Week 4 Interactive Assignment

Shaun Hoadley

CST 304: Software Requirements & Analysis

Professor Robert Key

April 1, 2021

**10.1. You have been asked to build one of the following systems:**

**a. A network-based course registration system for your university.**

**b. A Web-based order-processing system for a computer store.**

**c. A simple invoicing system for a small business.**

**d. An Internet-based cookbook that is built into an electric range or microwave.**

**Select the system that is of interest to you and develop a processing narrative. Then use the grammatical parsing technique to identify candidate objects and classes.**

We have the task of *developing* the web-based order-processing system for MackBytes Computer Emporium. To *process* orders, the system will need to *collect* customer information, *check* and *adjust* inventory stock, *process* payments, and *produce* order documents (invoices, inventory pull orders, etc.).

The minimum data needed for *collection* is their name, address, phone number, and email address for the customer information. Payment *processing* includes payment method (e.g., PayPal, credit card, and crypto-currencies) and billing address if different from the shipping address. The system has to be able to *access* the inventory system to *verify* the products available for purchase, the amount of stock available, and *adjust* the quantity during the transaction. Lastly, the order documents need to be *generated* (customer invoice/receipt and the inventory pull order if the invoice is not used as such).

|  |  |
| --- | --- |
| **Potential Class** | **General Classification** |
| Web-based order-processing system (WB-OPS) | Thing |
| MackBytes Computer Emporium | Entity |
| Order | Occurrence, attribute of transaction |
| Customer Information | thing, attribute of transaction |
| documents | Thing, attribute of transaction |
| stock | thing, attribute of product |
| payment | Occurrence, attribute of transaction |
| name | Entity, attribute of customer information |
| address | Thing, attribute of customer information |
| phone number | Thing, attribute of customer information |
| email address | Thing, attribute of customer information |
| billing address | Thing, attribute of documents |
| shipping address | Thing, attribute of documents |
| product | Thing, attribute of order |
| quantity | Not object, attribute of product |
| transaction | Occurrence |

**10.2. Develop a set of operations that are used within the classes identified in Problem 10.1.**

MackBytes -

WB-OPS -

Transaction - getCustomerInformation(), getOrder(), getPayment(), getDocuments()

CustomerInformation - addName(), addAddress(), addPhoneNumber(), addEmailAddress()

Order - getProduct()

Product - checkQuantity(), getStock()

Documents – addShipAddress(), addBillAddress(), createInvoice()

**References**

Pressman, R. S., & Maxim, B. R. (2015). [*Software engineering: A practitioner's approach*](https://ashford.instructure.com/courses/81372/modules/items/4111209) (8th ed.). Retrieved from https://www.vitalsource.com