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**MOBILE TESTING -1 ASSIGNMENT**

**1.What are the popular Mobile operating systems?**

a)Android

b)IOS

c)Windows

d)Blackberry

**2)Five key challenges in mobile application testing?**

* High cost for building the app : Native apps developed for one platform will not run on another platform. An App built for Android will not run on iOS. We need to build a different App altogether for iOS. Because of this reason, we need to maintain multiple versions of the App.
* Checking the responsiveness of each app on each plate-form is also a tedious job to do.One-size doesn’t fit all:One of the biggest problems in mobile testing is selecting the right tool. limitations like no image comparison, slow script execution for the iOS platform etc.
* Network can have a huge impact on the functionality of the app. Be it 3G, 4G or 5G,Wi-Fi.
* Power consumption and battery life. The innovation in the battery storage capacity field hasn’t been as quick as in the app consumption.
* One rapp is running on background without us even noticing. This is also a tedious job.

**3.Two categories of Mobile Testing and the difference between them?**

a)Mobile App Testing

Mobile application testing is a process by which application a software developed for handheld mobile devices is tested for its functionality, usability, and consistency. ice. Like Functional Testing, Laboratory Testing, Performance Testing, Installation testing etc.Mobile app testing includes only software testing like functionality, usability and performance of the app.

b)Mobile device testing

Mobile device testing includes hardware testing like Battery testing, Bluetooth, Camera features so on and also software testing like OS functionality

**4.What are the extensions for the Android and iOS executable files?**

For Android:.apk

For iOS:.ipa

**5.What are the Pros and Cons of Hybrid, Native and Web app?**

Web App

Pros:

* Easy access.
* Easy Development: Developing responsive design and restructuring the content to be properly displayed on a smaller screen/hardware will make any desktop website mobile friendly.
* Easy update: Just update in one location and all the users automatically have access to the latest version of the site.
* No installation required.

Cons

* Mobile websites cannot use some of the devices features. For example, access to the file system and local resources isn’t available in websites.
* While native and hybrid apps appear on the App Store and Google Play, web apps won’t. So redistribution is not that sensible.

Native App

Cons:

* Native Apps live on the device and are accessed through icons on the device home screen.
* They can take full advantage of all the device features — they can use the camera, the GPS, the accelerometer, the compass, the list of contacts, and so on. They can also incorporate gestures (either standard operating-system gestures, and app-defined gestures).
* Native apps can use the device’s notification system

Cons:

* Native apps developed for one platform will not run on another platform. An App built for Android will not run on iOS. We need to build a different App altogether for iOS. Because of this reason, we need to maintain multiple versions of the App.

Hybrid App:

Pros:

* Maintenance is simple, as there are not many versions to be maintained.
* It can take advantage of a few features available in the device.
* It can be found in the App Store, which makes the distribution easy.
* It has a browser embedded within the app only.

Cons:

* Graphics are less accustomed with the operating system as compared to Native Apps.
* Hybrid Apps are slower than Native Apps.

**6.List down the types of testing we perform for mobile apps?**

Functional Testing

• Compatibility Testing

• Localization Testing

• Performance Testing

• Security Testing

• Power Consumption Testing

• Interrupt Testing

• Usability Testing

• Installation Testing

• Uninstallation Testing

• Certification Testing

• Mobile UI Testing

- Screen Orientation

- Resolution

- Gestures (Multi touch, single touch, Long touch, short touch,

swipe etc.)

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

One of the way is to use virtual device testing in which we can just review the look of the size for different devices .Screen resolution can also be reviewed using virtual testing.Emulator can be used for this purpose

**8)What is meant by Responsive testing in Mobile sites?**

Mobile responsive web design is an approach followed in the website development to give the users a decent viewing experience on whatever device they are viewing.Google gives priority to the mobile-friendly sites in their search results and hence it becomes important to design your website by keeping this in mind. Flexible images and media – This helps to show the images and media differently in different sizes by using scaling or CSS.

With the development approach, testing of responsive websites is also important.Mobile friendly websites need to give the same experience to the users on a mobile as it does on a laptop or a desktop. It needs to be tested for different browsers, different screen sizes, modes – landscape or portrait etc.The content, videos, images, links etc., all need to be tested for their appearance before releasing the website. Not just across the devices but testing needs to be done on different browsers and operating systems as well.

For Example*,* a website may look little different on Android when compared to iOS or in Window

Creating matrices for the different combinations of phone sizes, browsers, operating systems, and versions

**9.Use Newerworlds app for the testing and log at least 5 bugs.**

1)No Option available for LogIn.Once a user sign In from one email Id ,another user with different email Id can not Log in to the app.

2)No Home page is available.

3)First Time when I launch the application there appears a push notification of “Connect to TOTHENEW wifi.”

4)Even if logout from the app,next time when i open the app it do not ask for my credentials.

5)Leave summary is not working.

**10.What do you understand by usability? Why it is more important to be taken care? Give 3 points of usability from real-time apps you have in your phones.**

Ans: Usability is part of the broader term “user experience” and refers to the ease of access and/or use of a product or website. It should be taken care so that it should be easy for the user to become familiar with and competent in using the user interface during the first contact with the website.

Three points of usability from real-time apps you have in your phones.

1)Basic working Fields should not be hidden behind the keypad during the time of filling the entries

2) Easy navigation should be there for every element.

3)Basic feature should be platform independent whether android and iOS one should be able to access any app irrespective of the OS he is using.

**11.Should the user use their own devices or provided devices to perform usability testing? Give the reasons for “Yes/“No” or both “Yes and No” together.**

Ans: It is advisable to have them test using their own devices. This eliminates issues associated with an unfamiliar, device or operating system. This will encourage the user to use the device as normally as possible and adapt the camera or any other feature in the devices as possible or needed.

**12)What do you mean by Soft Keys and Hard Keys in mobile?**

Hard Keys always have the same function and cannot be changed. An example of a hard key is the Hold Button, or the Volume up or Down Button.

Soft Keys are buttons whose function changes depending on the context. They typically use part of the display to identify their current function. Because of this, they are usually located directly adjacent the display.Example:The on-screen navigation buttons are sometimes called soft keys .

**13)Difference between Mobile application testing and web application testing?**

The main difference is , A Mobile App is essentially for one particular mobile device platform and it can be installed directly onto the particular devices itself. A Web App is basically an Internet-enabled app that can be accessible via mobile device's Web browser as well as desktop Web browser.

Testing related to gestures and other usability becomes more important in case of mobile app as compared to web app.Mobile app testing could be offline as well as online