

DBMS Project - Updated ER Diagram

Prepared & Frozen Meal Manufacturing Database

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The improved **ER diagram** is much more organized, understandable, and normalized than the original one. In the original diagram, there were many concepts, namely supplier formulation, ingredient composition, and the different user types, which were either not shown, blended together, or linked in confusingly incorrect ways. The improved diagram uses appropriate and cleanly distinguished entities such as IngredientBatch, ProductBatch, SupplierIngredientFormulation, FormulationMaterial, IngredientComposition, ConsumedIngredientLot, and DoNotCombine, encapsulating separate and distinct business concepts, including well-defined foreign key relationships. This greatly reduces the problems of the old one, which confused compound ingredients manufactured by the supplier, compound ingredients manufactured by the manufacturer, as well as cleanly handling many-to-many relationships, namely those between the ingredients and the recipes, and those between ingredients and input lots. Additionally, this improved diagram provides appropriate access control through the addition of the Users table, ensures strict one-to-one relationships between Product and Recipe, and defines appropriate attributes 'valid_from' and 'valid_to' to provide for version control.

