

Automated testing of an iOS Healthcare Monitoring application

Executive Summary

Our clients, a California, USA based smart and innovative IT solutions provider (Healthcare Management industry) wanted an automated test suite for their iPhone application , which is used to monitor the health data of their client who uses equipment manufactured by the company. Automating a hybrid application which interacts often with Wireless networks and Bluetooth was a challenging and well experiencing task for us. We provided an automation solution which makes sure that every new build of this application has minimal defects by providing reports for bugs. We provided solutions like test case updation and maintenance of the script for the new builds of the application with added features, at a later stage.

About Our Client

Client: A major innovative and smart IT service provider in Healthcare management domain (IOT based) | **Location:** California, USA | **Industry:** Healthcare Management

Business Situation

Our client wanted an automated test suite for the iPhone application they have , which has a major role for delivering the health statistics to their consumers. They wanted the project to be hassle free, which can be easily executed by anybody from their end with easily interpreted test results. They looked for a fully automated solution that will be a suitable candidate for integration with Continuous Integration tools like Jenkins. The idea behind automating this app was to have a complete regression suite for Black-Box testing covering the functional, acceptance and system scenarios of the application. Clients need was to have an automation script that can be run over application configured with any of the environment servers they have and that to be chosen while running the script.

Our Solution and Customer Benefits

We suggested Appium as the best candidate for the need, indicating it to be a perfect match to the requirement of CI support and better test coverage. We completed automating test scenarios according to the test cases prepared. Appium was adequate enough to make us handle all kind of user actions, assertions and verifications with the application and with a short period of time we came up of with a powerful automated test suite satisfying the client needs.

We prepared documentation containing instructions to handle script run with Mac OS and configuration details for the mentioned platform.

Divided the test suites according to the functionality of the application to best suite Job configuration with Jenkins. We configured the Jobs with a VM provided by client using Share Screen and configured that machine to be friendly with the script run.

We configured iPhone/iPod to be used with automation having the application under test installed with it.

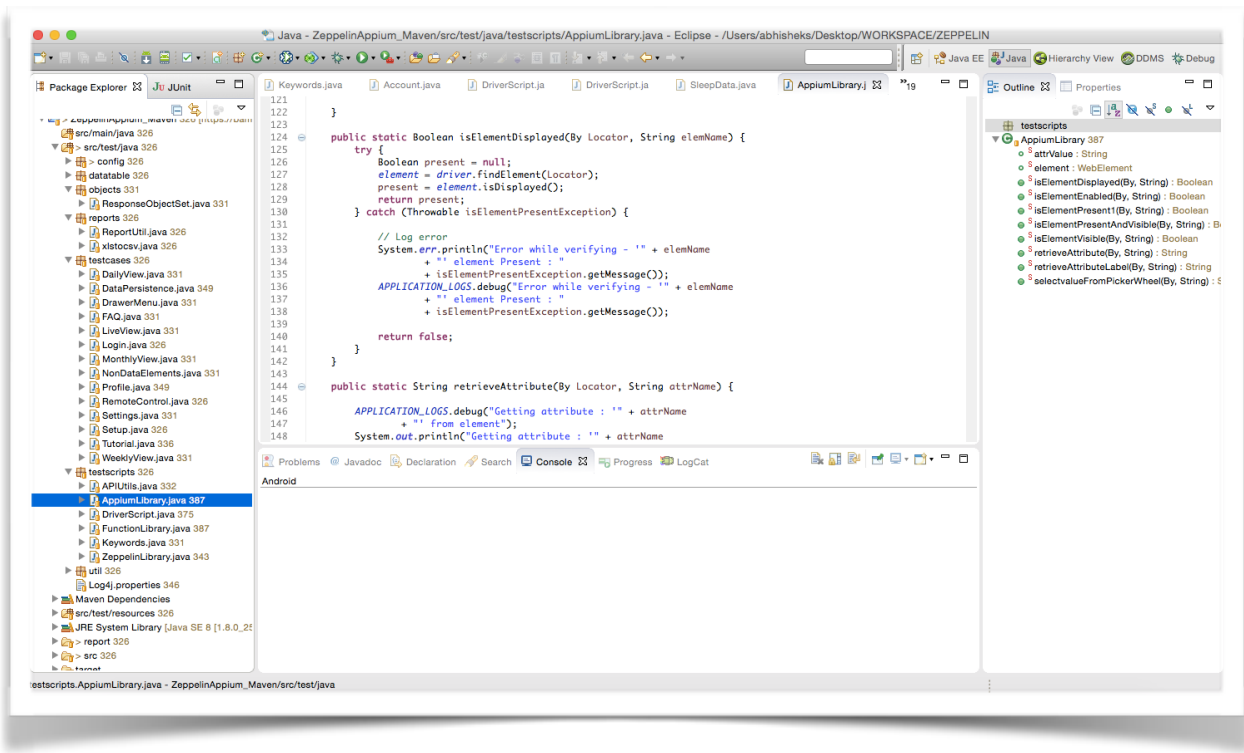
Our automation test report gets generated in HTML, Spread sheet and csv format as well. Demonstrating test results test case wise (along with screenshots), which helped client to narrow down the exact portions of the application which has defects.

Later we integrated our automation test suite with a test case application which made defect tracking process automated. Whenever a test case fails , it saves a record in test case application database and at any point of time , we can track which build had the issue on which date.

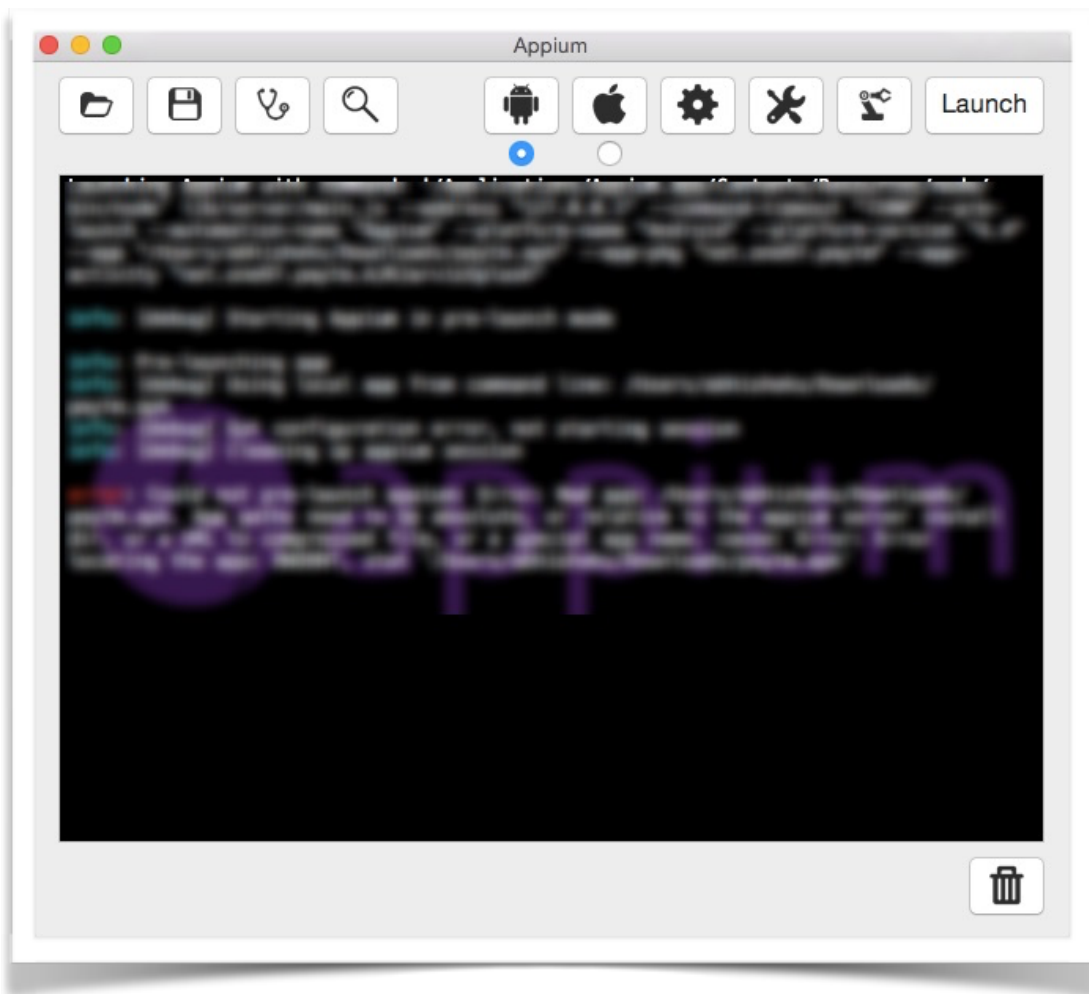
Technologies and Tools

Appium, Java, Eclipse, Maven, Jenkins & Xcode

Final Results



Glimpse of project being developed using Eclipse IDE



Appium Server

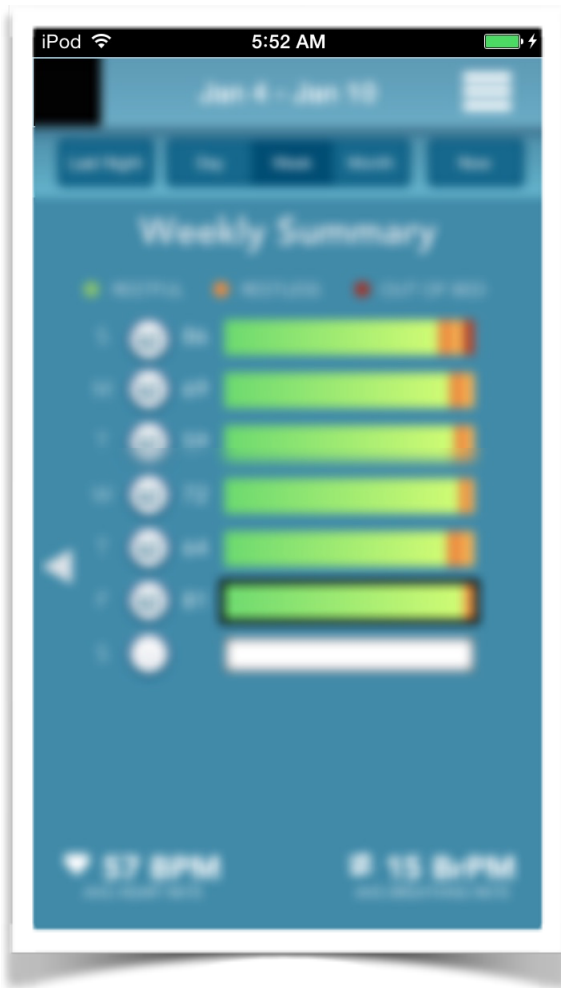
Automation Test Results

Test Details :

Run Date	16.October.2015
Run StartTime	16.October.2015 02.43.40 AM
Run EndTime	16.October.2015 04.16.37 AM
Environment	qa4.sleepiq.sleepnumber.com
Build	Firefly Backend
Version	Firefly Backend
Project	Backend API

TestSuite Report :

Test Script#	Test Suite Name	Status	Run Start Time	Run End Time
1	Account	Pass	16.October.2015 02.43.41 AM	16.October.2015 02.46.41 AM
2	Address	Pass	16.October.2015 02.46.47 AM	16.October.2015 02.47.32 AM
3	Administrative	Pass	16.October.2015 02.47.33 AM	16.October.2015 02.47.37 AM
4	Bed	Pass	16.October.2015 02.47.37 AM	16.October.2015 02.57.09 AM
5	Component	Pass	16.October.2015 02.57.16 AM	16.October.2015 03.02.44 AM
6	CustomerRegistration	Pass	16.October.2015 03.02.49 AM	16.October.2015 03.04.17 AM
7	CustomerServices	Pass	16.October.2015 03.04.19 AM	16.October.2015 03.10.43 AM
8	Miscellaneous	Pass	16.October.2015 03.10.51 AM	16.October.2015 03.11.22 AM
9	Sleeper	Fail	16.October.2015 03.11.23 AM	16.October.2015 03.23.58 AM
10	TagNJournalNote	Pass	16.October.2015 03.24.12 AM	16.October.2015 03.35.03 AM
11	Thumbnail	Pass	16.October.2015 03.35.10 AM	16.October.2015 03.37.37 AM
12	User	Pass	16.October.2015 03.37.39 AM	16.October.2015 03.40.01 AM
13	Wifi	Pass	16.October.2015 03.40.03 AM	16.October.2015 03.41.11 AM
14	FAQ	Pass	16.October.2015 03.41.13 AM	16.October.2015 03.41.15 AM
15	BedTimeRoutine	Pass	16.October.2015 03.41.15 AM	16.October.2015 03.44.48 AM
16	SleeperGoal	Pass	16.October.2015 03.44.50 AM	16.October.2015 03.55.05 AM
17	PushNotification	Pass	16.October.2015 03.55.11 AM	16.October.2015 04.09.41 AM
18	RegistrationCacheCalls	Pass	16.October.2015 04.09.48 AM	16.October.2015 04.10.48 AM
19	CloudDeviceCalls	Fail	16.October.2015 04.10.51 AM	16.October.2015 04.16.26 AM



Application under test

Customer Benefits

The powerful and easy-to-use automation solution helped client in the same fashion they wanted it to be. Smooth Job execution from Jenkins and finding out failures in a detailed manner in reports, facilitated to figure out the problems in more easier way, avoiding the exhaustive manual effort.

Future Relationship

A work of new of its kind and successful execution of the project led us for a strong business relationship with a couple of other projects. Along with this we got the chance of maintenance as well as enhancement of script according to the features added in the further builds.

