Phase #1 Expected Result:

1. GitHub project
2. Initialize GitHub (define what will be in) project Wiki
3. Initialize GitHub project
4. Initialize repository
5. Defined project start page (use markdown)
6. Add repo contributors (if they are)
7. Each team member need clone repository
8. Defined VOC
9. Defined EPIC
10. Define system temporary architecture
11. Defined User stories
12. Defined Backlog (Remember backlog specific)
13. Defined first 2 Sprints backlog (Remember sprint backlog specific)

Project 1: Recipe Generator

Description: A program that generates a random recipe based on user preferences for ingredients, cuisine, and dietary restrictions.

Specification:

- User inputs preferred ingredients, cuisine, and dietary restrictions.
- The program generates a recipe that meets the user's preferences.
- Recipe includes ingredients, instructions, and nutritional information.

Technology suggestions: *Python, Flask, MySQL*

Tasks to Start the Project:

Remember to adjust and prioritize the tasks based on your project mainline, team capabilities, and development and operational requirements.

Relevant to Development and Operations:

Example:

1. Set up the development environment:
    - Set up a local development server to run the Flask application. Install Python, Flask, MySQL, and other necessary dependencies.
2. Design the user interface:
    - Create wireframes or mockups for the web interface.
    - Implement the user interface using HTML, CSS, and Flask templates.
3. Define the database structure:
    - Identify the necessary tables and relationships (e.g., recipes, ingredients, nutritional information).
    - Create the necessary database schema using MySQL.
4. Implement user input functionality:
    - Create the input fields for preferred ingredients, cuisine, and dietary restrictions in the web interface.
    - Implement the backend logic to capture and process user inputs.
5. Develop the recipe generation algorithm:
    - Design and implement the algorithm to generate recipes based on user preferences.
    - Consider factors such as ingredient availability, cuisine compatibility, and dietary restrictions.
6. Integrate the recipe data:
    - Set up database connectivity in the Flask application.
    - Implement the necessary data models and CRUD (Create, Read, Update, Delete) operations for recipes, ingredients, and nutritional information.
7. Generate recipe display:
    - Develop the logic to fetch and display the generated recipe on the web interface.
    - Ensure that the recipe includes a list of ingredients, step-by-step instructions, and nutritional information.
8. Test and debug:
    - Perform unit testing to ensure the correctness of the implemented functionalities.
    - Conduct manual testing of the web application to identify and fix any bugs or issues.
9. Deploy the MVP:
    - Deploy the Flask application to a hosting platform or server.
    - Ensure that the deployed application is accessible and functional.

Relevant to DevOps:

Example:

10. Implement version control:
    - Set up a Git repository to manage the source code.
    - Create branches for feature development and follow a branching strategy.
11. Implement infrastructure as code (IaC):
    - Define the necessary infrastructure components (e.g., servers, databases) using infrastructure as code tools like Terraform or CloudFormation.
    - Automate the provisioning and configuration of the required infrastructure.
12. Configure continuous integration/continuous deployment (CI/CD):
    - Set up a CI/CD pipeline to automate the build, testing, and deployment processes.
    - Configure automated testing and deployment steps.
13. Monitor application performance:
    - Set up monitoring tools to track the performance and health of the deployed application.
    - Configure alerts and notifications for critical issues.

EPIC template

A program that generates a random recipe based on user preferences for ingredients, cuisine, and dietary restrictions.

User story template

“As a [persona], I [want to], [so that].”

As a user I want to get generated recipe list from products what I have, so that allows me economy time on recipe ideas.

User can input products and get recipe list.

Task template

Set up the development environment.

Subtask template

- Install Python
- Install Flask
- Install MySQL
- Define and install other necessary dependencies.