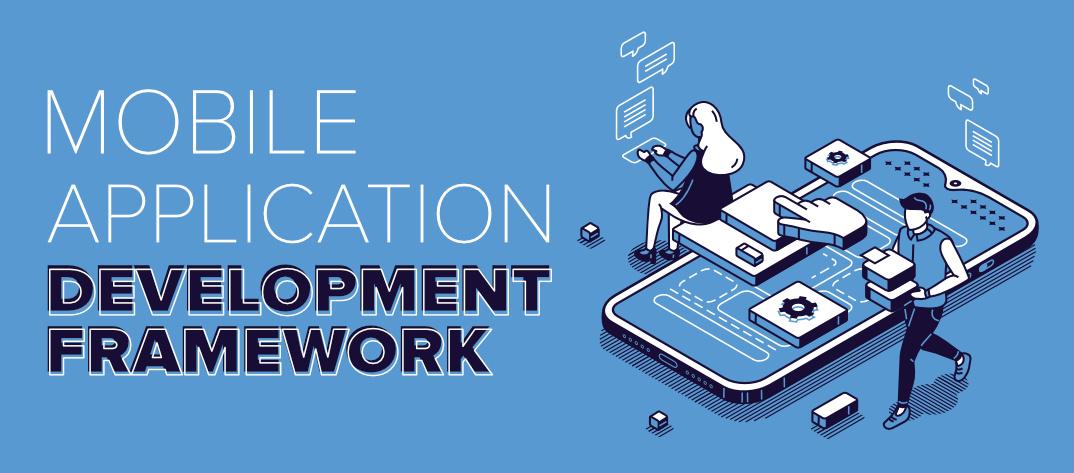
Needless to say, mobile apps have already become a vital part of our daily lives. Whether you want to *go for a ride* or *book a movie ticket* or *virtually connect with your favorite ones*, etc. – you just take out your smartphone and search for the respective apps. Indeed, due to numerous technological-advanced mobile applications, everything is just on your fingertips. *But… did you ever think of* ***how to develop a Mobile Application?*** No Worries, there are various **Mobile App Development Frameworks** available in the tech world that you can consider learning to build your own mobile application and even can make a career in the Mobile App Development domain!!



Now, you must be thinking about ***What is the Mobile Application Development Framework, right??*** Okay, Mobile App Development Framework is a library that offers the required fundamental structure to create mobile applications for a specific environment. In short, it acts as a layout to support mobile app development. There are various advantages of Mobile App Development frameworks such as *cost-effective*, *efficient*, and many more. Moreover, mobile application frameworks can be classified majorly into 3 categories: *Native Apps*, *Web Apps* & *Hybrid Apps*. Before moving further, let’s take a quick look at all these three categories.

* **Native Apps:** A Native App is an application that is specifically designed for a particular platform or device.
* **Web Apps:** A Web App concerns with the application that is designed to deliver web pages on different web platforms for any device.
* **Hybrid Apps:** A Hybrid App is a combination of both native & web applications. It can be developed for any platform from a single code base.

Now, let’s get back to the point and ***discuss several leading Mobile Application Development Frameworks in 2020*** that can help you to build Mobile Applications more efficiently and conveniently.

**. React Native**

React Native is one of the most recommended Mobile App Frameworks in the development industry. The framework, created by **Facebook**, is an **open-source framework** that offers you to develop mobile applications for **Android** & **iOS** platforms. The React Native framework is based on **React** and **JavaScript** that aims to develop native applications over hybrid applications that run on a web-view. Moreover, it is a c*ross-platform development framework* that uses the single code base for both Android & iOS applications. Some of the major **benefits of React Native** are mentioned below:

* Code Re-usability & Cost-Effective
* Compatible with third-party plugins
* Re-usable components for optimal performance
* Provides hot deployment features

There are various renowned mobile applications built with **React Native** such as *Instagram*, *Soundcloud*, *Uber Eats*, and many more.

**2. Flutter**

Flutter, developed by **Google**, is a **UI toolkit** to build native applications for the mobile, desktop &  web platform. Flutter is a **cross-platform mobile app development framework** that works on one code base to develop Android as well as iOS applications. The framework provides a large range of fully customizable widgets that helps to build native applications in a shorter span. Moreover, Flutter uses the **2D rendering engine called Skia** for developing visuals and it’s layered architecture ensures the effective functioning of components. Some of the major benefits of Flutter are mentioned below:

* Provides Full Native Performance
* Flexible User interface (UI)
* Provides Strong Widget Support
* Offers Built-in Material Design
* Fast Application Development

Some of the major mobile applications that are built on **Flutter** are – *Google Ads*, *Hamilton*, *SpaceX Go*, *Watermaniac*,  and various others.

**3. Xamarin**

Xamarin is also one of the most popular open-source framework used to develop mobile applications. The framework, acquired by **Microsoft**, is based on **.Net**  and allows you to build native applications for *Android*, *iOS*, and *Windows* platforms. Xamarin comes with almost every required tools and library needed to build native applications and offers you to create rich experiences using **native UI elements**. Moreover, Xamarin also supports the feature of sharing the common codebase to make the development process more efficient and cost-effective. There are various **benefits of Xamarin**, some of these are mentioned below:

* Huge Community of around 1.4 million developers
* Native API Access & UI Support
* Easier API Integration
* Target All Platforms
* Cost-Effective & Faster Development Process

Some of the most popular and renowned mobile applications that are built on **Xamarin** are – *OLO*, *Alaska Airlines*, *Storyo*, and many more.

**4. Mobile Angular UI**

Mobile Angular UI is an open-source mobile application development framework that merges the implementation of the **Bootstrap** and **Angular** framework. The framework offers **various UI components** such as *overlays*, *switches*, *sidebars*, *navbars*, *scrollable areas*, etc. to provide robust and attractive user interfaces for the applications. Furthermore, Mobile Angular UI supports **fastclick.js** and **overthrow.js** to create rich experiences. Moreover, Mobile Angular UI supports **cross-browser compatibility** that allows it to automatic handling of JavaScript code for each browser. Some of the major benefits of Mobile Angular UI are mentioned below:

* Responsive Framework
* Offers Interactive Components
* LightWeight
* No jQuery dependencies
* Easier conversion from the web or desktop application to the mobile app

There are various renowned mobile applications built with **Mobile Angular UI** such as *Hotelier News*, *iKeyBox*, and many more.

**5. Ionic**

Ionic, developed in **2013**, is an open-source framework that allows you to build cross-platform mobile apps using web technologies like **HTML**, **CSS** & **JavaScript**. The application built through Ionic framework can work on *Android*, *iOS* & *Windows* platforms. The framework offers numerous default UI components such as *forms*, *action sheets*, *filters*, *navigation menu*, and many more for attractive and worthwhile design. Moreover, Ionic has its **own command-line interface** and various other in-built features such as **Ionic Native**, **Cordova-Based App packages**, etc. Some of the major benefits of Ionic are mentioned below:

* Faster Application Development
* Availability of Cordova Plugins
* Built-in UI components
* Platform Independent
* Based on AngularJS

There are various renowned mobile applications built with **Ionic** such as *MarketWatch*, *Amtrak*, and many more.

**6. Adobe PhoneGap**

Indeed, PhoneGap is among the most popular mobile app development frameworks. PhoneGap, purchased by **Adobe Systems** in **2011**, is an open-source framework that allows you to **build cross-platform applications** using languages such as **HTML5**, **CSS3**, and **JavaScript**. The framework allows you to create a single mobile application that can be installed as a native app over many devices. Furthermore, the PhoneGap framework ***does not depend on any hardware configurations*** during the development of mobile applications. There are various benefits of PhoneGap, some of these are mentioned below:

* Code Re-usability
* No Hardware Restrictions
* Plugin Library & Third-Party tools
* Robust Support System
* Compatibility with all the platforms

Some of the most popular and renowned mobile applications that are built on **PhoneGap** are – Wikipedia, TripCase, Buildr, and many more.

**7. Appcelerator Titanium**

Titanium, developed by **Appcelerator Inc**, is an open-source development framework that allows you to build mobile apps for all platforms. The framework is based on a **Javascript-based SDK** with **over** **5000 APIs** for *Windows, HTML5, iOS,* and *Android* that further allows the reusability of Javascript code up to **90%** in case if you’re targeting multiple platforms for application development. Moreover, the framework comes with various UI components that can be used to create rich experiences for the users. There are various benefits of the Titanium SDK, some of these are mentioned below:

* Various features for API Management
* Compatible with multiple platforms
* Easier API Integration
* Better Code Reusability
* Faster Development Process

There are various renowned mobile applications built with **Titanium SDK** such as *Avis*, *Massachusetts Institute of Technology (MIT)*, *Comerica*, and many more.

**8. Framework 7**

Framework7 is an **open-source development framework** that allows developing mobile, desktop, or web applications with a native perspective. The framework allows you to use tools of your preferences with **HTML**, **CSS**, & **JavaScript** and offers the additional support of **Vue.js** and **React** components for app development. Furthermore, Framework7 provides a **wide range of UI elements and widgets** such as *action sheet*, *side panels*, *list views*, *form elements*, etc. to make the development process more convenient and efficient. There are various benefits of Framework 7, some of these are mentioned below:

* Easier Customization
* Provides various UI widgets and elements
* Paired with additional tools like Electron & NW.js
* Rich Ecosystem
* Ease of Maintenance

There are various renowned mobile applications built with **Framework 7** such as *Wappler*, *Blokt*, *Kidoverse*, and many more.

**9. JQuery Mobile**

JQuery Mobile is a cross-platform development framework that is used to **build mobile and web applications** for various devices. The framework allows running a single code version across for all the devices. Furthermore, the **HTML5-based development framework** comes with various plugins such as *Image Slider*, *Content-Slider*, *Pop-Up Boxes*, etc. that help to create a feature-rich and interactive design. Moreover, the JQuery framework is compatible with other mobile application development frameworks such as PhoneGap and various others. There are various benefits of JQuery Mobile, some of these are mentioned below:

* Responsive Framework
* Supports multiple platforms & devices
* Lightweight Size
* Various Add-on Plugins
* Powerful Theming Framework

Some of the major mobile applications that are built on **JQuery Mobile** are – *Untappd*, *Veev*, and many more.

**10. NativeScript**

Last but not least, Native Script is an open-source framework that is used to build native mobile applications using **Angular**, **Vue.js**, **TypeScript**, or **JavaScript**. The framework allows you to create both **Android** and **IOS** apps from a single codebase. The apps built with the NativeScript framework use the same APIs as in **Xcode** or **Android Studio**. Moreover, the framework is strongly recommended to those developers who want to build applications for multiple platforms within a lesser duration and effective cost. Some of the major benefits of NativeScript are mentioned below:

* Cross-Platform Development
* Direct access to Android & iOS APIs
* Native Performance
* Re-usability of Code
* Strong Backend Support

There are various renowned mobile applications built with **NativeScript** such as MayMyPhotos, Smart Evaluation, and many more.

So, these are several major mobile application development frameworks that you can opt for as per your needs and technological requirements. Now, what are you waiting for? Just identify your requirements, pick a relevant framework, and start to build your mobile application!!

A [Mobile Application Development for a Business](https://www.apogaeis.com/blog/a-mobile-app-for-a-smarter-business-how-it-can-increase-your-productivity/) is not just a technological innovation. You need business knowledge and skills to develop a user-friendly application. In this blog, we are going to highlight few key points which every business owner, app developer as well as service providing company should remember before developing a mobile app.

#### 1. Research

If you have a great idea to develop a world class mobile application for your business, the first thing you need to understand is the market, customer demand and trends. Even before giving a technological touch to your business app, you need to do market research. A market analysis report can give you very useful insights. You can understand the popularity of similar apps available in the market and your competitor strategies. This will allow you to optimize your app from the very beginning. Apogaeis believes in “Learning from others mistakes than Learning after making mistakes.”

Customer reviews can provide you a glimpse of customer likes and dislikes, choice and preference and future demands. You can take a note of the pain areas and try to resolve those in your mobile app. Research can give you an opportunity to plan better and allow you to prepare a robust application from the very beginning.

#### 2. Identify Target Audience

This comes under research stage and extremely important. Identifying the right set of audience for your application is very important. The entire application future depends on these target set of users, as they play a very significant role is application development, as well as app feature expansion and growth. Questions like who are going to use my application and how it can add value to their lives, should be asked before starting development. If you meet the expectation of your users, definitely your app is going to get popular and it will help you to generate more revenue.

#### 3. Right Platform Selection

One of the most important question you need to ask yourself is, in which platform you want to deploy your business app. It is advisable to start with one platform. Be a master of a single platform, later you can move on other platforms. iOS, Android and Windows are the most popular mobile app platforms.

In order to decide the best-suited platform for your mobile application, you need to keep certain things in your mind like app brand, target audience, app features and most importantly pricing strategy. After that, you need to choose development methodology for your business app; Native, Mobile Web or Hybrid. Native applications have many advantages, but it may be slightly expensive.

#### 4. Set Plan of Action

Before starting to build your business mobile application, make sure you understand the entire process. A robust business app takes a decent amount of time and effort. It also passes through various stages. The business owner should understand the importance of all the stages, before going ahead. Project Management, App Design, App Architecture, App Development Methodology, App Testing, Enhancement and finally App Deployment- These are the basic stages of any mobile application. Set a plan of action for your app development process. Monitoring and controlling are very much essential. Release a beta version of your app first, and do rigorous testing and review before releasing the full version to the end users.

#### 5. Know your Budget

Developing a business mobile app requires investment along with knowledge and strategy. Knowing your budget and allocating it properly among each stage of app development is essential. There are various aspects of an app which requires money to be invested in; app development, maintenance, updating, marketing etc. Basically you app budget depends on your niche. The type of app you want to create and the type of content you wish to add in your app.

#### 6. Think Out of the Box

Always keep one thing in mind. People want something different. Why they choose one brand ahead of another similar brand? It is only because they feel the chosen brand has something unique to offer. Mobile applications are the best way to engage your customers and probably the easiest way to convert a lead into a potential buyer. Human beings have a tendency to get bored of one thing very quickly. As there are millions of smartphone applications available in the market, app users want to be served with something new. Hence, it is recommended to think out of the box strategies or features and don’t let your users choose someone else.

Also Read : [**7 “Must Follow” Strategies for Sublime Customer Engagement**](https://www.apogaeis.com/blog/7-must-follow-strategies-for-sublime-customer-engagement/)

#### 7. Smooth and Efficient

No excuse, your business mobile app must be smooth and efficient. If your app is taking a lot of time to load, it may prove to be fatal. Either user uninstalls the app after first use or rarely opens. It adds to create a negative impression in the user’s mind. Make sure your app does not consume a lot of memory space and processing power on a mobile device.

Efficiency is something users expect from all the mobile applications. It includes user-friendliness, data efficiency, battery usages, security and alike. If your app is using a lot of 3G or 4G data, it might not work for you in a longer run. Users may download and forget. So, don’t fall into that category and develop your app in such a manner that it won’t consume more data of your users and does not drain battery.

#### 8. User Experience

User Experience is the backbone of any application. If you failed to provide your users excellent experience, then there is no reason for them to come back to you and use your app. User experience is an increasingly crucial feature when it comes to the digital landscape. An app defines how a user feels and think about your business and services. It is about making something valuable, easy to use and effective for your target audience. Don’t make your app confusing or complicated.



A well thought mobile application offering seamless user experience can translate into several key benefits. The functionalities and content that are delivered to your app must be in line with your target audience. The end product must provide a superior quality customer service. If you are unable to provide a quality mobile application, it may harm your brand image.

#### 9. Focus on Marketing Strategy

There is no meaning of building an app for your business if you are not focusing on, how to market it and make it available to potential users. Creating a buzz, before the launch can promote your app in such a way that your app can get a lot of reach from the word go. Most of the business owners fail in executing their marketing strategies for their mobile application.

Different [Mobile Applications](https://www.apogaeis.com/blog/8-ways-to-increase-your-mobile-app-rankings-and-downloads/) have different targeted users. Similarly, you have to analyse your industry and your potential user base. After analysing that only, you can make strategies on how to promote it. Online campaigns are one of the preferable options for many business owners. But your marketing strategy depends largely on your industry, offerings, and your potential users.

Also Read : [**How Mobile Enterprise Applications are helping Telecommunication Industry**](https://www.apogaeis.com/blog/how-mobile-enterprise-applications-are-helping-telecommunication-industry/)

#### 10. Testing

It is important to test your mobile application before you launch. Before users getting an experience, you should make sure it can fulfil their requirements. Smooth, efficient, high performance are few of the things you should keep in mind while testing. Testing will allow you to dust out all the nooks and crannies and make your app a strong business tool which can connect your business with your customers.

**Symbian**

It is a dropped mobile operating system and digital platform developed for smartphones. It was initially developed for a closed-source operating system for personal digital assistant in 1988 by Symbian Ltd. It was used by many popular brands named as Samsung, Sony Ericsson, Nokia, etc. The OS of Symbian contains two components: [microkernel](https://www.geeksforgeeks.org/operating-system-microkernel/) and user interface. The Symbian OS was written in C++ language. Various versions of Symbian OS:

* EPOC32(Electronic Piece of Cheese)
* Symbian OS 6.0 and 6.1
* Symbian OS 6.2
* Symbian OS 7.0
* Symbian OS 7.0
* Symbian OS 8.0
* Symbian OS 9.1
* Symbian OS 9.3
* Symbian OS 9.5

**Evolution Of Symbian:** Symbian was begun from EPOC32. It was developed by Psion in the 1990s. In 1998, Psion software turns into Symbian Ltd. and established a partnership with Nokia, Sony Ericsson, and Motorola. After that Symbian OS goes under several different software platforms was created for Symbian with the help of these big companies. They incorporate S60(for Nokia, LG, and Samsung), UIQ(Ericsson and Motorola) and MOAP(for Japanese only). Symbian cover 67% of the global market of the smartphone in 2006. Nokia was the biggest shareholder of Symbian. In 2008, Nokia takes over Symbian Ltd. and established a new non- profit organization named as Symbian foundation. In 2010 Apple launched its iPhone and Google launched its Android Os, which continuously decreasing the popularity of Symbian. In 2012 Nokia launched the last Symbian smartphone named as Nokia808 PureView. In 2014 Nokia breaks its all ties with Symbian.

**Features of Symbian OS:** Symbian OS contained a browser, messaging, multimedia, communication protocol, mobile telephony, data synchronization, security, application environment, multi-tasking, robustness, flexible.

**Advantages of Symbian OS:**

* Symbian OS provides open platform to enable independent technology and software vendors to develop third party app.
* Symbian allowed impressive battery life.
* Symbian required lower hardware requirements.

**Disadvantages of Symbian OS**

* Symbian OS is dependent on Nokia
* Major drawback of Symbian os is it provided a late response as compared to ios and Android.
* The touch of Symbian use devices are not as smooth as compared to ios and android devices.

**Android**

**Android** is a mobile operating system which is successfully developed by Google. The Android OS is based on Linux operating system and open source operating system which is specially developed for touchscreen mobile devices like tablet, smartphones, AndroidTv, wear OS, etc. Android os is written in java. Android brought a drastic change in the mobile technology.

**Evolution of Android:** Originally android is developed by Android Inc. and in 2007 Google brought android. The concept of Android was described by Andy Rubin, Rich Miner, Nick Sears, and Chris White in 2003. In September 2008, Android was released as the first commercial Android device. Afterward, the operating system of android undergoes several major changes. The current member of the Android family is 9.0 (Name: Pie). The core code source of Android is known as Android Open Source Project(AOSP) and it is licensed under Apache license. Apache license is also free software and open source license. HTC Dream was the first commercially available smartphone with Android as an operating system of the smartphone. On September 23, 2008, Google officially released the first version of Android that is android 1.0. After successfully release of Android 1.1 Android goes through several updates, the updates of android continuous improvement in the operating system, adding new features, fixing bugs in the previous release. Various versions of Android are:

* Android 1.0: Name-unnamed, Year-2008
* Android 1.1: Name-Petit Four, Year-2009
* Android 1.5: Name-Cupcake, Year-2009
* Android 1.6: Name-Donut, Year-2009
* Android 2.0, 2.1: Name-Eclair, Year-2009
* Android 2.2: Name-Froyo, Year-2010
* Android 2.3, 2.4: Name-Gingerbread, Year-2010
* Android 3.0, 3.1, 3.2: Name-Honeycomb, Year-2011
* Android 4.0: Name-Ice Cream Sandwich, Year-2011
* Android 4.1: Name-Jelly Beans, Year-2012
* Android 4.4: Name-KitKat, Year-2013
* Android 5.0: Name-Lollipop, Year-2014
* Android 6.0: Name-Marshmallow, Year-2015
* Android 7.0: Name-Nougat, Year-2016
* Android 8.0: Name-Oreo, Year-2017
* Android 9.0: Name-Pie, Year-2018

**Features Of Android:** Basic features of hardware is divided into two parts:

* **Hardware based features:** Audio, Bluetooth, GSM, Microphone, NFC, and sensors.
* **Software based features:**app widgets, home screen, input method, live wallpapers, layout, storage, messaging, multi-language support, browser, Java support, media support, multi-touch, calls, multitasking, accessibility, external storage, video calling, optimized graphics, etc.

**Advantages Of Android:**

* Android can be built by anyone because it is based on Linux open source.
* Android phones are multitasking, you can perform multiple tasks at the same time. For example, while listening to music you can chat with your friend.
* Android provides app market known as Play Store. From the play store, you can download and install different types of apps in your mobile phones.
* Android provides a notification facility. Whenever new message comes, an email arrived on the phone it automatically shows on the home screen of the phone.
* Android provides a widget. With the help of a widgets, you can easily change or access an app.

**Disadvantages of Android:**

* Most of the apps and features of android required an active internet connection. Without the active internet connection, you cannot access them.
* In android OS the wastage of battery is more due to the background processing.
* Many of the android application contains virus, for example counter strike ground force was supposed to have virus.
* Android system is not safe as iOS.

**iOS**

**iOS(iPhone OS)** is a mobile operating system which is successfully designed and developed by the Apple Inc. iOS is the largest used mobile operating system after Android. It is basically designed for iPhone, iPad, and iPod Touch. In terms of security, iOS is more secure than Android. The iOS interface depends upon the direct manipulation by using touch gestures.

**Evolution of iOS:** The concept of iPhone was innovated by the Steve Jobs in 2005. For iPhone, the iPhone OS is created by the Scott Forstall and Forstall also develop software development kit for programmers to create iPhone applications, as well as an App Store within iTunes. The first official iPhone with iPhone OS was released in 2007. After the success of the iPhone in 2008, Apple announced the iPhone SDK for developers to develop applications for iPhone. In 2008 Apple released the iOS App Store with 500 applications. In 2010 Apple renamed the iPhone OS as iOS. The latest version of iOS is 11 and it is available for iPhone 5S, iPad Pro, iPad Mini2 and sixth generation iPod Touch.

Various versions of IOS:

* iPhone OS 1:Year-2007
* iPhone OS 2:Year-2008
* iPhone OS 3:Year-2009
* iOS 4:Year-2010
* iOS 5:Year-2011
* iOS 6:Year-2012
* iOS 7:Year-2013
* iOS 8:Year-2014
* iOS 9:Year-2015
* iOS 10:Year-2016
* iOS 11:Year-2017

**Features Of iOS:** iOS contains home screen, touchID for apps, icloud drive, health, Siri(personal assistant), Safari(browser), multitasking, message, interactive notification, camera, icloud photo library, game center, bluetooth, calls, accessibility, voice recognition, face recognition, battery usage indicator, Wi-Fi etc.

**Advantages Of iOS:**

* In terms of performance iOS is magnificent and smooth.
* iOS generate less heat while processing as compare to Android.
* iOS are best for gaming and business purposes.
* iOS provides excellent security.
* It provides Jailbreaking for customization.
* It provides good face recognition security.

**Disadvantages of iOS:**

* iOS is depends upon iOS devices.
* iOS is not an open source.
* The price of iOS devices are very high.
* The cost of iOS apps are very high.
* iOS devices supports only single SIM.
* iOS applications are larger in size as compared to other mobile platforms.

**Difference between Windows and Android :**

| **WINDOWS** | **ANDROID** |
| --- | --- |
| It was developed and is owned by **Microsoft Incorporation**. | It was developed and is owned by **Google LLC**. |
| It was launched in 1985. | It was launched in 2008. |
| It is designed for PC of all companies. | It is specifically designed for mobile devices. |
| Current stable version is Windows 11. | Current stable version is Android 13. |
| Kernel type is Hybrid with modules here. | Kernel type is Linux-based. |
| Preferred license is Proprietary and Source-available. | Preferred license is Apache 2.0 and GNU GPLv2. |
| It charges for the original version. | It is free of cost as it is inbuilt is smartphones. |
| It is the most used operating system in personal computers. | It is the most used operating system overall. |
| It is for workstation, personal computers, media center, tablets and embedded systems. | Its target system type is smartphones and tablet computers. |

### Difference between iOS and Android:

| **S.No.** | **IOS** | **ANDROID** |
| --- | --- | --- |
| **1.** | It was developed and is owned by **Apple Incorporation**. | It was developed by Google and Open Handset Alliance and is owned by **Google LLC**. |
| **2.** | IOS was initially released on July 29, 2007 | Google was initially released on 23 September 2008. |
| **3.** | when IOS was released its first version is iPhone OS 1 before named IOS. | When Google released its first version of Android 1.0, Alpha. |
| **4.** | It was launched in 2007. | It was launched in 2008. |
| **5.** | Its target system types are smartphones, music players, and tablet computers. | Its target system types are smartphones and tablets. |
| **6.** | It is specially designed for Apple iphones and ipads. | It is designed for smartphones of all companies. |
| **7.** | Its kernel type is Hybrid. | Its kernel type is Linux-based. |
| **8.** | It has preferred license is Proprietary, APSL, and GNU GPL. | It has the preferred license of Apache 2.0 and GNU GPLv2. |
| **9.** | It is mainly written in C, C++, Objective-C, assembly language, and Swift. | It is written using C, C++, Java, and other languages. |
| **10.** | Its update management is Software Update. | Its update management is Systems Software Update. |
| **11.** | Swift is majorly used for iOS application development. | Java and Kotlin are majorly used for Android application development. |
| **12.** | IOS  has a Commercial Based Source model with open source components. | Android is an Open Source based Source model. |
| **13.** | IOS-based Devices have Safari as the default Internet Browser. | Android devices have google chrome but one can install any Internet Browser. |
| **14.** | IOS has Siri as Voice Assistant. | Google has Google Assistance. |
| **15.** | IOS-based devices have the feature of blocking 3rd party app stores. | But Google doesn’t block 3rd party app stores. |
| **16.** | IOS devices are available in 34 languages. | Android Devices are available in 100+ languages. |
| **17.** | In IOS customizability is limited unless jailbroken. | In Android, we can change almost anything. |
| **18.** | File transfer in android is easier than in IOS. | File transfer in IOS is more difficult than in android. |