RECIPE BOOK

A JAVA-SPRING BOOT PROJECT

PRESENTED BY:

S.V.S.SAI APARNA (BBPBV008)
S.SAI SINDHU (BBPBV009)
A.S.L.YASASWINI (BBPBV011)
SHAIK AFSANA (BBPBV012)

CONTENTS

- Problem Statement
- Introduction
- Software Requirements
- Hardware Requirements
- Architecture
- Modules involved in the project
- Output
- Conclusion

PROBLEM STATEMENT

Challenges of Traditional Recipe Management are,

>> Manual Process: Recipes are often managed on paper or in physical cookbooks, making them difficult to organize and search.

>> Limited Access: Recipes may not be easily accessible to family members or friends.

>> Lack of Personalization: Users cannot easily customize recipes based on dietary preferences or available ingredients.

>> Difficulty in Scaling: For professional chefs or cooking enthusiasts, managing a large number of recipes can be overwhelming. etc…

SOLUTION: Digitalizing the Recipe Management

INTRODUCTION

The Recipe Book Web Application is a Java Spring Boot project that provides a user-friendly platform for managing recipes. You can expand upon the basic features like create, update, get and delete the recipes.

> It allows users to perform the following actions:

1. **Recipe Search:** Users can search for recipes based on ids, ingredients, or categories, making it easy to find specific recipes.
2. **Recipe Categories:** Recipes can be categorized into various types. Users can browse recipes by category.
3. **Recipe Ingredients:** A recipe can have many ingredients. Users can easily search the ingredients of a recipe by using recipe ids.

We can even consider adding features like user reviews, meal planning and integration with external APIs to enhance the applications functionality.

“ FOOD IS EVERYTHING EVERYWHERE ALL AT ONCE ”

The potential applications of the Recipe Book System include

- Recipe Sharing Platform
- Meal planning and Grocery Lists
- Personal Recipe Organizer
- Cooking Education and tutorials
- Nutrition and Dietary Tracking
- Restaurant and Menu Recommendation
- Integration with Smart Appliances
- Cookbook Publications
- Event and Party Planning
- Restaurant Reviews and Recommendations
- Localization and Cuisine Exploration
- Food Blogging and Content Creation
- Cooking Competitions and Challenges etc…

SOFTWARE REQUIREMENTS

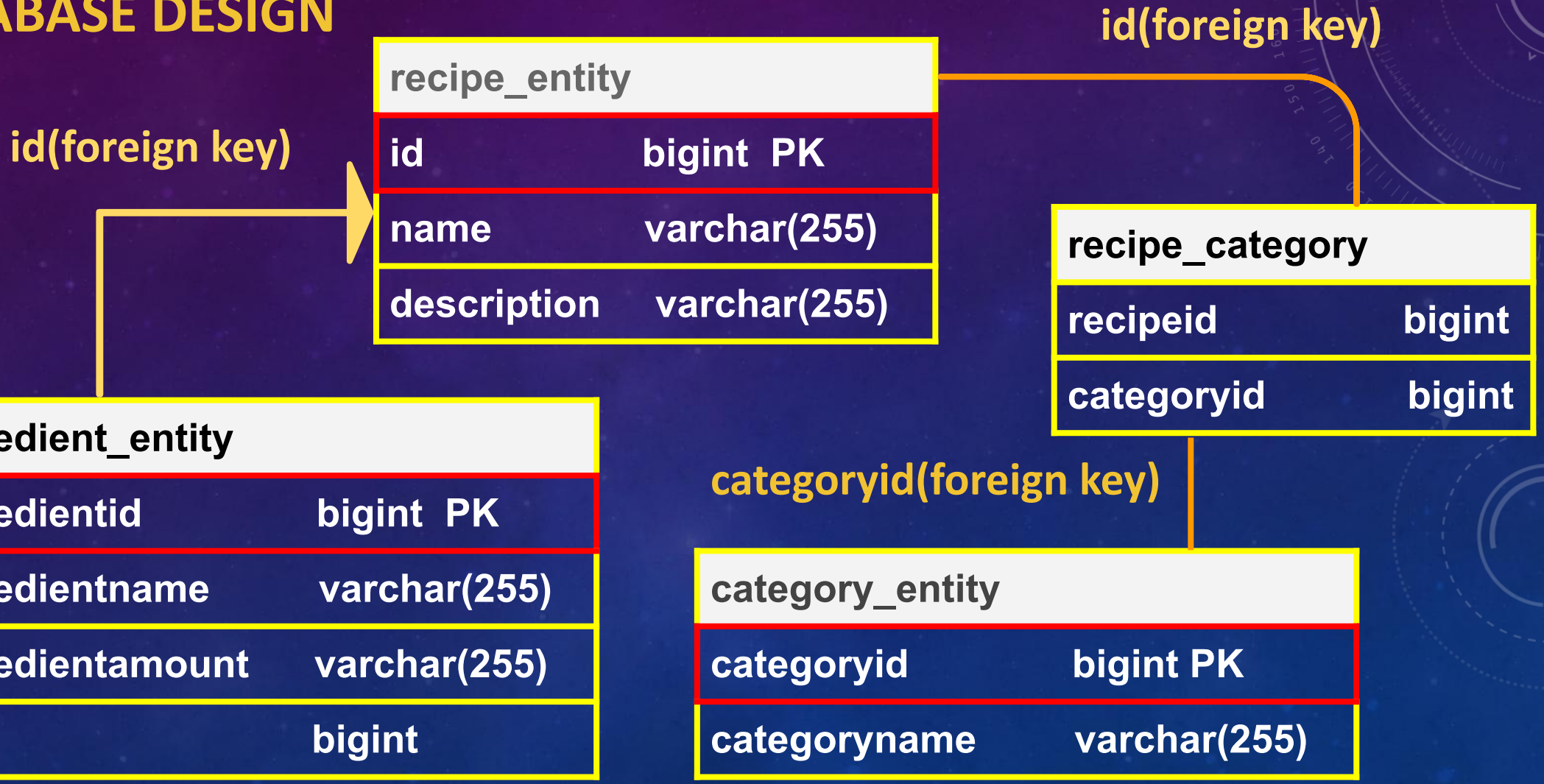
- **DEVELOPMENT ENVIRONMENT:** Java Development Kit (JDK)
- **FRAMEWORK** : Spring Boot
- **DATABASE:** MySQL
- **INTEGRATED DEVELOPMENT ENVIRONMENT(IDE):** Eclipse
- **BUILD TOOL:** Apache Maven
- **WEB SERVER:** Apache Tomcat
- **API TESTING TOOL:** Postman
- **DEPENDENCY MANAGEMENT:** Apache Maven

HARDWARE REQUIREMENTS:

Laptop 4Ghz minimum, multicore-core processor, memory(RAM)-4GB or high, Hard disk space 1TB.

ARCHITECTURE

DATABASE DESIGN



PROJECT STRUCTURE

Recipe Book
→src/main/java
→com.bbproject
> RecipeBookApplication.java
→ com.bbproject.controller
> CategoryController.java
> IngredientController.java
> RecipeController.java
→ com.bbproject.entity
> CategoryEntity.java
> IngredientEntity.java
> RecipeEntity.java
→ com.bbproject.repository
> CategoryRepository.java
> IngredientRepository.java
> RecipeRepository.java
→com.bbproject.service
> CategoryService.java
> IngredientService.java
> RecipeService.java
→src/main/resources
> application.properties
→pom.xml

MODULES INVOLVED

1 RECIPE MANAGEMENT MODULE:

Description: The core module for adding, editing, and organizing recipes.
Key Features:

- Recipe creation with name, description, ingredients, and categories.
- Editing and updating existing recipes.
- Categorization and tagging of recipes.
- Recipe_id acts as primary key to uniquely identify recipes.
- This module maintains one to many relation with ingredient module.
- This module maintains a many to many relation with category module.

Importance: Recipe management is at the heart of the application, allowing users to store and organize their culinary creations.

2 INGREDIENT MANAGEMENT MODULE

Description: This module deals with managing ingredients used in recipes.

Key Features:

- Adding new ingredients.
- Viewing ingredient details and measurements.
- Associating ingredients with recipes.
- Ingredient_id acts as primary key to uniquely identify the ingredient.
- This module maintains a many to one relation with recipe module.

Importance: Ingredient management ensures accurate recipe descriptions and measurements.

3 CATEGORY MANAGEMENT MODULE

Description: Handles the organization of recipes into categories or types.

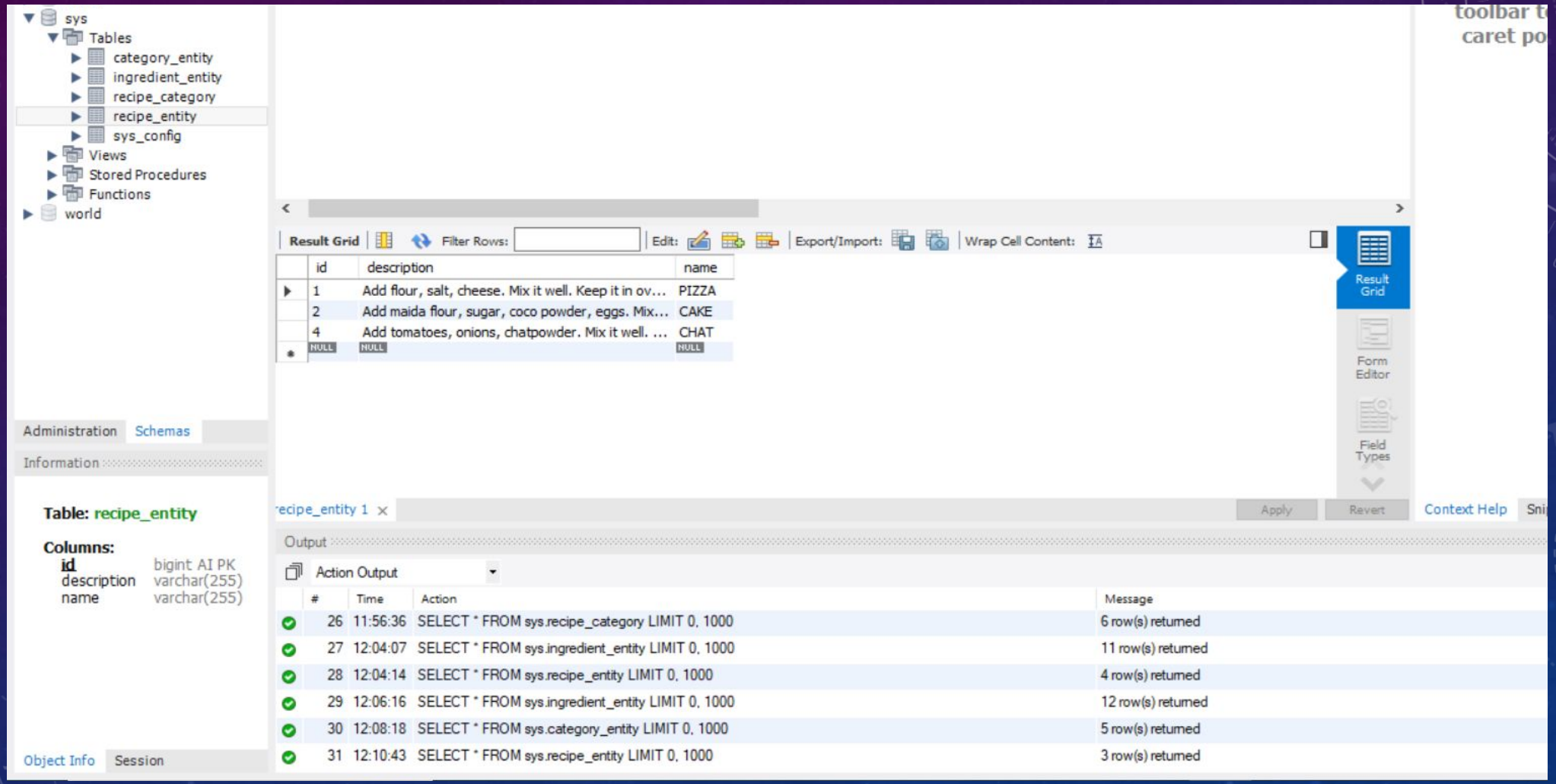
Key Features:

- Creating recipe categories (e.g., appetizers, desserts, main courses).
- Assigning recipes to categories.
- Browsing recipes by category.
- Category_id acts as primary key to uniquely identify the category.
- This module maintains a many to many relation with recipe module.

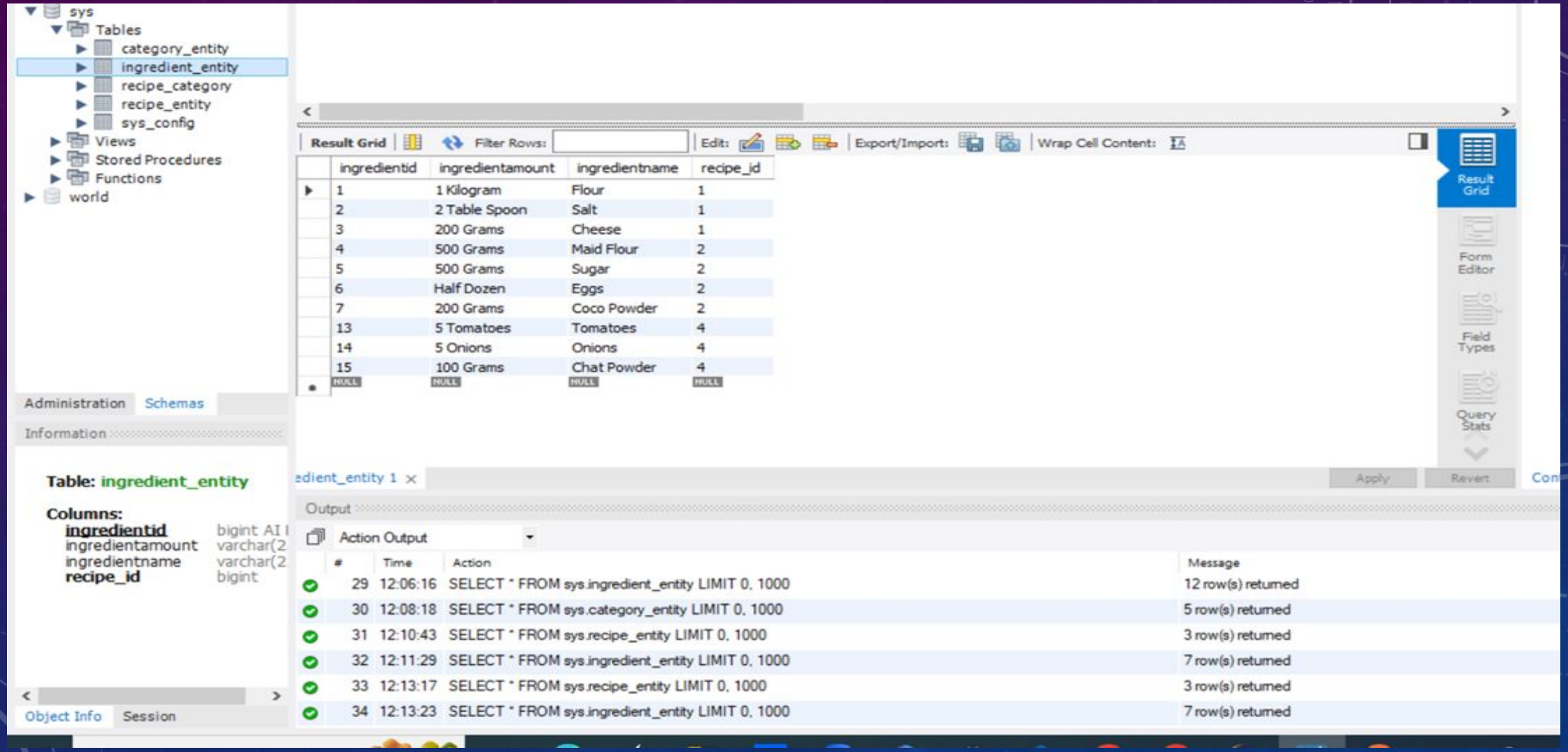
Importance: Category management helps users find recipes quickly by grouping them into relevant sections.

OUTPUT

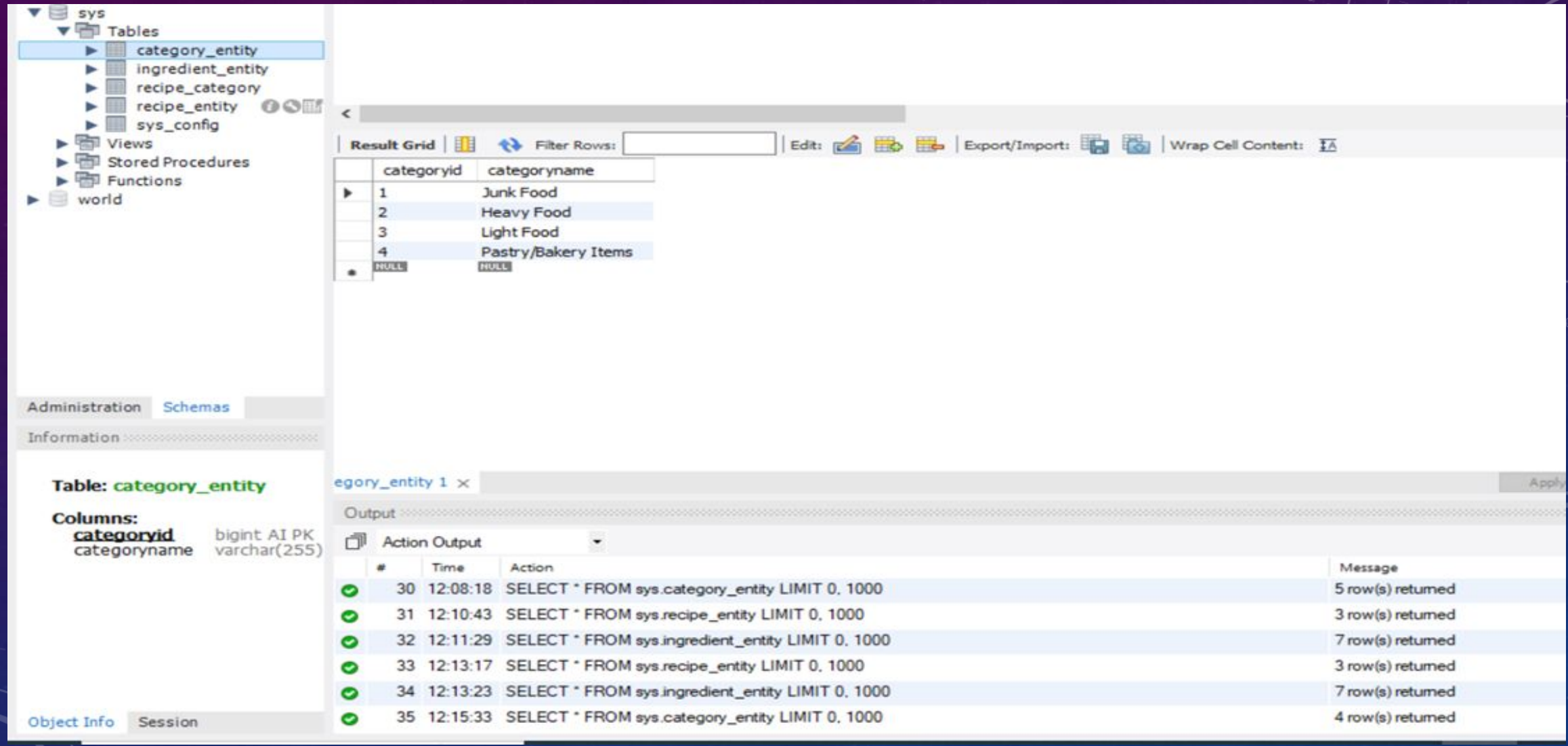
RECIPE TABLE



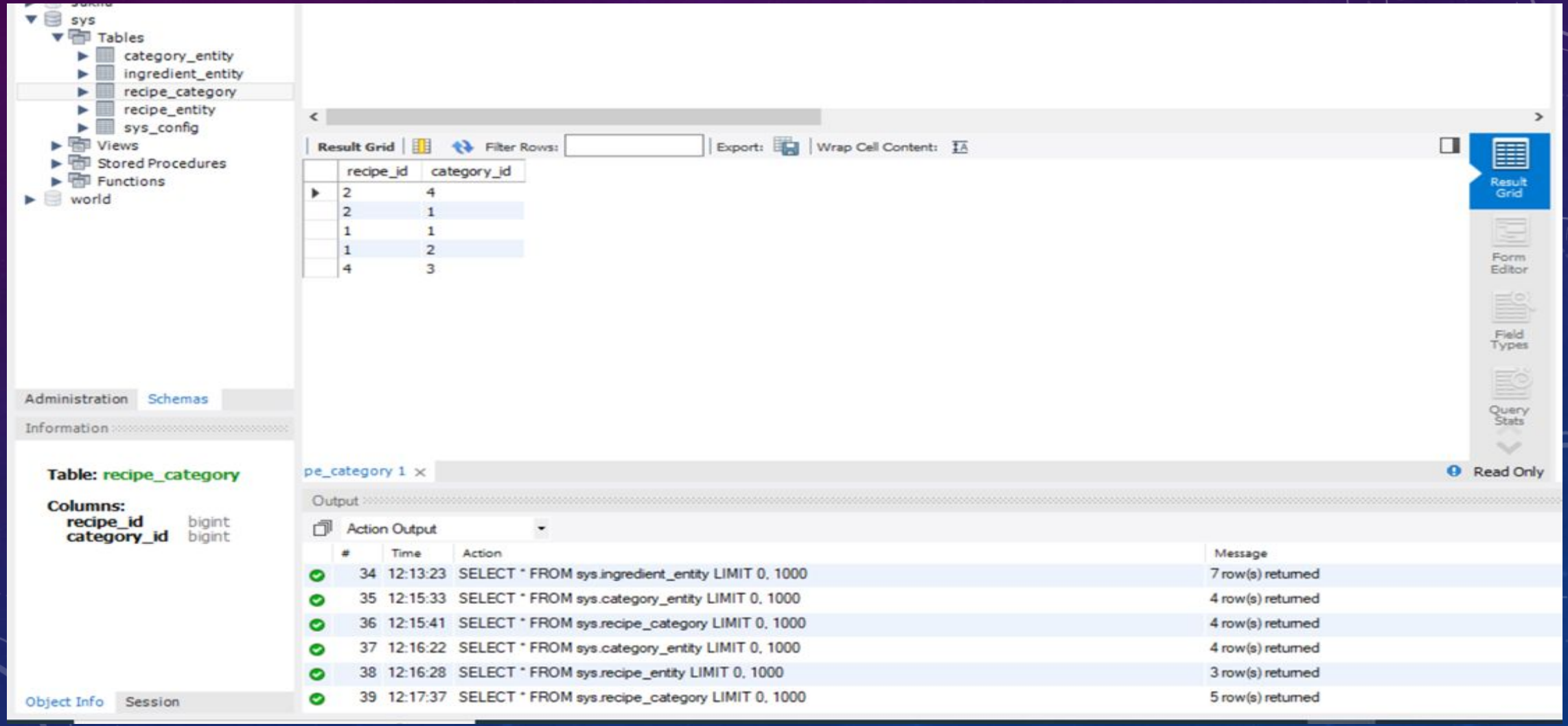
INGREDIENT TABLE



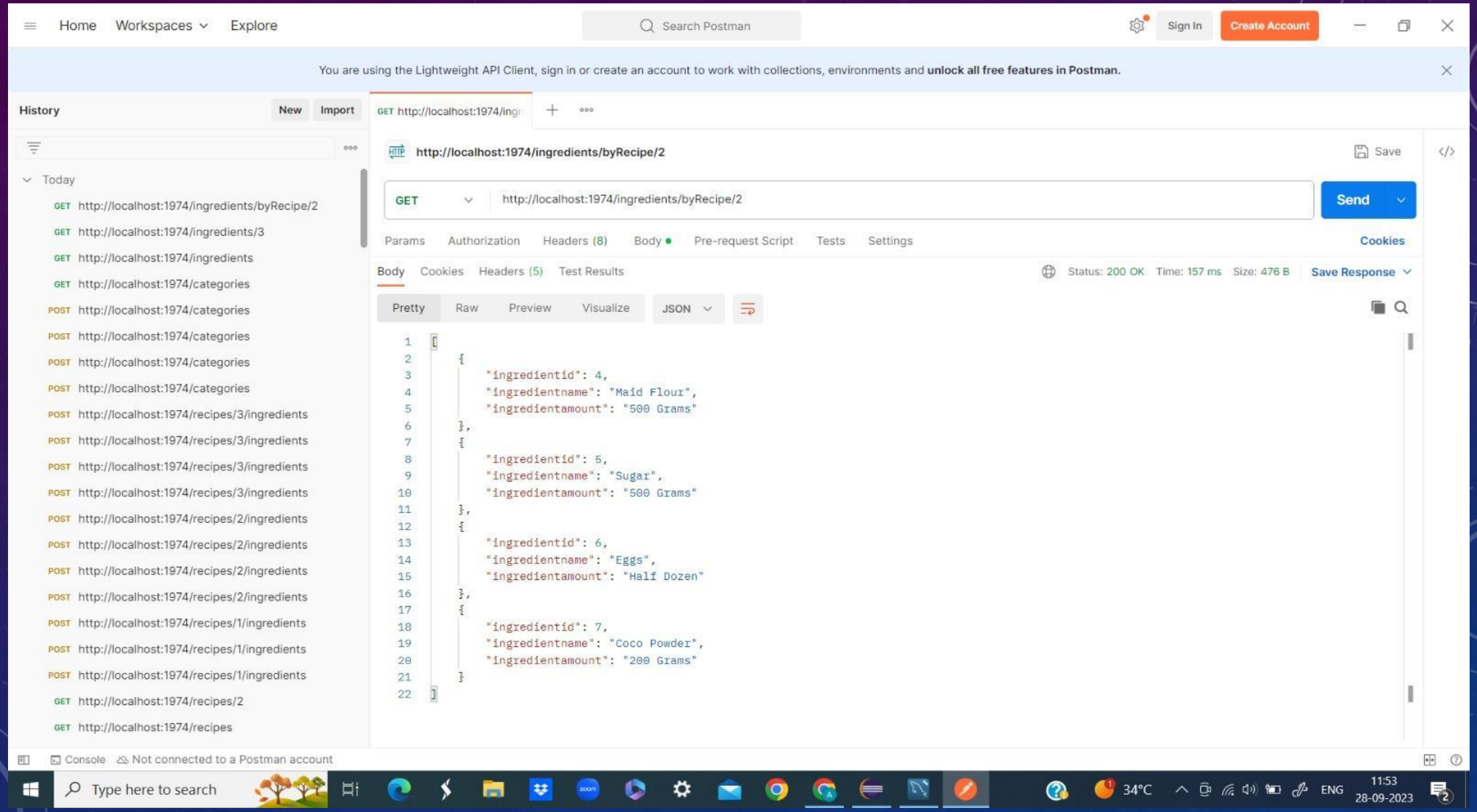
CATEGORY TABLE



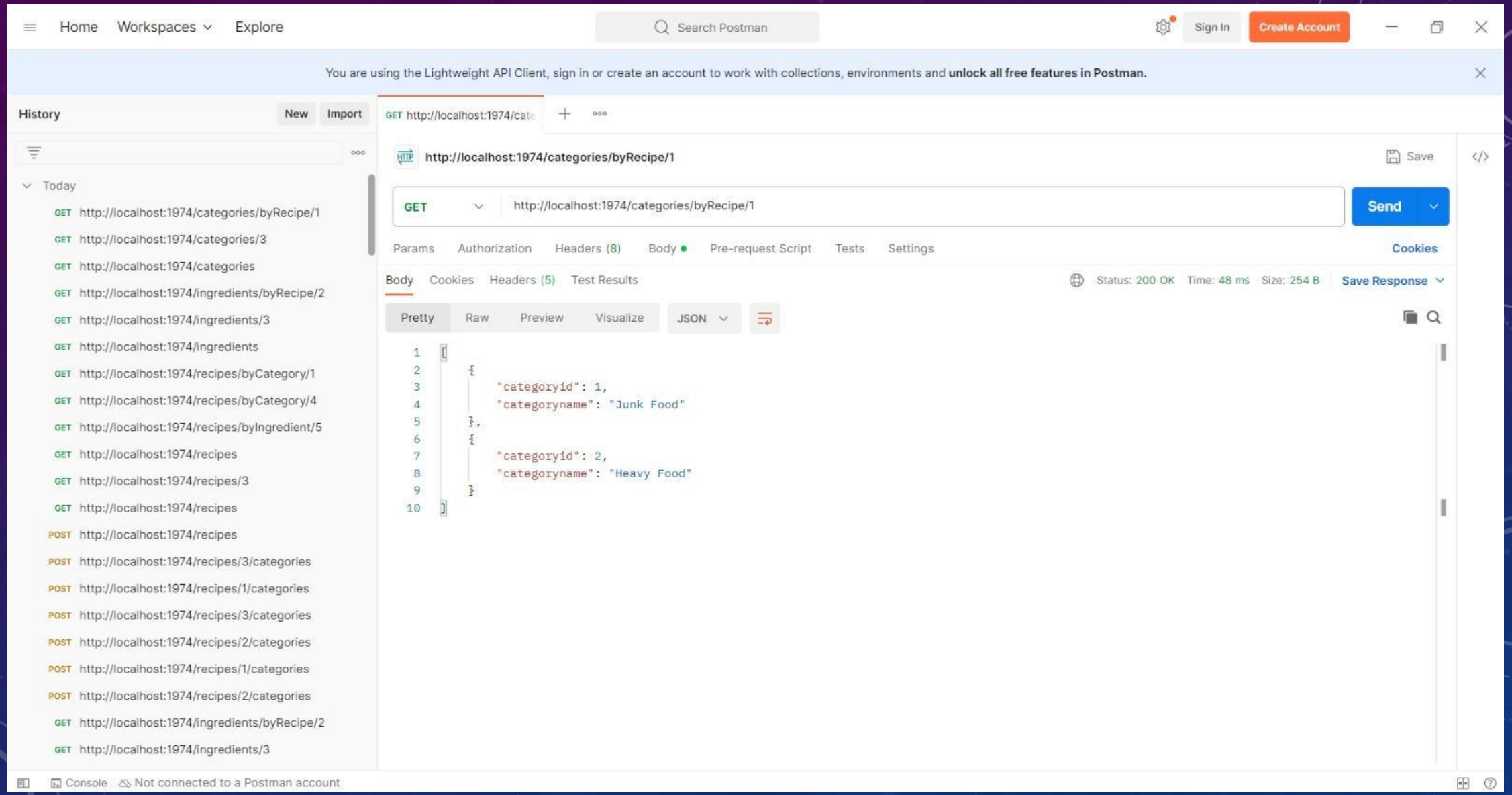
RECIPE_CATEGORY- table which contain two fields recipe_id and category_id to maintain many to many relations between recipe_entity and category_entity.



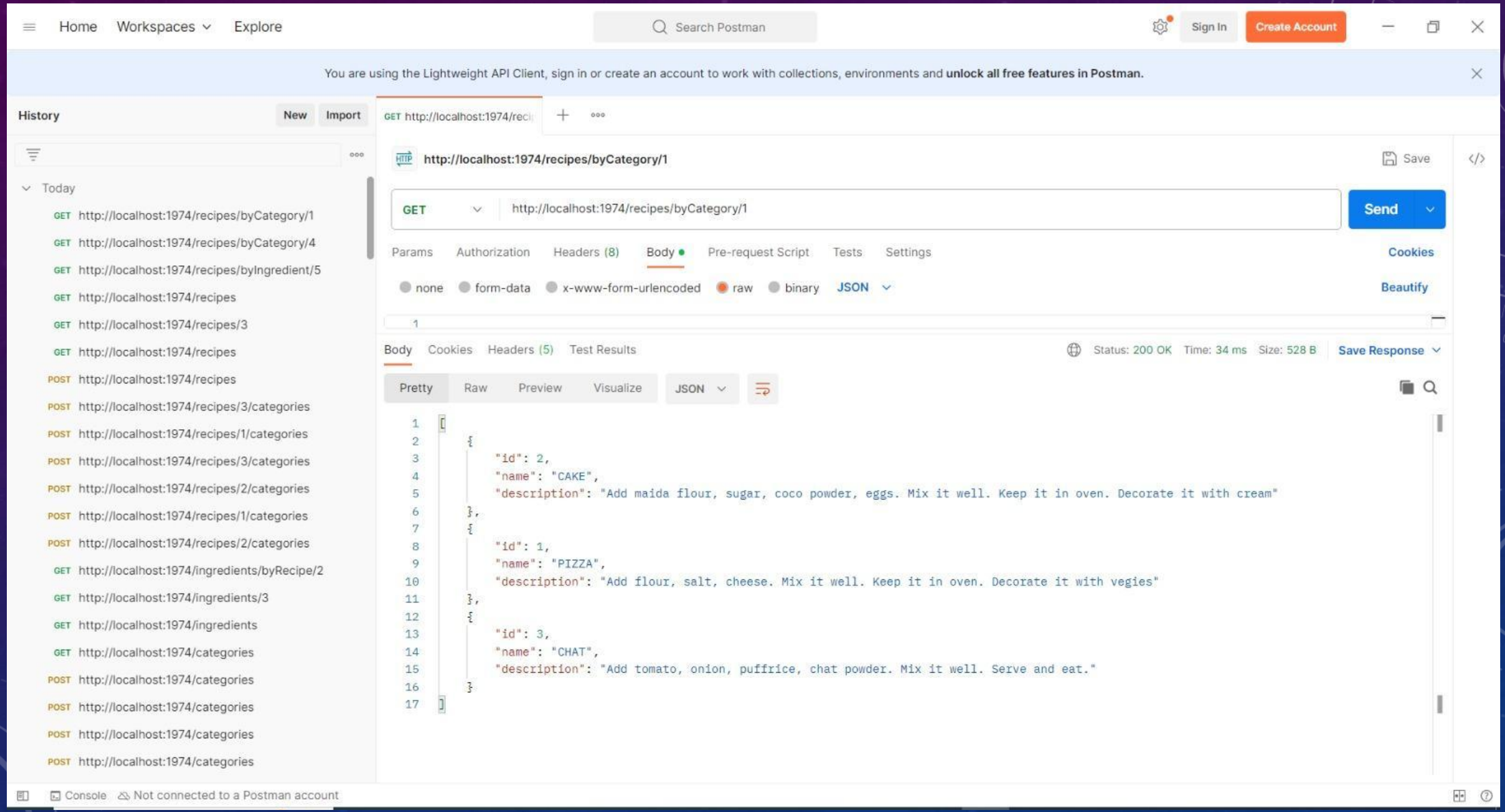
GETTING INGREDIENTS BY RECIPE_ID



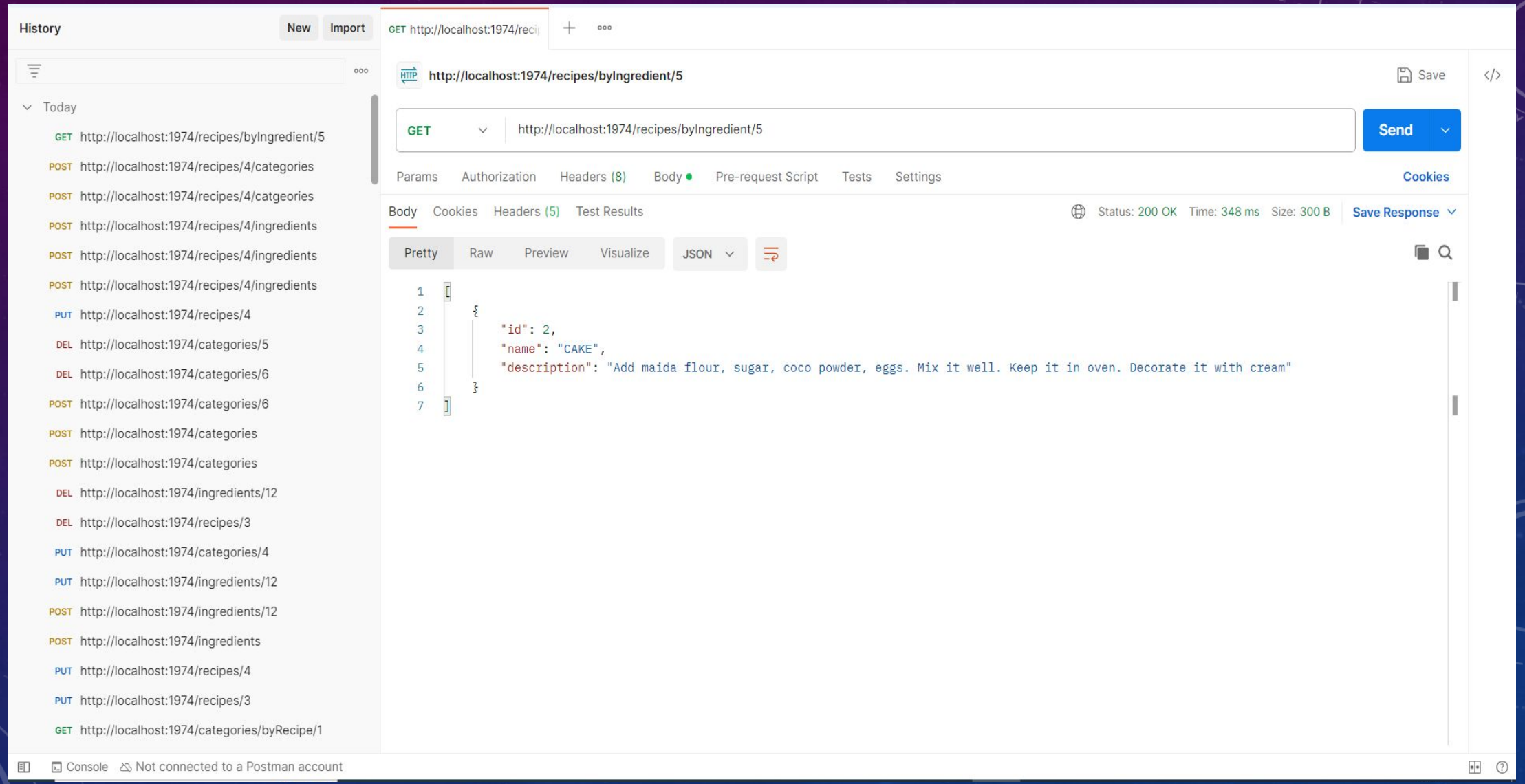
GETTING CATEGORIES BY RECIPE_ID



GETTING RECIPES BY CATEGORY_ID



GETTING RECIPE BY INGREDIENT_ID



CONCLUSION

The main purpose of this project is to create the recipes, upload them in the database, update, delete them. All these recipes are categorized. The main entities in recipe book are recipes, ingredients and categories.

Java Spring Boot is a tool that makes developing web application and microservices with Spring Framework faster and easier through three core capabilities: Autoconfiguration, an opinionated approach to configuration, the ability to create standalone applications. Spring Boot helps developers create applications that *just run*. Specifically, it lets you create standalone applications that run on their own, without relying on an external web server, by embedding a web server such as Tomcat or Netty into your app during the initialization process. As a result, you can launch your application on any platform by simply hitting the Run command.

In conclusion, the recipe book is created by using java spring boot because, there is no external server required and it also helps with auto configuration.

“ GOOD FOOD ENDS WITH GOOD TALK “

- **Jules Renard**

THANK YOU