

5 FAQ's for App Development

1. What programming software, database, tools and language should we use to develop the app?

A number of programming languages exist and the final objective of the app often determines the appropriate course of action. When preparing an RFP, any specific requirements for coding proficiency should be clearly stated. In general, all applications use the SQLite database. For programming on iPhone and iPad, programming languages include Xcode editor, Objective-C and Apache Subversion (SVN) for subversion control. When evaluating Android, programming platforms include Eclipse and IntelliJ editors, Android Software Development Kit (SDK) and JAVA. On Blackberry, programming tools include Eclipse editor, Blackberry Software Development Kit and J2ME. Finally, a number of programming languages are now available that allow for development across multiple platforms at the same time. Appcelerator has released a product call Titanium, which allows for development across multiple platforms; so be aware that developers may request permission to utilize different development products. There also are many other tools being developed, so plan for flexibility.

2. How do you approach development on tablets?

The answer depends on the operating system (OS) that you are developing for. Assuming that you are starting with a previously developed app, leave the app as is or engage in the design process for tablet optimization. Avoid the tablet boondoggle of failing to maximize the additional design space available on tablets. When considering developing products for a tablet, the most important consideration is real estate size (the total display size of the tablet). The user interface (UI) should fit the screen size and careful consideration should be paid to how the end user will interact with the device and the processing power needed for the program to work. Avoid using an app designed for the constraints of a phone. Additional limitations of certain software development kits (SDKs) should also be considered when developing a tablet optimize experience.

3. How do you submit to the marketplace? Copy, naming and process for submission

So you are ready to submit to the marketplace, right? The developer often handles this process, but in certain instances an organization may wish to publish under the requesting company's name. Reasons include brand continuity or the ability to make small easy changes at a later date to copy contained in the marketplace. Publishing to a marketplace often requires registration as a developer on various platforms for a nominal fee. Marketplace copy should be approved with the introduction focused on the features of the app followed by a description of the releasing organization if appropriate. SDKs should be reviewed for specific requirements, (e.g., image sizes, age group of use) when publishing an app. Note: The Apple process is a longer and more granular review compared to other platforms. One consideration is to avoid using the term "encryption" which may delay the review process using protected or other words to describe features in marketplace copy.

4. From a developer perspective: What is the use of the device?

- a. Design for simplicity – use a single column layout and [let data scream!](#)

- b. Reduce clicks.
- c. Have large and easy to press links and clickable objects.
- d. Avoid scrolling when possible (mobile devices).
- e. Remove excess content.
- f. Design for tablet vs. smartphone constraints.
- g. HIPAA Security Requirements for devices containing PHI.

5. Do you have experience with the integration of peripheral sensors?

A number of peripheral accessories are now available for mobile devices. Standards such as WiBan, Bluetooth (BLE), Ant+ and others permit the flow of information across devices. Developers should be knowledgeable of these standards. Additional considerations include the potential that the device is now regulated by the FDA. Both developers and requesting organizations should consult an attorney to determine if the use of peripheral sensors has subjected the app to the FDA guidelines on mobile medical device data systems. One other consideration is battery life. If you are using BLE or one of the other protocols you should consider the connection time with the sensor and the impacts on user experience. GPS for instance, uses a lot of power and can impact battery performance in addition to impacting user experience.

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