
Business Requirements

| ID | Requirement | Topic Area | Actor | Priority |
|--------|---|-------------|-------|----------|
| BR-001 | Ingredients must be able to include sponsor links | Advertising | All | Medium |
| BR-002 | Collect user data for later processing | Reporting | Admin | Medium |
| BR-003 | Replication factor of 3 for data consistency | Database | Admin | High |

User Requirements

| ID | Requirement | Topic Area | Actor | Priority |
|--------|---|---------------|--------|----------|
| UR-001 | User can search ingredients by category | Interface | User | High |
| UR-002 | User can search ingredients by query | Interface | User | High |
| UR-003 | User can enter dietary restrictions | Interface | User | Medium |
| UR-004 | User can enter an optimal price range | Interface | User | Medium |
| UR-005 | User can save a dietary preference/restriction | User | Medium | |
| UR-006 | User can select importance value of dietary restriction | Interface | User | Medium |
| UR-007 | User can generate recipe list at any point | Interface | User | Medium |
| UR-008 | User can remove an ingredient from their list | Functionality | User | Medium |

Non-Functional Requirements

| ID | Requirement | Topic Area | Actor | Priority |
|---------|--|------------|-------|----------|
| NFR-001 | Show 10 recipes upon search | Interface | User | Low |
| NFR-002 | Return at least 3 hits in under one second | Media | User | Medium |
| NFR-003 | Less than one second load time for initial website | Website | All | High |
| NFR-004 | Recent database results cached locally | Database | User | Low |
| NFR-005 | Set partition size for Database | Database | Admin | Low |

Database: We will be using Cassandra DB so that we can easily delegate multi-factor replication and partition management. We will be hosting our database using Amazon S3 which easily integrates a Cassandra deployment.

Data Persistence: We will have a static list of recipe names with ingredients lists which will persist. We will query the database and MapReduce based on the ingredients provided by the user to provide a list of the 10 best matches. We will have a separate partition of data persistence allocated for user ingredients data.

UI Mockup on following pages

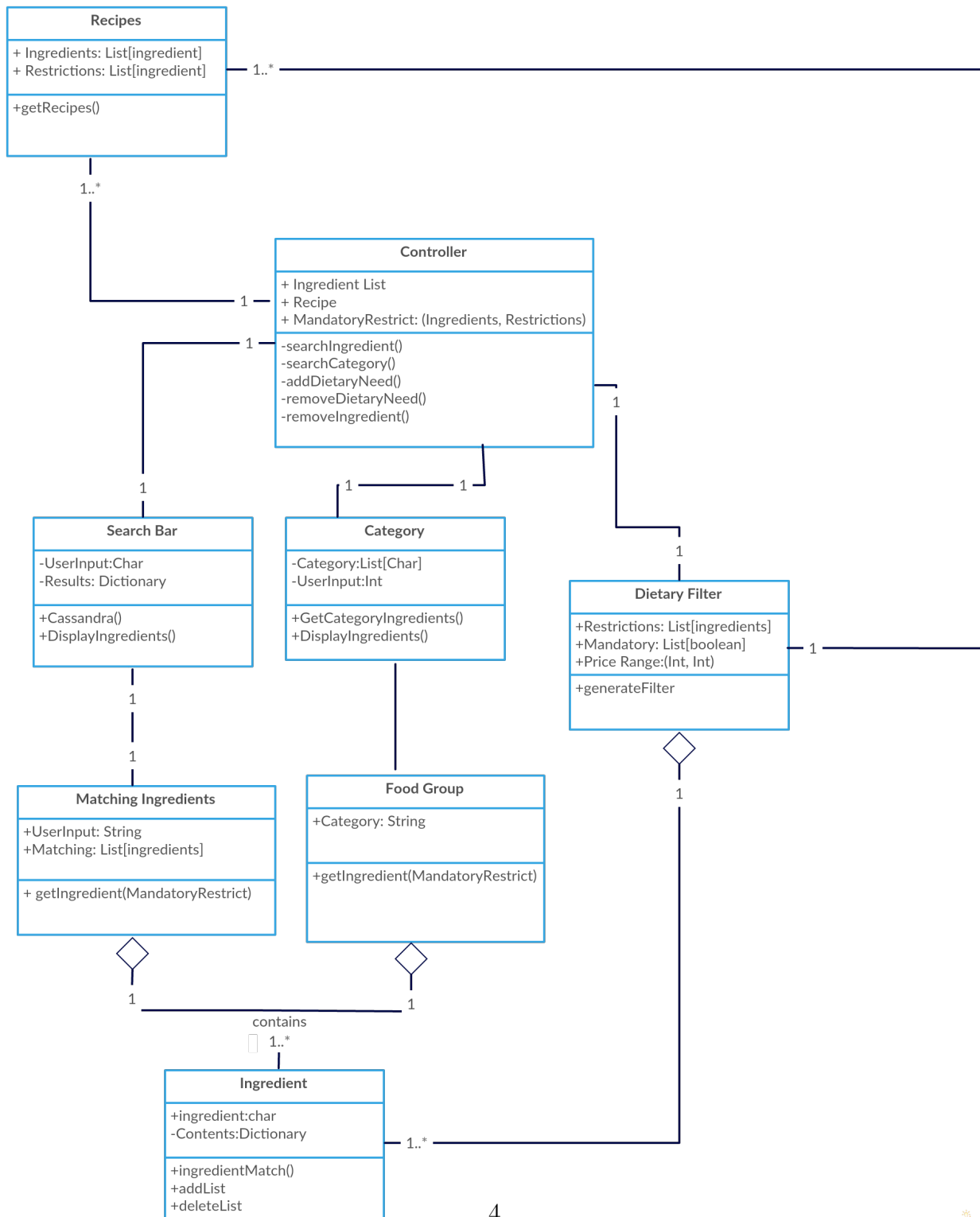


Figure 2: Class Diagram