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Price Sharing Android App

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Abstract

As there are not many price sharing mobile applications on the market in Hong Kong, this project developed a convenient Android price sharing mobile application which allows consumers to find out the cheapest prices of supermarket products before they go shopping.

In order to provide the most updated and reliable product price, this application collects the price data from the supermarket websites and users. A web crawler is developed to grab the daily price data from different supermarket websites. Besides, users can update the product price manually.

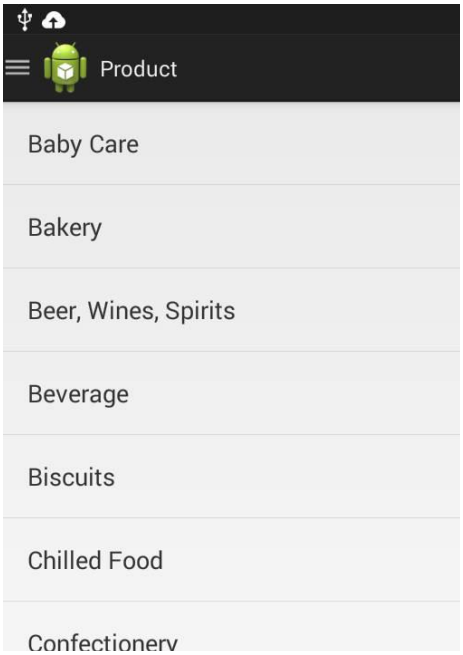
Some features like favourite list and product barcode searching, which allows users to search the desired product through scanning the product barcode, are installed to provide a better shopping experience for consumers. With this application, consumers can purchase in a smart and easeful way.

Methodology

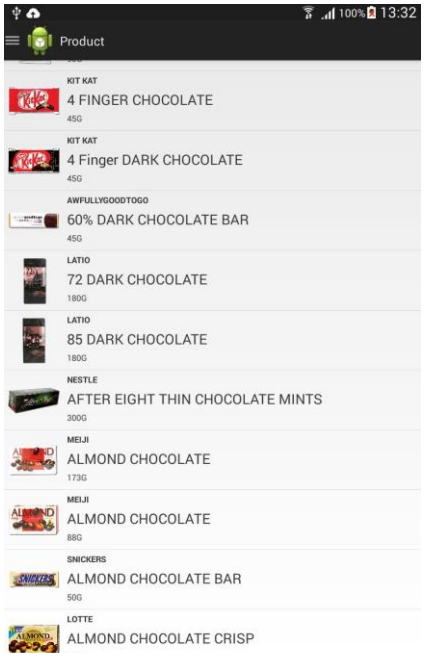
Design

- Daily necessities prices database
- Barcode Scanning
- Search product price
- Add product price
- Crowdsourcing
- Shopping cart

Product search results

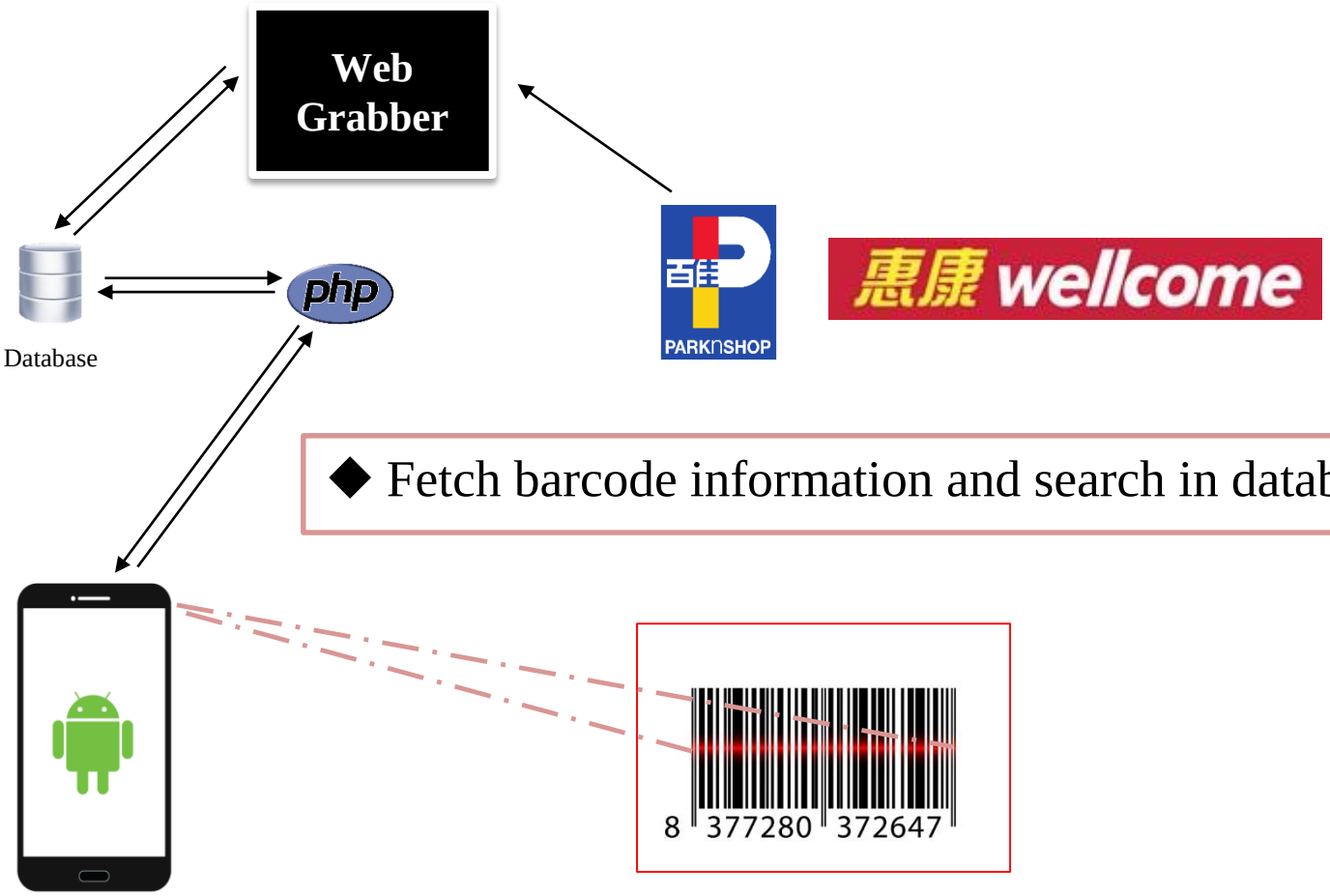


Product Categories



Implementation

- We developed a web crawler to grasp the daily product prices from supermarket website. The daily product prices will then be sent to our database for updating purpose. We used PHP to develop a web interface between server and client.



- Fetch barcode information and search in database

◆ Shopping cart

Product 1
Product 2
Product 3
Product 4
…

Cheapest prices for each product over different supermarket

Cheapest Total Price ($)	26.5

Challenges

✧ No barcode data online

✧ Reliability of crowdsourcing

◆ Self-record

◆ Input price limitation

◆ Administration system

Testing

We had done some testing on our database and user acceptance on our app.
For the database test, the product price grasping form supermarket is smooth and successful. As for user acceptance testing, the result shows that most of the users tend to feel reliable and satisfactory on our application.

✓ Database
✓ User acceptance

```
Page 1: Finished
Page 2: Finished
Page 3: Finished
Page 4: Finished
Start updating products
Inserted: 150 Price(s). Updated: 0 Price(s).
Inserted: 604 Price(s). Updated: 0 Price(s).
Inserted: 97 Price(s). Updated: 0 Price(s).
Inserted: 797 Price(s). Updated: 0 Price(s).
Inserted: 170 Price(s). Updated: 0 Price(s).
Inserted: 430 Price(s). Updated: 0 Price(s).
Inserted: 637 Price(s). Updated: 0 Price(s).
Inserted: 2038 Price(s). Updated: 0 Price(s).
Inserted: 336 Price(s). Updated: 0 Price(s).
Inserted: 163 Price(s). Updated: 0 Price(s).

Deleted: 0 Price(s).
Stop updating products
Time that is consumed: 0h 0mins 58s 969ms
```

Conclusion

In this project, we designed and developed a user-friendly Hong Kong supermarket price sharing Android mobile application. This application could help consumers finding the cheapest price of products and provide a more convenient shopping experience for consumers. We have done some test on our app and the test results can fulfill our objectives.