

**Tables before normalization**

**Strong-Entities**

Person( person\_id , name, age, height, weight )

Recipe( recipe\_id , name, calories, nutrition\_info )

Inventory( inventory\_id )

Ingredient(ingred\_id , name, category , calories )

Measurement(base\_unit , abbreviation )

Meal ( meal\_id , name, serving , calories)

Allergy ( allergy\_id , name)

Type( type\_no , meal\_type )

**Weak-Entities**

Direction(recipe\_id , dir\_id , step, detail )

Image ( meal\_id , img\_id , title , description )

**Relationships**

own( person\_id , inventory\_id )

itemize( inventory\_id , ingred\_id , quantity, inStock , expiration\_date)

make( person\_id , recipe\_id , creation\_date )

contains( recipe\_id , ingred\_id, base\_unit , numeric\_measure)

host( person\_id , allergy\_id )

schedule( person\_id , meal\_id , type\_no, date, auto\_gen)

prepare( recipe\_id , meal\_id )

provides(recipe\_id , dir\_id)

represent(meal\_id , img\_id, date\_taken)

reacts(allergy\_id , ingred\_id , food\_category )

**Functional Dependencies**

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| Table Name | Functional Dependency |
| Person | person\_id 🡪 name, age, height, weight |
| Recipe | recipe\_id 🡪 name, calories, nutrition\_info |
| Inventory | inventory\_id 🡪 total\_items |
| Ingredient | ingred\_id 🡪 name, category, calories |
| Measurement | base\_unit 🡪 abbreviation |
| Meal | meal\_id 🡪 name, serving, calories |
| Allergy | allergy 🡪 name |
| Direction | recipe\_id , dir\_id 🡪 step, detail |
| Image | meal\_id , img\_id 🡪 title , description , date\_taken |
| Own | person\_id 🡪 inventory\_id |
| Itemize | inventory\_id, ingred\_id 🡪 quantity, inStock, expiration\_date |
| Make | person\_id , recipe\_id 🡪 creation\_date |
| Contains | recipe\_id , ingred\_id , base\_unit 🡪 numeric\_measure |
| Host | person\_id , allergy\_id 🡪 person\_id , allergy |
| Schedule | person\_id, meal\_id , type\_no 🡪 auto\_gen , date |
| Prepare | meal\_id , recipe\_id 🡪 meal\_id , recipe\_id |
| Reacts | allergy\_id , ingred\_id 🡪 allergy\_id , ingred\_id |

**Normalized Tables**

Recipe( recipe\_id , name, serving, calories, nutrition\_no)

Nutrition (nutrition\_no , calories , total\_fat , sugar , sodium , protein , saturated\_fat )

**Data Dictionary**