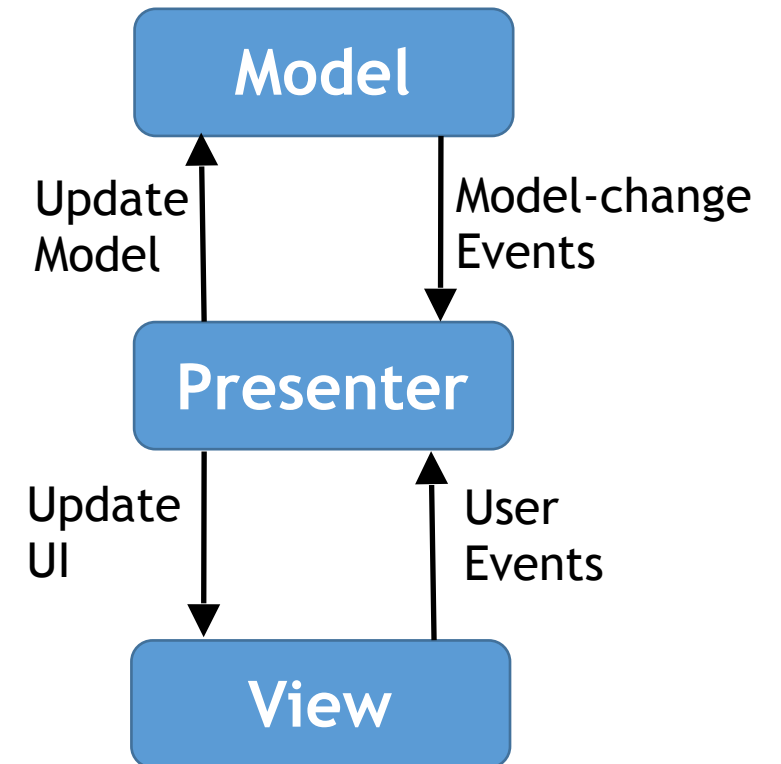


CSCB07 - Software Design

Android - Testing

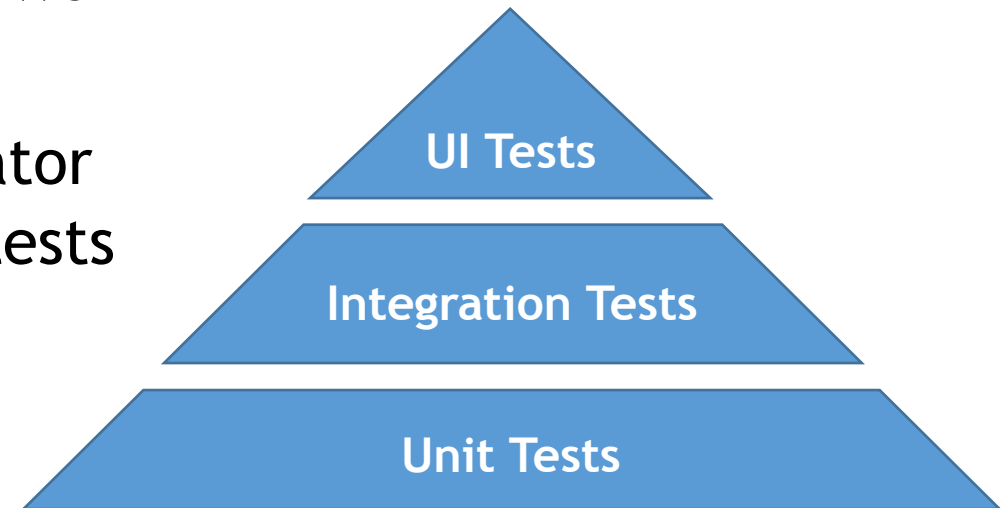
Model-View-Presenter

- An architectural design pattern that results in code that is easier to test
- It consists of three components:
 1. Model (Data)
 2. View (UI)
 3. Presenter (Business logic)



Local and Instrumented Tests

- Local unit tests
 - Run on the machine's local JVM
 - Do not depend on the Android framework
- Instrumented tests
 - Run on an actual device or an emulator
 - Usually used for integration and UI tests



Commonly used tools

- JUnit
 - Writing unit tests
- Mockito
 - Creating dummy (mock) objects to facilitate testing a component in isolation
- Roboelectric
 - Running tests that involve the Android framework without an emulator or a device
- Espresso
 - Writing UI tests

Mock Objects

- A mock is software component that is used to replace the “real” component during testing
- Mock objects could be used to:
 - Represent components that have not yet been implemented
 - Speed up testing
 - Reduce the cost
 - Avoid unrecoverable actions
 - Etc.

Mockito

- A mocking framework for Java
- Features include:
 - Creating mocks
 - Stubbing
 - Verifying behavior

Example