PROJECT PROPOSAL FOR CS 5200 (Revised)

Online Recipe Management System

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Introduction

In 2020, due to COVID, many countries went into lockdown shutting down prominent businesses like food industry. Restaurants were shut down leading to people cooking more often for themselves at home. Now that people were working from home, they would cook more. Not all of us are born chefs and require guidance and recipes to cook meals. In today's world where we would rather ask Alexa about anything and everything than our mothers, I was motivated to build a Management system to support a website where users can search and share recipes. This can be extremely useful as it is not limited to certain cuisines. Being a programmer, if we lack resources to do anything, we can always create opportunities like this project.

The recipe system aims to help users try cooking new dishes. A user can look up recipes by names or by cuisines. In the recipe, one can expect to find ingredients, measurements and order in which to use. A user can also contribute to the system by sharing one's own recipe. By this, we can end up with a database that increases multifold on its own with less maintenance.

Database

I am going to create my own database with entering data using SQL commands. The database proposed is envisioned to contain following tables, description mentioned(The finalized schema will be documented in Project Database):

- Login – captures user login information like userid, password etc for each user
- User Profile – captures user information like userid, food preferences etc for each user
- Nutrition Value – captures nutritional information like itemid, nutritional value etc for each food item

- Recipe – consists of the recipe of food items entered by users
- Author – captures relationship of author-recipe, answers questions like which user/author contributed which recipe

Database Architecture

For maintaining the proposed database architecture, we need database consisting of user information and food recipe information. Since the data involved is highly relational, the chosen database language to support back end operations is SQL. MySQL Database can support complex queries to be performed on the data stored in the database. It has quicker response time and can be hosted on multiple servers handling the large throttle that may be the case in real time scenario.

Technical Description

I propose to build a Flask application to support Food Recipe Management system. I will create a database consisting of

- 10 users with login information
- 5 Indian recipes
- 3 Italian recipes
- 2 Breakfast recipes

There will be several tables to capture all the relevant information in the back end. In the front end, **Flask** will run the application on the server where the interface presents the user with first the log in page. Here, the user can either create an account or log in. Once log in is successful, the interface directs the user to the home page consisting of search button to look up recipes, or add, remove or update existing recipes that he/she contributed.

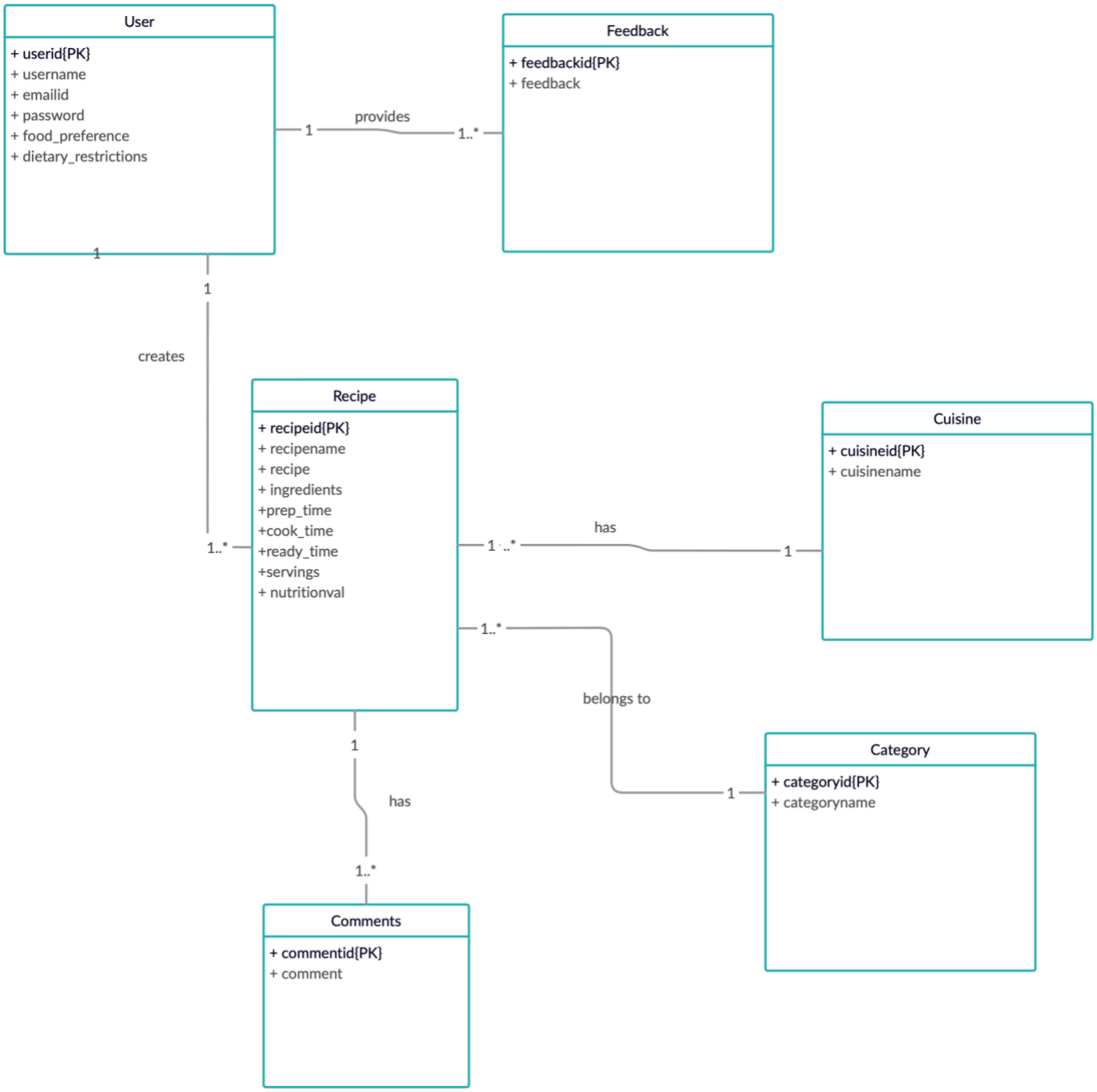
Here, I will be leveraging **Python** to build a Flask application. I will also use basic framework to build web pages: **HTML, CSS** and **JavaScript** to emulate the Online webpage to support interface for the search system. The background runs for database will be **SQL** based, as the database consists of relational data.

The project is envisioned to be able to perform these operations (some instances mentioned):

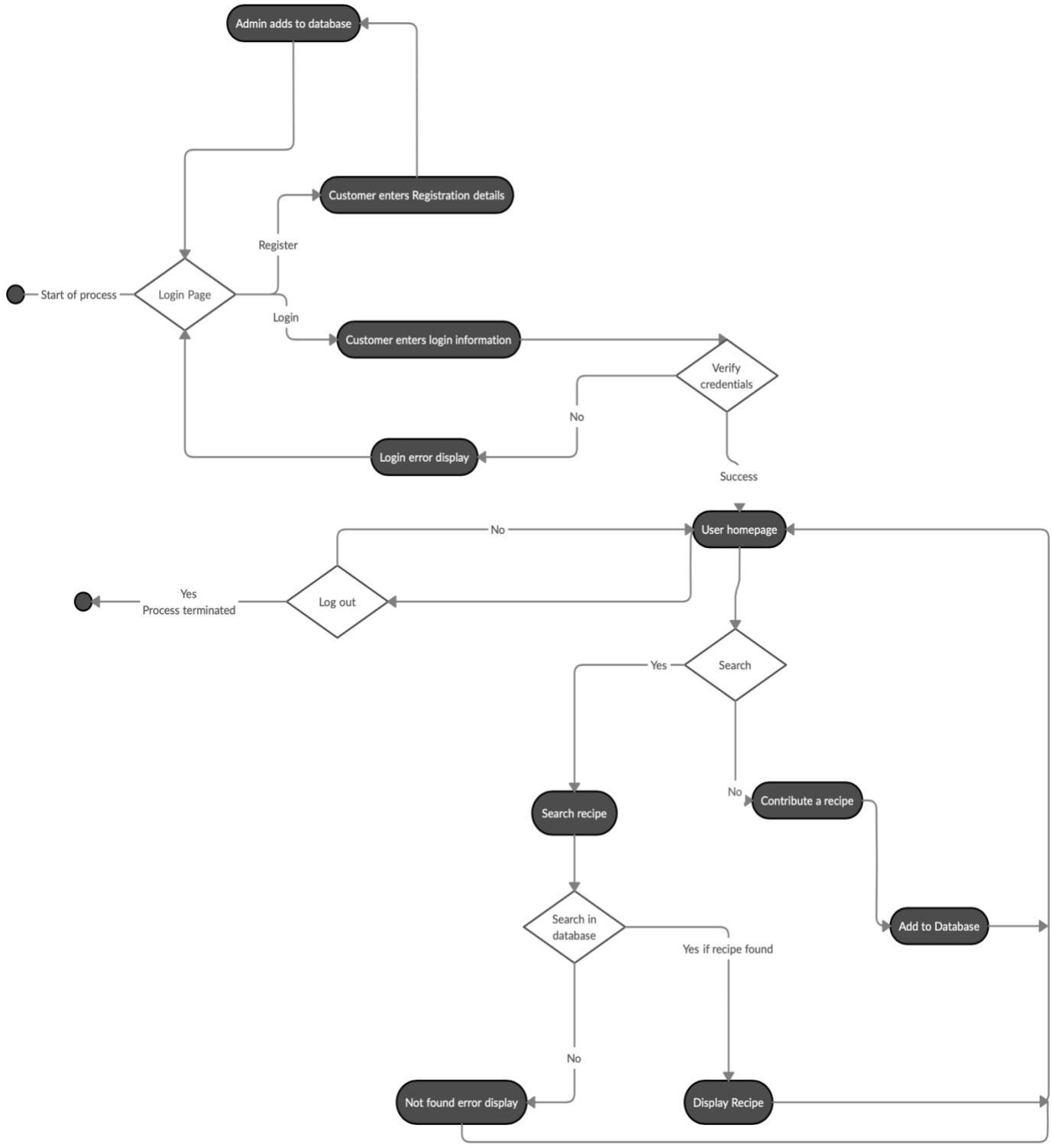
- Create - create a new user profile
- Read – look up existing recipes
- Update - update his own recipe that he/she may have contributed in the past
- Delete - delete his own recipe that he/she may have contributed in the past

As of this point based on project research, there seems to be no machine restrictions.

UML Class Diagram



Activity Diagram



Use Case Diagram