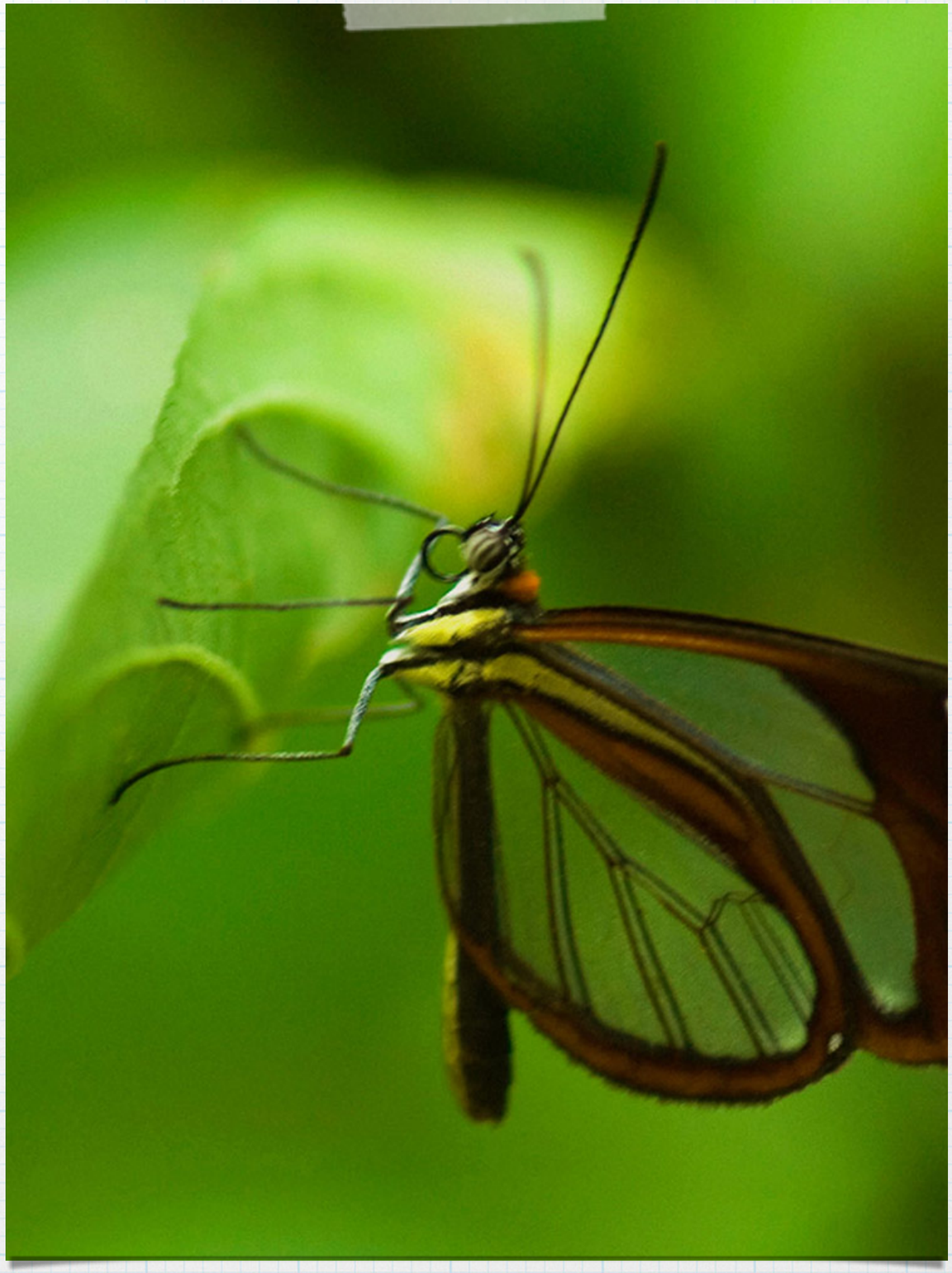
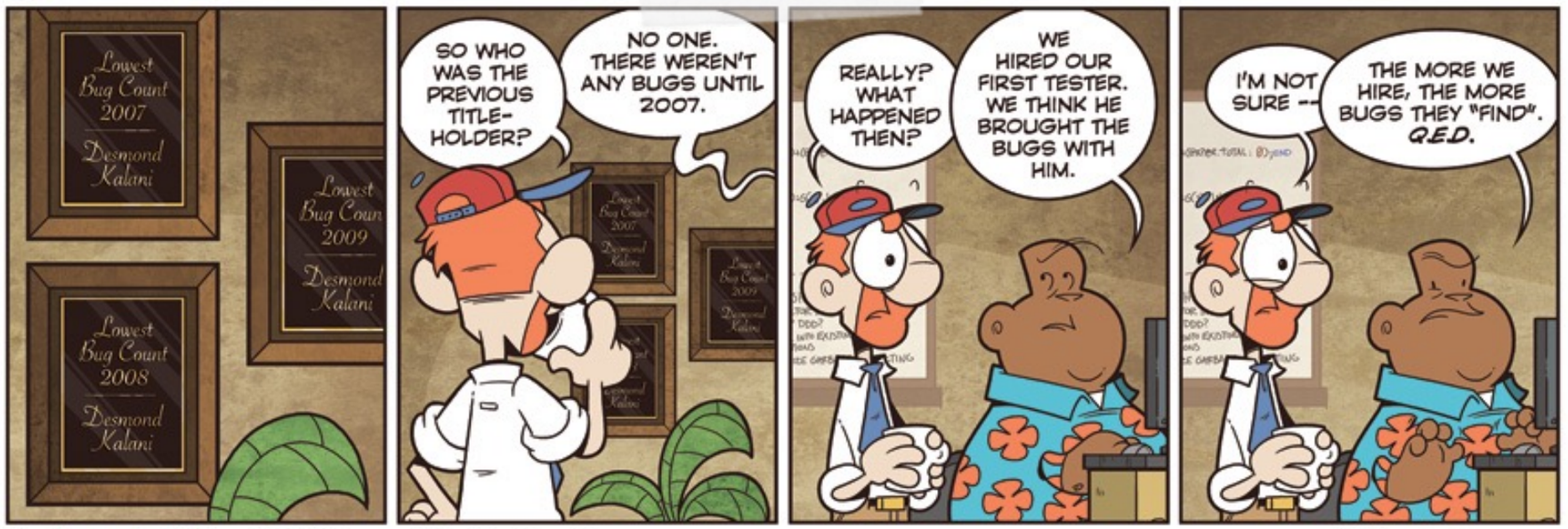
I, For One, Welcome Our New Robot Overlords

Accepting Mobile Automated Testing into your Heart

About Me:

- Engineer at MEDL Mobile
- Been doing Android & iOS development for 4 years





How many of you have a dedicated QA group?

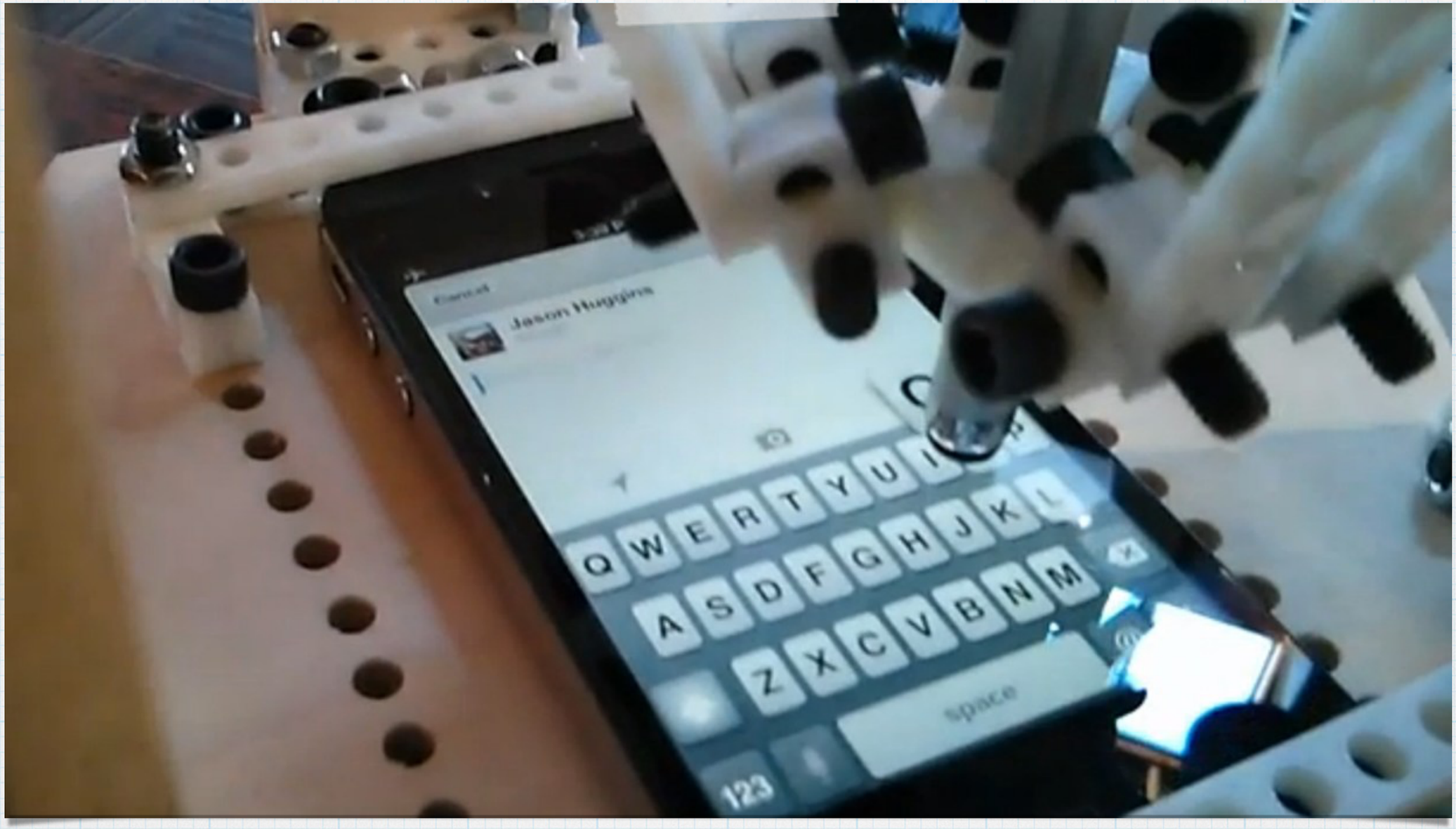
How many of you are doing automated testing?

Old projects: small army of manual testers

New projects: only one or two testers

Manual Testing Problems

* Testers must be in the office
* Troubles with reproducing
* Flaky error cases
* Takes lots of time



I, for one, welcome our new robotic overlords

Pros of manual testing

* Testers invent new ways of going through the app
* If something is out of place, they can exploit it right away
* Can tell you how aggravating some of your flows are

"Don't abandon manual testing completely"

- Me
(and your QA department)

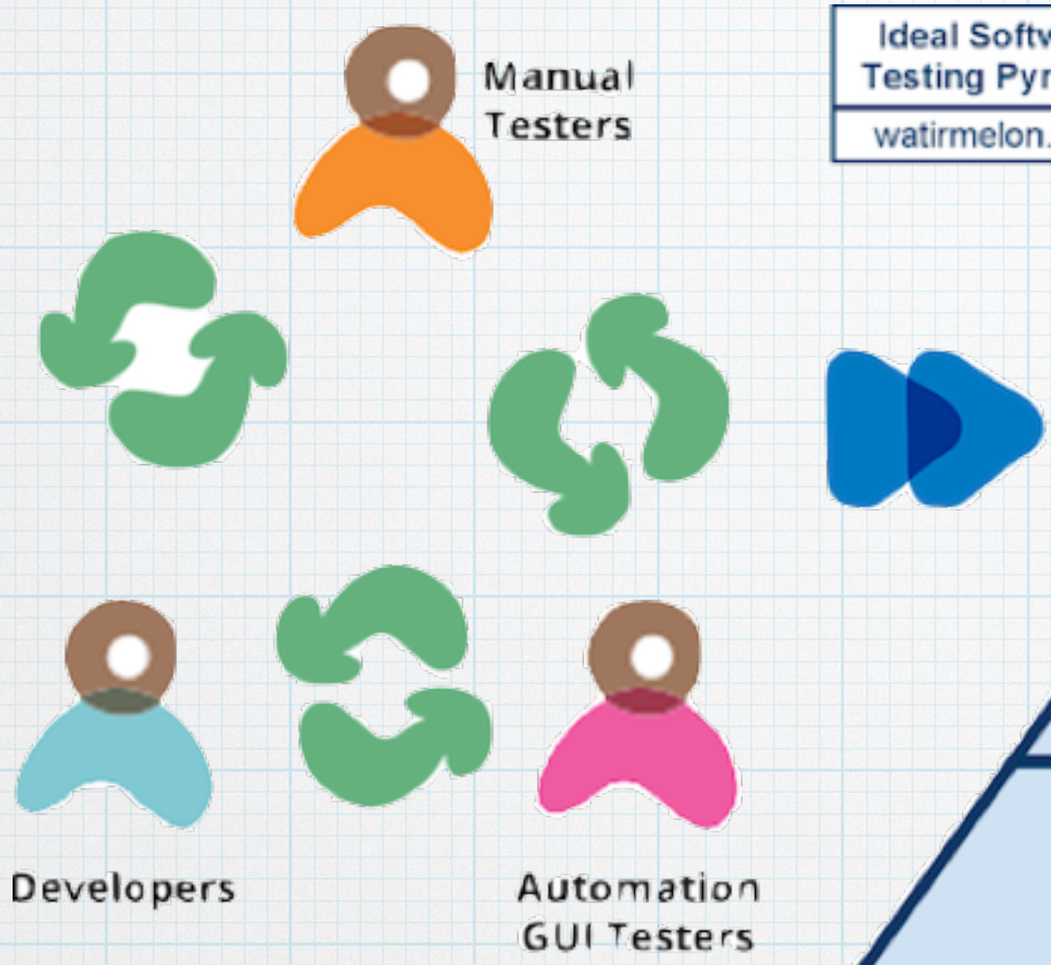
KEEP

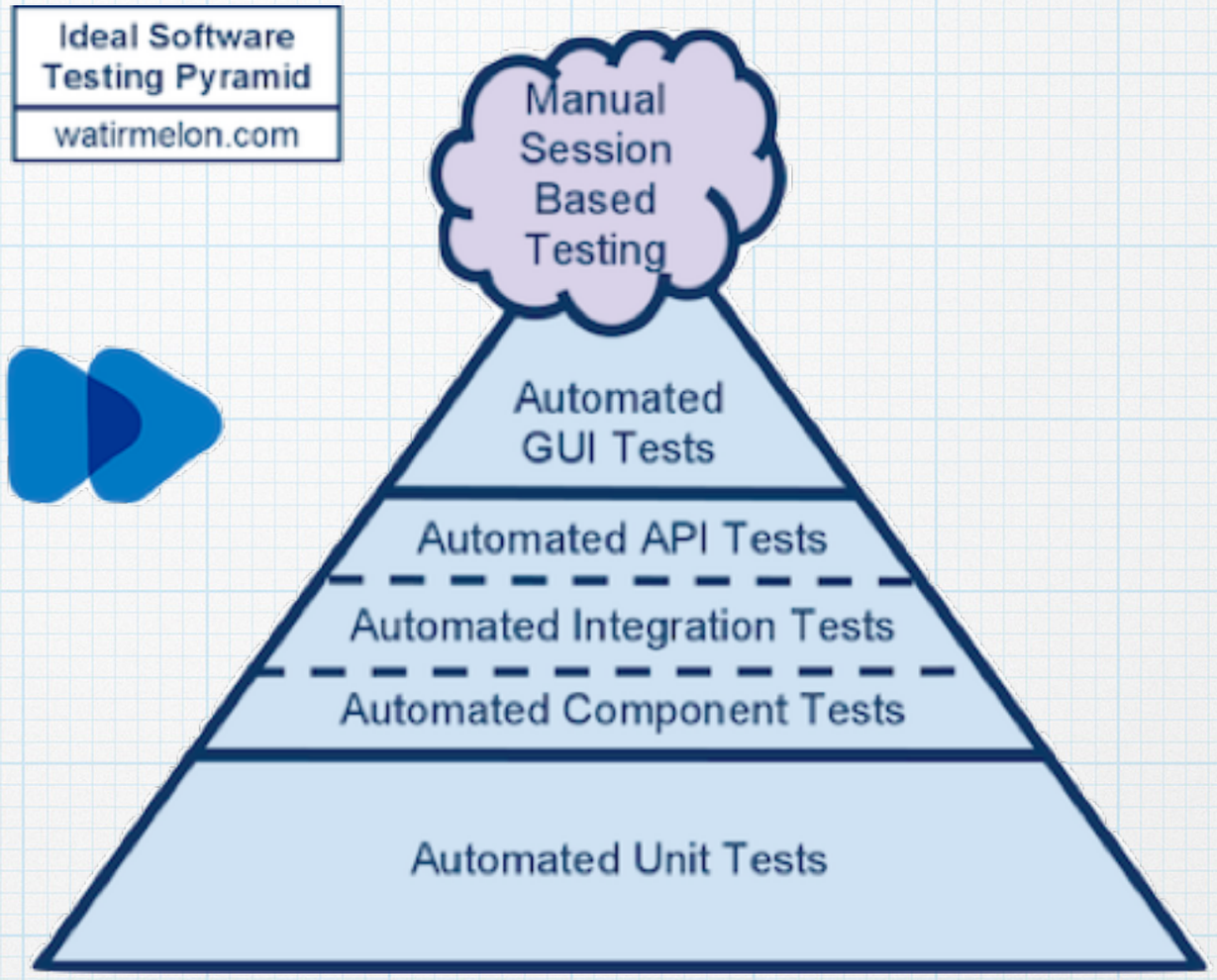
CALM

AND

CONTINUE

TESTING





Levels of Testing

Unit Tests

* Small, independent tests
* Tests only a small chunk of a class
* Fast to run
* Written mostly by developers

Functional Tests

* Test entire feature
* Cut across large sections of the app
* Can be written by developers, QA, or product owners

Needs from a testing solution

* Has to support iOS and Android
* One set of test cases shared between both apps

Needs from a testing solution

* Needs to be quick to pick up and set up

Needs from a testing solution

* Needs to be understandable/usable by non-technical people

UIAutomation/ UIAutomator

* iOS/Android specific frameworks
* One is Javascript, the other Java.
* Tests are not portable between platforms

Cucumber

* Tests are written in plain language
* "Given", "When", "Then"
* Desired by teams interested in Agile

Calabash

* Cucumber support, Ruby code
* Many built-in step definitions for mobile tests
* iOS and Android can use the same steps & step definitions
* FREE!

How to write Cucumber/Calabash tests

```
Feature: Running a test
  As a Developer
  I want a sample feature
  So I can begin testing quickly
```

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Scenario: Logging in
  Given I am about to login
  When I login as “User”
  Then I should see “My Profile
```

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```
Scenario: Invalid Login
  Given I am about to login
  When I login as “BadUser”
  Then I should see “Invalid Credentials”
```

```
Feature: Running a test
  As a Developer
  I want a sample feature
  So I can begin testing quickly

@valid
Scenario: Logging in
  Given I am about to login
  When I login as “User”
  Then I should see “My Profile

@invalid
Scenario: Invalid Login
  Given I am about to login
  When I login as “BadUser”
  Then I should see “Invalid Credentials”
```

Step Definitions

```
Given(/^I am about to login$/) do
    …
end
```

Step Definitions

```
Given(/^I am about to login$/) do
  …
end
```

```
When(/^I login as “(.*?)”$/) do |user|
  …
end
```

It's Just Ruby Code!

Step Definitions

```
When(/^I login as “(.*?)”$/) do |user|
  …
end
```

Step Definitions

```
When(/^I login as “(.*?)”$/) do |user|
  …
end
```

```
USERS = {
 BadUser: {
  username: ‘baduser’,
  password: ‘BadPassword’
 }
}
```

Step Definitions

```
When(/^I login as “(.*?)”$/) do |user|
 user = USERS[:user]
 touch(“Username”)
 keyboard_enter_text(user[:username])
 touch(“Password”)
 keyboard_enter_text(user[:password])
 touch(“Login”)
end
```

Writing Good Tests

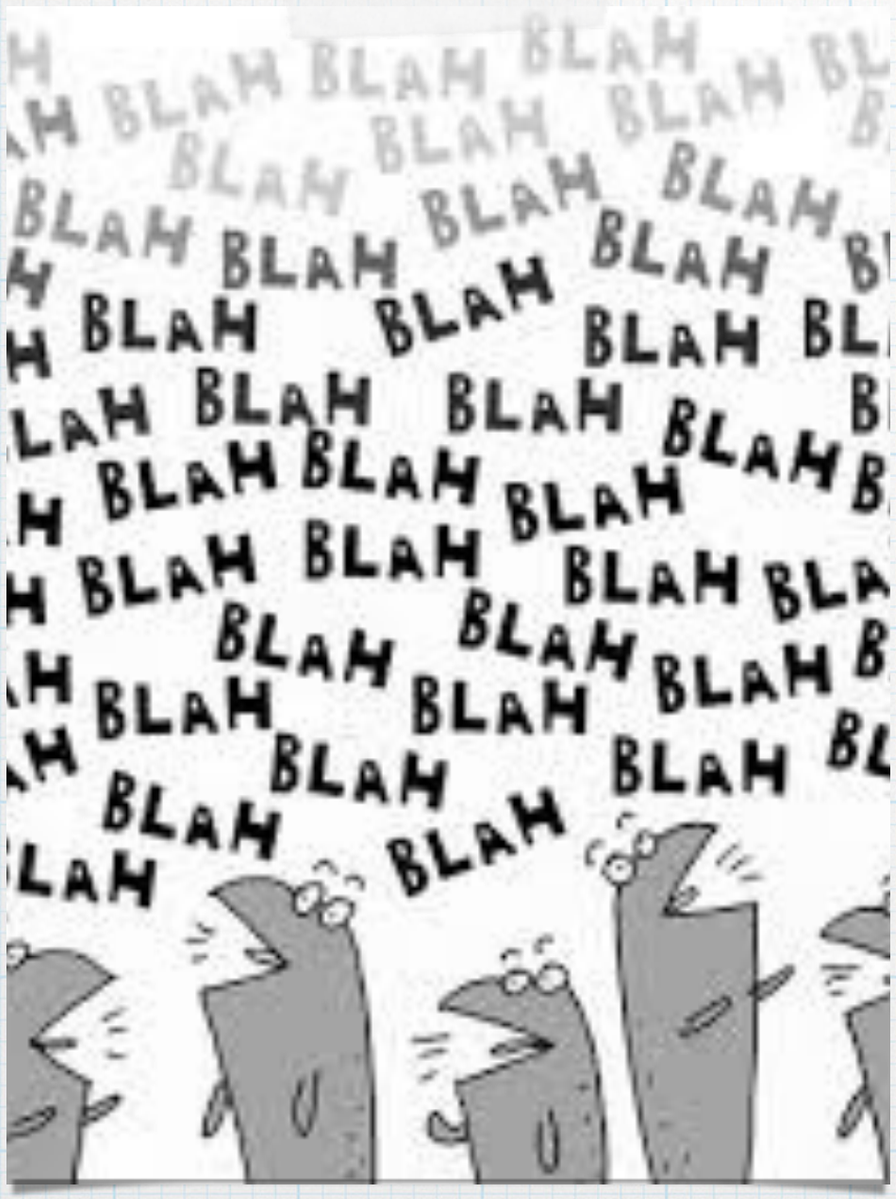
Bad Tests are worse than no tests

Good tests should be slightly verbose

TestLoginShouldFailWithInvalidCredentails

VS

LoginTest45



Good Tests should be Concise

Given I am on the Welcome Screen
Then I press the Welcome button
Then I tap the Username field
And I type "username"
Then I tap the Password field
And I type "badPassword"
And I tap the Login button
Then I should see “Invalid Login"

Given I am on the Welcome Screen
Then I press the Welcome button
Then I tap the Username field
And I type "username"
Then I tap the Password field
And I type "badPassword"
And I tap the Login button
Then I should see “Invalid Login"

Given I am about to login
When I log in as “BadUser”
Then I should see “Invalid Login"

Good tests should be flexible

NOT

Good Tests must be independent


TNDIE

Good Tests should be run often


TEST
EARLY
AND
TEST
OFTEN

Good Tests should not know too much about what they're testing

```
- (void)testSquare {
    assertEquals([sut squareOf:2], 2*2);
}
```

```
- (void)testSquare {
    assertEquals([sut squareOf:2], 2*2);
}
```

```
- (void)testSquare {
    assertEquals([sut squareOf:2], 4);
}
```

Manual testing is on a decline

Explored solutions for automated testing

Saw what goes into a Cucumber test

What makes a good test

Fin

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