

Database Schema

Relationship Types:

One-to-One (1:1): One record in Table A corresponds to only one record in Table B.

One-to-Many (1:N): One record in Table A corresponds to multiple records in Table B.

Many-to-Many (M:N): Multiple records in Table A correspond to multiple records in Table B.

Relationships in the Schema:

Users → Recipes (1:N)

One user can have multiple recipes.

Example: User John has recipes "Chicken Parmesan" and "Vegetable Soup".

Recipes → Users (N:1)

One recipe belongs to only one user.

Example: Recipe "Chicken Parmesan" belongs to User John.

Recipes → Ingredients (M:N)

One recipe can have multiple ingredients.

One ingredient can be used in multiple recipes.

Example: Recipe "Chicken Parmesan" uses ingredients "Chicken", "Tomato Sauce", and "Mozzarella Cheese". Ingredient "Chicken" is also used in recipe "Chicken Fajitas".

Ingredients → Recipes (M:N)

Same as above.

Recipes → Categories (M:N)

One recipe can belong to multiple categories.

One category can have multiple recipes.

Example: Recipe "Chicken Parmesan" belongs to categories "Italian" and "Main Course".

Category "Italian" also includes recipes "Spaghetti Bolognese" and "Bruschetta".

Categories → Recipes (M:N)

Same as above.

Users → Ratings (1:N)

One user can leave multiple ratings.

Example: User John leaves ratings for recipes "Chicken Parmesan" and "Vegetable Soup".

Recipes → Ratings (1:N)

One recipe can have multiple ratings.

Example: Recipe "Chicken Parmesan" has ratings from users John, Jane, and Bob.

Scenario Examples:

User John wants to add a new recipe "Chicken Fajitas".

Insert new recipe into Recipes table.

Link recipe to User John through Users-Recipes relationship.

Add ingredients "Chicken", "Peppers", and "Onions" to Recipe_Ingredients table.

Link recipe to categories "Mexican" and "Main Course" through Recipe_Categories table.

ERD:

Community Recipe Sharing ERD

