Retry TestRule for Android Espresso tests

Andres Sandoval   Mar 2, 2019 · 2 min read ★

This tutorial shows how to add Retry Test Rule to your Espresso UI automation tests. If a test fails it will retry test 'X' times. The code snippets are for Java and Kotlin projects.

1. First, we create the Retry TestRule

Kotlin:

```
/**
 * Retry test rule used to retry test that failed.
 * Retry failed test 3 times
 */

class RetryTestRule(val retryCount: Int = 3) : TestRule {

    private val TAG = RetryTestRule::class.java.simpleName

    override fun apply(base: Statement, description:
Description): Statement {
        return statement(base, description)
    }

    private fun statement(base: Statement, description:
Description): Statement {
        return object : Statement() {
```

```kotlin
        @Throws(Throwable::class)
        override fun evaluate() {
            var caughtThrowable: Throwable? = null

            // implement retry logic here
            for (i in 0 until retryCount) {
                try {
                    base.evaluate()
                    return
                } catch (t: Throwable) {
                    caughtThrowable = t
                    Log.e(TAG, description.displayName + ":
run " + (i + 1) + " failed")
                }
            }

            Log.e(TAG, description.displayName + ": giving up
after " + retryCount + " failures")
            throw caughtThrowable!!
        }
    }
}
```

Java:

```java
public class RetryTest {
    public static class Retry implements TestRule {
        private int retryCount;

        public Retry(int retryCount) {
            this.retryCount = retryCount;
        }

        public Statement apply(Statement base, Description
description) {
            return statement(base, description);
        }

        private Statement statement(final Statement base, final
Description description) {
            return new Statement() {
                @Override
                public void evaluate() throws Throwable {
                    Throwable caughtThrowable = null;
```

```
                        // implement retry logic here
                        for (int i = 0; i < retryCount; i++) {
                            try {
                                base.evaluate();
                                return;
                            } catch (Throwable t) {
                                caughtThrowable = t;
                                Log.e(TAG,
  description.getDisplayName() + ": run " + (i + 1) + " failed");
                            }
                        }
                        Log.e(TAG, description.getDisplayName() + ":
  giving up after " + retryCount + " failures");
                        throw caughtThrowable;
                    }
                };
            }
        }
    }
```

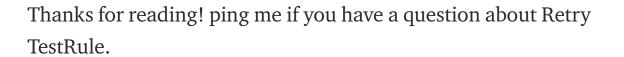## 2. Then we add TestRule to test class:

Kotlin:

```
  @Rule
  @JvmField
  val mRetryTestRule = RetryTestKotlin.Retry(3)
```

Java:

```
  @Rule
  public RetryTest.Retry mRetryTestRule = new RetryTest.Retry(3);
```

3. Run Espresso tests.

Note: make one of your tests failed and you can see it retries tests.

Thanks for reading! ping me if you have a question about Retry TestRule.

Resources:

All about TestRule — A Steroid Before/After

We usually have @Before and @After in our test for setup and teardown functions needed for the test. So what is...

medium.com

Kotlin   Espresso Testing   Android   Retry Test Rule   Ui Testing