SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE PROCESS MODEL DOCUMENT

PROJECT NAME: Recipe Bank

GROUP MEMBERS: Atakan Acaroğlu, Hasan Efe Ünal, İdil Sanem Gürsoy, Fulya Aydın, Mert Can Erdoğan, Barış Özdemir

#	NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS
1	An innovative approach should be created to encourage users to use the application.
2	Team members should feel comfortable sharing their ideas, concerns, and progress.
3	Team members should be willing to work together and support each other to achieve a common goal.
4	It is important to identify and prioritize the work to be done for each sprint in advance. This allows the team to stay focused and use their time effectively.
5	The team should be able to quickly adapt to changing requirements and priorities.
6	Team members should have a clear understanding of the project's overall purpose and goals. This ensures that the product is developed consistently and meets user needs.
7	Collaborate with professional chefs and culinary experts to create balanced and delicious recipes to ensure accuracy, clarity and consistency of recipes.
8	Use a variety of marketing channels such as social media, influencer marketing and paid advertising to reach the target audience and promote the app.
9	Surveys, interviews, and user testing to understand users' cooking habits, preferences, and needs.
10	Support should be sought from experts who know artificial intelligence and machine learning algorithms to learn users' culinary preferences, dietary restrictions and cooking skills.

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SOFTWARE PROCESS NAME: AGILE (SCRUM)

SOFTWARE PROCESS DESCRIPTION:

Scrum is an agile project management framework specifically designed for iterative and incremental software development. It emphasizes collaboration, self-organization, and continuous improvement.

Roles:

- **Product Owner: Represents the stakeholders and defines the product vision and backlog (a prioritized list of features).**
- **Scrum Master: Facilitates the Scrum process, removes roadblocks, and ensures the team adheres to Scrum principles.**
- **Development Team: A self-organizing group responsible for developing the product.**

Artifacts:

- **Product Backlog: A prioritized list of features and functionalities for the product.**
- **Sprint Backlog: A subset of work selected from the product backlog for a specific sprint.**
- **Sprint: A time-boxed iteration (usually 1-4 weeks) where the development team focuses on completing a specific set of tasks.**
- **Increment: The working product functionality delivered at the end of each sprint.**

SOFTWARE PROCESS MODEL:

Sprint 1: (4 Weeks)

User Story 1: Users should be able to create a profile and edit their information.

Tasks:

- **Develop user registration/login screen**
- **Create user profile creation and editing forms**
- **Securely store user data in the database**

User Story 2: Users should be able to save their kitchen preferences (diet, cuisine type, etc.), allergies, and dietary restrictions.

Tasks:

- **Create fields for kitchen preferences, allergies, and dietary restrictions**
- **Save user-entered information to the database**

User Story 3: Users should be able to add and manage ingredients in their pantry, or automatically add ingredients through barcode scanning or image uploading.

Tasks:

- **Develop ingredient adding/management interface**
- **Barcode scanning and image recognition integration**
- **Adding and managing ingredients in the database**

Sprint 2: (4 Weeks)

User Story 4: Users should be able to track expiration dates and quantities of ingredients.

Tasks:

- **Add UI elements for expiration date and quantity tracking**
- **Create fields for expiration date and quantity information in the database**

User Story 5: Users should be able to create weekly or monthly meal plans and prepare shopping lists accordingly.

Tasks:

- **Develop meal plan creation and viewing screen**
- **Shopping list creation and management functionality**
- **Integration between meal plan and shopping list**

User Story 6: The application should suggest recipes based on users' pantry ingredients, kitchen preferences, and dietary restrictions.

Tasks:

- **Develop algorithm for recipe suggestions**
- **Create filtering mechanism based on user data and ingredient inventory**

Sprint 3: (4 Weeks)

User Story 7: Users should be able to search for recipes using filters such as keywords, category, cooking time, difficulty level, etc.

Tasks:

- **Add UI elements for advanced search filters**
- **Create mechanism for search queries in the database**

User Story 8: Each recipe should have detailed information including images, user reviews, and nutritional information.

Tasks:

- **Recipe detail page design and development**
- **Image uploading and storage**
- **Add functionality for user reviews**
- **Create data for nutritional information**

User Story 9: Users should be able to save and manage their favorite recipes.

Tasks:

- **Develop favorite recipes list creation and management interface**
- **Track user-marked favorite recipes in the database**

Sprint 4: (2 Weeks)

User Story 10: Users should be able to follow each other, create, share, rate and comment on their own recipes.

Tasks:

- **Develop follower system and profile pages**
- **Add recipe sharing, rating, and commenting functionality**

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REASONS TO CHOOSE THIS MODEL:

1-The project involves user profiles with preferences and restrictions (dietary, allergies etc.) which can evolve. Scrum's focus on short sprints (e.g., weekly) allows for gathering user feedback and incorporating changes in the next iteration.

2-With a vast amount of features like recipe search, meal planning, and AI guidance, prioritizing functionalities becomes crucial. Scrum prioritizes tasks within a sprint backlog, ensuring the most critical features are developed first.

3-Features like recipe suggestion and AI guidance heavily rely on user experience. Scrum's sprint reviews allow for early user testing and feedback, leading to improvements before extensive development.

4-Scrum's focus on frequent releases aligns with the need for fast recipe searches. New features and bug fixes can be delivered in short cycles.

5-The requirement for a scalable structure to handle user growth aligns with Scrum. Each sprint can focus on improvements to handle increased load and maintain performance.

6-The need for a user-friendly and clear interface can be addressed through Scrum's iterative approach. Early user testing during sprint reviews can identify UI issues for improvement.

7-Scrum allows for prioritizing features based on user feedback. Through sprint planning, functionalities like recipe creation and social features (follow, share) can be prioritized based on user demand.