Technological Requirements How to Train Your Dragon Boat

# Document Revision History

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| --- | --- |
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| 0.1 | 23/11/2019 |
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# Requirements

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| --- | --- | --- |
| Technology Chosen | Implementation Difficulty | Reasons For Selected Technology |
| Mobile Environment | Low | The How To Train Your Dragon Boat application will be used in an outdoor environment, where larger forms of technology such as computers as not optimal. A mobile application will be the ideal form of implementation, as it requires no setup in order for it to be used in these environments.  The application, while providing a variety of features, is not designed to be a large scale application, and does not require large interfaces or storage methods, making a mobile application a valid fit for this type of software. Additionally, the application does not require internet access for general usage, as opposed to software such as a web application.  The mobile application market is a largely growing network, along with the trends of have smartphones capable of more and more features. As a result, developing this software as a mobile application is more appealing and convenient to the marketplace. |
| React Native | Medium | Offers cross-platform compatibility with Android and iOS devices allowing us to reach all of our target audience  React Native renders to platforms native code allowing use of platforms API such as google maps |
| SQLite Database | Low | The Application will utilize an internal Database to save both analytics and information on the dragon boat team.  Runs natively on mobile platforms making integration into a cross-platform application easy  Team is familiar with SQL language and has used SQLite in other project removing need for training  Internal phone DB removes need for external server or cloud server, lower cost and production time for the team |
| Google Maps API | Medium | Industry standard for displaying location data on mobile devices. Using proven technology minimizes risk of a dependency being discontinued  Google offers a well-documented and developer friendly environment for tis API making app integration easier.  Google provides a familiar interface and design for end user |

# Training Plan for React Native

As this is the first project the team has worked on utilizing react native the following learning plan will be used. As the team member with the most experience with React Native Arsalan Farooqui will take a leadership role in this aspect of the project.

## Team members

All team members will participate in the learning plan as everyone will be interacting with the framework.

## Dates

The Start Date for the learning plan will be the 13th December, 2019, coinciding with the end of the Fall 2019 semester. The team will meet up in person or online approximately once a week and review their progress. The End date for the learning plan is flexible, with the team planning to be able to start work on the React native application on the beginning of the Winter 2020 semester. However continued learning may be required until the end of January 2020.

## Learning Resources

### 1. Official React Documentation

[*https://reactjs.org/docs/getting-started.html*](https://reactjs.org/docs/getting-started.html)

The official documentation and start guide, this will be the jumping off point to familiarize the team with the framework. Official documentation will also be used for trouble shooting and to lookup functionality and methodology.

### 2. CS50's Mobile App Development with React Native

[*https://www.edx.org/course/cs50s-mobile-app-development-with-react-native*](https://www.edx.org/course/cs50s-mobile-app-development-with-react-native)

A complete course on mobile development using React native. Team members will enroll in this free course follow its module. Due to the time constraints of this project and the fact that all team members are full time student’s completion of this course is not mandatory.

### 3. React Native Tutorial: SQLite Offline Android/iOS Mobile App

<https://www.djamware.com/post/5caec76380aca754f7a9d1f1/react-native-tutorial-sqlite-offline-androidios-mobile-app>

A tutorial outlining a similar use of the react framework and SQLite to our project. Due to these similarities this tutorial may be used as a starting point for setting up the How To Train Your Dragon Boat application.