

Project Technical Recommendations

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Application Overview and Purpose

The Bay Area Chess app is essential as it greatly enhances convenience and keeps the community updated and informed. The majority (73%) of Bay Area Chess users are using an iOS device, however, the current website does not have a mobile friendly state. This app would allow thousands of users to interact with the site in a more user-friendly way. The addition of push notifications will also increase interactivity, and potentially help users avoid late registration fees and save them from having to continuously check the website for tournament results. Ultimately, the mobile application will allow families to be more informed about chess events in the area, and the children will be able to fully take advantage of the chess opportunities around them.

Application Functionality

The app will feature a main landing screen that displays icons to different parts of the website (see GUI sketch below). Each of these icons will lead to a specific page that displays the appropriate information. For example, the icons tournaments, clubs, enrichment programs would show information about those events and allow registration for users. Others like results, calendar, and news would allow users access to the appropriate information. Push notifications would also be available based on data from the tournaments and results.

Technical Considerations

Platform

We have decided to develop the application for iOS platforms due to the fact that the end-user data that the customer provided showed that 73% of their user base was on an iOS platform. Furthermore we've decided to primarily develop for iPhone, as iPhone apps are usable on iPad/iPad Mini platforms (though, with resolution and layouts catered to the iPhone), whereas the reverse is not true. It should also be noted that if an iPad specific app were to be requested, only the views would necessarily have to be ported to iPad, and the rest of the code base would still be used to drive the core functionality of the app.

Expenses

Because Apple requires App publishers to have a developer account. The developer account costs \$99/year to maintain, thus the Bay Area Chess Organization will have to pay to maintain this account every year. Because this app will rely on existing database and server infrastructure for the Bay Area Chess Organization's website, we project that there will be no additional fees for retaining user login information, event information, etc.

Specific Technologies

Within the iOS development environment there are two programming languages used to natively develop applications. Before 2014 Objective-C was the language used to develop iOS apps, however Apple has released another language, Swift, which they are pushing developers to use for future applications. Our team has decided to use Swift for several reasons. The first reason is future-proofing the application. Because Apple is pushing developers to use Swift to develop apps from iOS 8 onward, it is likely that most app developers will switch to using Swift to develop their apps. This trend results in more information (in the future) available online for reference if this app needs to be updated, and more developers available to maintain it if necessary. The second is the advantage that Swift has in development speed. That is, Swift is, in general, less verbose, easier to read and write, and quicker to learn than Objective-C. This means that we, as developers can focus more on developing the product, rather than spending time worrying about specific code semantics. The third is performance, Apple boasts that Swift is 40% faster than Objective-C. This is a very significant speed increase, and, seeing as Swift is still in early stages of development, it is extremely likely that the performance increase will actually be much greater than this.

Much of the information for this app will be accessed via the pre-existing MySQL database that is used for the normal website, this way no new database infrastructure is needed to power this app, and the data will be consistent across platforms.

