What is this project?

- Meowu Gacha is a web game that lets the user experience the gacha system of different gacha games like Honkai: Star Rail, Wuthering Waves, etc.

Why is this project created?

- Primary Reason:

- Gacha games have evolved tremendously over the past few years. Comparing to the initial games which primarily focus on just getting shiny characters through luck and money, current games also incorporate important aspect like story-telling and marketing. However, at their base, they are still gacha games which is a soft form of gambling and can leads to people overspending based on depression or fear of missing out.
- While the spending of customers will benefit the games' revenue, overspending will cause the user to have negative feeling about the games. Leading to high revenue in short term and low revenue in the long term. Additionally, in the writer personal opinion, hating the gacha aspect of the game will also lead to the hate for the entire game, including its story, which is a waste as some games have phenomenal world building and lore direction.
- Meowu Gacha primarily aims to give player more insight into their chance of winning before they decide to spend their hard-earned money or resource.

- Secondary Reason:

- While there are many gacha simulations on the internet, Meowu Gacha will be different from them for three reasons.
- Firstly, most of these simulations existed to simulate only one game.
- Secondly, most of these simulations include long gacha animation from the original games, which slow down the website.
- Meowu Gacha focuses on the speed and simplicity of the user interface. The writer believes that the faster a user reach a win, the sooner their adrenaline rush will drop down to clear their mind. The result of the simulator will also give the users more information on whether if their supposed 'luck' is sufficient at the time.

What is included in this project?

1. User Stories
2. Use Case Diagram
3. Database Schema
4. Class Diagram
5. User Interface Design
6. Use Case Documentation
7. API Documentation

Technologies used by this project

- Frontend

- Framework: NextJS Static Generation:
- Reason: NextJS Static Generation will allow the application to load the information of the game like the gacha system and characters with their rarity, excluding images, at build time. After that, all the computing of the game, i.e. the rate to hit pity and the characters that the player get after 1 or 10 pulls will be entirely done on the frontend in an interactive way without needing to compute and retrieve data during each pull from the server. This method aims to significantly reduce the loading time by using Vercel global caching CDN. The downside of this is that the web application must be rebuilt every time the database change, which actually doesn't happen frequently.
- Hosting Platform: Vercel

- Backend

- Framework: NestJS
- Reason: Good framework with guidance, support, and structured operation
- Hosting Platform: Railway

- Database

- Framework: MySQL
- Reason: Simple, fast and easy to understand
- Hosting Platform:

- UI/UX Design

- Framework: Figma