An android app for Smart shopping using QR Codes

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Introduction

This project aims at creating an innovative shopping system which combines the features and ideas of an online selling system and customer traditional buying routines, i.e. visiting the physical stores. **Shopping electronically while seeing the real products!** The system intentionally provides another option for customers to go shopping in a better and more convenient manner.

Objective

Customers
◆ Access product page by QR code
◆ Place orders with delivery service
◆ Process online payment
◆ Participate online discussion

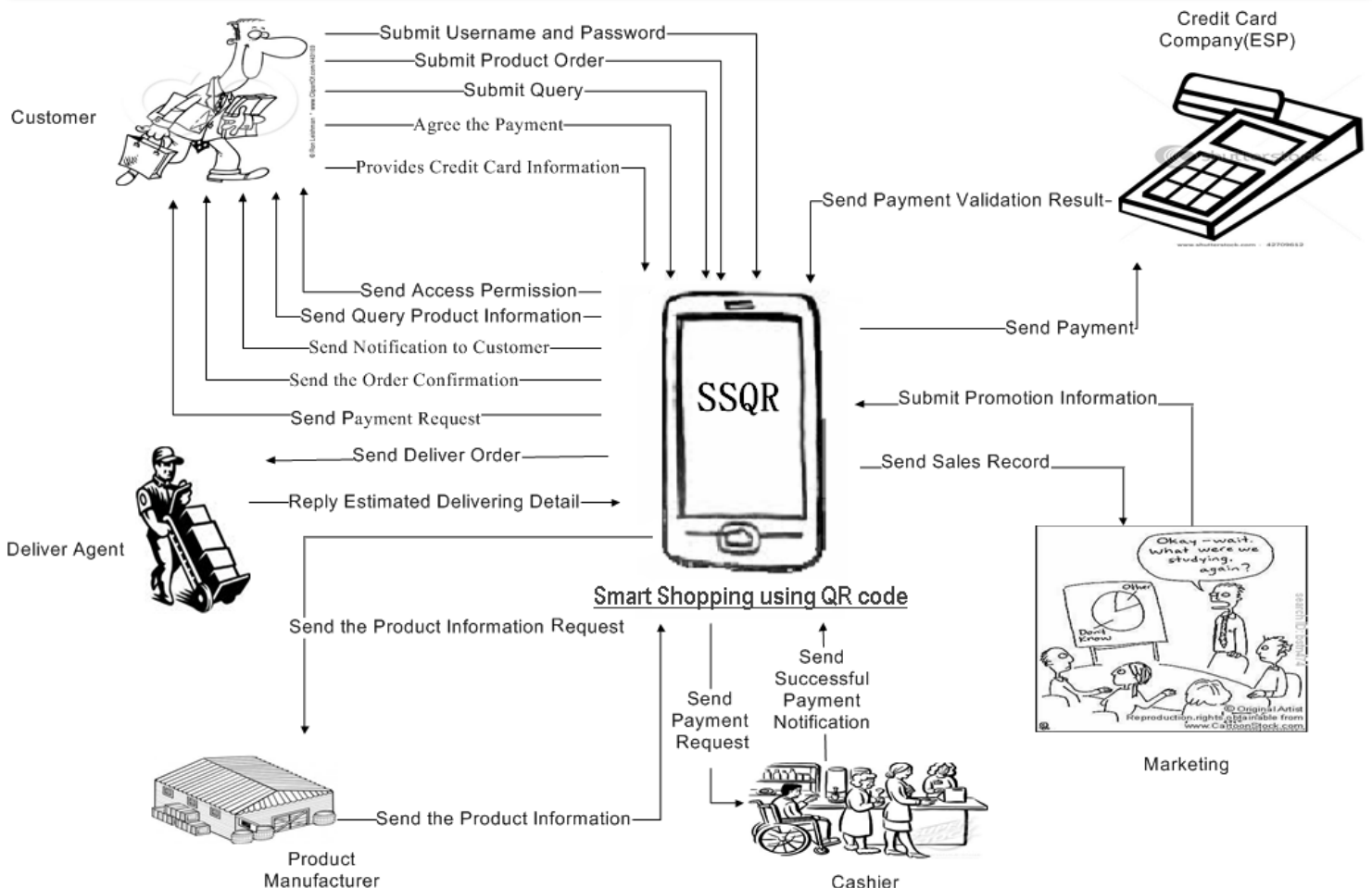Retail store staff
◆ Insert new product records into the database
◆ Update product information
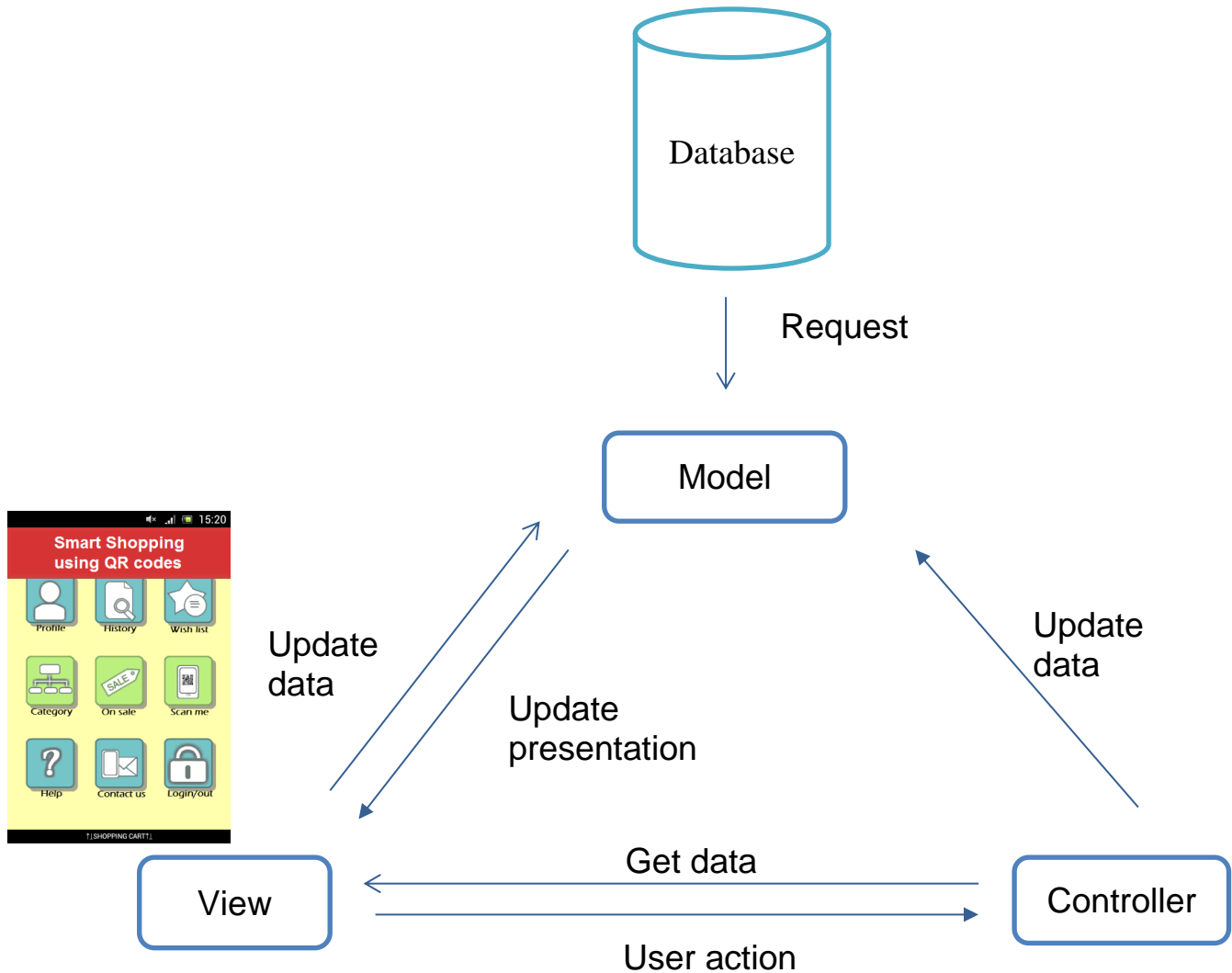◆ Assign QR code to every product
◆ Update daily promotion information

System administrator
◆ Create accounts and grant privileges to staff members
◆ Update account information
◆ Modify product and company information
◆ Maintain the system and database files

Data flow

Smart Shopping using QR code

Design


```
            Database
               |
            Request
               |
               v
             Model
           /        \
   Update /          \ Update
   data  /            \ data
        /   Update      \
       /   presentation  \
      v                   \
    View  <--- Get data --- Controller
          --- User action -->
```
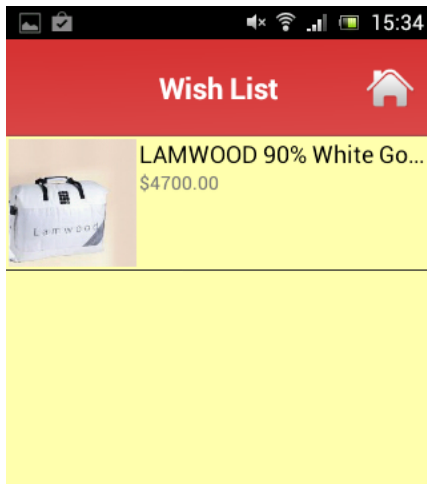
Implementation

Access product page by QR Code (Scan me)

With our designing Android application software installed in clients' smartphone, it activates the camera to capture the QR code printed on the price tag or products. The Android app will then process the information (linkage) stored in the QR code and will show the details including photos, description, prices, size, and weight. Clients can store the ID of the products within the Android app for further processing, e.g. stored as an Item in the" wish list", add to "shopping cart".
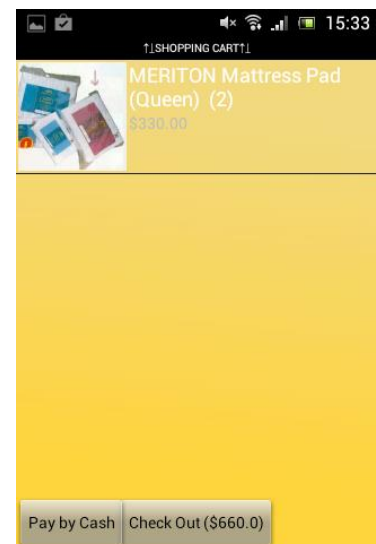
Wish list

Wish list is a temporary storage list of product IDs that are saved within the clients account. It aims at providing flexibility for clients to make amendment before payment or sort goods of the same nature into the same wish list for price comparisons.

This function is designed for clients that do not want to process the payment right after they finish the QR capturing process or viewing the product pages. List of the products ID are stored as "wish list". The list of an account will then be synchronized between the Android application software and website. Users are able to access to the website and alter the list for payment.

Shopping cart

A shopping cart acts as an electronic shopping basket. It allows clients to accumulate a list of items for purchase. All the QR codes on the products captured by the clients are sent to the system, the products' id are identified. Clients may then add products to the shopping cart from product page. Once clients have finished capturing the product QR codes and the shopping cart is confirmed, it will enter into payment process. The shopping cart will then be saved as "order history" for further review or re-ordering the products, e.g. refilling the household commodity monthly.

Conclusion

Using the android app in SSQR, customers are able to browse retail products detailed information by decoding the QR code assigned to the product, put it into the shopping cart, checkout and process payment, and order delivery services.

The website is an online shopping platform for customers to browse the products online and manage their accounts. Retail company employees use it as a back-end platform to manage the system and products that they are selling at the store as well as studying the statistics of sales.