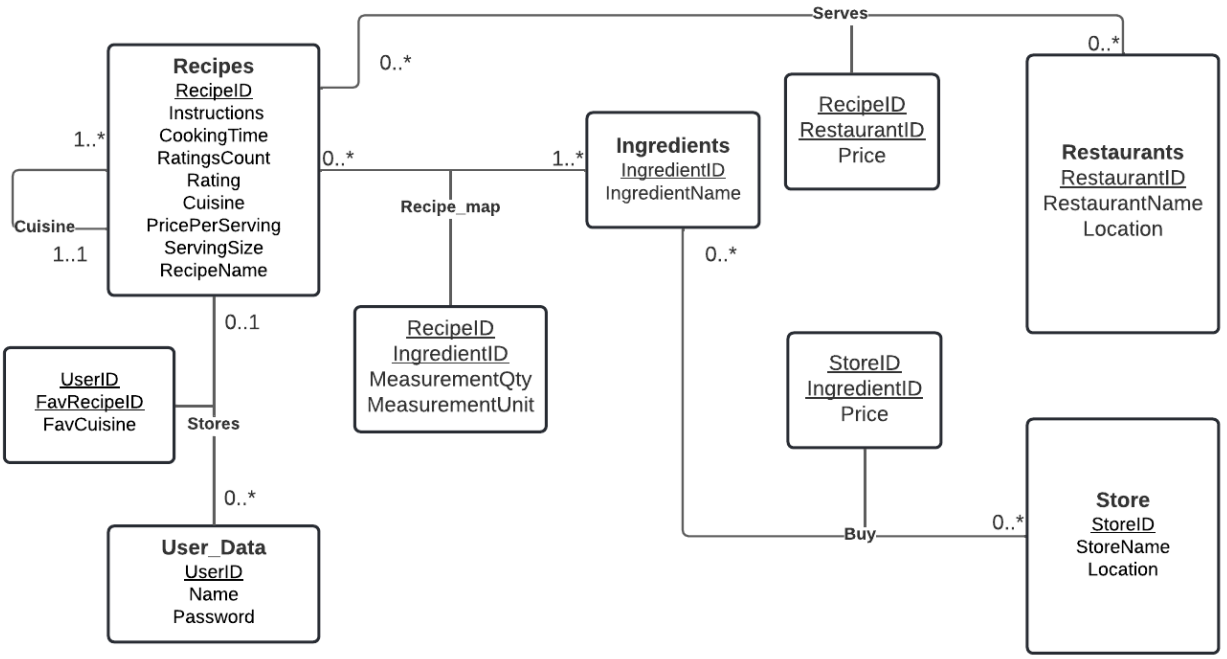
STAGE 2 - DATABASE DESIGN



Relational Schema:

Entities:

- Recipes (RecipeID: INT [PK], RecipeName: VARCHAR(100) Instructions: VARCHAR(500), CookingTime: INT, Rating: REAL, RatingsCount: INT, Cuisine: VARCHAR(50), PricePerServing: REAL, ServingSize: REAL)
- Ingredients (IngredientID: INT [PK], IngredientName: VARCHAR(100))
- User_Data(UserID: VARCHAR(100) [PK], Password: VARCHAR(100), Name: VARCHAR(100))
- Restaurants (RestaurantID: INT [PK], RestaurantName: VARCHAR(100), Location: VARCHAR(100))
- Store (StoreID: INT [PK], StoreName: VARCHAR(100), Location: VARCHAR(100))

Relationships:

- Recipe_map(RecipeId: INT [FK to Recipes.RecipeId] [PK], IngredientID: INT [FK to Ingredients.IngredientID] [PK], MeasurementQty: INT, MeasurementUnit: VARCHAR(10))
- Serves(RecipeID: INT [FK to Recipes.RecipeID] [PK], RestaurantID: INT [FK to Restaurants.RestaurantID] [PK], Price: REAL)
- Buy(IngredientID: INT [FK to Ingredients.IngredientID] [PK], StoreID: INT [FK to Store.StoreID] [PK], Price: REAL)
- Cuisine(RecipeID INT [FK to Recipes.RecipeID] [PK], Cuisine: VARCHAR(50) [FK to Recipes.Cuisine] [PK])

- Stores(UserID: VARCHAR(100) [FK to User_Data.UserID] [PK], FavRecipeID: INT [FK to Recipes.RecipeID] [PK], FavCuisine: VARCHAR(50))

Description & Assumptions:

- There are five entities being used in this design - Recipes, Ingredients, User_data, Restaurants and Store.
- The ‘Recipes’ entity is uniquely identified by RecipeID. Other attributes are RecipeName, Instructions, CookingTime, Rating, CountRatings, Cuisine, PricePerServing, ServingSize.
- The ‘Ingredients’ entity is uniquely identified by IngredientID. Another attribute is Ingredients.
- The ‘User_data’ entity is uniquely identified by UserID. Other attributes are Password, FavRecipeID, FavCuisines.
- The ‘Restaurants’ entity is uniquely identified by RestaurantID. Other attributes are RestaurantName and Location.
- The ‘Store’ entity is uniquely identified by StoreID. Other attributes are StoreName and Location.
- We assume that each recipe can be served at 0 or many restaurants and each restaurant can have 0 or many recipes. This is a many-to-many relationship.
- We assume that each recipe can have 0 or many users that favorite it and each user has 0 or 1 recipe that is their favorite. This is a one-to-many relationship.
- We assume that each recipe can have 1 or many ingredients and each ingredient can be in 0 or many recipes. This is a many-to-many relationship. This relation additionally stores attributes such as MeasurementQty and MeasurementUnit.
- We assume that each ingredient can be in 0 or many stores and each store can have 0 or many ingredients used in the recipe. This is a many-to-many relationship.
- We assume that each RecipeID could be associated with exactly one cuisine, and each cuisine could have 1 or more RecipeIDs associated with it. This is a one-to-many relationship.