Is your Mobile App Testing Well for Compatibility & Responsiveness?
- Kapil Saxena

“Mobile First” is the buzzword in everything digital today. Businesses and individuals want mobile apps to be simple and fast - just one nagging bug could spoil the entire experience. And with so much competition in this space, if users do not have an excellent experience, they will switch to a rival product faster than you can say, “There's an app for that.”

When it comes to a stable mobile app, ‘Compatibility’ and ‘Responsiveness’ are two really important aspects that must be looked at. Every app that addresses these issues will always have the probability of more adoption than the ones that don’t.

Compatibility
Software applications are meant to be platform independent. Building Apps that works on all platforms in not an easy task because of:

- Multitude of mobile devices available
- Device fragmentation & various OS platforms available today
- Different types of apps

Considering that over 500 million Android devices and about 220 million iOS devices were shipped since 2007, it is really tough to test an app on all possible OS versions & different mobile devices. Hence, we often end up releasing an App to market with just testing on either virtual devices (emulators/simulators) or a few real devices.

But is that enough? Are we really confident about our mobile App quality? How do we know that our App will work on all devices available with end users? What will happen if a user changes his/her mobile handset?

The need of the hour is to have an App that works seamlessly across devices & platforms, providing surety that it will work no matter what device or OS the user has.

Responsiveness

Responsiveness is something that keeps every developer on his toes. No user likes an ‘Application Not Responding’ (ANR) dialog appearing on the device screen. It informs users that something wrong has happened after the App was
installed, ultimately forcing the user to uninstall it. In today’s world, the user demands the best. Hence, an App that responds flawlessly across devices & platforms is surely going to survive.

The Android platform has capabilities to guard against applications that become unresponsive for a significant time period by displaying an ANR dialog that looks like this.

![ANR Dialog](image)

At this point, it offers the user an option to close the app and is not a good indication about the quality of your App. Hence it is of utmost criticality to build and test for responsiveness from day1 ensuring the ANR box never comes up.

**The Challenge**

The challenge to testing Apps for compatibility and responsiveness is the non-availability of a large number of real devices with any organization. Most organisations therefore end up testing the Apps on just a few devices - real & virtual - and release the App with a risky assumption that the App will work fine on all devices.

**The Solution**

Automated Testing is a preferred choice when it comes to testing but with Mobile Apps, many organizations are struggling to cope with new, emerging technologies. So how can automated testing test our apps for problems related to compatibility and responsiveness?

For compatibility testing, any solution must allow us to test the App for installation and uninstallation on multiple real devices. We must also check that the App can be launched after it gets installed. These three operations in sequence i.e. Install, Launch & Uninstall, when successful, will suffice to show the compatibility of the App on underlying devices.

Both Android & iOS platforms provide commands for running these operations, and those commands can be bundled together inside automated scripts, to make them run on several devices. The solution must be smart enough to take screenshots & logs at various instances during the whole testing process. These may prove valuable in debugging any issues observed.
Compatibility alone would therefore not suffice as the App may hang or become unresponsive after launch (for the many obvious reasons discussed above). Hence, testing for responsiveness is a must for mobile Apps and the best way to do it is to run several hundred random mobile gestures after the app is launched. It is the most efficient way to make sure that the app remains responsive even after hundreds of random gestures are performed at the fastest speeds possible.

**Monkey tests faster**

One of the solutions to randomly test your App’s responsiveness is using Monkey Tests. A Monkey test is often defined as an automated test that runs with no specific test in mind. It can be random in nature and hence produce eye-catching results.

Running Monkey tests daily, against different builds can prove to be very effective at catching bugs early in the development cycle of a new release.

The human tester too can perform all the operations performed by Monkey tests, but the random selection and the speed with which these random commands are executed is not always possible with human hands.

**Get your App tested the Magic way**

The Magic Software QA team with years of experience in automated and manual testing clearly understands how painful these obvious problems can be and hence we’ve been developing a robust automated online solution that will enable you to certify your App on a multitude of real physical devices. The solution supports hundreds of mobile devices covering various operating systems like Android, iOS & Windows. The users will be able to test their mobile apps from any remote geographic location for instant results. Apart from compatibility and responsiveness, the solution will also support testing the complete functionality on a large number of devices.

**About Magic Software:**

Magic, an EdTech major, provides consulting, platforms and tools, product design and development, and product testing solutions to publishers, technology companies and content providers. Its cloud-based mobile learning and distribution platform MagicBox and digital curriculum products developed for publishers are used in schools in North America, UK, Europe, Australasia and Latin America.

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