JustRecipe

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Introduction

Chapter 1

Dataset

In this first chapter of this document we will talk about searching for the initial dataset.
As specified in the project documentation, the dataset had to be at least 50MB large, and this quantity could not be generated directly within the application. So we did an initial search, finding two datasets, which were generated by their authors by performing the scraping on the sites *www.FoodNetwork.com* and *www.Epicurios.com.* The second dataset was more complete (more nutritional values), so it was used as the main dataset. The other dataset was used to complement the other, reaching a total of 67.8 MB, with 45349 recipes.
To correctly extract the data present in the two datasets we wrote a program in Java, called *RecipeReade*r, thanks to which we adapted the two different formats and removed the duplicates (recipes with the same title that were present in both datasets). To implement this program we used the GSon library and the Jackson library.
The variety property is ensured by using two different sources. The velocity / variability properties are ensured because comments and recipes are eliminated and added inside the application, indeed this data may lose importance after a certain time interval since new data quickly arrives.

Chapter 2

Design

2.1 Introduction To The Application

The topic of cuisine is extensively widespread in our society. In fact we can think at the success achieved by tv shows related to cooking in the last years and also at the fact that a lot of chefs are becoming superstars. Then there is another important factor: the coronavirus outbreak.
With the coronavirus outbreak a lot of people became cuisine lovers, in fact at the first moments of the pandemia several ingredients as flour and yeast were very hard to find, because people were confined in their home and so they had more free time.
But this topic is not a recente one. The first recipe book dates back to eigth century B.C. and it is the so-called *Eraclio* (by the name of the city in which he was found). Then also an important latin writer, Apicio, wrote one of the most important recipe books of the roman era: *De Re Coquinaria* which dates back to the first century B.C..
So the topic of cuisine is inherent to human nature, because the necessity of eating is a basic need. Furthermore, everyone has experimented the infamous question: “What will I eat this evening?”. JustRecipe has the aim of answer to this question, it has the aim of helping university student or workers to retrieve and to do fast and simple recipes.
So this application is basically a recipe book but it is also more than this.
JustRecipe is also a social network which allow people to enjoy, to ex-change ideas about cooking, to feel less lonely in this hard period.

2.2 Requirements

2.2.1 Main Actors

2.2.2 Functional Requirements

Unregistered User

- Sign-up

User

- Login/Logout
- Search a recipe
- Browse suggested recipes
- Browse recipes of following users
- Add a recipe
- Edit own recipes
- Comment recipes
- Follow another user

- Like a recipe

Moderator

- Delete comments

Administrator

- Delete users
- Delete recipes
- Elect moderators

2.2.3 Non-Functional Requirements

2.2.4 Actors and Use Cases

The use case diagram of the application is described in the figure 2.1

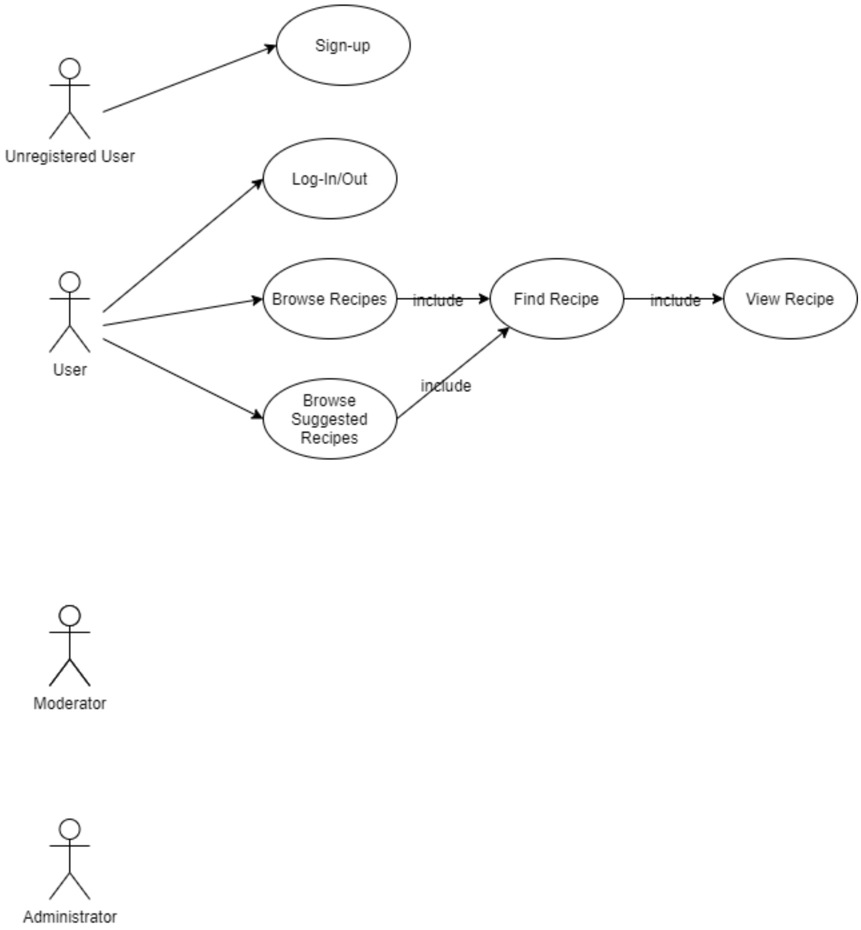

Figure 2.1: Use Case Diagram

2.3 UML Class Diagram

2.4 Data Model

2.4.1 DocumentDB

2.4.2 GraphDB

2.5 Distributed Database Design

2.5.1 Replicas

2.5.2 Sharding

2.6 Software Architecture

Chapter 3

Implementation and Test

3.1 Main Modules

3.2 Main Packages and Classes

3.3 Most Relevant Queries

3.3.1 MongoDB

3.3.2 Neo4J

3.4 Unit Test

3.5 Tests and Statistical Analysis

Chapter 4

User Manual