RecyPy:
Software Requirements Specification

Last Modified: February 27, 2021

Table of Contents

Introduction

RecyPy is a web application used for sharing recipes. Similar to a cross between a social media app and a recipe database, in this system users will be able to create an account. Using this account, they will be able to post their own recipes, as well as "follow" other users or "star" their recipes. This creates a personalized experience for each user, as well as a foundation for further implementations, such as a rating system for individual recipes and the ability to categorize them. Users will be able to view a feed of recipes from the people they follow, as well as search new recipes in the search bar.

This document will provide a broad overview of the current vision of the system and list the specific requirements of the system. These are broken down into two broad categories - functional and non-functional requirements - as well as a number of subcategories.

System Objectives

If properly implemented, this system should provide a more personal recipe finding/sharing experience for its users. It should provide a platform for people to find exactly the food they are looking for along a number of different axes, and it should lay the groundwork for a sense of community among the users.

Our primary goal is to provide a good experience for our users. Advertising functionality is a minor requirement of the system, but profit is not the main goal. RecyPy is meant to be a fun place for food enthusiasts to share their recipe journey with others. In order to facilitate this, it is important that the system is approachable and easy to use. There shouldn't be a significant learning curve for any features of the system, and it should be as visually appealing as possible. Further, the system should be reliable - when a user expects something to happen, it should happen.

With these very broad objectives in mind, we have developed the following requirements.

Requirements

Functional

Posting Recipes

The system shall allow users to post their own recipes.

The system shall allow users to post images with their recipes.

The system shall allow users to post tutorial videos with their recipes.

The system shall track which user posted each recipe.

The system shall allow users to see ratings from recipes they posted.

The system shall allow users to see comments from recipes they posted.

The system shall allow users to see how many people have viewed recipes they posted.

The system shall track how many users view a recipe.

The system shall allow users to add nutrition facts to their recipes.

The system shall allow recipes to specify the brand of ingredients.

The system shall allow ingredients to link to external store pages.

The system shall allow users to tag their recipes with a portion size.

The system shall allow users to tag their recipes with an estimated preparation time.

The system shall allow users to tag their recipes with whether they are vegan or not.

The system shall allow users to tag their recipes with the recipe's country of origin.

The system shall allow users to tag their recipes with whether they are pet friendly.

The system shall allow users to tag their recipes with the recipe's difficulty.

The system shall allow users to tag their recipes with dietary restrictions they meet.

Viewing Recipes

The system shall allow users to comment on recipes.

The system shall allow users to rate recipes.

The system shall allow users to save recipes they find such that they can navigate to them from the home page within 10 seconds 95% of the time.

Finding Recipes

The system shall allow users to search recipes by name.

The system shall allow users to filter recipes by portion size.

The system shall allow users to filter recipes by their estimated preparation time.

The system shall allow users to filter recipes by whether they are vegan or not.

The system shall allow users to filter recipes by the number of ingredients required.

The system shall allow users to filter recipes by whether they involve specific ingredients.

The system shall allow users to filter recipes by the recipe's country of origin.

The system shall allow users to filter recipes by the user who posted the recipe.

The system shall allow users to filter recipes by whether they are pet friendly.

The system shall allow users to filter recipes by the recipe's difficulty.
The system shall allow users to filter recipes by dietary restrictions they meet.
The system shall allow users to sort recipes by average rating.
The system shall allow users to sort recipes by how recently they were posted.
The system shall allow users to sort recipes by the number of ingredients required.
The system shall allow users to sort recipes by the recipe name.
The system shall allow users to sort recipes by the recipe's difficulty.

Shopping Lists
The system shall allow users to create shopping lists.
The system shall allow users to add individual ingredients to their shopping lists from a recipe.
The system shall allow users to add all ingredients from a recipe to their shopping list.
The system shall allow advertisers to see users' shopping lists.

Other
The system shall allow advertisers to show ads to users.
The system shall allow users to log into accounts.
The system shall allow users to register for accounts.

Non-Functional

Security

The system shall use HTTPS to communicate between components and the user.
The system shall prevent unauthorized users from seeing other users' data 99% of the time.
The system shall hash and salt passwords when storing them.

Efficiency

The system shall be able to handle 1,000 simultaneous inquiries 95% of the time.
The system shall load any given page within 5 seconds of a user navigating to it 95% of the time.
The system shall complete recipe post requests within 30 seconds of submission at least 98% of the time.
The system shall respond to recipe filtering requests within 5 second 99% of the time.

Reliability

The system shall backup all data such that at least 95% of content is preserved if the original database is wiped 99% of the time.
The system shall be compatible with the three most recent versions of Chrome, IE, Firefox, and Safari.

Size

The system shall enforce that posted images be at least 124 x 124 in resolution.
The system shall enforce that posted videos be at least 160 x 120 in resolution.
The system shall enforce that posted videos be no more than 250MB in size.
The system shall store images such that each takes less than 5 MB.

Ease of Use

The system shall be intuitive enough that new users can accomplish any goal possible in the system within 3 minutes of navigating to the website 90% of the time.
The system shall enable users to find a recipe meeting any 2 criteria within 10 minutes 95% of the time.
The system shall alert users if they attempt to post a recipe violating any size requirements.