Designing a Frequent Shopper System

The A-Team  
Bachmeier, Cifra, Cornett, Gabriel, and O’Connell  
  
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Instructor: Christopher Vozella

# Designing a Frequent Shopper System

Kudler Fine Foods, is a large retail store that specializes in various hard to find foods and other goods. Since opening the first store, Kudler has always provided promotions and discounts to their loyal frequent customers. Originally this was tracked through pen and paper, before evolving to Excel.

Now that they have a web presence and several stores, it has become difficult to coordinate tracking customers between these different locations. Additionally they are unable to have a consistent user story, which is leading to inefficiencies of the program. The senior management of the company believes without a modernization of this system, they will not be able to stay competitive with neighboring businesses.

# Scope, Goals, and User Stories

1. Customer Enrolls in FSS
   1. Application is sent to the a service
   2. Service validates the enrollment request
   3. An enrollment id (token) is associated with the customer
2. The customer buys something at the store or web presence
   1. User retrieves the token
      1. Web Presence: Associated with email address
      2. In Person: Associated with a keychain or phone number
   2. Transaction is committed
      1. System accepts the money
      2. Records the items purchased
      3. Associates the purchase with the token
3. Sales wants to recommend a product
   1. They aggregate the items purchased by each user
   2. Using a nearest neighbor algorithm, similar customers are clustered together
   3. Members of a cluster then get recommendations based on similar customers
   4. The recommendation needs to be bunched off and sent as a targeted ad
4. Marketing accepts these targeted ad suggestions that are associated with tokens
   1. They query that the suggestion is for a new item
   2. They filter anything that the customer has specifically said not interested in
   3. Send the recommendation
      1. If successful record the recommendations has been sent

# Measurements for Success

* Number of suggestions that are purchased
* Number of attachments from frequent shoppers
* Increase in numbers of frequent shoppers,
* Decrease in marketing costs
* Time products sit on shelve

# Project Feasibility

* Does Kudle have the expertise to design
  + The database, web site, and Point of Sale integration
* What additional hardware would be needed for this project
  + Who will maintain the hardware
  + What is the plan to decommission or upgrade
* Is an external marketing consultant team needed?
  + They can teach our team so skills stay in house
* How will the old data be migrated to the new system

# Current Business Process

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# Proposed System Requirement List

* Transaction processing system
* Enrolled Customer database
* Clustering system
* Materials to make frequent shopper key chains and frequent shopper cards
* Manufacturer of frequent shopper key chains and frequent shopper cards

# Recommended Next Action

Based on internal assessment Kudle Fine Foods would be able to better target ads and be more competitive in the market place, if the Frequent Shopper System was renovated. Additionally the savings in labor and efficiency of ringing up customers will likely pay for the system in itself.

Before starting the development of the new system, there are many questions regarding the feasibility of the project which need to be addressed first. Some of the key questions are < A >, <B> and <C>.

After pushing the system into production they will need to pay close attention to the following metrics <A>, <B> and <C>. If they are not meeting performance a alterations and design changes will be required.