**ANA 650 Data Taco Project Proposal**

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This is a project proposal for ANA650, *Database Design for Analytics*.  Our team proposes a Restaurant Kitchen Inventory Management Database.  The purpose of this project is to create a database for managing inventory necessary to create recipes and meet daily demand, reduce costs, and make sure that all food is as fresh and safe as possible.

Data Taco is a restaurant that serves 4 basic items: Tacos, Burritos, Enchiladas, and Tamales.  Basic items may have lower categories. For example, the burrito comes in: Bean and Cheese, Carne Asada, and Beef and Bean.  Tacos come in hard or soft shells and can have ground beef, shredded beef, or chicken.

Each item that Data Taco sells has one recipe. Each recipe has a recipe ID number, recipe description,  and a list of ingredients. Each recipe has one or many ingredients.

Ingredients are categorized as Fresh Produce, Spices, Meat, Dry Goods, Peppers, and Diary. Each ingredient that restaurant uses has an ingredient ID number, ingredient description, unit price, unit (i.e. lb, tsp, cup), and item quantity on hand stored in the system. Each ingredient has one or many sources (or vendors).   Each ingredient can be used in one or many recipes.

Ingredients are combined into Recipes that are sold.  In order to track inventory, we will need to have the transaction ID (tracking the actual items), the day the item was received, the day it is used (consumed in a recipe), the day that is disposed of (if not used and past its shelf life), and the number of days that it has been on the shelf, which could be calculated.  Items might also be tracked by the “use before date” on the item.

Ingredients in inventory will need to be stored.  Some can be on a shelf, some might need refrigeration and some may be stored in a freezer.

Ingredients may need preparation, for example, lettuce needs to be shredded and cheese needs to be grated.  Others may have no preparation.

Multiple vendors may be available for ingredients. We will need to identify them by name and have contact info for them.  Their quoted price will allow for comparison shopping.

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| Entity | Relationship |
| Item | Has 1 recipe |
| Recipe | Has multiple ingredients |
| Ingredients | Has 1 or multiple vendors; goes into 1 or multiple recipes; may be recursive |
| Transaction | Has one inventory action |
| Preparation | Each ingredient has none or multiple preparations |
| Storage | Each storage type has 1 or many ingredients |
| Vendor | Sells one or multiple ingredients |
| Ingredient\_Recipe | Joins ingredients and recipes |
| Order | Each order has 1 or many ingredients |
| Delivery | Each order has 1 or many deliveries |
| Order\_Ingredient | Joins order and ingredient |
| Delivery\_Order | Joins delivery and order |