1.1. Objective

With the development of society, the application of modern technology is more and more popular in our world, especially of using phone in daily life. Today's phones can meet most user requirements, from keeping contacts, taking photos/videos to serve entertainment purpose such as music, games, etc.

One of the benefits of a modern phone (smartphone) is that users can select their favorite applications and use them independently as regular web applications.

Applications that are the most popular have basic requirements such as tracking the status of an in-app object, finding an object, controlling personal information from the application and the interaction between users and apps, etc.

With my product (called "Sport News"), you can use the functions needed for specific sport community events in your area.

1.2. Problems and Solutions:

\* Problems:

+ With customer:

- There are too less applications used to track community sports events in smartphone.

- It is difficult to keep tracking of favorite kind of sports.

- The event positioning system has not been applied.

- Review tournaments with pictures is hard.

+ With Owner:

- Upload event into phone application is limited.

- Hard to manage the own events in smartphone.

\* Goal:

- Realtime Push notification about the event into customer’s phone.

- Capture their moment using to review the event.

- Tracking the events by realtime map and GPS.

- A web application for event’s hosts.

1.3 Technical

1.3.1 React (React Native and ReactJs)

React was introduced and developed by Facebook, the biggest community network in the world. React was created to optimize the DOM handling (by saving the state of an application and just change the DOM when state changed). By this way, it is really helpful with constant data.

Beside that, React Native is a framework that lets you build native iOS and Android apps with one unique language of Javascript. React Native provides a virtual DOM (Document Object Model) which is a generic representation of what your UI will look like independent of the two platforms. React Native then renders the native control based on your UI markup representation which then renders native controls. It is able to take native platform components (sliders, switches, labels, tab bars) and wrap them in React component counterparts.

1.3.2 Firebase

1.4 Goal

After developed the project, I want to gain the needs that:

- Having an application for user to track sports community events (in both client-server sides).

- Using React to build application (on both smartphone and web environment) with smoothly.

- Applying Firebase into future projects as a steady server to store and analyze data.

2. System Architecture

2.1 Background

2.2 System requirements

\* I will divide my group users into 2 groups:

- **user (visitor), member: Customers using my app on smartphone.**

- Administrator, **owner: The event’s hosts using web app to manage their events.**

2.2.1 Use cases

**Theme 1: user (visitor), member.**

1. Display informative homepage

|  |  |
| --- | --- |
| *As a* | user |
| *I want to* | see all information of Login page when open an app on smartphone. |
| *so that I can* | Login by created account or register new account for using app. |

1. Display informative homepage

|  |  |
| --- | --- |
| *As a* | user |
| *I want to* | see all information of Main page whenever I logged in successfully. |
| *so that I can* | Navigate between tabs and see all information of each tab. |

1. Display informative homepage

|  |  |
| --- | --- |
| *As a* | user |
| *I want to* | Using search tool |
| *so that I can* | Search keywords of the event on News tab and Tournaments tab. |

1. Display informative homepage

|  |  |
| --- | --- |
| *As a* | user |
| *I want to* | see all information of events that are approved from administrator in form of list on News Tab. |
| *so that I can* | View new event created and view details of that event. |

1. Display informative homepage

|  |  |
| --- | --- |
| *As a* | user |
| *I want to* | see all information of event that I responded on Tournaments tab. |
| *so that I can* | Update the status of events and get push notification from those events. |