**Overview**

For my project, I am doing an app for an ice cream shop my friend is planning on opening that will help him keep track of his recipes and determine how much of each ingredient he will need to purchase on a given day, given desired output and amount of ice cream left over from the previous day.

**Base Specifications**

*Recipe Management*

The user will be able to view, create, update, and delete ice cream recipes. Therefore, the base of the app will be a somewhat simple crud app. The one caveat here is that the form to create a new recipe will be a nested form, with each ingredient being its own subform. With some simple js, the user will be able to dynamically add/delete ingredient lines, allowing them to create recipes with as many ingredients as they want. Fortunately, my friend measures each ingredient in grams, so measurement conversions will not be an issue here.

*Inventory Management*

The user will be able to see how much of each ingredient they will need for the day’s production based on based on desired output and the amount of ice cream left over from the previous day. Each of these inputs will require its own separate form. The user should have the option to create these forms one after the other, or separately, with the program cross-referencing them based on date. With this information, an employee of the shop would go into the back and take inventory of raw ingredients to generate an order form to distributors.

**Add-Ons (If I have time)**

*Base Recipes*

The user can create base recipes- full plain ice cream recipes that can be plugged into other recipes (i.e, a sweet cream base is used to create a lot of other recipes). This would require some javascript if I want the base recipe to be dynamically generated in the recipe form and allow the user to tinker with it

*Sundaes/Ice Cream Sandwiches*

My friend also wants to sell Sundaes/Ice Cream sandwiches at his shop. Both of these are composed as at least one flavor of ice cream + multiple subcomponents. Therefore, to do these, the user would have the option of adding an ice cream, a subcomponent, or a raw ingredient. The subcomponent idea could also come in handy for ice cream recipes, as perhaps the different ice creams used the same subcomponent (strawberry jam in a strawberry and a strawberry-chocolate). The one potential issue with these subcomponents is that whereas all the ice cream recipes final weight is simply a summation of all their ingredients, some subcomponents (such as the jam) lose weight as they are cooked. This could be addressed by adding an optional field for final weight .

*Recipe Costing*

My initial idea for this app was as a recipe costing app that could take your wholesale orders with price and quantity and send them to a unit converter and a volume to mass converter (if needed) to generate the cost per gram of each product, and thus cost out your recipes. I have one volume to mass converter I have downloaded, but I have had some difficulty in terms of accuracy and usability. If I implement this feature, I will try to use to converter, but if that falls through and I still have time to implement this feature, I will either hardcode some common ice cream conversions into the app myself or include a space for the user to do this.

*Other ideas:*

- generate desired output forms based on form from same day last week, if available

- include page that specifies quantity in which user buys their ingredients in with necessary conversions to generate a list that would say something like 2 40 lb bags of flour instead of 10000 grams of flour