

Design Document

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1 Design Considerations

1.1 Assumptions

- The supermarket chain stores, such as *PureFoods*, is in need of an easy grocery shopping APP for customers to create a shopping cart consisting of items and coupons, generate order, and to checkout. The EZShop APP is designed for this need and facilitates grocery shopping.
- The payment system is designed to work with the EZShop APP and allows the customers to pay their orders.
- It is assumed that there is a grocery store management system that contains a database for the customers', items' and coupons' information.
- It is assumed that the EZShop APP has access to the grocery store database and can retrieve the relevant information.
- It is assumed that the payment system has access to the customers' and merchants' bank accounts (possibly store in a payment transaction database) to process card payment transactions.
- It is assumed that QR scanning, payment processing and email capabilities can be provided by libraries, through utility classes.

1.2 Constraints

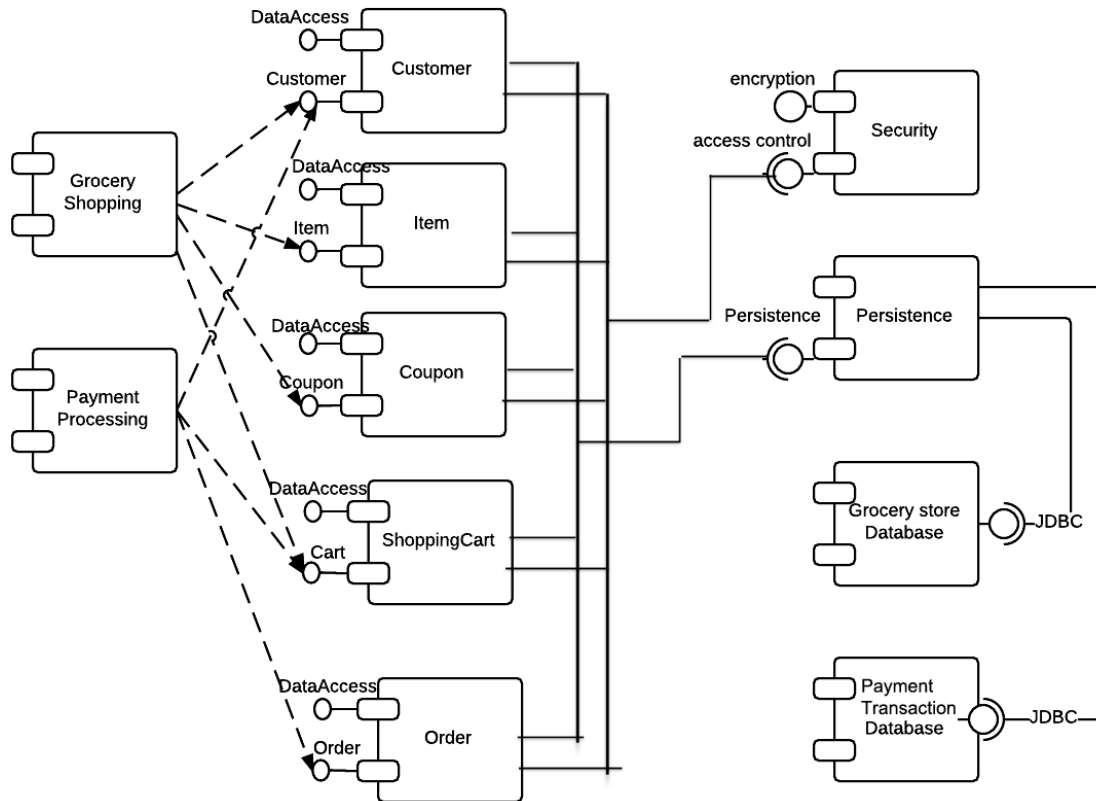
- The EZShop APP uses Java, object-C or other programming languages.
- The final delivery date of the APP and payment system must be within 6 months.
- The budget for system development must not exceed 200,000 USD.
- The size of the APP should not exceed 20 MB.
- The size of the payment system should not exceed 1GB.
- The APP and payment system must comply to all licensing restrictions and legal requirements.

1.3 System Environment

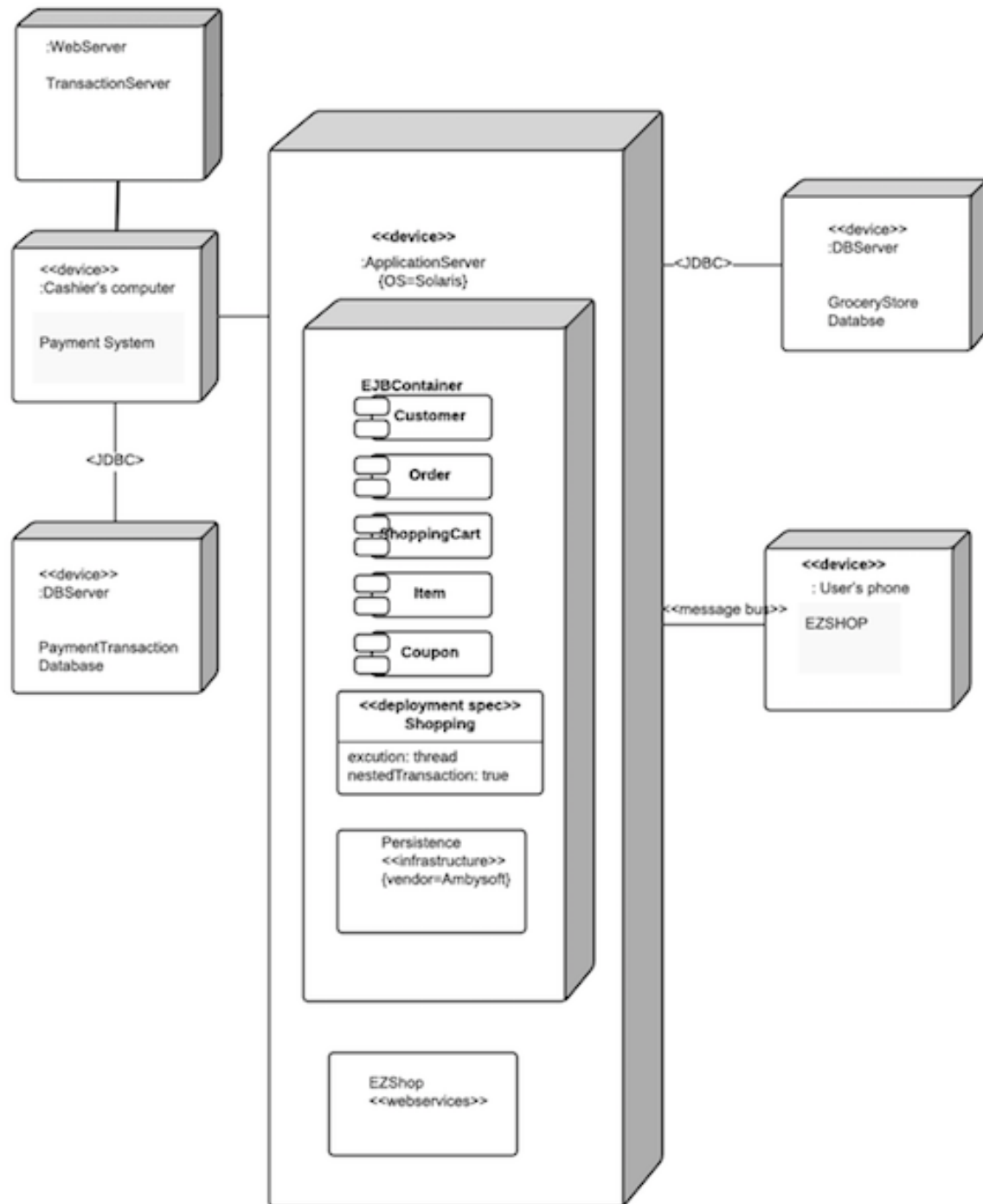
- The EZ shop must operate in smart phones or tablets with an IOS, Android or windows phone system. The smart phones and tablets should have a working camera for scanning QR codes and have Internet access.
- The payment system must operate in computers with any operating system and with access to Internet, a scanner, a pin pad, a card swiper and a signature pad.

2 Architectural Design

2.1 Component Diagram

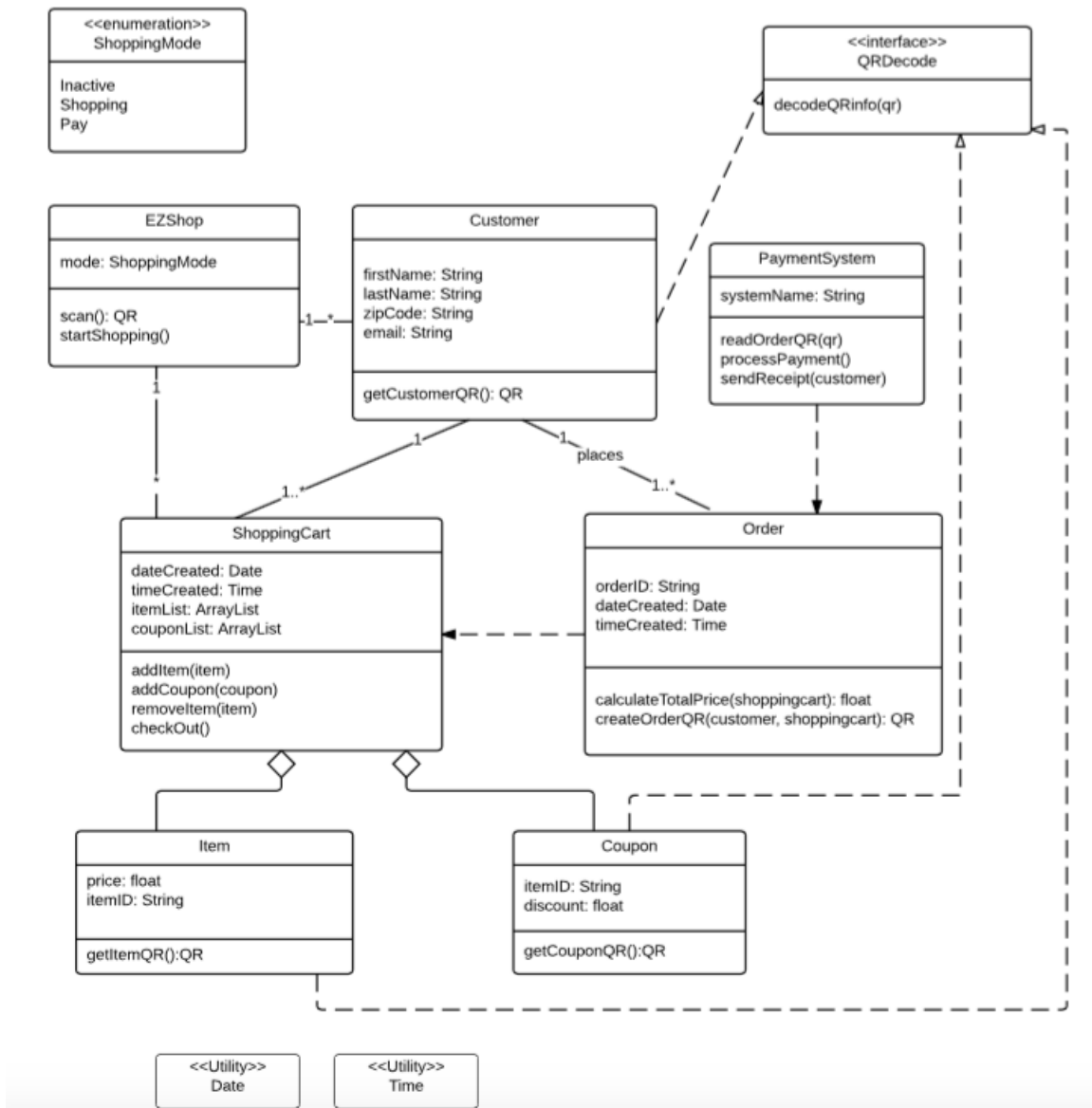


2.2 Deployment Diagram



3 Low-Level Design

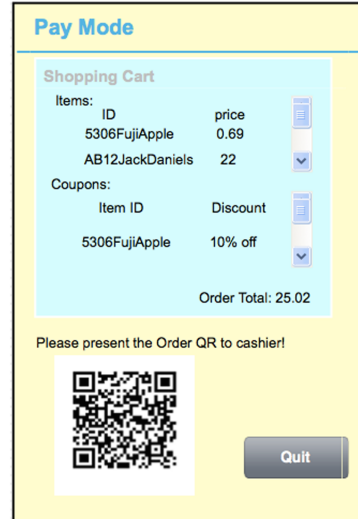
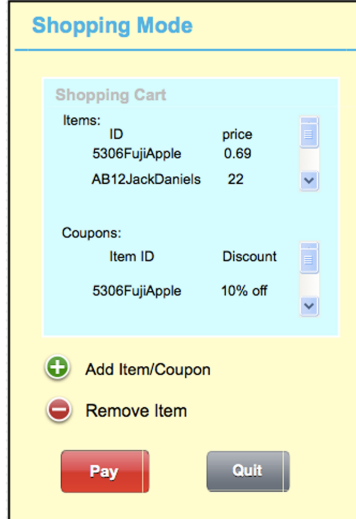
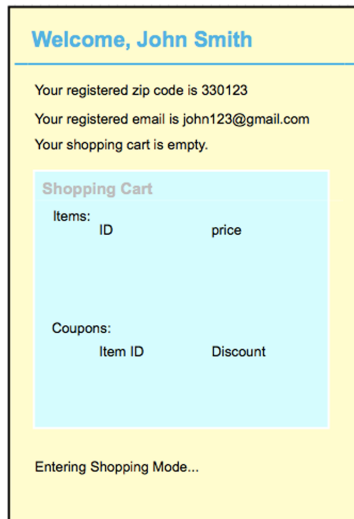
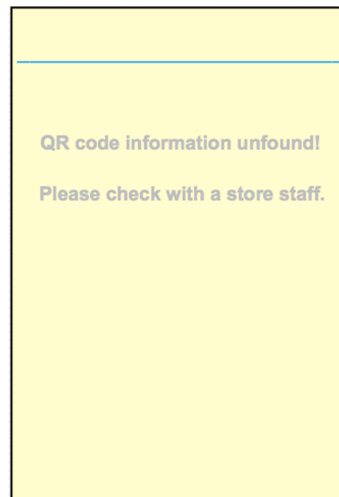
3.1 Class Diagram



3.2 Other Diagrams

4 User Interface Design

4.1 EZShop APP UI Design



4.2 Payment System UI Design

Please log in the payment system:

Username:

Password:

Please scan an order QR code



Order Details

Customer: John Smith
zip code: 330123
email: john123@gmail.com

Cart:

Items:		
5306FujiApple	0.69	
AB12JackDaniels	22	

Coupons:		
5306FujiApple	10% off	

Total Value of the Cart: 25.02

Please choose a payment method:

Cash

Debit Card

Credit Card

Payment successful!

Your receipt is sent to your email!

[Click to process a new order](#)

Transaction failed!

Please try again or select another payment method.

[Return to pay again](#)

[Cancel order](#)