

Mobile Data Collection with FHIR

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Who am I?

- Jing Tang
- Software Engineer at Google
- London, UK



Learning Objectives

- How to integrate Structured Data Capture Library into your Android application
- How to display a Questionnaire
- How to get answers as a QuestionnaireResponse
- How to extract FHIR resources from a QuestionnaireResponse

Tutorial

- Fred Hersch's Introduction to Android FHIR SDK earlier today

Prework

- Download Android Studio
 - <https://developer.android.com/studio>
- Have a physical Android device or set up Android emulator
 - <https://developer.android.com/studio/run/emulator>
 - API level 24+
- Clone the GitHub repo of Android FHIR SDK
 - <https://github.com/google/android-fhir>

Recommended prework

- You'll be able to follow the codelab without much knowledge in Kotlin and Android development. But it's strongly recommended that you familiarize yourself with Android and Kotlin fundamentals.
- *[Strongly recommended]* Build your first app:
 - <https://developer.android.com/training/basics/firstapp>
- *[Advanced reading]* Android Basics in Kotlin:
 - <https://developer.android.com/courses/android-basics-kotlin/course>

Let's build!

- Structured Data Capture Library Codelab
[https://github.com/google/android-fhir/tree/master/codelabs/data capture](https://github.com/google/android-fhir/tree/master/codelabs/data_capture)

What did you learn?

- How to integrate Structured Data Capture Library into your Android application
- How to display a Questionnaire
- How to get answers as a QuestionnaireResponse
- How to extract FHIR resources from a QuestionnaireResponse

Stretch goals / future work

- Can you modify the questionnaires to add validation extensions? Observe how the library handles them.
- Can you customize the look and feel of the questionnaire?
- Can you try to use FHIR Engine to store the newly created Patient resource? Can you try to upload the resource to a FHIR server?

Hints / pointers in next slide

Stretch goals / future work hints and pointers

- Can you modify the questionnaires to add validation extensions? Observe how the library handles them.
 - <https://github.com/google/android-fhir/wiki/SDCL%3A-FHIR-specification-support#value-constraints>
- Can you customize the look and feel of the questionnaire?
 - <https://github.com/google/android-fhir/wiki/SDCL%3A-Customize-how-a-Questionnaire-is-displayed>
- Can you try to use FHIR Engine to store the newly created Patient resource? Can you try to upload the resource to a FHIR server?
 - <https://github.com/google/android-fhir/wiki/FHIR-Engine-Library>

Additional resources

- Wiki: <https://github.com/google/android-fhir/wiki>
- YouTube tutorial from Digital Square
<https://www.youtube.com/watch?v=v5EirtlrjCY>

Contact

- During DevDays, you can find / reach me here:
 - Via Whova App – Speaker’s Gallery
- After DevDays, you can find / reach me here:
 - jingtang@google.com
 - send me a message on chat.fhir.org
- General feedback on the SDK to:
android-fhir-sdk-feedback@google.com
- Create issues in the GitHub repository:
<https://github.com/google/android-fhir>

Q&A

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