

Large-Scale and Multi-Structured Databases

Project Design

JustRecipe

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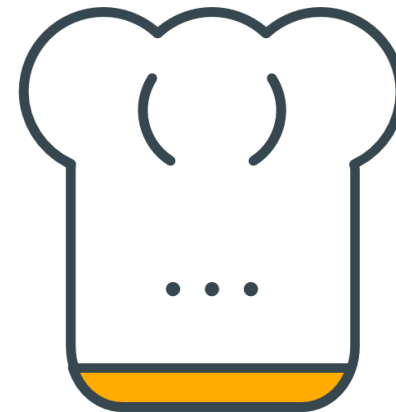
Francesco Iemma

Application Highlights

The **JustRecipe** application is designed to create a community of cuisine lovers.

The **main features** of the application are:

- Users can browse and add recipes
- User can modify his own recipes
- Social Network features
 - Follow a user
 - Like a recipe
 - Comment a recipe
 - Obtain suggestions



JustRecipe

Actors and main supported functionalities

- 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

Dataset Description

Source:

<https://eightportions.com/datasets/Recipes/>
[https://www.kaggle.com/hugodarwood/epirecipes?select=full format recipes.json](https://www.kaggle.com/hugodarwood/epirecipes?select=full+format+recipes.json)

Description:

Datasets containing recipes. Each one of them is in JSON format.

Volume:

45349 recipes (62 MB)

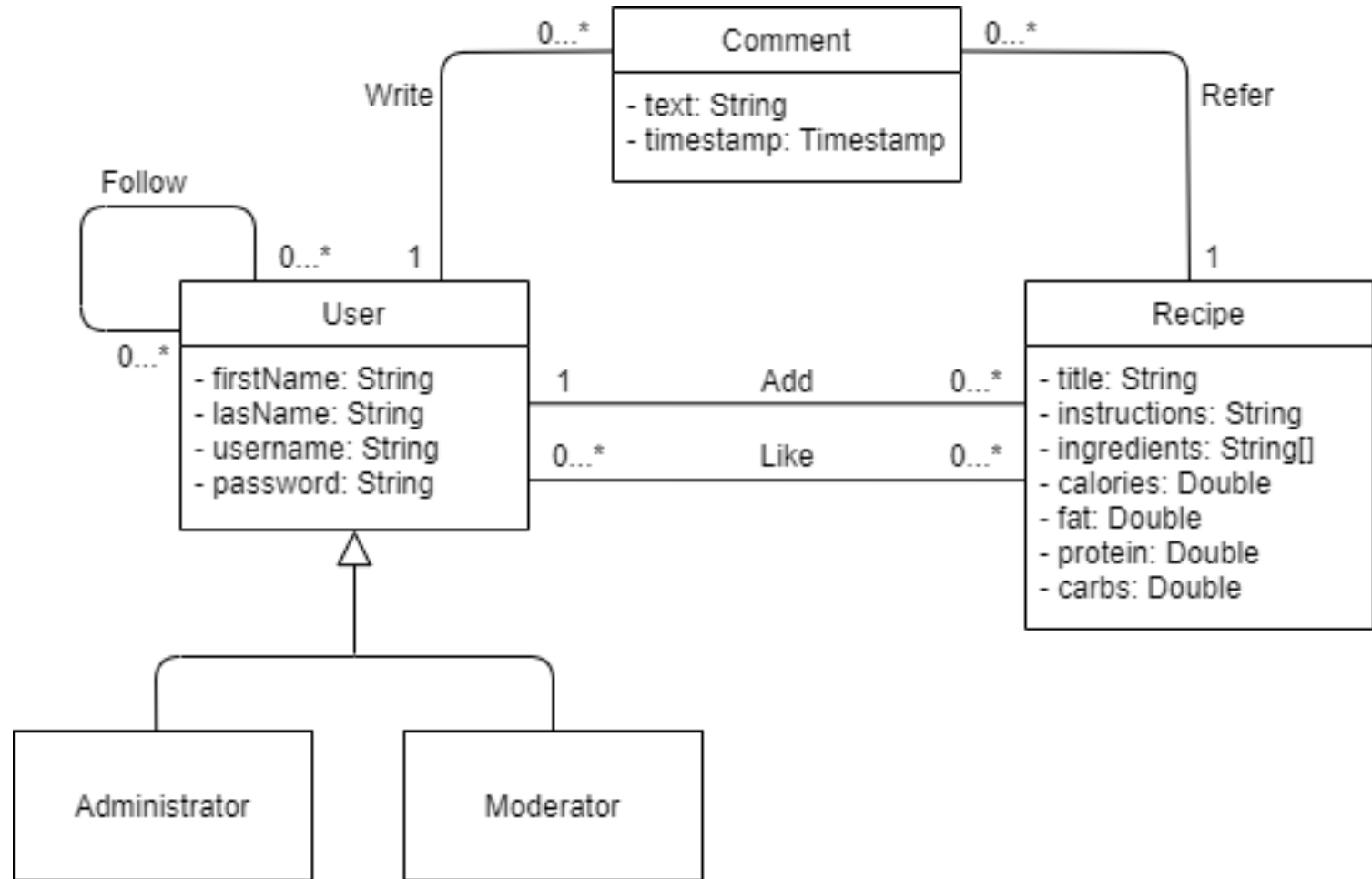
Variety:

We use two datasets of recipes, obtained by scraping Foodnetwork.com and Epicurios.com. Both datasets have been cleaned up by removing duplicates.

Velocity/Variability:

Variability and Velocity are ensured by deleting and/or adding recipes and comments

Preliminary UML Class Diagram



Requirements and Entities handled by Document DB

Collections:

- Recipe

High Level Query:

- Search a recipe given certain parameters (recipe's name, recipe's ingredients)
- Low caloric recipes
- Low fat recipes
- High protein recipes
- Low carbs recipes
- Last written comments (for moderator)
- Last written recipes of the following users (for the user)
- Fastest recipes

Requirements and Entities handled by Graph DB

Entities:

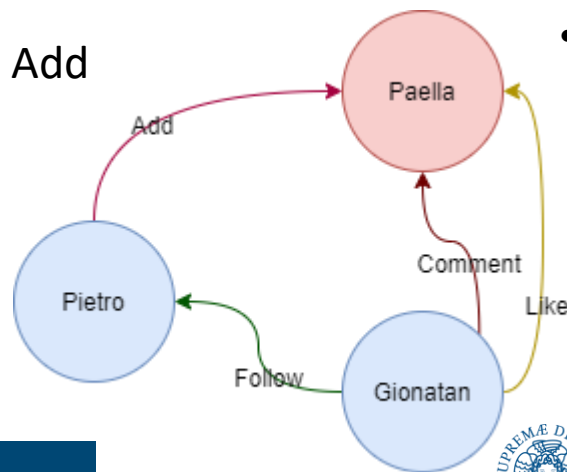
- Recipe
- User

Relations:

- User – Recipe: Like
- User – User: Follow
- User – Recipe: Comment
- User – Recipe: Add

High Level Query:

- Suggested recipes (considering hops number)
- Best recipes (considering likes)
- Most followed and active user (centrality measure)
- Top Commentators
- Most liked user (considering his/her recipes)



Software Architecture Preliminary Idea

Programming Language:

- JavaFX

DBMSs:

- MongoDB
- Neo4J

Frameworks:

- JUnit
- Log4J
- Maven

