SNAPSHOT TESTING 101

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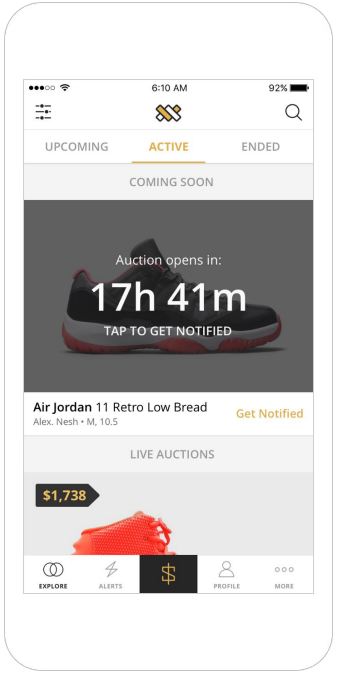
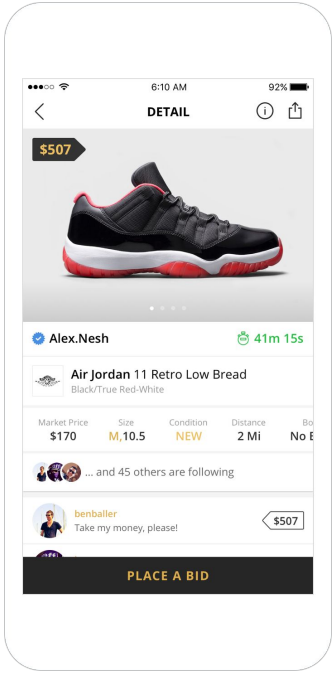
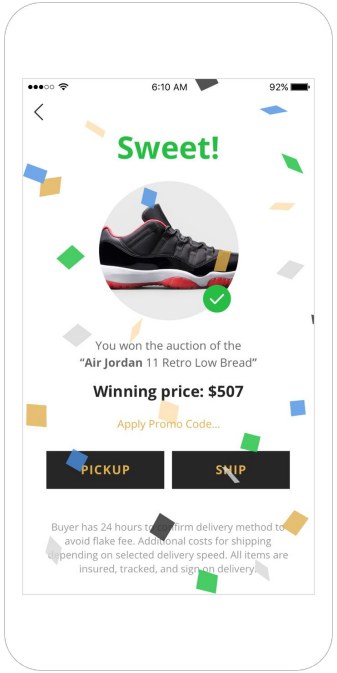
HOW TO MAKE SURE EVERYTHING LOOKS OK?







Maybe take a picture and compare it with some reference?

MEET SNAPSHOT TESTING

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SNAPSHOT TESTING

- Visual testing method
- Comparing screenshots
- Record mode - generate snapshots and store them
- Test mode - compare snapshots with reference ones to check for changes

WHY DO THIS?

- See how your views look like during development
- Test different and hard to reach states
- Easy to write tests
- You know when something breaks

FBSnapshotTestCase

- Developed and used by Facebook
- Testing multiple devices and screen sizes
- Can show difference in case of failed test
- Customizable to specific workflow
- CI friendly

FBSnapshotTestCase

- Install via CocoaPods
- Set `FB_REFERENCE_IMAGE_DIR` environment variable
- And start testing!

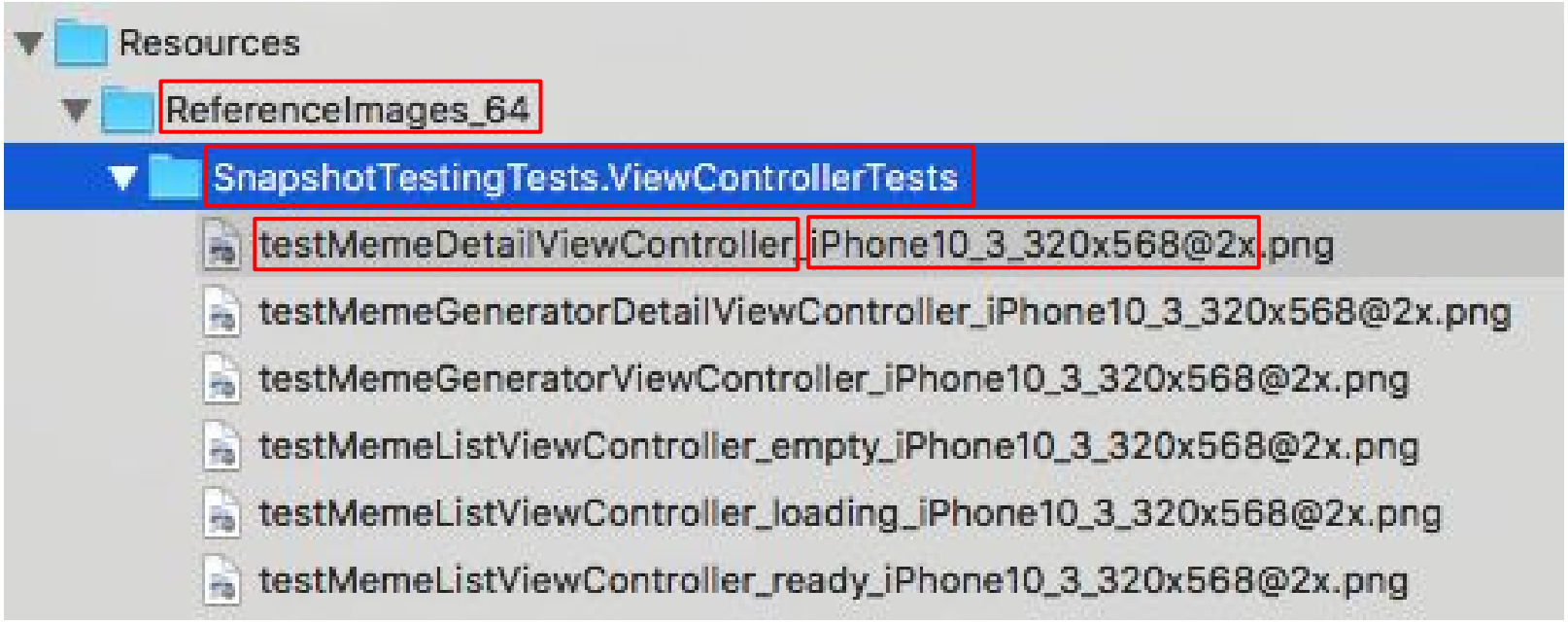
FIRST TEST

```
class SnapshotTestingTests: FBSnapshotTestCase {

    override func setUp() {
        super.setUp()
        isDeviceAgnostic = true
//        recordMode = true
    }

    func testMemeDetailViewController() {
        let vc = R.storyboard.main.memeDetail()!
        vc.meme = Meme.memes.first
        FBSnapshotVerifyView(vc.view)
    }
}
```

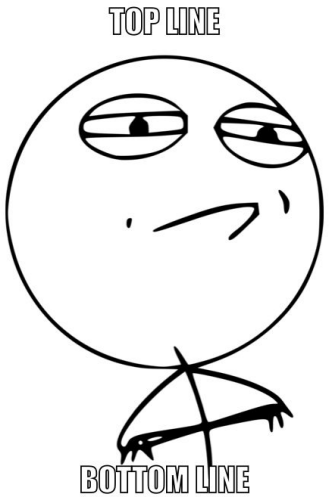
REFERENCE IMAGES



VISUAL DIFFERENCE

Top line Some funny text

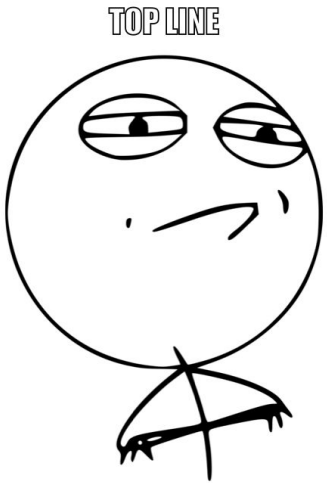
Bottom line Some funny text



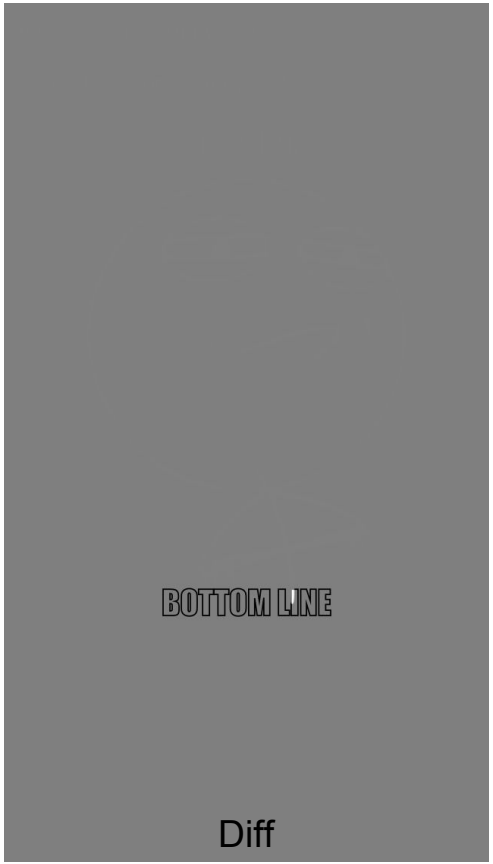
Reference

Top line Some funny text

Bottom line Some funny text



Current



Diff

DEMO

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PREPARING YOUR CODE

- Create view controllers separately
  - Storyboard identifiers
  - No extra dependencies
- Provide view controllers fixed testing data
- Code quality benchmark

GOTCHAS

- Checking failed images when testing on device
- Reference images must be stored somewhere
- `UINavigationController` & `UITabBarController`
- Toggle `usesDrawViewHierarchyInRect` for
  - UI Appearance
  - visual effect views
  - size classes

IMPOSSIBLE STUFF

- Animations
- `WKWebView` - doesn't render
- `UIAlertViewController`
- Separate `UIWindow`

CI INTEGRATION

- CI Friendly
- Default test target
- Buddybuild support

DEMO

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RESOURCES

https://github.com/dzindra/SnapshotTesting

https://github.com/facebook/ios-snapshot-test-case

https://www.objc.io/issues/15-testing/snapshot-testing/

https://github.com/ashfurrow/Nimble-Snapshots

THANK YOU

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QUESTIONS

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