

Application Development: Task One – Research

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A detailed technical profile for a mobile OS of your choice, outlining basic requirements for designers and developers to follow.



A mobile OS is what makes the smartphone that you utilize every day, work and depending on how good your OS operates alongside its hardware, it'll be efficient and nowadays, many people aren't even able to function without a smartphone.

iOS is one of the world's leading operating systems, only coming second to android. Apple Inc. was established in the 70's in California but the iOS was not introduced until 2007, with the invention of the first iPhone. iOS is made exclusively

for Apple hardware (iPhone, iPad etc.) and it has an incredibly devoted consumer base, with its customers being incredibly loyal and devoted to the brand.

There are many things that need to be taken into consideration when creating an application for any OS, for example certain features like hardware interdependence and adaptability and memory and task management.

Hardware Interdependence: the software of the OS is always dependent on the hardware, because without it, the software would not be able to operate; therefore, this makes the software fully dependent on the hardware and the hardware semi-dependent on the software, because while it may still operate, there isn't much you can do with hardware that doesn't have an OS.

Hardware Adaptability: since iOS is made for specifically Apple products (making it hardware specific), hardware adaptability isn't very difficult for iOS applications to have. The developers have to make sure that they follow the guidelines that are provided to them by Apple Inc. themselves, or else, it might be the case that their app wouldn't be allowed in the App Store.

Memory & Task Management: The OS works as a run time environment, meaning that it releases all unwanted resources, and cares for the memory.

UI focuses on making sure that the user is able to have a good experience with the application he or she is using; that is why guidelines are provided. Apple guidelines are more strict than other operating systems and it's why their applications usually run so smoothly.

There are three main themes that you have to abide by:



- Clarity – by this they mean that everything is legible, no matter the size of the screen, icons are easy to interpret and utilize, there isn't an abundance of adornments and addons and that the main focus of the user should be on the main function of the application.
- Deference – this is basically making the application easier on the eyes; making sure that the design is sleek and that it avoids eye-strain for the users. Overall, ensuring that the application is easy and efficient to use.
- Depth – making sure that the layers are realistic, and making sure to employ hierarchy, thus enabling ease of access throughout the whole application.

Other themes that have to be given importance is aesthetic integrity, which is making sure that the application looks good, consistency, keeping everything relatively the same throughout the entire application, good feedback to the users, enabling them to realise if they are doing something positive or negative with the application and also good user controls.

In iOS, there are specifications when making an app that are very important, and failure to follow along with these specifications may lead to the application to be unable to be published in the App Store.

Developers must ensure that their application has bars installed, wherein you may find the location within the app, the navigation, so that they could move throughout the application with ease, and also buttons. A back button must always be present to the left side of the bar, because with Apple hardware, they do not have a back button, and therefore, all applications must have a back button coded into them. Moreover, any action buttons (which should be kept to the right-hand side) must be kept to a minimal, usually only one, to avoid confusion and to ensure smoothness.

Explore **two mobile-specific technologies or services** used to complement or enhance a user's experience in a mobile app.

The Accelerometer

This is the technology that enables your phone screen to rotate, or for you to play a racing game where your one instruction is to tilt your phone. It is a small device that is implemented in mobile phones that is used to measure acceleration forces. It was first made popular by the iPhone and prompted many smartphones after it to be installed with an accelerometer. To determine at which angle the device is tilted with respect to the earth, it measures the gravitational pull.

In mobile applications like Youtube, one may either watch a video in portrait mode, where the description, related videos and comments can be seen, or tilting the phone horizontally turns it into landscape mode, where you may view the video in full screen, without anything distracting you. Accelerometers are also used when using applications like Maps, where it is able to pinpoint your location, and enables the compass to point to wherever your destination is.

Location Services

This technology is one of the most over used in any OS. It basically keeps track of the location of your device, so long as you have location services on. It operates basically very similarly to cell triangulation, wherein your devices pings, and different cell towers pick it up, and if they determine that it is within their radius, they are able to provide you with the

location. The easiest way to establish this is through WiFi or a mobile data connection. There is also GPS, which operates through a system of satellites. They are used in a multitude of applications, such as Instagram, where it is able to detect in which restaurant you have just taken a picture in, based on your location. The security risks are quite obvious with this one, since you are easily trackable, so long as you have location services turned on.

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