LameDucks Coffee Requirements and Use Cases

Team 007

Version: Final

1. Introduction

LameDucks coffee in Atlanta, GA desires a reward system to help promote their expanding number of coffee carts. The company has requested that an Android application be built to manage their VIP Card program. For the rest of this document the system will be referred to as the coffee cart reward system (CCRS). The CCRS will be operated independently by each coffee cart manager, and the database will be updated by LameDucks coffee owners.

In addition to the requirements listed below, LameDucks coffee owners have requested that the RUP is followed with accompanying UML diagrams.

2. User Requirements

2.1 Software Interfaces

The CCRS will be built in Java using the Android SDK 4.0+ and will interact with an external database service, Parse.com, using network connectivity to keep all data in sync throughout the various locations.

2.2 User Interfaces

The user interface will be a touch screen interface that will use drawer navigation ("LameDucks Coffee") with each menu item being a specific grouping of activities. The coffee cart manager will need to manage the rewards program. All data changing activities will be done through active "buttons", and all loading activities will be accompanied by informative loading messages using Android toast notifications.

2.3 User Characteristics

The users will be the managers of each coffee cart. The managers will have a range of technical skills from little technology experience to very tech savy. The managers will vary in education from being high school graduates to college graduates. They are all familiar with smartphones, but do not necessarily own one, nor necessarily have experience with the Android platform. It is recommended that all managers are trained and verified as competent users of the application after it is developed.

2.4 Assumptions and Dependencies

We make the following assumptions about the CCRS.

1.   That the managers will have access to a Android 4.0+ smart phone

1.1. That the managers will be able to effectively use Android OS on their smart phone.

1.2. That the managers will use the CCRS effectively and consistently.

2. That the Parse.com data store will continue to operate through the use of this CCRS.

2.1. That Parse.com will not dramatically change their API.

2.2. That Parse.com will not dramatically change the pricing of their storage and access.

3. That Parse.com will continue to to store all DateTime at UTC+0.

4. That the number of VIP Customers will not be too large to be selected from a list.

5. That the VIP Card Number is alphanumeric and exactly 10 characters in length.

6. That security for the initial system is not necessary.

6.1. If the phone is stolen the culprit can give themselves rewards.

6.2. If the phone is stolen the culprit can create, read, update, and delete VIP customers.

7. That the owners will update the database for and the CCRS will only read information for:

7.1. Coffee Drinks.

7.2. Desserts.

7.3. Coffee Cart Locations.

8. That the owners will not delete products.

8.1. The owners will only mark products as active or inactive.

9. The CCRS will give create, read, update, and delete access for:

9.1. VIP Customers.

10. The CCRS will give create and read access for:

10.1. Purchases.

10.2. Pre-orders.

11. Only one transaction (pre-order or purchase) is done at a time for a single item. Batched or bulk ordering will not be needed for this app.

12. That a coffee cart location will be set in the application before any other activities are attempted. Atlanta is the default location if unset.

3. System Requirements

3.1 Functional Requirements * - implemented in prototype

1. The system records the name, phone number, birth date, and VIP Card Number for each VIP Customer. *
   1.1. These fields are required.
   1.2. These fields, except for phonenumber, will be validated.
2. The system only allows one VIP card per VIP Customer.
3. The coffee cart manager must be able to add VIP customers to the system. *
4. The coffee cart manager must be able to edit VIP customers on the system. *
5. The coffee cart manager must be able to remove VIP customers from the system. *
   5.1. This removal is permanent and complete. *
6. The system must have product types of coffee and dessert. *
7. VIP customers are awarded 1 VIP point for each dollar spent when they use their card. *
   7.1. This point value is the price rounded to the nearest whole number. *
8. The system should be able to calculate:
   8.1. the items a VIP customer has purchased and pre-ordered.
   8.2. the items a VIP customer has purchased and pre-ordered in the last 30 days.
   8.3. the total amount of points the VIP customer has earned.
   8.4. the points the VIP Customer has earned in the last 30 days.
9. VIP customers can also pre-order desserts as early as 30 days in advance unless the pre-order slots for the order pickup day are filled.
   9.1. Desserts that are best sellers have 3 pre-order slots
   9.2. All other desserts have 5 pre-order slots.
10. A customer who earns more than 500 VIP points in last 30 days is upgraded to GOLD level
11. A customer who earns a total of 5000 VIP points is permanently upgraded to GOLD level.
12. Coffee refills are half price for VIP Customers.
    12.1. Coffee refills are free for GOLD Level VIP Customers.
13. The system can generate a report of purchase and pre-orders for the current day.

14. The coffee cart owner uses this system to manage and keep track purchases from selected VIP customers.
15. The VIP status of customers is tracked through a unique VIP card number in the system.
16. The owners will manage the Products, Coffee Cart Locations, and Bestseller status from the Parse.com database.
17. The manager will select which coffee cart location they are managing.
18. Navigation Drawer is closed on starting/restarting application.
19. Prices are displayed in US$ on all product lists.
    19.1. Prices are properly formatted.

3.2 Non-Functional Requirements

1. The system user interface must be intuitive.
2. The system user interface must be responsive.
3. The system user interface should display informative messages.
4. The system must have access to network connectivity through wifi or cellular service.
5. The system should communicate what actions it is performing.
6. The system should fail gracefully with helpful messages.
7. The phone should have a powersource.

4. Use Cases

LameDuck Coffee Reward Program Use Case Events

Subject	Verb	Object	Frequency	Arrival Pattern	Response
Customer	Joins	VIP Program	5 / Day / Stand	Episodic	Manager adds customer to application and saves information to the database. The manager gives the VIP Customer a physical card with a card number
Customer	Cancels	VIP Program	1 / Week / Cart	Episodic	Manager permanently deletes Customer's information from the application and database.
Customer	Updates	VIP Information	1 / Week / Cart	Episodic	Manager looks up customer information, selects the correct customer, edits information, and saves to database.
Customer	Purchases	Item	250 / Day / Cart	Episodic	Manager selects VIP Customer and selects item , then the manager saves the purchase.
Customer	Purchases	Coffee Refill	50 / Day / Cart	Episodic	Manager selects VIP customer and then the refill item from the purchase list saves the purchase.stem checks to see if customer is a GOLD Member. The coffee is free if the customer is a GOLD member, otherwise the customer is charged the standard refill price.
Customer	Pre-orders	Dessert	10 / Day / Cart	Episodic	Manager selects pickup date for the dessert, selects VIP Customer and then chooses a dessert from the list. If the item is available to pre-order, the pre-order is recorded. Otherwise the system notifies the manager it is not available for pre-order
Manager	Looks up	Customer	10 / Day / Cart	Episodic	Manager selects a VIP customer from VIP Account Management and system displays the total points earned by the customer, the total points for the last 30 days, the GOLD member status(if applicable), and the option to list items ordered by the customer for the last 30 days. The manager also has the option of seeing total purchases with an option.
Manager	Generates	Reports	1 / Day / Cart	Episodic	Manager selects daily report and and the system generates a report for the current selected coffee

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					cart locationthat gives a list of items purchased and pre-orders made for the current day.
Manager	Selects	Coffee Cart	1 / Application Install / Cart	Episodic	Manager selects coffee cart. All further purchases and pre-orders are associated with that coffee cart location..
Owner	Adds	Product	3 / Month	Episodic	The owners add new product to sale to the Parse.com database. These items will automatically show up to all coffee managers for purchase and pre-orders
Owner	Adds	Coffee Cart Location	2 / Year	Episodic	The owerns add a new coffee cart location to the Parse.com database. The manager of the new coffee cart will be able to select their location as the coffee cart location.
Owners	Changes	Prices of Products	1 / Year	Episodic	The owners change the prices of all Products in the Parse.com database. All prices will be automatically reflected for all coffee cart managers. Previous orders will be stay recorded at the previous price/point-value
Owners	Change Active Status	Products	1 / Year	Episodic	The owners change the active status of a product from the Parse.com data browser.. The display of these products will be updated. Previous pre-orders for these products will stay in the system.
Owners	Changes Bestseller Status	Desserts	1 / Month	Episodic	The owners change a desserts bestseller status from the Parse.com data viewer. The number of future pre-orders will be changed, but the previously made pre-orders in the system will stay.

USE CASE 1.1 - Add VIP Customer
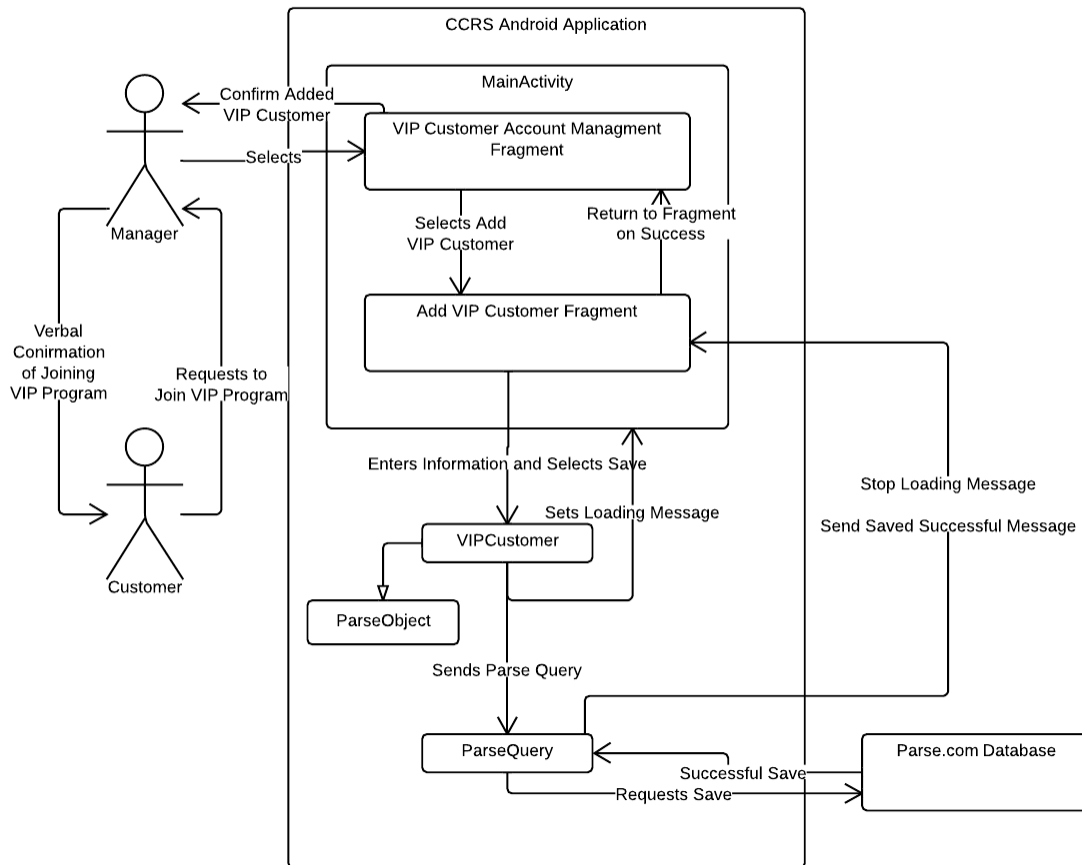
Use Case 1.1: Customer requests to joins VIP Program

1. Customer request to join VIP Program
2. Manager selects "VIP Customer Management"
3. Manager selects "Add VIP Customer"
    3.1. Adds name
    3.2. Adds phone number
    3.3. Adds birthdate
    3.4. Adds card number from physical card
4. Manager saves VIP Customer
5. Application verifies VIP Customer is added
6. Application displays VIP Customer information
7. Manager gives custom physical card with card number

USE CASE 1.2 - Delete VIP Customer
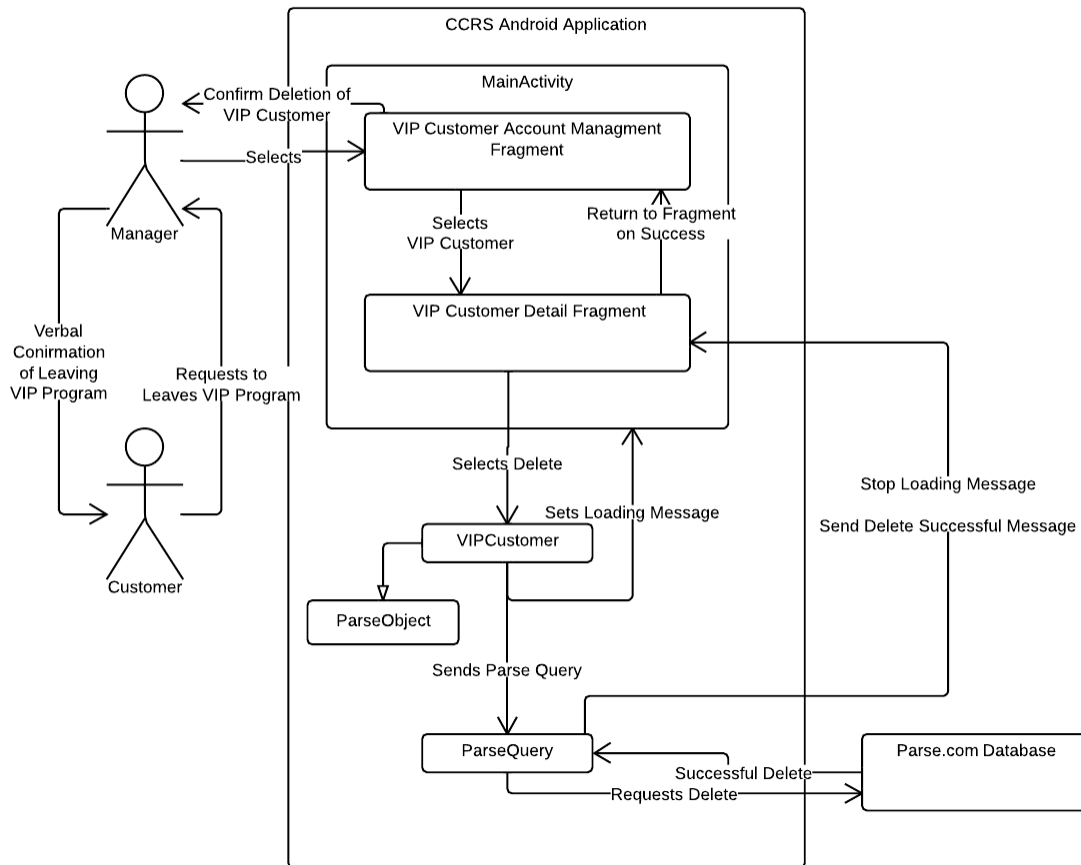
Use Case 1.2: Customer requests to leave VIP Program

1. Customer request to lean VIP Program
2. Manager request physical card
3. Manager selects "VIP Customer Management"
4. Manager selects VIP Customer from list
5. Manager selects "Delete"
6. Manager confirms selection
7. Application verifies VIP Customer is delete.
8. Application returns to "VIP Customer Management"
9. Manager verbally confirms deletion of account with customer

USE CASE 1.3 - Update VIP Customer
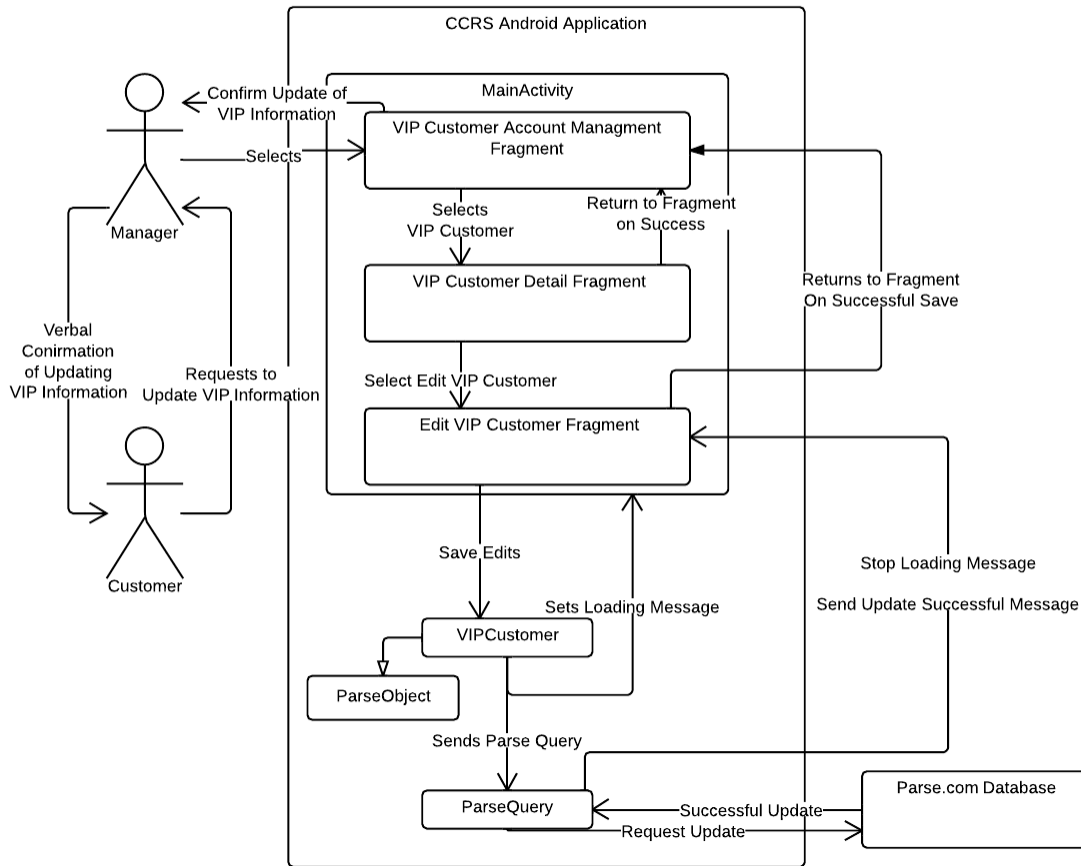
Use Case 1.3: Customer requests to update VIP information
1. Customer request to update VIP information
2. Manager request physical card
3. Manager selects "VIP Account Management" from "LameDucks Coffee" Menu
4. Manager selects the VIP Customer from list
5. Manager selects "Edit"
6. Manager edits information
   - 6.1. Name
   - 6.2. Birthdate
   - 6.3. Phone number
7. Manager selects save
8. Application verifies VIP Customer information is saved
9. Application returns to "VIP Account Management"
10. Manager verbally confirms updated of account with customer

USE CASE 1.4 - Look Up VIP Customer Details
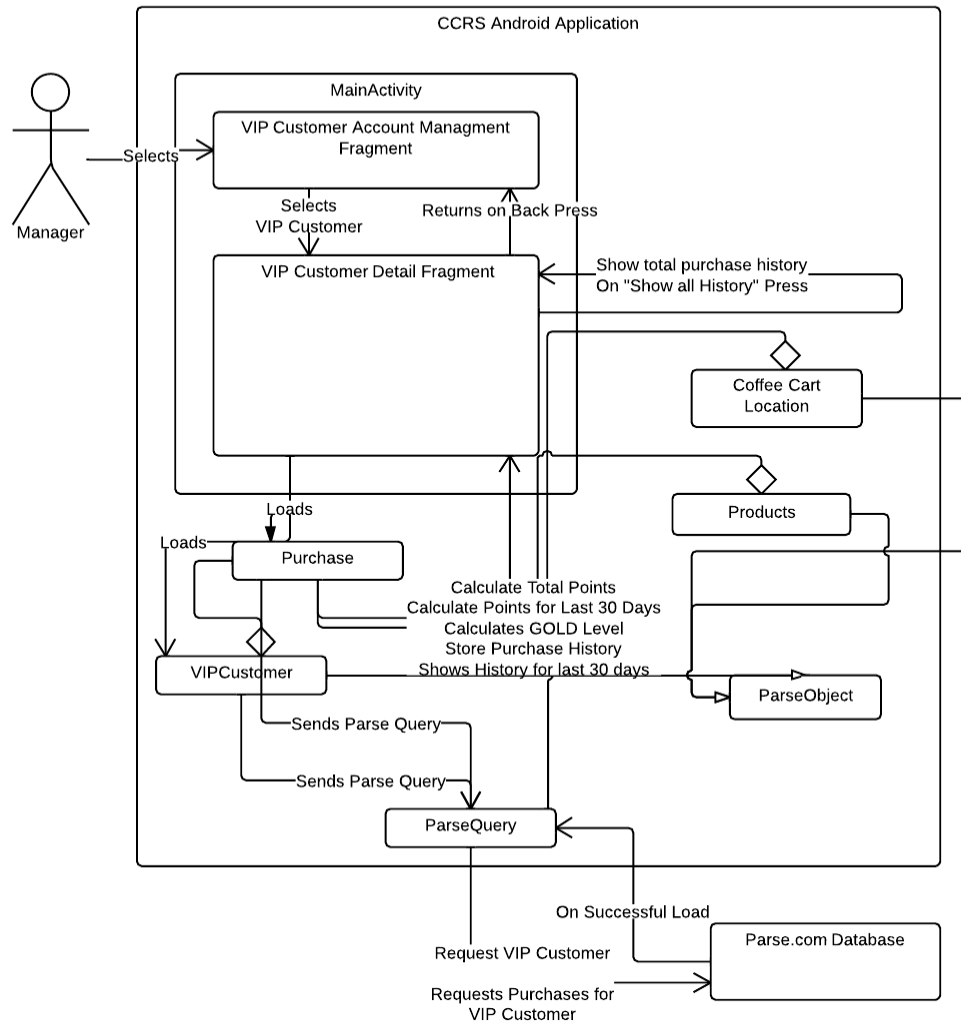
Use Case 1.4: Manager looks up VIP Customer Details
1. Manager selects "VIP Account Management"
2. Manager selects a VIP Customer from the list
3. Application displays
    3.1. Customer Details
    3.2. VIP Status
    3.3. Points for last 30 days (Total Points)
    3.4. A button for full purchase history
        3.4.1. If manager selects full purchase history the history is displayed.
    3.5. A button for 30 day purchase history
        3.5.1. If manager selects 30 day purchase history the history is displayed.

USE CASE 2.1 - Customer Purchases Product
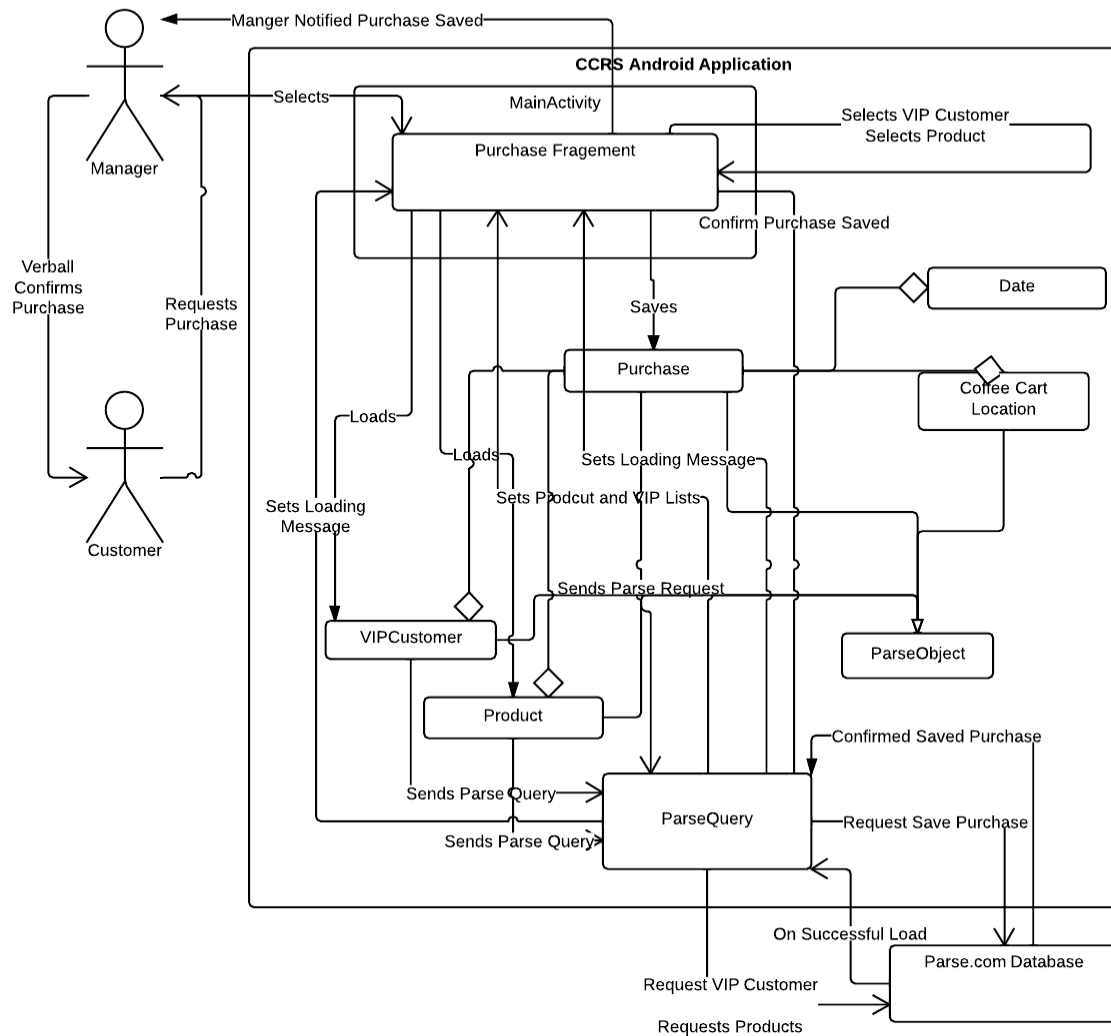
Use Case 2.1: Customer purchases item

1. Customer purchases item(s).
2. Manager selects "Purchase Items" from Main Menu.
3. Manager requests Customer Card.
4. Manager selects VIP Customer from VIP Customer list.
5. Manager selects requested item from purchase list.
6. Manager selects "Save".
7. Application confirms purchase.
8. Application stays on purchase screen.
9. Manager verbally confirms purchase and updates customer on his/her point totals.

10.   Manager can continue to make additional purchases.

USE CASE 2.2 - Customer Pre-Orders Dessert
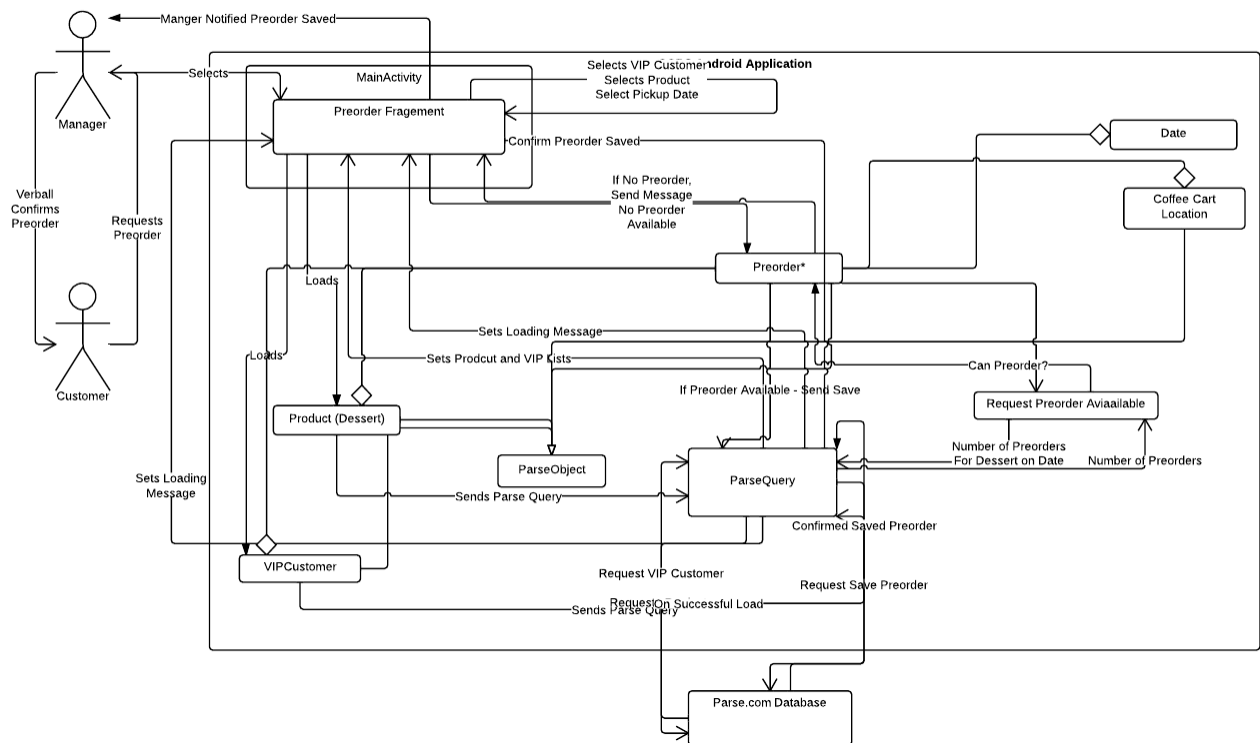
Use Case 2.2: Customer pre-orders dessert(s)
1. Customer pre-orders item(s).
2. Manager selects "Pre-order Item(s)".
3. Manager selects pre-order pick up date between tomorrow and 30 days from today
4. Manager requests Customer Card
5. Manager selects VIP Customer from list.
6. Manager selects Dessert from list.
7. Manager presses "Save" button
8. The application checks if pre-order is available
    a. If available, Application confirms pre-order
    b. If not available, Application notifies manager pre-order is unavailable.
9. Manager verbally confirms pre-order with customer
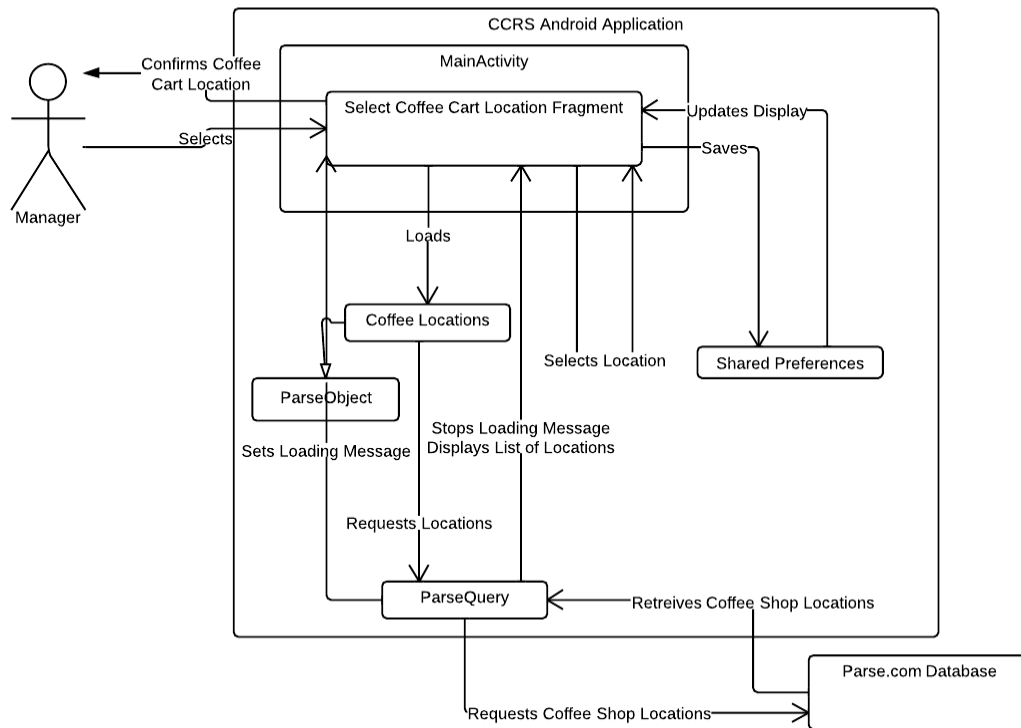10. Manager can make another preorder

USE CASE 3.1 - Manager Generates Daily Report
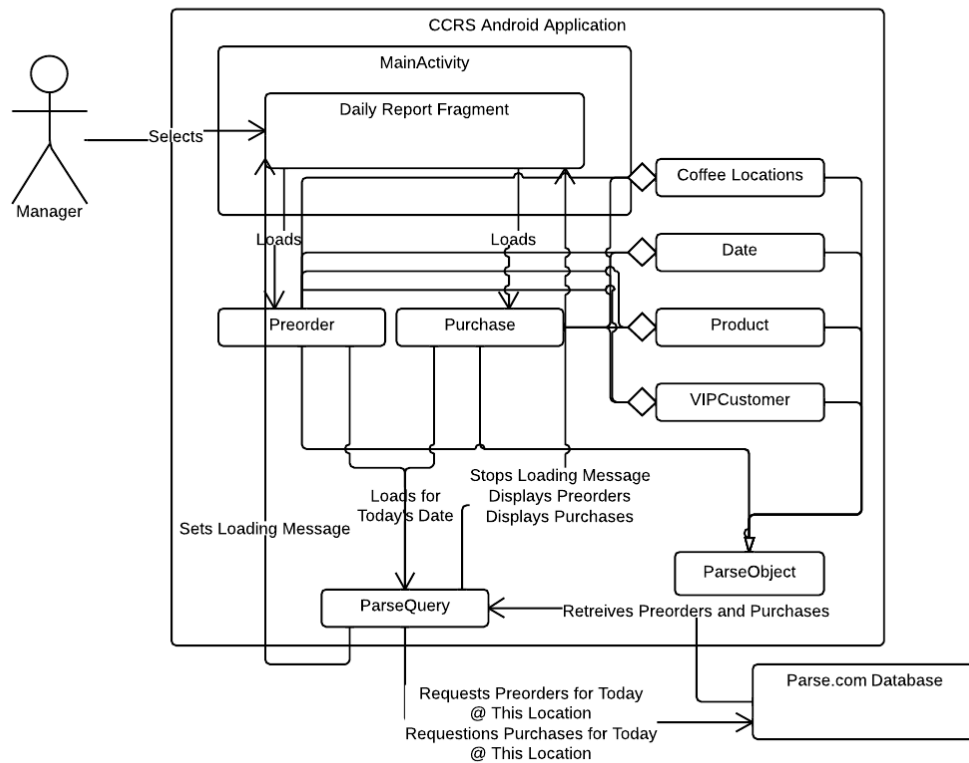
Use Case 3.1: Manager generates report
1. Manager selects "Generate Report" from "LameDucks Coffee" menu.
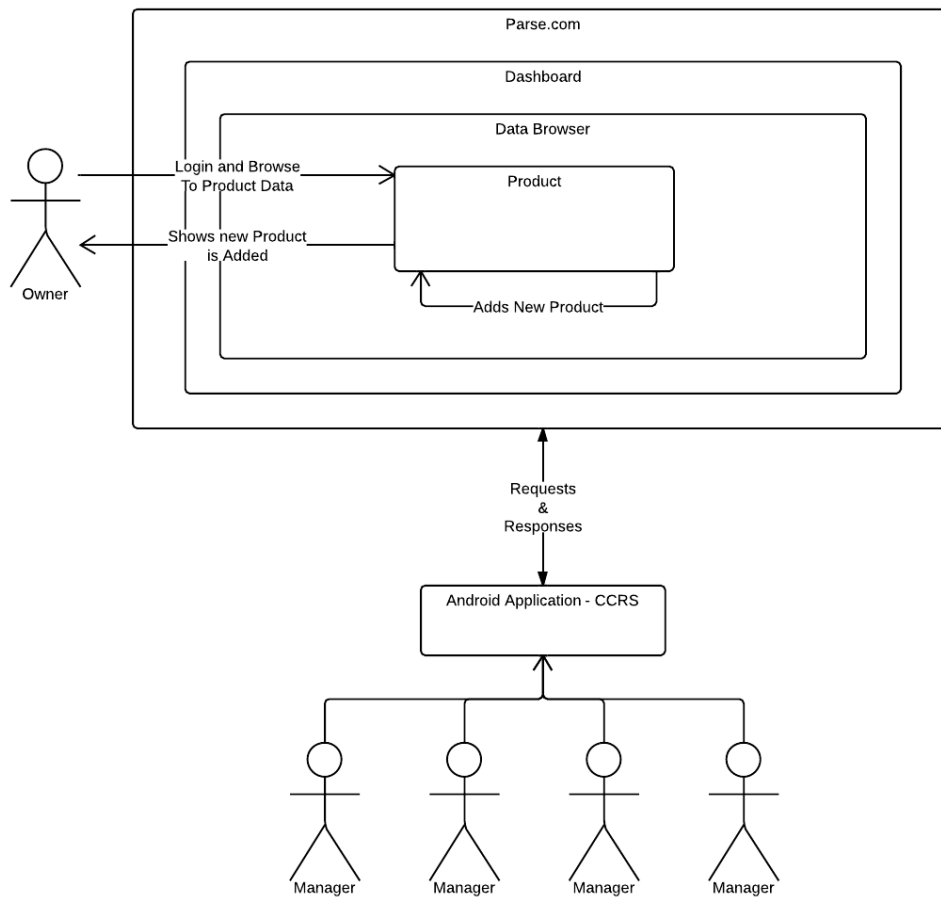2. Manager reviews report.

USE CASE 4.1 - Manager Selects Coffee Cart Location

Use Case 4.1: Manager selects Coffee Cart Location
1. Manager selects "Set Coffee Cart Location" from "LameDucks Coffee" Menu.
2. Manager selects "Coffee Cart Location" from list.
3. Manager presses "Save".
4. Application confirms coffee cart location selections

USE CASE 5.1 - Owners Add New Product

Use Case 5.1: Owner adds a Product
1. Owner logs into Parse.com
2. Owner selects "Dashboard"
3. Owner selects "Data Browser"
4. Owner selects "Product" from Classes
5. Owner adds row and enters
    5.1. Name (String)
    5.2. Type ("coffee" or "dessert")
    5.3. Price (Double)
    5.4. Bestseller (Boolean)
    5.5. Active (Boolean)
6. All coffee carts have access to new Product

USE CASE 5.2 - Owners Add New Coffee Cart Location
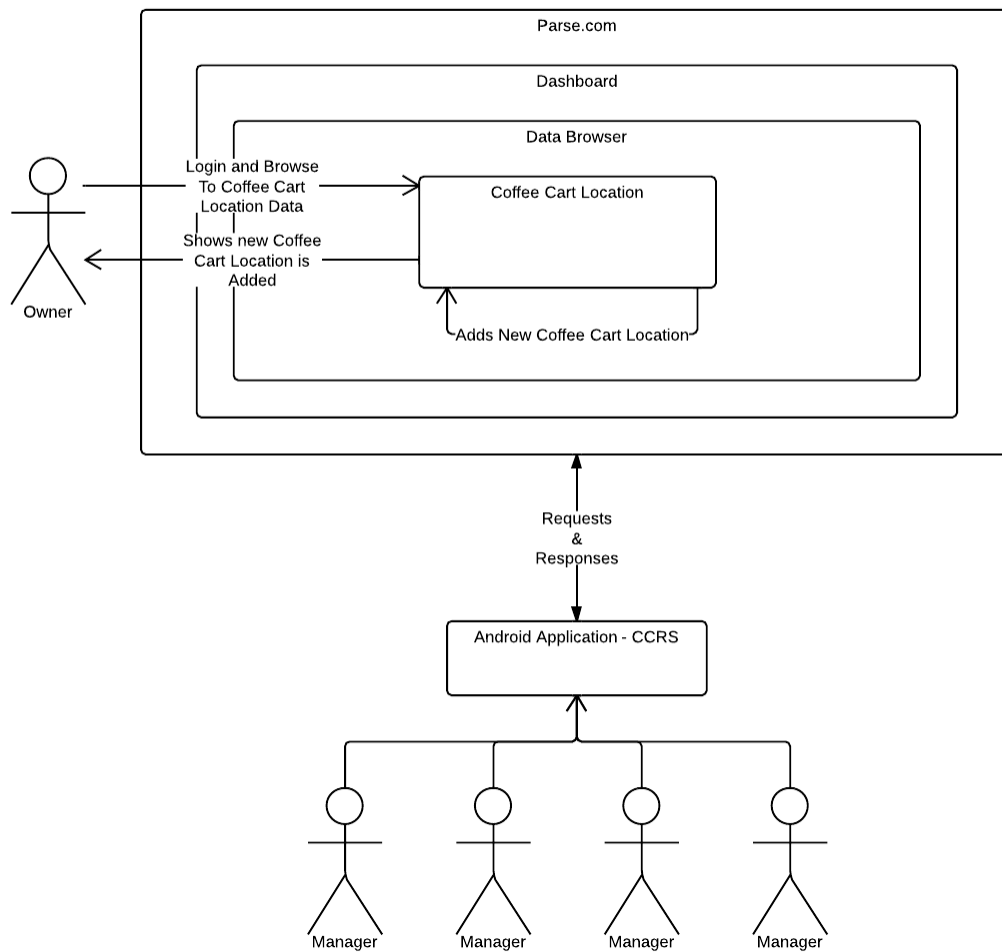
Use Case 5.2: Owner adds a Coffee Cart Location
1. Owner logs into Parse.com
2. Owner selects "Dashboard"
3. Owner selects "Data Browser"
4. Owner selects "Coffee Cart Locations" from Classes
5. Owner adds row and enters
    5.1.   Location (String)
6. All coffee carts have access to new Coffee Cart Location

USE CASE 5.3 - Owners Change Prices
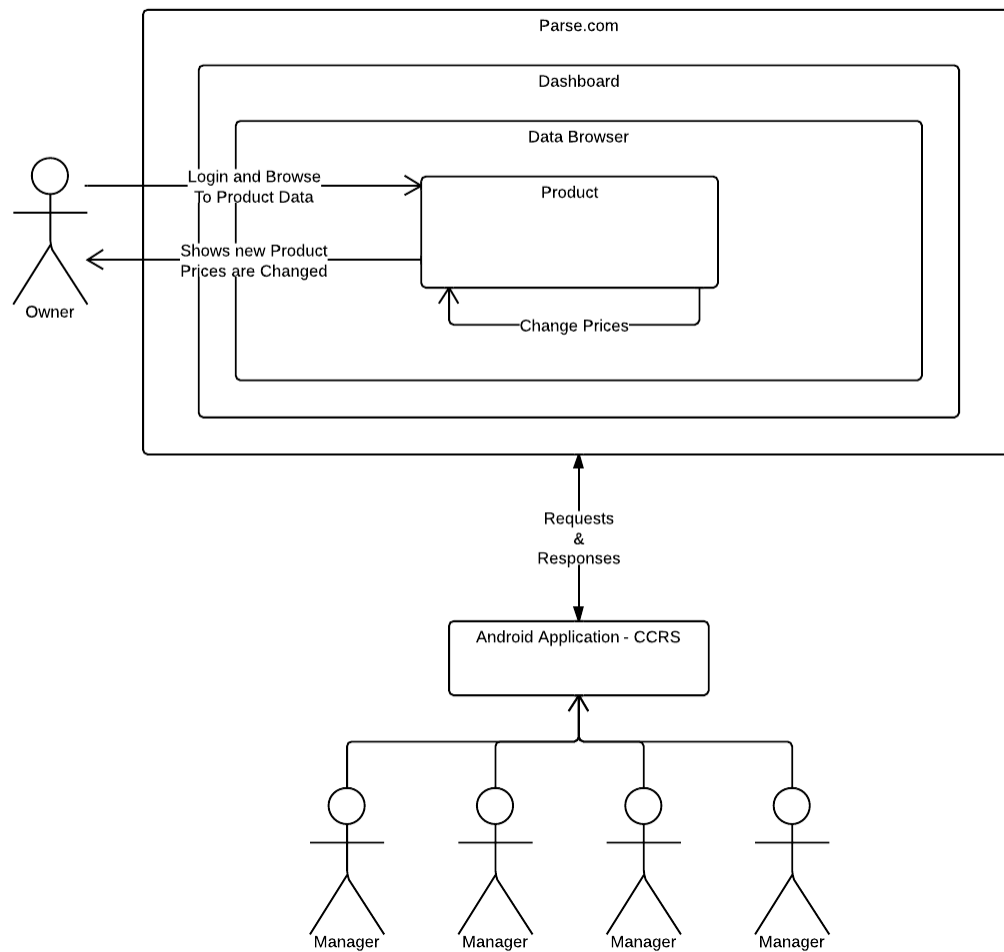
Use Case 5.3: Owner changes Prices
1. Owner logs into Parse.com
2. Owner selects "Dashboard"
3. Owner selects "Data Browser"
4. Owner selects "Products" from Classes
5. Owner changes "Price" for products
   5.1. Previous purchases will be unaffected

USE CASE 5.4 - Owners Activate/Deactive Product
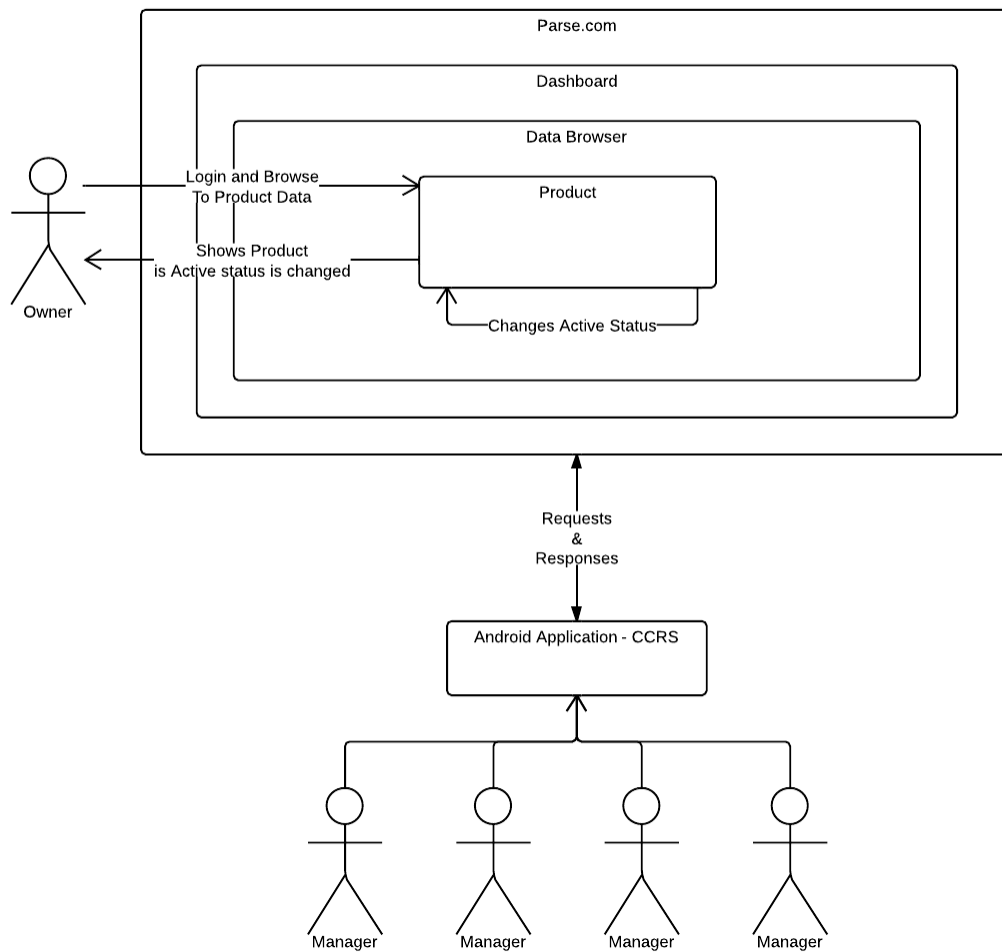
Use Case 5.4: Owner Activates/Deactivates a Product

1. Owner logs into Parse.com
2. Owner selects "Dashboard"
3. Owner selects "Data Browser"
4. Owner selects "Products" from Classes
5. Owner changes "Active" to "true/false"
6. All coffee carts will have updated access to products
    6.1. Previous orders and pre-orders will still be in the system and unaffected.

USE CASE 5.5 - Owners Change Bestseller Status of Dessert
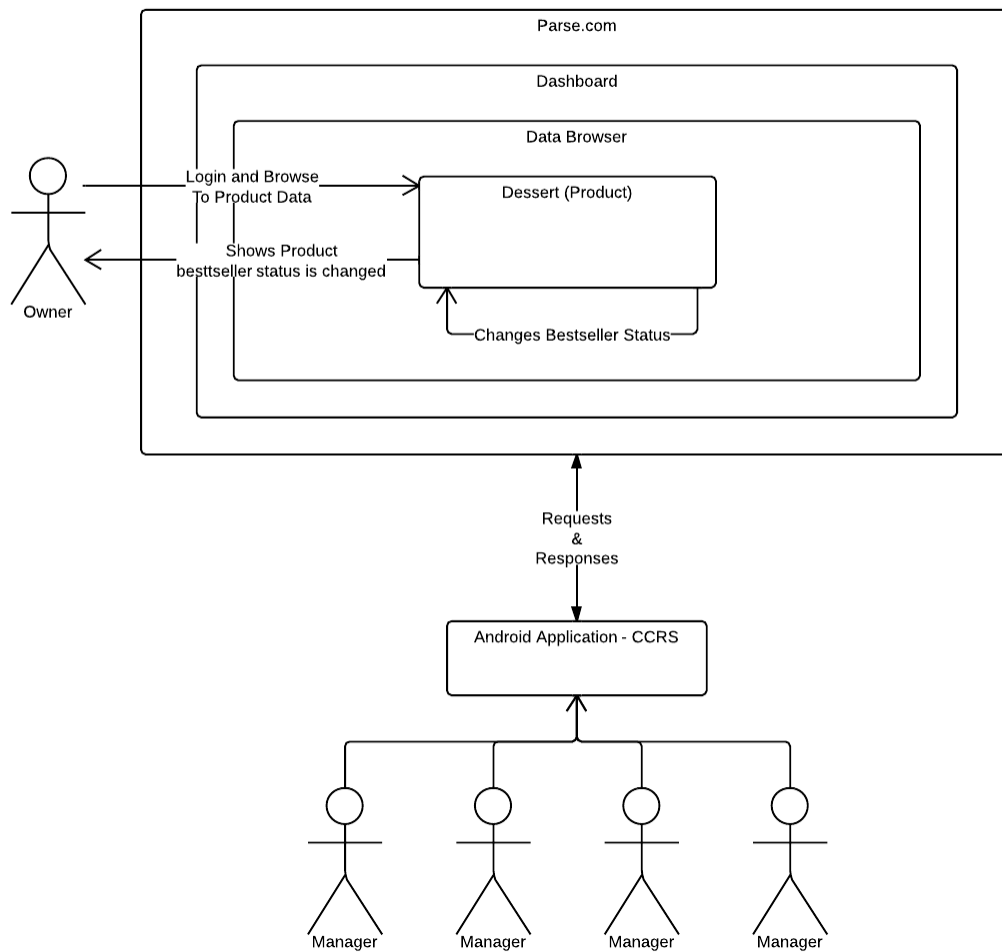
Use Case 5.5: Owner changes bestseller status of Dessert
1. Owner logs into Parse.com
2. Owner selects "Dashboard"
3. Owner selects "Data Browser"
4. Owner selects "Products" from Classes
5. Owner changes "Bestseller" to "false/true"Owner enters new prices from products
6. All coffee carts' ability to make pre-orders for this dessert will change
    6.1. Previous pre-orders will still be in the system and unaffected