

Lesson 12:

Inventory App



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About this lesson

- Lesson 12:
 - Data Access Objects
 - Workshop
 - SQL Basics & App Inspection
 - Persistency (Room)

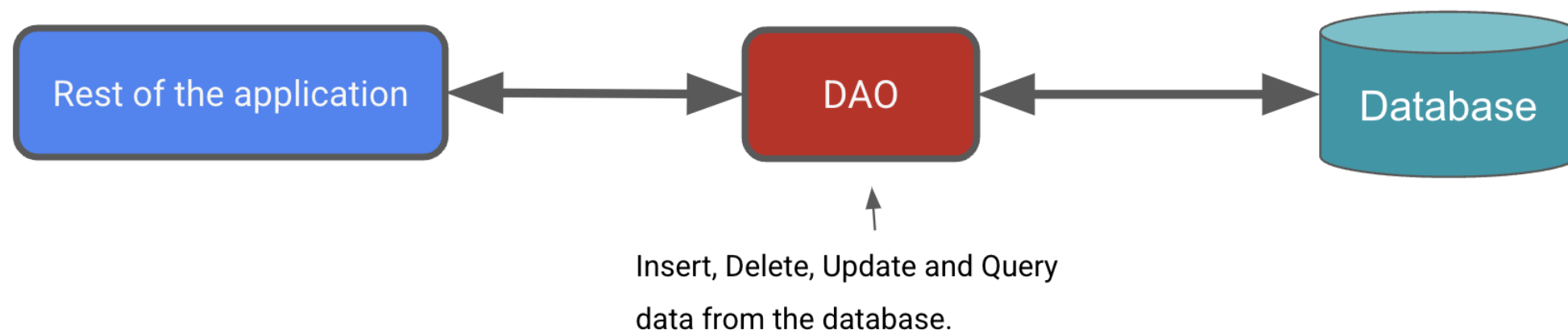
Get started

Storage types

- **App-Specific storage:** Store files that are meant for your app's use only
- **Shared storage:** Store files that your app intends to share with other apps
- **Preferences:** Store private, primitive data in key-value pairs
- **Databases:** Store structured data in a private database using the Room persistence library

Data Access Objects

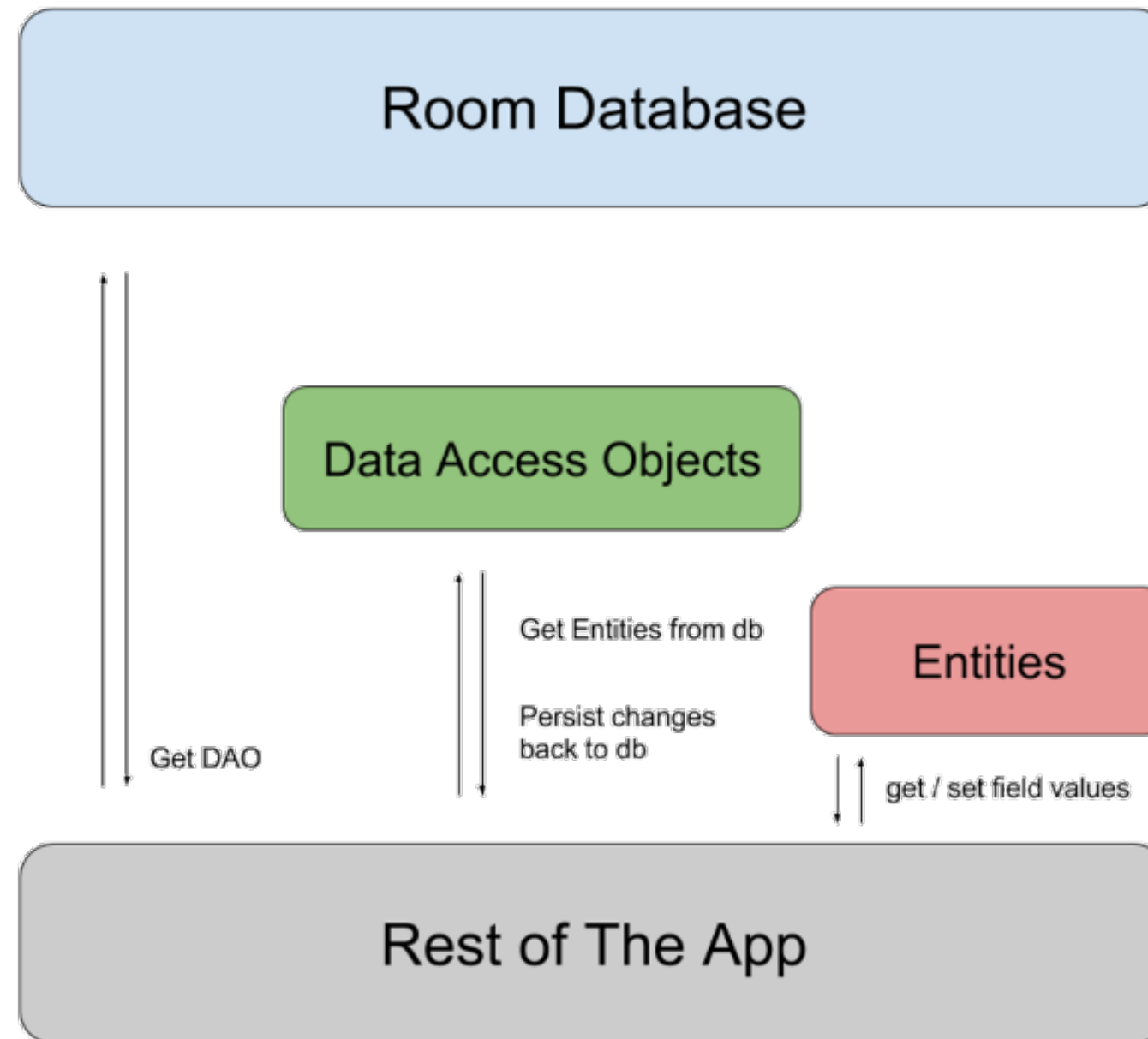
- The Data Access Object (DAO) is a pattern you can use to separate the persistence layer from the rest of the application by providing an abstract interface.
- This isolation follows the single-responsibility principle, which you have seen in previous codelabs.



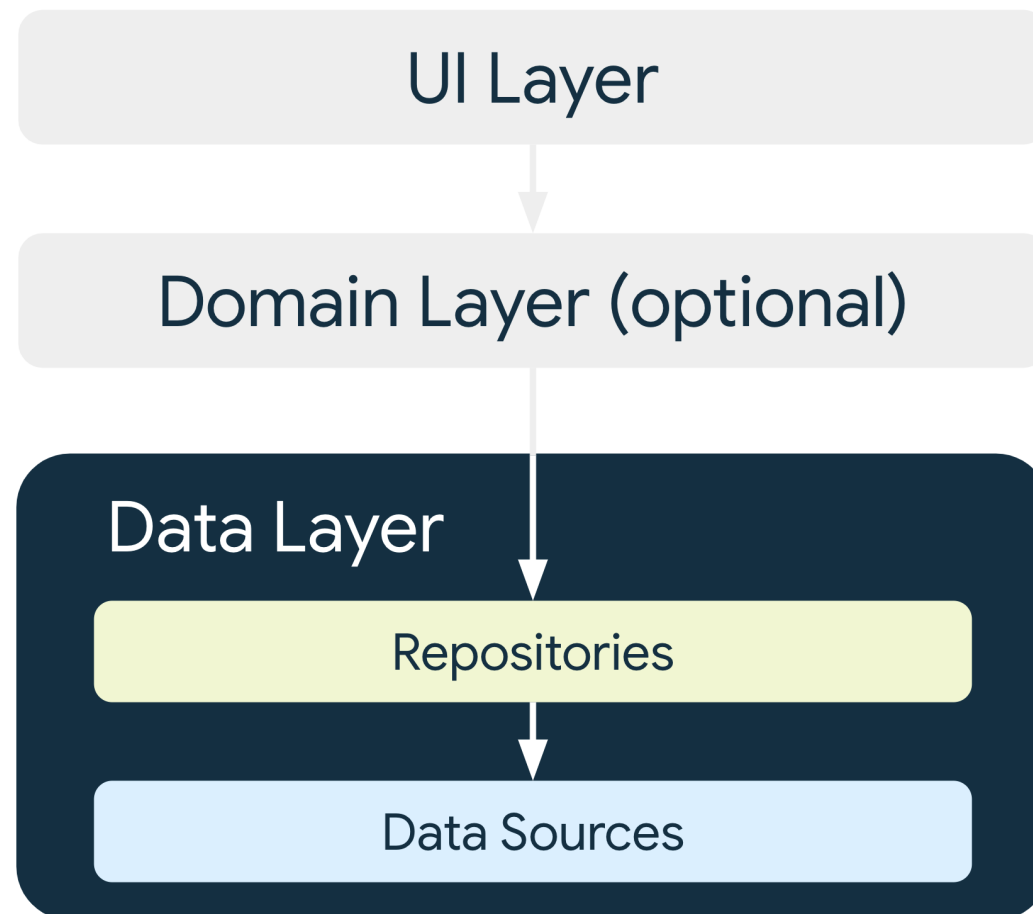
Room

- The Room persistence library provides an abstraction layer over SQLite
- Room entities represent tables in your app's database. You use them to update the data stored in rows in tables and to create new rows for insertion
- Room DAOs provide methods that your app uses to retrieve, update, insert, and delete data in the database
- Room Database class is the database class that provides your app with instances of the DAOs associated with that database

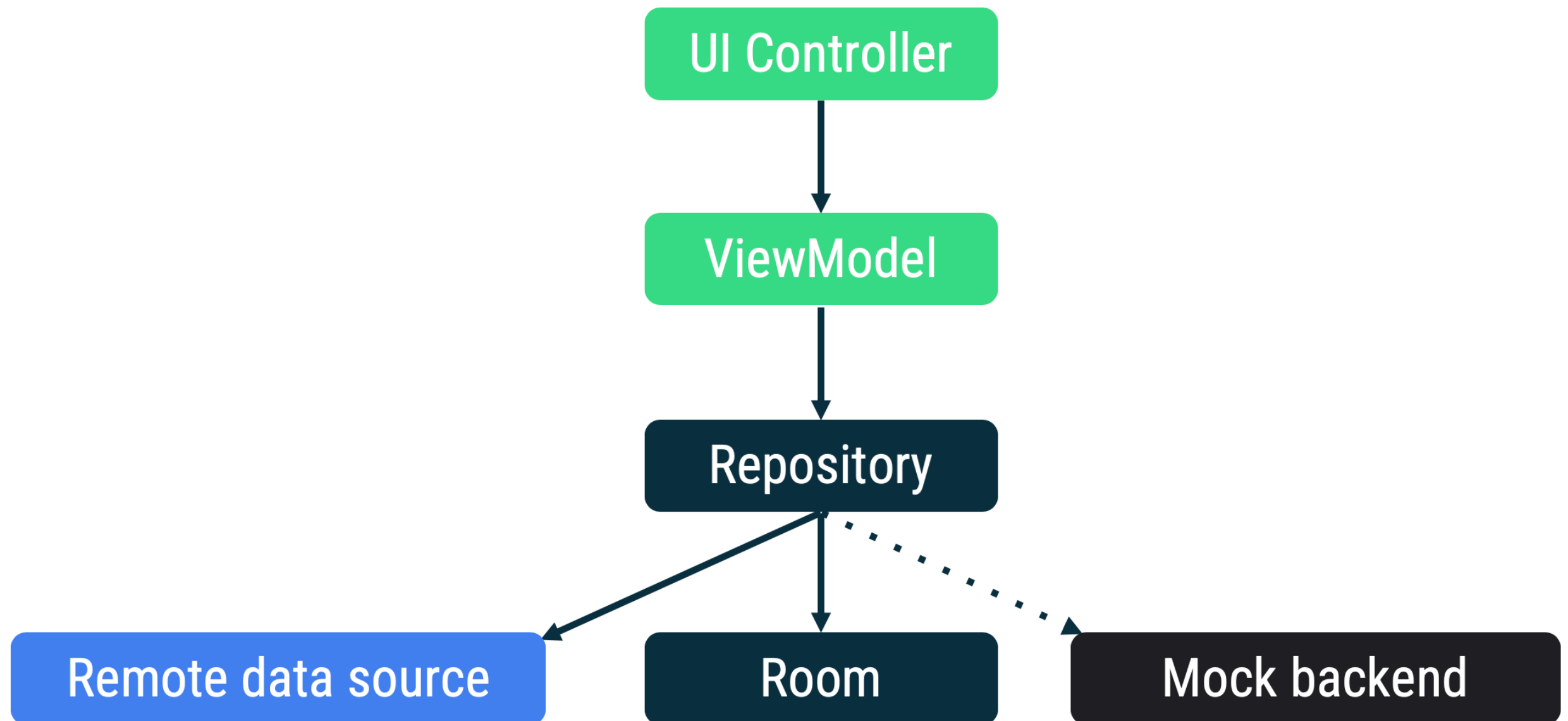
Room



Data layer



App architecture with repository pattern



Implement a repository class

- Provide a common interface to access data:
 - Expose functions to query and modify the underlying data
- Depending on your data sources, the repository can:
 - Hold a reference to the DAO, if your data is in a database
 - Make network requests if you connect to a web service

Workshop