

Baking Factory Narrative

Now that Alex and Mark Heimann are finishing their college educations, they are looking to expand their career options. To that end, they have decided to create a new start-up venture called "The Baking Factory". They need to establish an online presence for this venture, but have a very limited budget for doing so. You have been hired as a technical consultant to create an ecommerce system due to your remarkable skills and low rates (i.e., pro bono).

What is the Baking Factory?

The idea behind the Baking Factory is that customers will be able to go online and order from a selection of breads, muffins and pastries. Each evening at 9pm the bakers will come in, review a list of items that need to be created and bake all the items that were ordered the previous day. By 12am the shippers will review the orders that need to be filled, pack each order into boxes and have them express shipped so that customers will have their orders in hand no later than 4:30pm that day.

To do that Alex and Mark need an online application where customers can visit, create an account, view various items, order those items and manage their personal information. The system needs to also generate a list of items (and quantities) that needed to be baked at the end of each day. Lastly the system must be able to list the orders that need to be shipped, including an itemized list of breads, muffins and pastries that go into each order and the address that order has to be shipped to.

Breads, Muffins and Pastries

Of course one of the keys to the Baking Factory is that Alex and Mark and the staff there bake the most delicious baked goods in the world. They offer three types of items at the Baking Factory: breads, muffins, and pastries. Customers and visitors can pursue the selections in each category and when they click on a particular item, they get more details about the item, including a description of the item and a picture of the baked good. In addition, the weight of the item is

important because of its role in determining shipping costs (more on that later). Finally, the number of units associated with an item should be displayed. Typically for bread they come in units of 1 (loaf), whereas muffins are typically sold in groups of 6 or 12 and pastries in groups of 2 or 4. Of course, there could be mega-muffins that are sold as single units or mini-loaves of bread (sold in groups of two) in the future so this is not a hard and fast rule.

From a business perspective, the most important feature about an item is its price. Of course, prices change over time – sometimes there are special sales where for a few days the item's price goes down, but generally speaking prices go up over time. The key thing is that for accurate accounting purposes, it is necessary to keep a price history of every item offered by the Baking Factory. It is also important to note that while one can always change the current price, no one should be able to retroactively change the price history in the system.

Ordering from the Baking Factory

When guests go to the Baking Factory site, they see the home page and information that you (the developer) feels is most important for new visitors or returning customers to see. They are also able to look over a listing of items offered by the Baking Factory and can explore any of these options in more detail if they like. However, to actually be able to order items from the Baking Factory, a user must make a customer account and log into the system.

To create a customer account, a person must provide their first and last names, their email address and a phone number they can be reached at in case of issues with their order. Moreover, every customer sets up a user account which has a unique username and a password so they can log into the account at any time and access their information.

What information can a customer access? A customer who is logged in can view a list of their past orders as well as look at the details from past orders. Furthermore, customers can add addresses into the system for where they'd like orders shipped to. There is no limit on the amount of addresses a customer could add to their account. Of course, for every account there is only one address that is the billing address associated with the customer; the billing address can be,

and usually is, also a shipping address. (It is important for credit card processing to know the billing address of a customer, but shipping addresses are where baked goods are actually sent.) Every address needs to have the name of the person who is receiving the order (could be the customer his/herself, a family member or a friend), a street address (two lines possible), city, state and zip code.

Of course, the most important function of a customer is to place orders with the Baking Factory. To place a new order, the customer goes to a page which lists all the items available and their costs. With each item is a button or link which allows a customer to add one of those items to the cart; if more than one is desired, pressing the button or link again will increment the quantity upward. When an item is added to the cart, the cart status on the right hand side is updated appropriately. (The cart is not visible on the right if nothing is in it.) If a customer wants to remove an item from the cart, clicking on an icon or link to remove the desired item should remove the item from the cart completely.

Once the customer has filled the cart with all the baked goods he/she wants they click on the checkout option where they are shown an itemized list of the goods they are ordering (including quantity and subtotal), the order subtotal, the shipping costs and the grand total for the order. The customer then has to choose an address to ship the order to from a list of addresses associated with the customer. All this information, along with the grand total for each order in the system and the date the order was placed, is saved for each customer's order.

Note: in addition to this information, we will be saving an encoded payment receipt for each order. Since we will not be connecting to an actual payment gateway, we will simulate the payment process with some Ruby methods that will be discussed in later phases.

Employees

As mentioned earlier, the Baking Factory has administrators (Alex and Mark for now are the only ones), bakers and shippers. Employees get a user account with a username and a password so they can log into the system. When a baker logs into the Baking Factory, the first thing they see is a baking list of all the items that have been ordered but are unshipped (that is, no shipping date has been

recorded). The list gives the name of each item as well as the total quantity needed; it is not split out by orders, but by items only. If there were thirty orders each containing one loaf of Honey Wheat Bread, then the list would record "30 Honey Wheat Bread" rather than "1 Honey Wheat Bread" thirty times.

Since most bakers do not need to log into the system, only the more senior bakers are actually given login accounts. These bakers lead the baking teams, so they log in to get the necessary information and then communicate that information to their teams of bakers as they see fit. But any baker who logs in sees the same baking list.

On the other hand, all shippers need to login and need to see a list of all the unshipped orders broken down by order. For each order, the shipper needs to see the items and quantities ordered as well as information on the recipient and address who is getting the order. As each order item is placed in the shipping box, the shipper can check off that item and its shipped date will be marked with the current date. When the order is complete and all the items in the order are in the box, the order should disappear from the shipping list.

Administering the Application

As mentioned earlier, Alex and Mark serve as administrators for the system. Administrators have complete control over all aspects of the application and can pretty much add or edit whatever they need to in the system to get things done.

Administrators who log into the system should get a customized home page which is essentially a dashboard presents key information they would need to monitor all facets of the system. The exact contents of that dashboard are design decisions left to you to determine.

Finally, given the small size of this operation and the need to maintain records for possible later use, we will not be deleting anything from the database this term. Administrators should, however, be able to deactivate items, customers, users and addresses that are no longer considered active.