Compatibility Testing
Tuesday October 17, 2017

Compatibility testing is essential in the present market owing to the diversity in platforms and hardware’s in existence. As an entrepreneur, you must know about this diversity and must ensure that your app/software is working seamlessly across OSs and devices.

By performing compatibility testing you can gain that competitive advantage for your product which your competitor lack.

Read this blog to know about this wonderful process in software testing.

What is Compatibility testing?

Compatibility testing is a non-functional testing method primarily done to ensure customer satisfaction. This testing process will ensure that the software is compatible across operating systems, hardware platforms, web browsers, etc. The testing also works as validation for compatibility requirements that have been set at the planning stage of the software. The process helps in developing software that has the ability to work seamlessly across platforms and hardware without any trouble.

Compatibility testing is conducted in mobile applications for the following reasons:-

- This testing is performed to make sure that the final app product performs as expected on various mobiles/devices of different make and models.
• This is a type of non-functional testing whose main aim is to check the compatibility of applications with browsers, mobiles, networks, databases, operating systems, hardware platforms, etc.
• Through this method, the behavior of a mobile app in different environments can be analyzed
• With this testing, a tester can detect any error before the final launch of the mobile application in the market
• This testing confirms that all the necessary requirements sets by the developer and end-user have been met by the app
• Helps to create a top-notch bugs free applications which helps in accelerating reputation of the firm and move the business towards success
• Dynamic testing ensures stability and workability of the mobile app before it finally gets released in the market

Types of Compatibility Testing

#1) **Forward testing** makes sure that the application is compatible with updates or newer mobile operating system versions.

#2) **Backward testing** checks whether the mobile app has been developed for the latest versions of an environment also work perfectly with the older version. The behavior of the new hardware/software has been matched against the behavior of the old hardware/software.

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Compatibility type of testing can be performed on operating systems, databases, systems software, browsers, and mobile applications. The mobile app testing is performed across various platforms, devices, and networks.

**Process of Compatibility Testing**

The compatibility test is conducted under different hardware and software application conditions, where the computing environment is important, as the software product created must work in a real-time environment without any errors or bugs.

Some of the main computing environments are the operating systems, hardware peripherals, browsers, database content, computing capacity, and other related system software if any.
The Initial Phases of Conducting Compatibility Testing are as follows:

- Define the platforms on which mobile app is likely to be used
- Create the device compatibility library
- Make a drawing of various environments, their hardware’s, and software to figure out the behavior of the application in different configurations
- Initiate a testing environment and start testing compatibility across multiple platforms, networks, and mobile devices. After noticing the behavior report any error or bugs detected and get them fixed.
- Again perform the testing by following the same process, till no bugs can be found.

Categories of Compatibility Testing

- **Hardware** – To ensure compatibility across various hardware devices
- **Operating system** – To make sure that the software works equally across various OS’s
- **Network** – Software is tested with various fluctuating parameters of a network
- **Devices** – How the software is performing across various devices
- **Versions** – To check the compatibility across various versions of OS across devices backward and forward compatibility testing has to be performed

Advantages of Compatibility Testing
• Customer complaints can be avoided in the future
• Feedback in the testing stage will enhance the development process
• Apart from compatibility, scalability, and usability, stability will be revealed
• Makes sure that every prerequisite is set and agreed by the engineer and the client
• Ensures success in business
• Reputation and goodwill of the company will increase

How to do Compatibility Testing

Have a clear idea about the platform the app will be working on

The person and team involved in the process must have good platform knowledge

Set up the environment and before the actual test do a trial run.

Report the issues properly and make sure that it has been rectified. If you are finding new bugs make sure that after the rectification old fix is working fine.

Tools For Compatibility Testing

Tools make the process much easier. Major tools used in the industry include,

• CrossBrowserTesting.com,
• LambdaTest,
• Ranorex Studio,
• Browsershots,
• TestComplete,
• Turbo Browser Sandbox,
• Browsera

Conclusion

The main intention behind performing testing is to make sure that the software is working fine in any kind of platform/software/configuration/browsers/hardware etc.

Performing testing compatibility will reduce the gross error of the software. Thus this comparatively inexpensive process is a boon to ensure that your product is a success.
There are some most common defects which can be found in the mobile application by the compatibility tester; Differences in the UI with respect to appearance and feel, issues with font size and alignment, concern with respect to Scroll Bar and marked changes in CSS style and color, issues like broken tables or frames, etc.

Testbytes overcome challenges associated with this testing like system integration, app distribution management, performance and security, platform, OS, and device integration, and physical characteristics of mobile devices, etc. and offers comprehensive mobile app testing services.