Trade Bitcoins: Store, Exchange, Buy
DiQiKing Specification

About

- **Background and Context**
    - Technology has changed the way that we live and think, also changing the way we conduct business as we seek competitive advantage in the world of information processing. As most of the business activities today relied on "e-Business", it increasingly popular ascribable to the widespread use of the internet-based and device-based shopping and banking.
    - We live in a time, by 2020, 97% of the world will have a smartphone, that experience a dramatically change- the era of mobile bank comes, cash is going to be marginalized, consumers will move from unbanked to banked, and banking will primarily be done by smartphone, etc. As a result, the technics of e-Payment, Mobile Commerce, mobile banking service, etc. become extremely crucial for the computer industries as well as for the people who want to dedicate in the real-life e-Business industries in the future.
- **Preamble**
    - With the popularity of smart phone, mobile games become one of the most popular entertainments among people. However, game points (Bitcoins) inside those mobile games can only be used inside the game app, and can hardly be exchanged into real cash. So, people often have surplus bitcoins in their games.
    - At the same time, retailers and other stores owners are seeking for a better way to attract customers. In some stores (ex. coffee shop), revenue is in proportional to customers' staying time.
- Why we need it?
    - Game players can use the game points they won inside games to buy items in real-life store, and retailers can attract their customers and prolong their staying time inside the store with games themes and related activities.
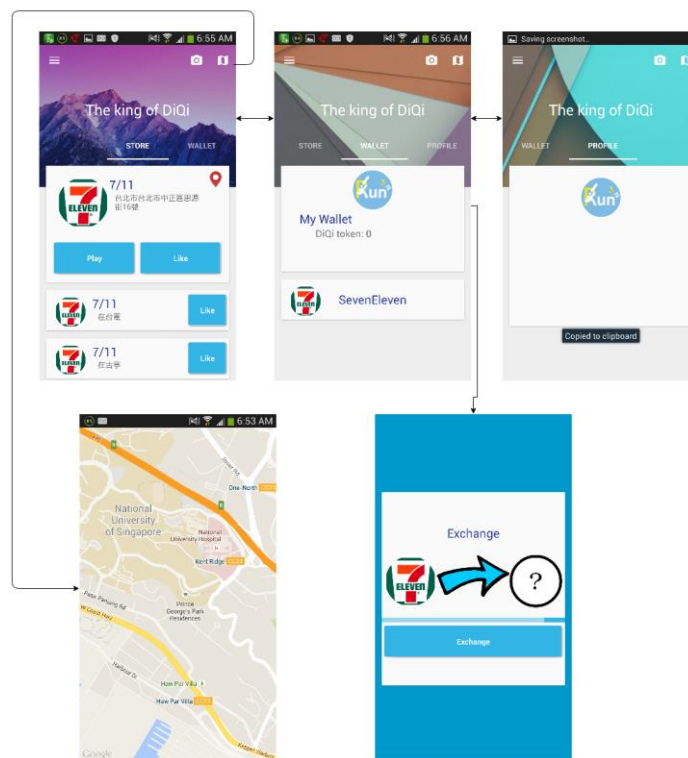- What is it?
    - This project can achieve currency exchange between virtual currency- Bitcoins and virtual currency and by merchandises in real-world via DiQiKing platform.

Developer Guide

- **Github**
  - https://github.com/vanessahu
- **IDE**
  - Android Studio
- Framework and Library
  - MaterialViewPager UI
- Server
  - Parse.com
- Adviser
  - Prof. Liao & Derek
- Project Snippet

View hierarchy

- Views
  - Top left: main page, stores are shown according to the geographical location on the map. Customers can gain daily bonus points by click "Like" button of this store (if this store is in the DiQiKing platform). Click "Play" button can select the game played inside the store. Click "Map" icon to

enter map interface. Click "Cam" icon to enter VR interface to see promotion activities around stores via smart phone camera (Appendix 1). The "Drawer" icon has not been used by now.

- Top center: Main page, the place to achieve currency exchange among virtual currency and between virtual currency and items in reality.
- Top right, Main page, account management.
- Down left: Map interface, show and select surrounding stores with pins on the map.
- Down right: Currency exchange interface.

TODOs

- Re-factoring
  - Due to the limitation of developing time, use cases and UMLs are not well-defined so that the system framework is not very clear and needs to be re-factored.
- Not yet implemented items
  - VR (virtual reality)
  - More detail-rich info window for map interface
  - A framework to add/edit/remove different currency
  - Account settings
  - Add some default games inside
  - Link App and default games
  - Link App with other mobile games by providing SDK and API.
  - Others

Appendix 1

- Virtual Reality
  - For example, put a virtual rose inside a vase in reality, and when the time users move in the room, it should remain the same position in the VR windows.