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## **Mobile Application Testing Matrix and Challenges**

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**Abstract :** The adoption of smartphones and the usages of mobile applications are increasing rapidly. Consequently, within limited time-range, mobile Internet usages have managed to take over the desktop usages particularly since the first smartphone-touched application released by iPhone in 2007. This paper is proposed to provide solution and answer the most demandable questions related to mobile application automated and manual testing limitations. Moreover, Mobile application testing requires agility and physically testing. Agile testing is to detect bugs through automated tools, whereas the compatibility testing is more to ensure that the apps operates on mobile OS (Operation Systems) as well as on the different real devices. Moreover, we have managed to answer automated or manual questions through two mobile application case studies MES (Mobile Exam System) and MLM (Mobile Lab Mate) by creating test scripts for both case studies and our experiment results have been discussed and evaluated on whether to adopt test on real devices or on emulators? In addition to this, we have introduced new mobile application testing matrix for the testers and some enterprises to obtain knowledge from.

Keywords: mobile app testing, testing matrix, automated, manual testing

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