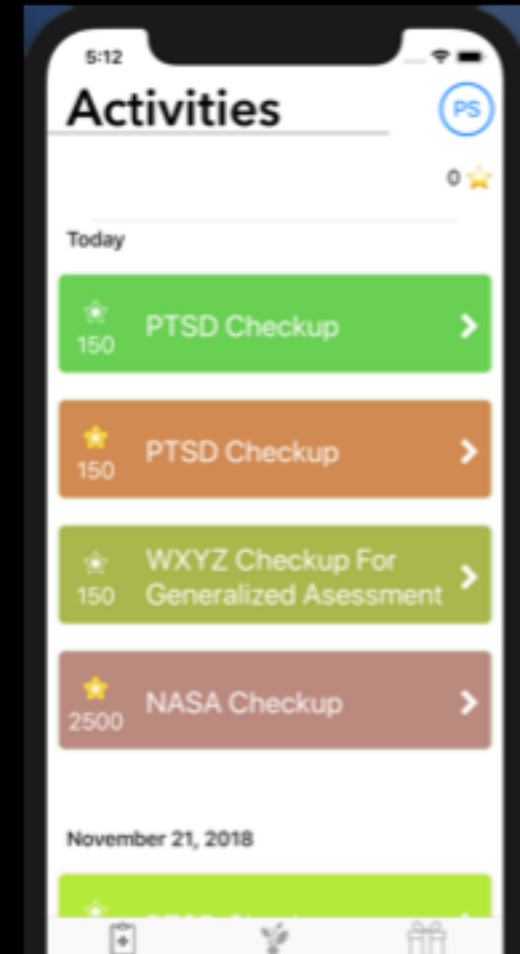
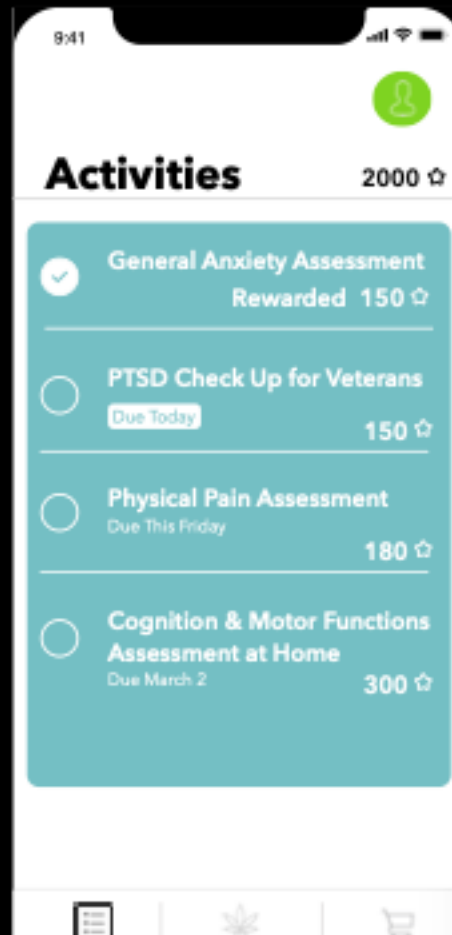
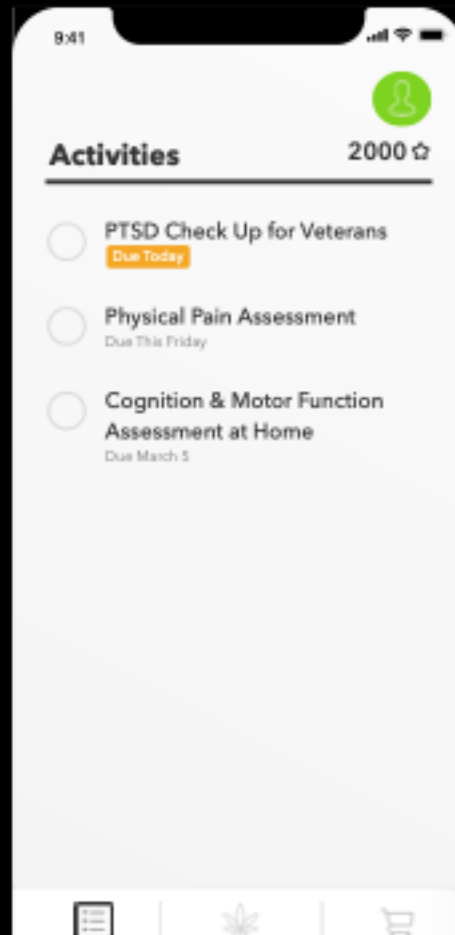


Steve, iOS Designer

Feedback from

# Feedback from Peer Testing Session

## The UI designs



**Thank you for finishing!**

Your data will be analyzed and you  
will be notified when your results  
are ready



Activities



Medication

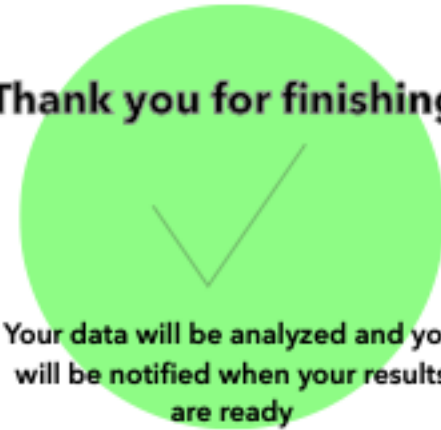


Rewards



**Thank you for finishing!**

Your data will be analyzed and you  
will be notified when your results  
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Activities



Medication



Rewards

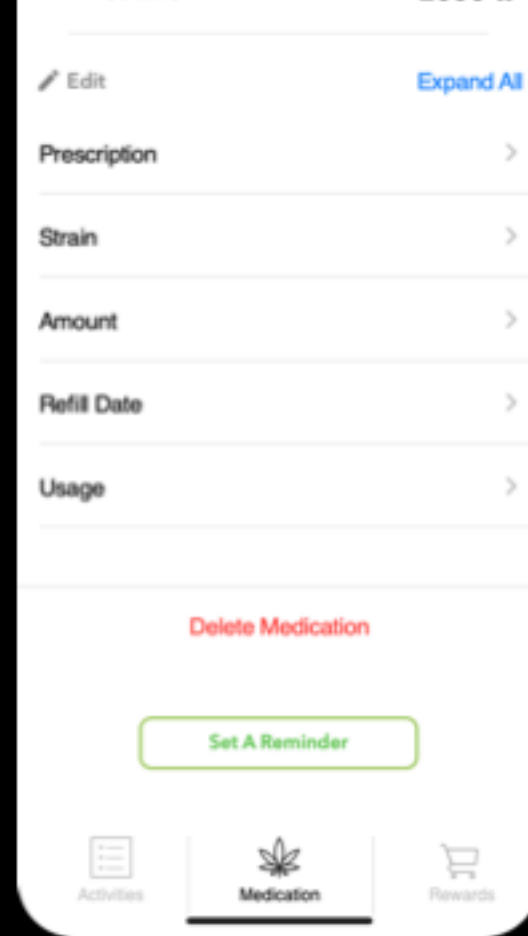
**Feedback from**

# Peer Testing Session

Users don't have a set schedule for consumption  
They could do it twice a day, or go weeks without it.







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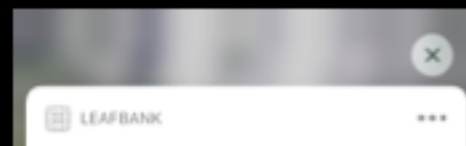
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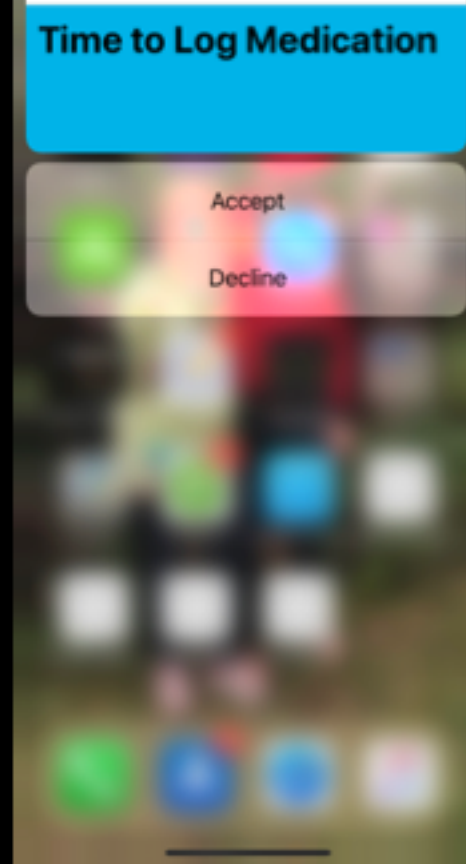
Challenges  
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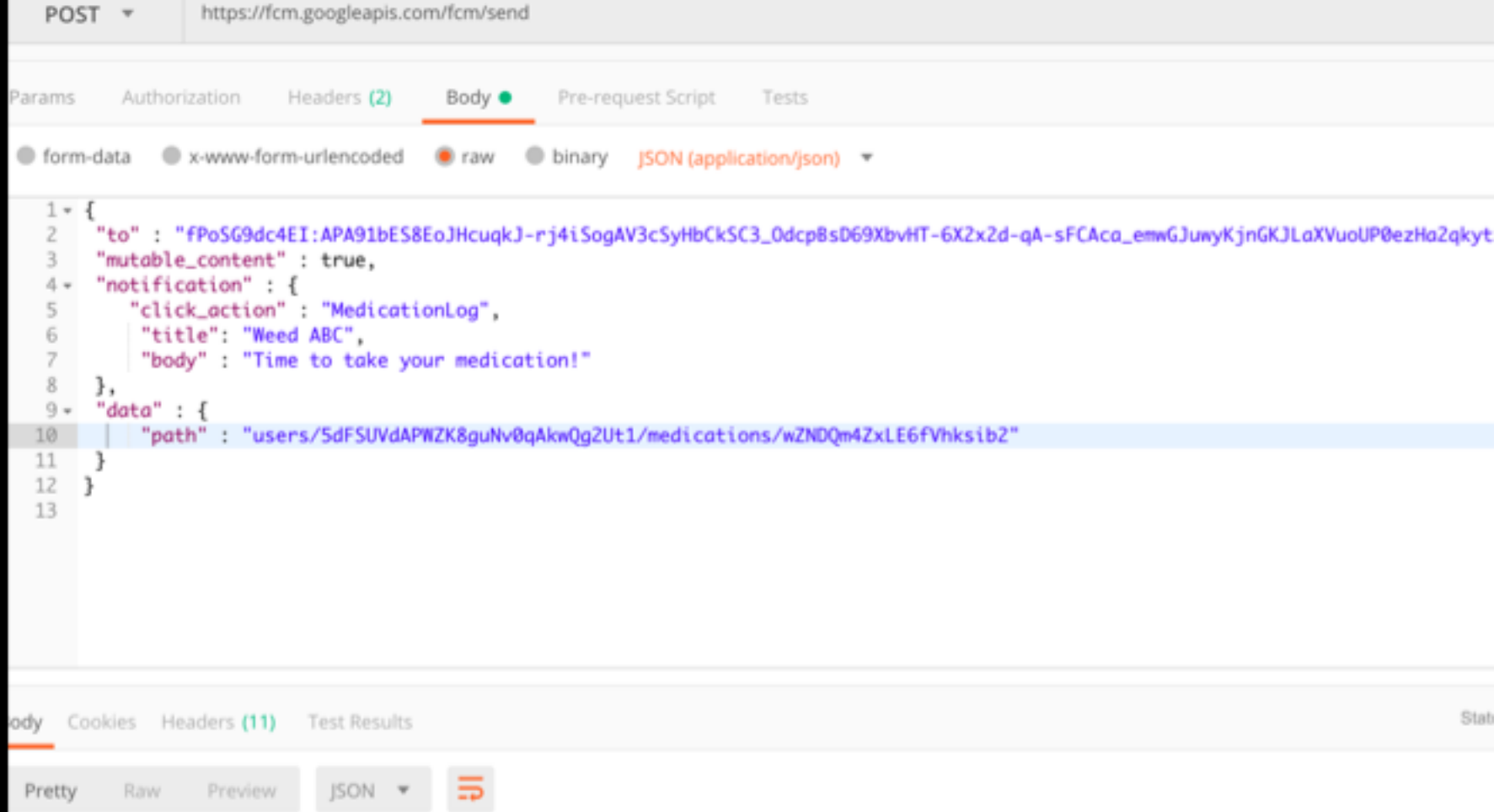
Patrick Sluth, iOS Developer

# Rich Notifications

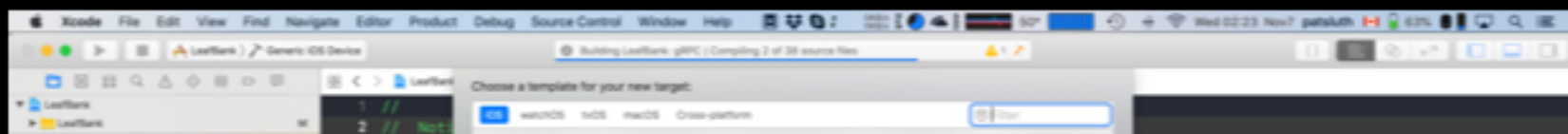


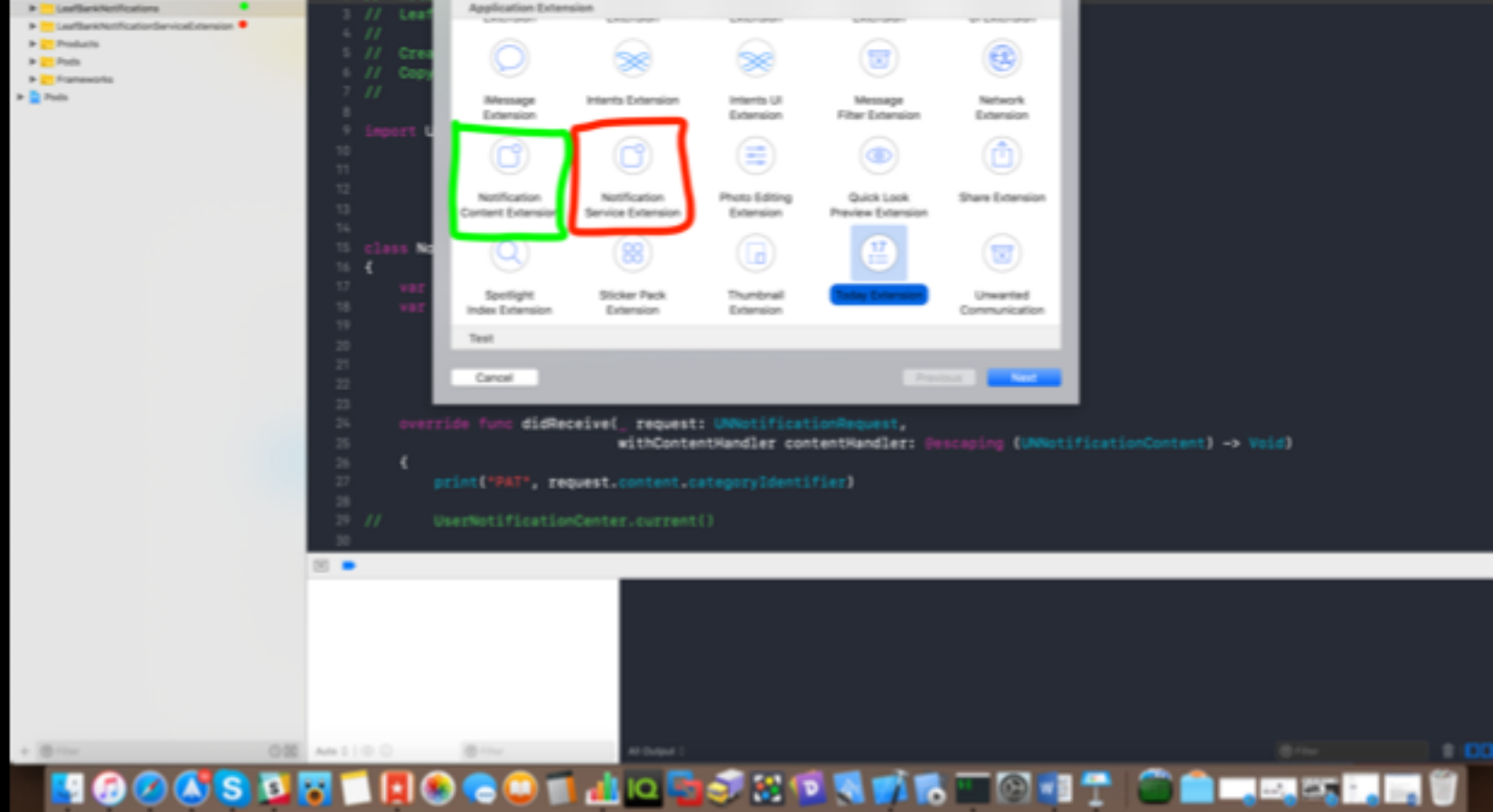


# Remote Notifications



# Notifications





# Type-Safe Firebase

```
39 Auth.auth().rx.currentUser()
40     .unwrap()
41     .do(onNext: { user in
42         print("#file: fileName: user: uid")
```

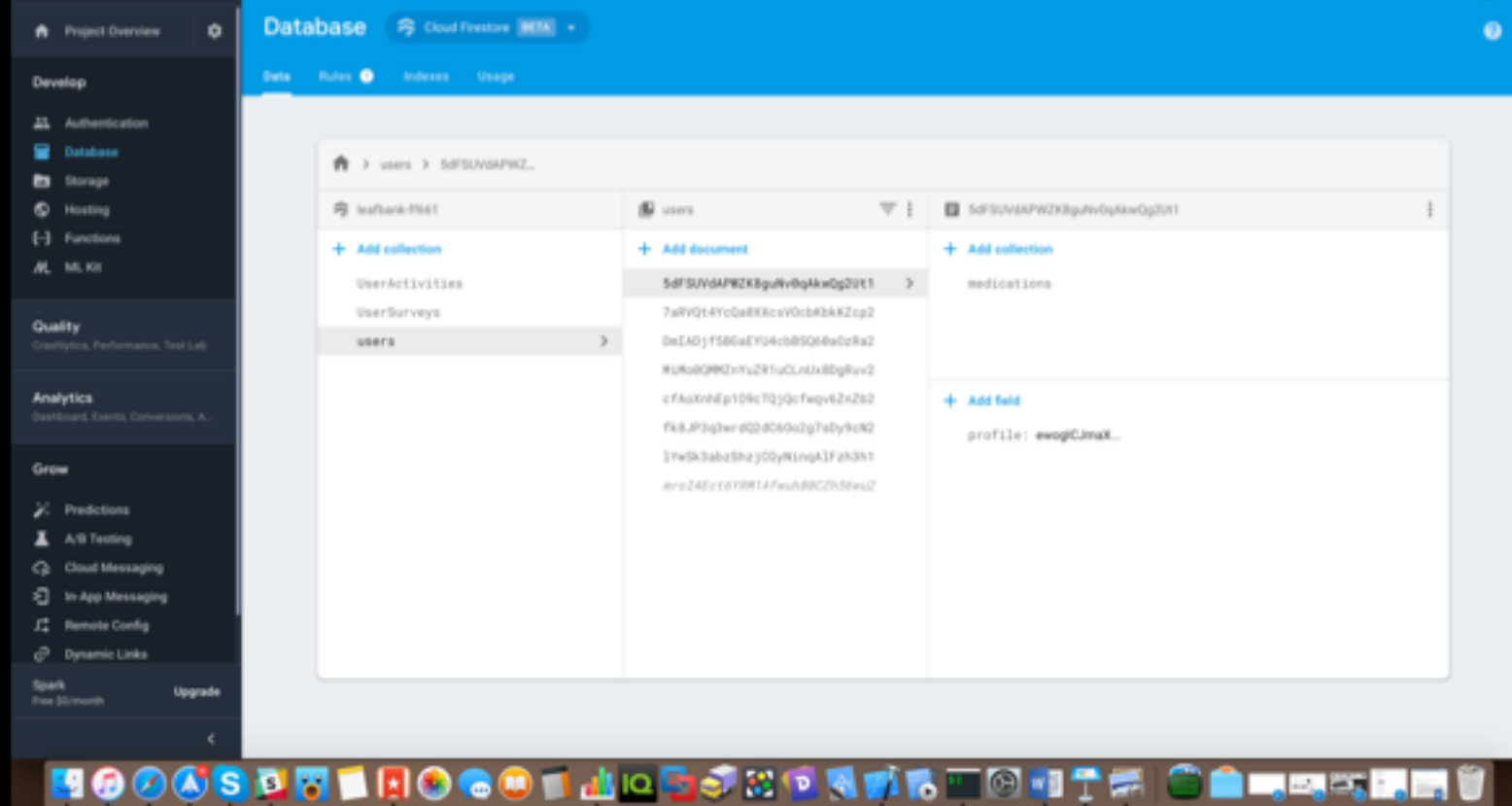
```

42         print(#file.FileName, user.uid)
43     })
44     .map({ user in
45         user.document.collectionOf(Medication.self)
46     })
47     .map({ user in
48         user.document.fieldOf(Profile.self)
49     })|
50     .flatMapLatest({ collection in
51         collection.documentsObservable()
52         //         .flatMapLatest({ documents in
53         //             Observable.combineLatest(documents.map({
54         //                 $0.observe()
55         //             })
56         //         })
57         .map({ elements in
58             (collection, elements)
59         })
60         .do(onNext: { collection, elements in
61             for element in elements {
62                 print(element.1)
63             }
64         })
65     })

```

# Firebase Auth/Store





# Bringing it All Together

```
141 func userNotificationCenter(_ center: UNUserNotificationCenter,  
142                             didReceive response: UNNotificationResponse,  
143                             withCompletionHandler completionHandler: @escaping () -> Void)  
144 {  
145     let content = response.notification.request.content
```

```

145 let content = response.notification.request.content
146 guard let type = NotificationType(rawValue: content.categoryIdentifier) else { return }
147 print(#file.fileName, #function, type)
148
149 switch type {
150 case .Survey:
151     completionHandler()
152 case .MedicationLog:
153
154     guard let document = try? Firestore.Document<Medication>.decode(content.userInfo) else { return }
155     _ = document.valueObservable()
156         .take(1)
157         .flatMapLatest({ element in
158             return document.modify(newValue: {
159                 var value = element
160                 value.name += "1"
161                 return value
162             }).asSingle()
163         })
164     .catchErrorJustComplete()
165     .subscribe(onDisposed: {
166         completionHandler()
167     })
168 }
169 }

```

# Summary

Send remote notification

Decode type safe Firebase object

Present corresponding rich notification

Handle user actions and update database

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Omar Qureshi, Chronic Procrastinator

# Architecture - What is MVC anyway?

A must use design  
paradigm in iOS

Controller

development

View - UI

Controller - UI logic

Model - background  
logic

Model

View

## Architecture - What is MVC anyway?

We need to manage  
communication  
between the groups

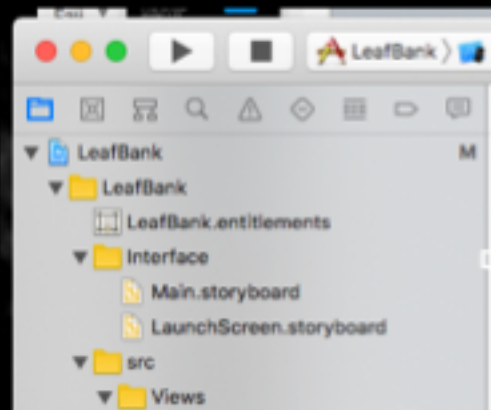
Controller

between the groups

Model

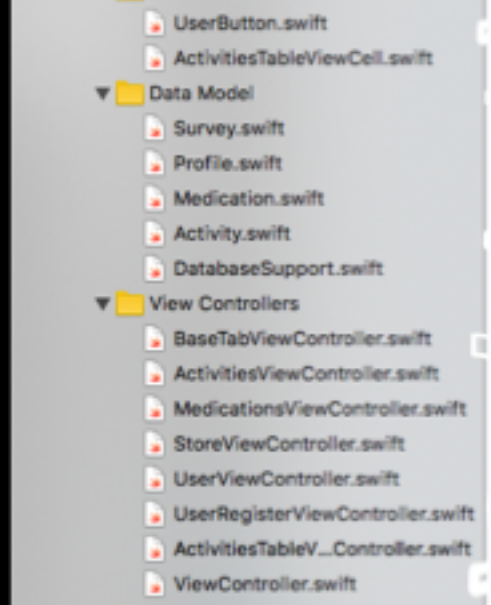
View

# Architecture - In our case



View

```
24 class ActivitiesTableViewController: UITableViewController
25 {
26
27     var activitiesFromServer = [Activity]()
28     var colors = [ "Green0", "Brown2", "Green1", "Brown1", "Green2", "Brown2" ]
29     var activitiesData: [Int:[Activity]] = [0:[Activity](), 1:[Activity](), 2:[Activity]()]
30     var activitiesKeysSorted = [String]()
31
32     // Create background view for the cell
```



**Model**

**Controller**

```
181 // Create background view for the cell
182 let view: UIView = tableView
183 let rect: CGRect = view.frame as CGRect
184 let bgView : UIView = UIView(frame: CGRect(x: 10, y: 10, width: Int(rect.size.width
185                                     20), height: Int(cell.bounds.height - 40)))
186
187 // Used for finding which color to make this cell
188 var cellsDrawn = indexPath.row
189 for i in 0..
```

**Ex. Controller handling model + view**

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Dabin Lamming, Tootsie Roll Enthusiast



# Challenges

Client interactions short and infrequent

Intimidating

Pressure

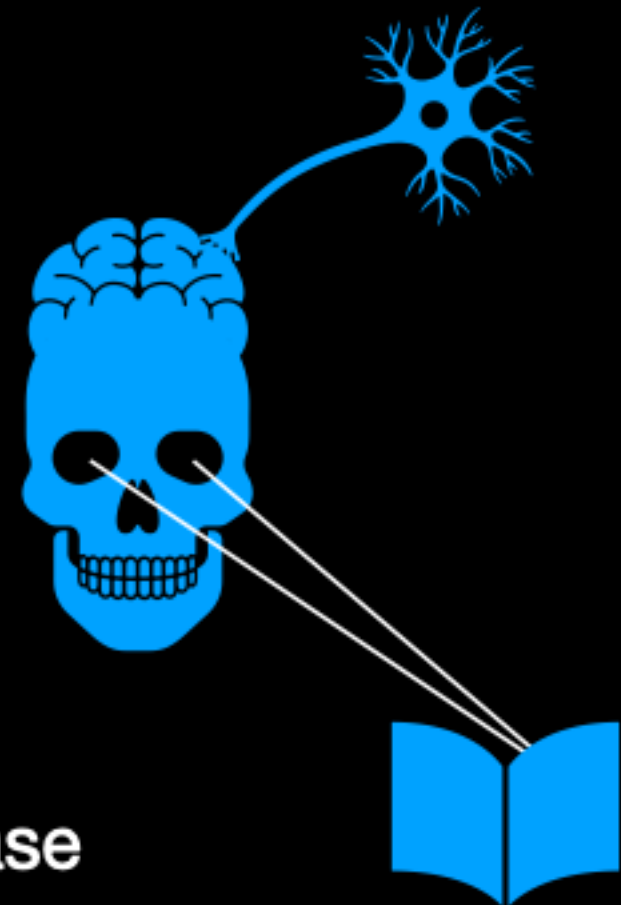


# Challenges

New Tools

Unfamiliarity with Swift

Backend Development in Firebase



Xcode IDE



# Challenges



From Prototype to Storyboard

It's a lot easier to create sketches

Roadblocks that necessitate changes

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Ore, iPhone impersonator

# Future Steps

Increase communication with client





# Future Steps

Surveys



User Studies



Expanded implementation





# Short Demo

**Questions?**  
**Comments?**

[https://www.youtube.com/watch?v=w7a79cx3UaY&list=PLPA-ayBrweUzGFmkT\\_W65z64MoGnKRZMq&index=2](https://www.youtube.com/watch?v=w7a79cx3UaY&list=PLPA-ayBrweUzGFmkT_W65z64MoGnKRZMq&index=2)