Android: Room Fundamentals

GETTING STARTED WITH ROOM CONCEPTS

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Overview

Prerequisites

Android Architecture Components

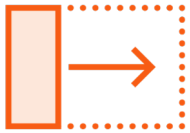
Advantages of using Room

Prerequisites

- Android Studio 3.0+ installed
- Android Device or Emulator
- Basic understanding of RecyclerView
- Basic understanding of Android Activity lifecycle

What are Android Architecture Components?

Android Architecture Components



Guide to Android app architecture with libraries for different tasks

Help create apps that are robust, testable, maintainable and less boilerplate code

Architecture components are a part of Android Jetpack

Android Jetpack

Collection of Android software components

Makes Android app development easy

- Minimal boilerplate code
- Helps us follow best practices

Android Architecture Components

DataBinding

Lifecycle Aware Components

LiveData

Navigation

Paging

Room

ViewModel

Work-Manager

Room vs. SQLite

Options for Storage

Realm Database

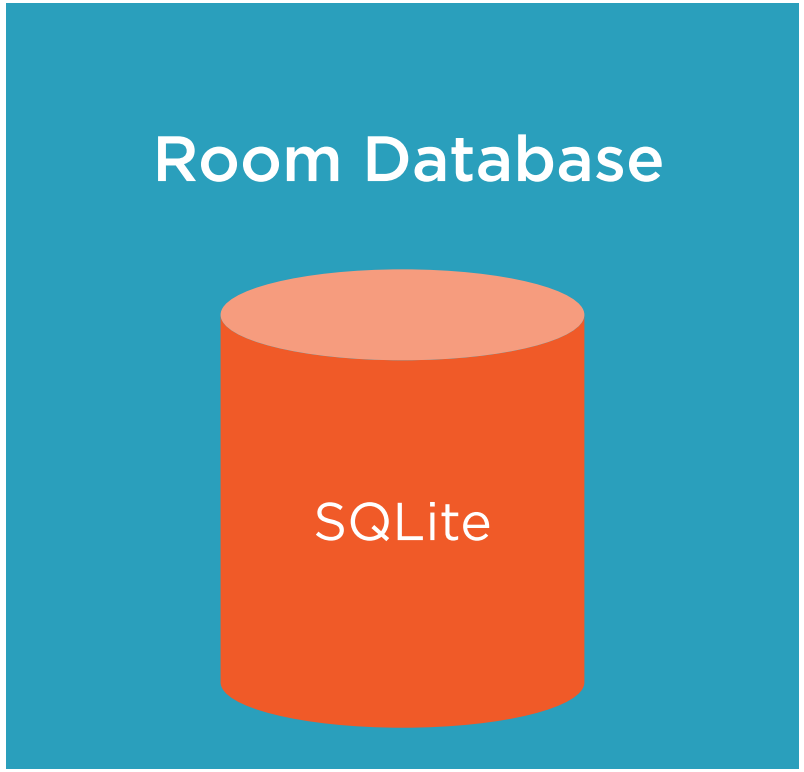
SQLite

Room Database

Why Room?

SQLite	Room
Deal with raw queries	No raw queries for basic DB operations
No compile-time verification of raw SQL queries	Compile-time checks of SQLite statements
Lots of boilerplate code to convert between SQL queries and java data objects	Maps database object and java objects without boilerplate code
SQLite API are low-level, thus, more effort to build apps	Room when used with ViewModel and LiveData makes it easy

What is Room



Database layer on top of SQLite

Provides an abstraction layer over SQLite for fluent database access

Object Relation Mapping(ORM) library

Used for easy caching of data

Summary

- Prerequisites
- Android Architecture Components
- Android Jetpack
- SQLite vs Room