Espresso UI Testing In Android

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Agenda

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Introduction Automated UI Testing

Automated UI Testing ?

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Automated UI testing refers to the usage of specific tools or frameworks for automating the manual test processes that verify UI functionality.

So if previously we need to verify the UI manually, with "playing" the application / system that we built, changed into we ask help from "robot" for doing this one.

What is Espresso ?

Espresso ?

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an open source android user interface (UI) testing framework developed by Google. The term Espresso is of Italian origin, meaning Coffee. Espresso is a simple, efficient and flexible testing framework.

Component in Espresso

Component in Espresso

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What we do in Automated UI Testing with Espresso ?
Basically we are doing for this :

1. Find a view
2. Doing the action
3. Check the result

Component in Espresso

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Espresso basically consist from three main components :

1. ViewMatchers – It is used for finding a view using different attributes like withId(), withText(), withTagKey(), etc.
2. ViewActions – It is used for performing the actions on the view defined in ViewMatchers like click(), longClick(), scrollTo(), etc.
3. ViewAssertions – It is used to assert that the view found using ViewMatchers and expected views are the same using match(), doesNotExist(), etc.

Espresso will be taking care of synchronization with any UI events

Pros and Cons

Espresso Test Recorder

Espresso Test Recorder

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Pros:

- Allow create ui test with interaction
- Save a lot of time due we doesn't need to code it manually
- Support multiple assertion

Cons :

- Limited Support in terms of devices and component that can be tested.

Espresso Testing

Espresso Testing

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Pros:

- Broader support in terms device and component that can be tested
- Simple and Quick setup

Cons :

- Need a lot time, due all test is written manually.

Sharing

Thank you