Mobile Application for The Link REIT

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Background
The Link Real Estate Investment Trust ("The Link REIT"), being the leading REIT in Asia, has the desire to serve local communities not only by physical means, but also by the use of new technologies.

In this project, we used both engineering and business approaches to develop a mobile application and a web interface for The Link REIT. The aim is to bring The Link REIT and the visitors of the Lok Fu Plaza together as a community. The application can bring both parties a positive experience and help the visitors to engage in the community.

Project Feature Overview
Mobile App
The mobile app is designed for Lok Fu Plaza customers to improve their shopping experiences, and attract more people to the mall.

Administration Website
The administration website is designed for LinkREIT system administrators, analysts and storeowners to monitor the database system, analyze the data and upload information respectively.

Features Highlight
(1) Membership System
To build the loyalty of the app users to the app, membership system is established. Members can bookmark their favorite stores and items. They can even interact with the community and enjoy benefits of getting discounted deals.

(2) Sharing
Users can share their view and experience in Lok Fu Plaza with one another on the platform. Under different Sharing topics, text messages and images can be shared.

(3) Indoor Localization
On the map, users can find their current position inside the mall, and follow a suggested shortest path to their destination store.

System Architecture
The server was implemented in Node.js to communicate with the mobile application and the database. The server listens to requests from the app, retrieves data from the database and returns to the user.

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AngularJS is a powerful framework that enables MVC design patterns in the app. Ionic provides a library of CSS and Javascript functions. Cordova provides plugins for the app to access native device features.

Amazon Web Service
hosted the online server on a cloud instance. Cloudinary is the online CDN that hold resources for fast access.

Node.js and Express
created a RESTful API server that can handle concurrent requests from clients. MySQL served as the database to store data.