

# Expert System Project Report: Meal and Beverage Suggestions

## **Introduction:**

The "Meal and Beverage Suggestions" expert system project aims to provide users with personalized recommendations based on their food preferences. Using a set of dynamic facts and logical rules, the system evaluates available ingredients and guides the user towards suitable meal or beverage choices.

## **Code Structure:**

The project code is organized to allow easy extension of the knowledge base. The distinction between facts (fact/1) and fiction (fiction/1) is used to manage information provided by the user. The predicate is\_true/1 evaluates the truth of a question based on these facts and fictions. Cooking rules (cook/1) are defined based on ingredients, and each recipe is associated with a list of steps (recipe/2). The system also suggests beverages using specific rules (drink/1).

## **User Interaction:**

- User interaction is managed by the run/1 predicate. The user is prompted to choose between preparing a meal (meal) or selecting a beverage (drink). Based on this choice, the system guides the user through specific questions to determine their preferences and available ingredients.
- Once a meal suggestion is made, the system also provides the associated recipe. Similarly, for beverages, the system offers a suggestion based on user preferences.

## **Strengths and Opportunities for Improvement:**

### **Strengths:**

- The system provides an interactive solution to help users make informed food decisions.
- The knowledge base can be easily expanded to include new recipes and beverages.

### **Opportunities for Improvement:**

- The user interface could be enhanced, including developing a graphical interface for a better user experience.
- Error handling could be strengthened to robustly handle unexpected user responses.
- Expanding the knowledge base with more diverse recipes and beverages would further diversify suggestions.

### **Conclusion:**

The "Meal and Beverage Suggestions" expert system project offers a solid initial step toward creating an interactive tool for food decision support. By continuing to develop and improve the system, it could become a useful companion for users seeking meal and beverage ideas tailored to their preferences.