Difference between stimulator and emulator?

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| STIMULATOR | EMULATOR |
| A stimulator is designed to create an environment that contains all of the software variables and configurations that will exist in an application’s actual production environment. | an emulator does attempt to mimic all of the hardware features of a production environment, as well as software features. |
| stimulators are best for software testing scenarios in which you’re focused on making sure that an application performs as expected when interacting with external applications or environments. | emulators are most useful when you need to test how software interacts with underlying hardware, or a combination of hardware and software. |
| A stimulator provides a fast and easy way to set up a software environment for application testing purposes without mimicking actual hardware | An emulator takes things a step further by emulating software as well as hardware configurations. |
| stimulators for internal configurations. | emulators for software and hardware; | |
| stimulators are written in high-level languages. | emulators are written in machine-level assembly languages | |
| stimulators are faster compared to emulators | Emulators’ binary translation makes them slower. | |
| A stimulator mimics the basic behavior of a device. | An emulator duplicates the thing exactly as it exists in real life. | |

1) What is mobile application testing?

Mobile application testing means a process in which an application is developed for mobile devices is tested to ensure its functionality, usability, and consistency. Testers can perform mobile application testing manually or with automation.

### **2) Why is mobile testing critical for businesses today?**

Testing is an indispensable part of every software development process. Mobile application is no exception: the growing number of mobile devices gives rise to a massive operation system fragmentation, screen sizes, and more. That is why tremendous attempts are made by QA teams to ensure the user’s seamless experience across various mobile devices without functionality bugs and issues. By putting the mobile application through rigorous testing, the product team can enhance the app’s ratings, as well as customer satisfaction for valuable referrals for even more downloads.

### **3) What is the key difference between mobile device testing and mobile application testing?**

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| Mobile device Testing | Mobile Application Testing |
| Mobile device testing examines a device’s quality – by validating its hardware and software functions | mobile application testing means testing the mobile application on different mobile devices to ensure its consistency and functionality. |
| This process aims to test features, i.e., screen, memory, camera, applications. | this process, you can measure the targeted application’s quality, whether it is well-suited for the device in terms of hardware, software, network connectivity, etc. |

### **4) How many types of mobile applications? What are they?**

There are three types of mobile applications:

* **Native Application**  
  A native application is a software application built in a specific programming language for the particular device platform, iOS or Android. It can be easily installed into your devices and available in the application store (Google Play for Android and App Store for iOS), for example, WhatsApp or Facebook.
* **Web Application**  
  A web application runs inside a mobile web browser, such as Chrome, Firefox, Opera, Safari using a mobile network or WIFI. For instance, some of the web applications are m.facebook.com, m.gmail.com, etc.
* **Hybrid Application**  
  A hybrid application is a combination of a native app and a web app. Even though this type of application can be installed on a device just like a native app, it is a web app built with HTML, CSS, or JavaScript and runs in a web view.

### **5) List out the types of mobile application testing**

* Usability Testing
* Compatibility Testing
* Installation Testing
* Interruption testing
* Network testing
* Orientation Testing
* Battery testing
* UI(VFX/SFX)
* GPS(Geo-Location)

### **6) What are the common challenges in mobile application testing faced by most testers?**

* Executing test cases with various operating systems(android&Ios)
* Testing application’s functionalities on a wide range of handsets
* Testing applications on different mobile networks(airtel,Vodafone/jio)(network providers)
* Different application types (native, hybrid or web app) require different ways to test
* The choice of the right mobile testing tool for QA team

### **7) What is the best way to test different screen sizes of the devices?**

Using emulators is the most effective way in case there are many different screen sizes of devices to test.

### **8) What are the common bugs that would often be found during the mobile testing process?**

In general, some mobile testers classify the most frequently-found bugs into the four types:

* **Critical bugs:** The device’s operating system crashes when testing the application’s particular feature.
* **Block bugs:** Unresponsiveness of performance occurs even though the device status is still on.
* **Major bugs:** A specific feature of the application is unable to perform its functionality.
* **Minor bugs:** GUI bug is commonly the main case falling into a minor bug list.

9)Mention what is the Android testing strategy?

The standard Android testing strategy must include the following test

* Unit Test
* Integration Test
* System Test

10) While performing end to end mobile testing what are the major criteria, you have to take in consideration?

* Installation
* Application launching without having network
* Uninstallation of app
* Orientation of app if it supports
* Testing application performance on a different kind of devices and network scenarios
* Testing the application response how it is responding

11) When to choose automation testing and when manual testing?

**Manual Testing**

* If the application has new functionality
* If the application requires testing once or twice
* If there is any changes in the code in the existing piece of code
* If there is any change in the crs based on the request of client/customer

**Automation Testing**

* If the regression tests are repeated
* Testing app for complex scenarios

12)What all major networks to be considered while performing application testing?

**Ans.** You should test the application on 4G, 3G,and WIFI shared data network network both secured as well as unsecured. 2G is a slower network, it’s good if you verify your application on a slower network also to track your application performance.

13) When performing sanity test on the mobile application what all criteria should be taken into consideration?

**Ans.**

* Installation and uninstallation of the application
* Verify the device in different available networks like 2G, 3G, 4G or WIFI.
* Functional testing
* Interrupt testing- Able to receive the calls while running the application.
* [Compatibility testing](https://www.softwaretestinghelp.com/software-compatibility-testing/)– able to attach the photo in message from gallery
* Test application performance on a different handset.
* Make some negative testing by entering the invalid credentials and test the behaviour of the application.

**14) What is the latest version of iOS?**

**Ans.**  ios 15.1

**15)What is the latest version of Android?**

**Ans.** Android 11(Red velvet cake) 8 sept 2020

**Android 10-**queen cake sept 7 2019