Xamarin

# Components & Features

**Modern Language Constructs** – Xamarin applications are written in C#, a modern language that includes significant improvements over Objective-C and Java such as Dynamic Language Features, Functional Constructs such as Lambdas, LINQ , Parallel Programming features, sophisticated Generics, and more.

**Mobile Cross Platform Support** – Xamarin offers sophisticated cross-platform support for the three major mobile platforms of iOS, Android, and Windows Phone. It reduces development cost and saves much more time.

# Pros:

* Xamarin’s TestCloud allows apps to be automatically tested
* Learning curve is relative. If your team knows C#, it is comparatively easy to get started with Xamarin
* Will save a bit of time by only having to code once

# Cons :

* Not so Straightforward UI interaction features and controls, some device specific UI feature may not be achievable.
* Lack of resources compared to that of Java and Swift
* Is not free, comes with an expensive price tag of $300 - $999 -$1899 per year depending on the plan, however it would be an ongoing cost.
* Xamarin Studio is far from that of Xcode or Android Studio in terms of stability and Integrated development environment, Xamarin also lacks extensive features and support.
* Impacts load time as it has its own runtime
* Does not support sharing of codes outside

Native

# Pros:

* Code runs much faster
* New features are integrated more quickly and easily
* Hardware related features are much more easier to implement and are achievable
* Troubleshooting is done with ease, due to the availability of resources
* Unique UI Design, specific to the use and feel of the device and OS

# Cons:

* Will require to code ‘twice’ – once for iOS and once for android which will result in more time for development

Cloud Backend

Cloud Backend providers provide

* File Storage
* Location Services
* Users (eg Facebook login)
* Push notifications

# Providers

**Appcelerator**: available across all major platforms, it features:

* Full-stack javascript
* Built for mobile devices
* True native app development using javascript without hybrid compromises

Price starts at $39 month

**PARSE**: stands out for being one of the the easiest and fastest backend services to work with, as well as having the best documentation. The documentation is easy to understand, as well as being comprehensive.

Price: FREE with 1million pushes, 30 requests per second, 20gb file storage, 20gb database storage, 2tb file transfer

Final Decision

Our final decision is to go with native, discerning that the opportunities it provides is far more beneficial. The only downside may be the time factor, but we can comprehend the time since we have it. Native will also help future expansion of app much more uncomplicated and advantageous in the long-run.

From our cloud research, we have decided to use PARSE backend as a service because of its simplicity and ease of use. It also has the best price planning compared to all price competitors. It is also scalable, which means that it can be expanded to a website or desktop application. PARSE comes with plenty of tutorials and documentations, which is great support for the development team currently developing the app, and for future developers that may want continue/expand the app.