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Project 1 Proposal: Bargain Hunter

The application we are proposing for this course is called Bargain Hunter. The concept is simple. In this day and age, many of us are constantly on the lookout for the best deals on electronics, food, clothing, etc. While there are plenty of online deals websites, there are still very few reliable resources for finding deals that are conscious of the user's location. Our application will attempt to solve this issue by accumulating the best deals and bargains both online and at local stores, as submitted by the users themselves.

The process for our application is as follows: when a user finds a particular product at a retail store that they believe is a great deal, they can look up the name of the product on this application (or create a new product in our database), then upload the location where they found the product and the price of the product. If a company has a bargain that they would like to advertise, they can upload this product and its locations as well, where it will be listed as a sponsored result. Afterwards, a user can search for deals on a product by name. The search result will show a list of products that most closely match the user's search. The user can select the desired product, which will then pull up the online retailers and locations near the user's current location where that product can be found, as well as the price of that product at each source. Should the user decide on a retail location, they can select the location to receive driving directions. Once a user has confirmed the availability of the product at a source, they can verify that product at that source on the application, which will help future customers in verifying the availability of the product.

Bargain Hunter should cater to the avid deal-seeker, and also to general shoppers looking for the locations where they can find the best prices on certain products. We plan to start this off by adding bargains that can be found on a few hundred products in retail stores around Seattle. Eventually, this will expand to cover thousands of products in stores around the States as users submit the locations of bargains that they find.
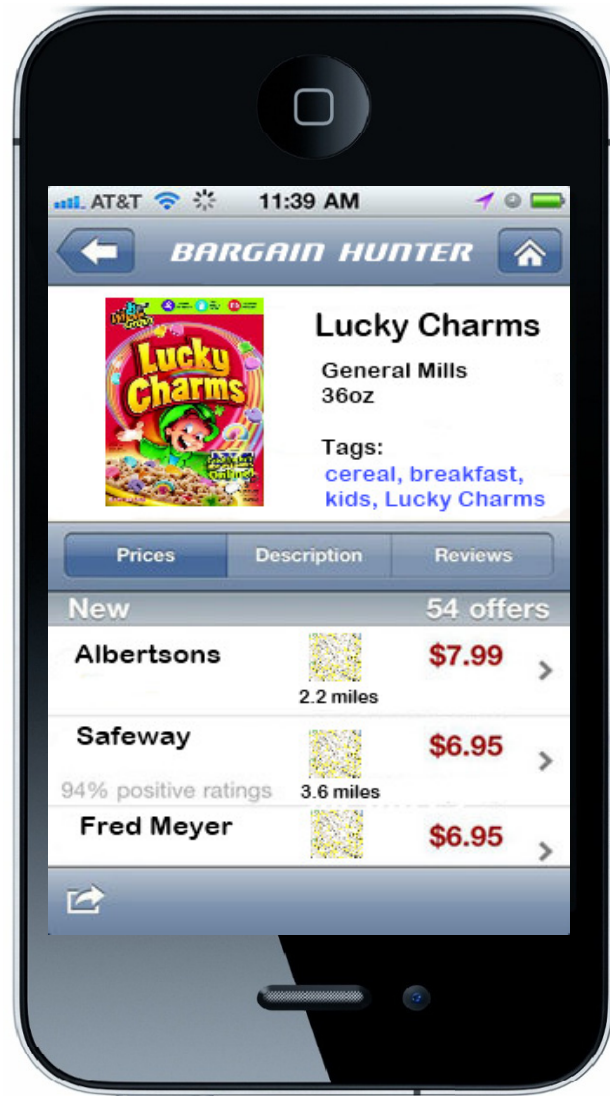
The architecture of this application will be as follows. In the background, we will have a database server containing all products, the user-submitted locations of where they can be found (probably in longitude and latitude coordinates), and other relevant information pertaining to the products. This database will also store user profiles. When the user looks for the locations of a particular product on their smartphone, the phone will query the database, which then returns the locations and information of the product. Using these location coordinates, the application will search an online map service, such as Google Maps, and retrieve a small snippet of the aerial map of each location, which it will include as part of the search result to the mobile device. When the user queries for directions to the store, the application will go to the online map service to retrieve those directions and project them onto the device.

One significant challenge is in providing reliable data on product bargains to customers. Many of current-day markets are constantly in flux, and user-uploaded deals may quickly become outdated as prices change. Additionally, a user can upload bogus deals as a way to attract customers, or even shun customers away from certain stores. To minimize this issue, we plan on implementing a user ratings system, which will help users keep track of the reliability of submissions. Users will be able to verify the authenticity of deals, and each deal will display a count of the number of users who have also either verified or debunked the deal. Submissions with low verification will be prioritized lower in the search results.