



Assignment 1:

Individual Project

- LCK Introducing application

COSC2659 – iOS Development

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A. Introduction

After the instruction of this assignment released, I decided to make the Korean professional league of League of Legends which is my favorite game, a topic without any hesitation. I'm a gamer who loves League of Legends very much who has been playing this game for over 10 years, and I've also seen my own Korean league including overseas leagues, for nearly 10 years. In fact, I still watch the game on the day when my favorite team 'KT Rolster' plays. That's why I chose this topic right away.

This application only deals with Korean professional leagues. The League of Legends Korean Professional League is called the LCK (a.k.a League of Legends Championship Korea) and is considered one of the top leagues in the world. There are currently 10 teams, which introduce team information including sponsors and players. The application name is 'LCK Introducing app'.

B. Project Description

As mentioned earlier, this application can see information about 10 teams belonging to LCK. The operation of this app is very simple. When you run the app, the welcome screen greets you, where you click the play button and the names of the 10 teams are listed along with the logo and the year it was founded. If you click on a team you like or want to know, it shows the team name, the year it was founded, pictures of the players, team information (coach, sponsor), information about the players (position, name, nickname), and finally where the team house is located with the map.

During this assignment, I learned so many things. As a student who has been studying coding for three years now, I was confident that I now know a lot about coding. Therefore, I thought that this assignment would end quickly without any problems, but it was not at all. At first, I was annoyed and angry because I got an error using any code, but I decided to have a humble mind with the mind of starting anew. As I studied the basic things one by one, I learned the basic concepts of Swift as the errors were corrected little by little, and I was able to see the completed application even though I stayed up all night. This project was a valuable opportunity to realize that people should always have an attitude to accept something without being conceited.

In terms of coding, I learned that swift language is quite different from java or C++ that I have been learning. I felt that Apple tried to make the Swift easier than others, but it felt more difficult for me. In addition, I learned that design is more important than other developments in application development. To be honest, I proceeded without any designs at first, but this caused the code to get twisted in the middle and it took more time to organize and fix them.

Obviously, it took a lot of time and a lot of hard work, but I think it was a precious time to learn so much.

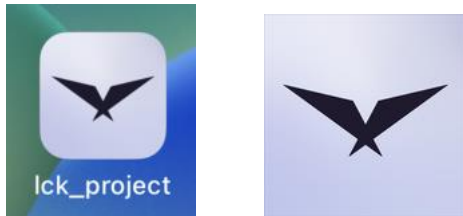
C. Implementation Details

- **General Workflow**

GIF Image:

<https://drive.google.com/file/d/1DY5SWIDJNtwHe2JhVwg8X6RBh5byKf8B/view?usp=sharing>

- **App logo**

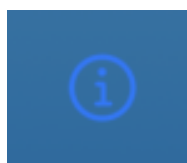
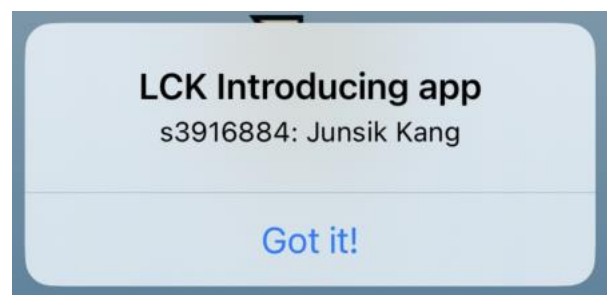


This is the official logo of LCK. I made it using a website that creates bunch of app logo and applied it to xCode. There were two background colors for the logo, black and silver. I chose silver instead of black to give a more luxurious feeling.

- **Welcome page**

GIF Image:

https://drive.google.com/file/d/1z38xKSXrsJxttynRuHf2K8v5pT138wI0/view?usp=share_link



When you run the app, the welcome screen welcomes you. On this screen, there is the logo of LCK, the logo of the League of Legends game, and the slogan. In addition, there is a circular icon marked with "i" in the bottom right, and when you click it, the name of the application, my student number, and name pop-up. Click the button labeled 'Got it!' and this pop-up modal disappears. Finally, when you click the play button under 'Let's watch LCK!' move on to the screen listed as LCK teams.

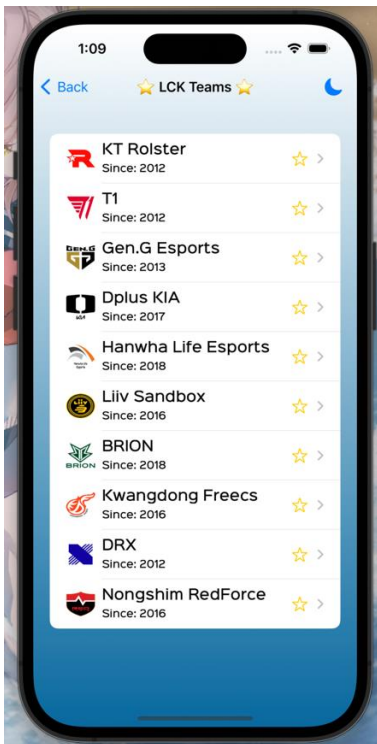
All of the upper letters above the logo of the League of Legends were actually downloaded and used the official font used in LCK. Users of this app are expected to use it by people who are interested in LCK, so I thought they feel it would be very pleasant to see the letters actually used in LCK from the welcome screen. As mentioned above, the icon in the middle is the icon of the actual League of Legends game. For similar reasons above, most LCK fans are users who play role games. Therefore, it was inserted for the purpose of giving familiarity. In addition, the button that can be moved to the next screen was selected as a play button that can be viewed when playing a video, and this button was selected rather than other buttons, giving the user the feeling of clicking this button to watch LCK.

For the background color, I used a gradation color mixed with blue and white. I adopted this color because it went well with black letters and also wanted to give users a cool feeling when they are using the app.

- Team list page

GIF Image:

https://drive.google.com/file/d/1wmjPzbSI92QRS1bzadfGKoImJmv58-iH/view?usp=share_link



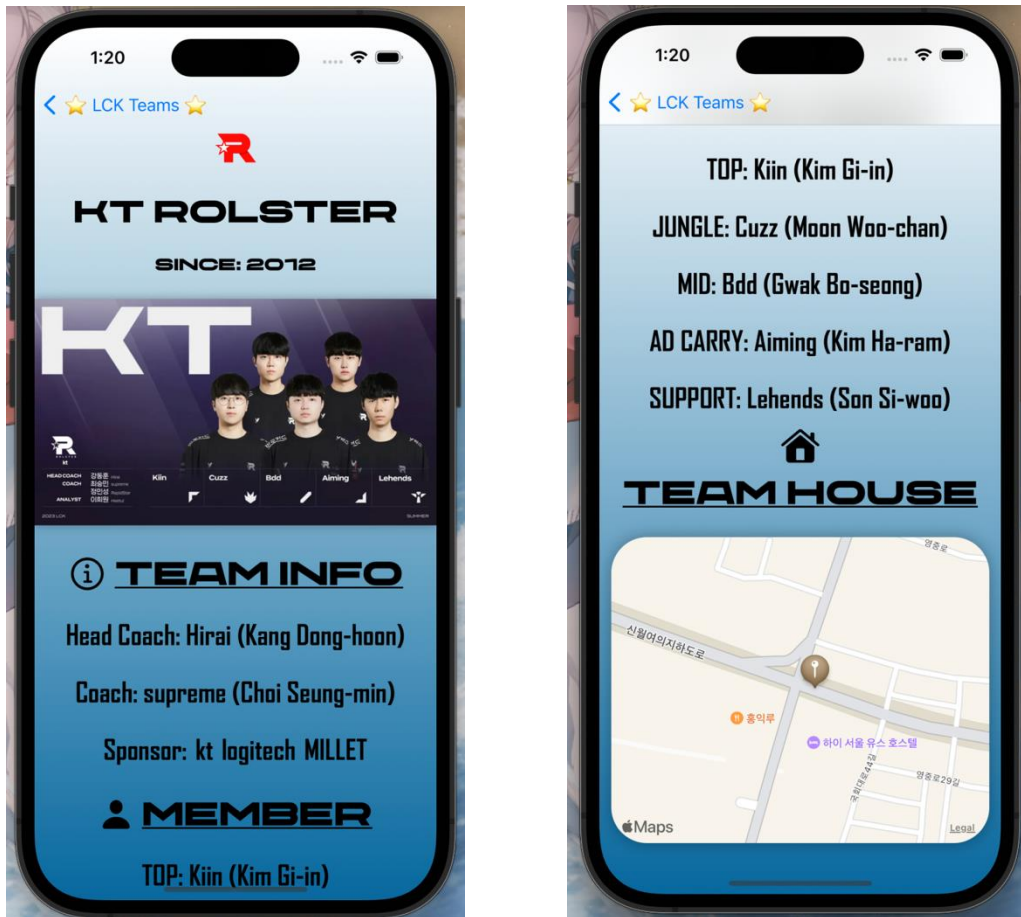
This screen shows 10 teams in LCK. Each row shows the team logo, team name, and the year it was founded. If you click on the team you want to see the information, you will go to the detail page that introduces each team.

The design of each line of the list was made by referring to the ranking tables of many official sports sites. In addition to the team logo and name, I added the year the team was founded at the bottom of each line because I wanted users to see as much information as possible at once.

- Team detail page

GIF Image:

https://drive.google.com/file/d/1SpfS8y_Q-RUTWfks7MIC6silLQY2cqSt/view?usp=share_link



This screen introduces detailed information about each team. At the top, it shows the team logo, team name, and the year the team was created once again. Below that, it shows picture of team members, information of each team (head coach, coach, sponsors), information of members (position, real name, nickname), and where the team house is located on the map.

In order to give a cleaner appreciation, the center was aligned. Also, each title was set larger than the font size of the text so that they could be distinguished by from text. An icon related

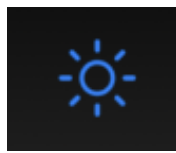
to the title was added to the left side of each title to give rough notification to the following information. In addition, the default size of the map indicating the team house was set wider so that the buildings or topographical features around it could be known to users.

Advanced features

- **Dark/light mode**

GIF Image:

https://drive.google.com/file/d/1krdceBEy2ZHIDy8UfcM2kdxLUDnNHIIv/view?usp=share_link



It is the first advanced function. If you look at the top right on the screen where the teams are listed, there is a sun (or crescent) shaped icon. First, in the light mode, a crescent-shaped icon is displayed. In the dark mode, a sun-shaped icon is displayed. This means that clicking the crescent-shaped icon changes to dark mode and clicking the sun-shaped icon changes to light mode. In light mode, it is applied as a gradation color background color mixed with white and blue. Conversely, in dark mode, gradation colors mixed with black and white are applied as background colors.

However, by adopting the white color used in light mode at the same time, I took care not to feel too far away. In addition, in light mode, it was a gradient color that started with white and came down to blue. But in dark mode, it was different in the style that started with black and came down to white. Both colors were chosen after much consideration to maintain a calm but modern and cool feeling.

- **Map pin**

GIF Image:

https://drive.google.com/file/d/1MhGm8gWvj3WZj3eLYPyoLfCQn7WcwKV/a/view?usp=share_link



It is the second advanced function. When showing the location of the team house, it shows the exact location of the team house with brown-colored map pin by applying map coordinates, rather than showing the approximate location by showing only the map.

- **Add/delete to favorite team**

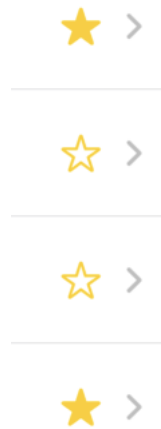
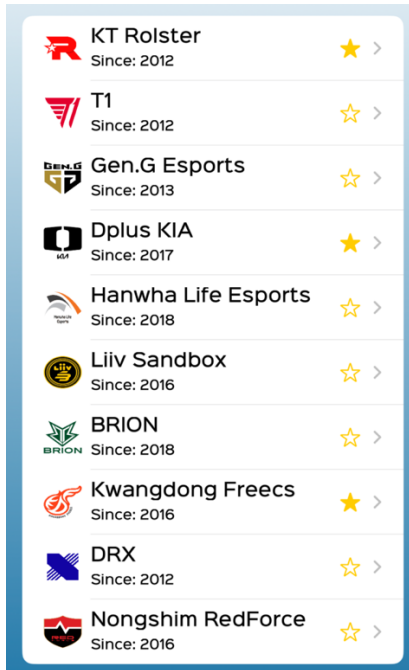
GIF Image:

Adding:

https://drive.google.com/file/d/1LGZwIdSHHlvNuTZhuNguxvbTF7_JZtMs/view?usp=share_link

Deleting:

https://drive.google.com/file/d/1gY5BMMnXc8pUGKn8B1rdFdTgNbSIWAnJ/view?usp=share_link



It is the last additional function. It is a function to add or delete to favorite team. If you look at the team list screen, there is a star-shaped icon on each team row, and you can click it. In short, if the star-shaped icon is colored, it means that it has been added to your favorite team. In addition, once added, it is saved even if the app is closed. The same applies when you click the icon again to delete from favorite team.

Usually, we color the stars and increase them one by one if we really liked the service of a restaurant or hotel to evaluate them in smartphone. I applied this perception to differentiate it so that users can use stars to bookmark their favorite teams, rather than using hearts that are usually used by applications for these features like this. It means that the user think they give full star to their favorite teams.

After finishing this project, I went through a lot of tests, but I didn't find any bugs. However, in the conclusion, I will describe some potential features which could be added in future.

D. Conclusion

First, I would like to talk about improvements among the functions of the current application. First of all, if the users choose favorite teams by the additional feature, I want to have a function where only selected favorite teams are aligned by clicking the button (for example, labeled "my favorite team"). I failed to implement it due to my limitation, but I really want to include this function in the future. Secondly, when entering the team detail screen, some of them may look distorted depending on the original size of the team logos, which I also want to fix if there is a way. Finally, setting the dark mode/light mode is only possible on the team list screen, which I also want to expand to be configurable on all screens.

From here, I would like to describe the functions I want to add in the future. First, this app only contains information about each team's in 2023. However, there is a possibility that team

information will be changed over time. In this case, I would like to get information from other online databases where this information is updated and change it automatically by the system. Also, at the moment, the app only shows information about each team. But if possible, it would be nice to show all the information of coaches, players, and even sponsors who belong to each team, just like Wiki. Finally, since this app is directly related to LCK, it would be good to create a feature that allows users to watch clips or live stream related to the competition. It allows users to watch the play video of the team they want.

E. Reference

App icon: <https://developer.apple.com/documentation/xcode/configuring-your-app-icon>

Color gradient: <https://www.hackingwithswift.com/quick-start/swiftui/how-to-render-a-gradient>

Custom font: <https://developer.apple.com/documentation/swiftui/applying-custom-fonts-to-text/>

Color scheme: <https://nilcoalescing.com/blog/ReadingAndSettingColorSchemeInSwiftUI/>

Dark/light mode: <https://www.youtube.com/watch?v=b5KZqZYvKmg&t=410s>

Favorite list: <https://www.youtube.com/watch?v=IPU9SrBpRI&t=480s>

Map pin: <https://www.hackingwithswift.com/quick-start/swiftui/how-to-show-annotations-in-a-map-view>