

IDEA

Today, technological advancement has reached an exceptional level, especially with the emergence of Artificial Intelligence (AI) in recent years. Technology has been applied across various fields, delivering impressive outcomes and making life significantly more convenient. In particular, the medical field has benefited greatly, with AI applications helping save many lives in critical or emergency situations.

However, we strongly believe in an old saying passed down from our ancestors: *"Prevention is better than cure."* And the best way to prevent illness is by improving one's diet and enhancing nutritional intake to strengthen the body. Despite this, technology in the field of nutrition remains fragmented, underutilized, and not easily accessible—despite being a fundamental and daily need.

Therefore, we have gathered technologies, analyzed data, and applied AI to create the **"AI-INTEGRATED NUTRITIONAL CARE SOFTWARE WITH ONLINE SPECIALISTS"**.

PRODUCT MODEL DESCRIPTION

1. Materials Used for Model/Product Development

- Development Environment: XAMPP, VSCODE
- Programming Languages: HTML, CSS, PHP, JavaScript
- Database: MySQL
- Clone Server: Cpanel
- Domain
- API Protocol/ AI Chat: ChatGPT 3.5 API
- Encryption: MD5

2. Product Assembly Process

Step 1: Program HTML, CSS, and PHP files using the VSCode development environment.

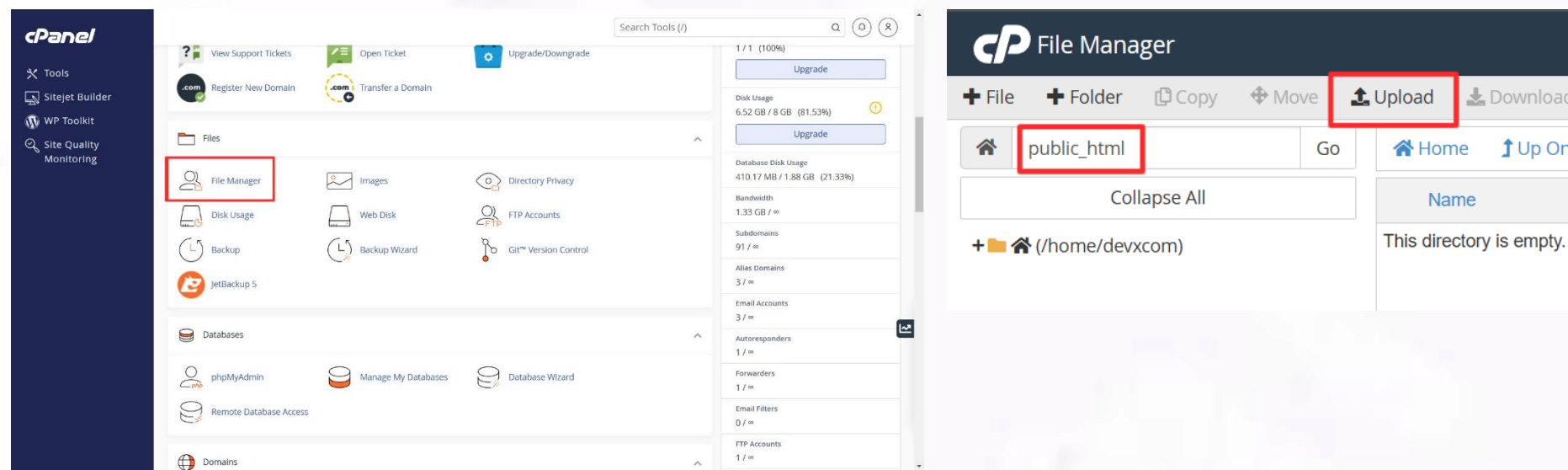
Step 2: Use Cpanel to manage and upload the files to the server and assign the domain.

Step 3: Connect the website to the MySQL database.

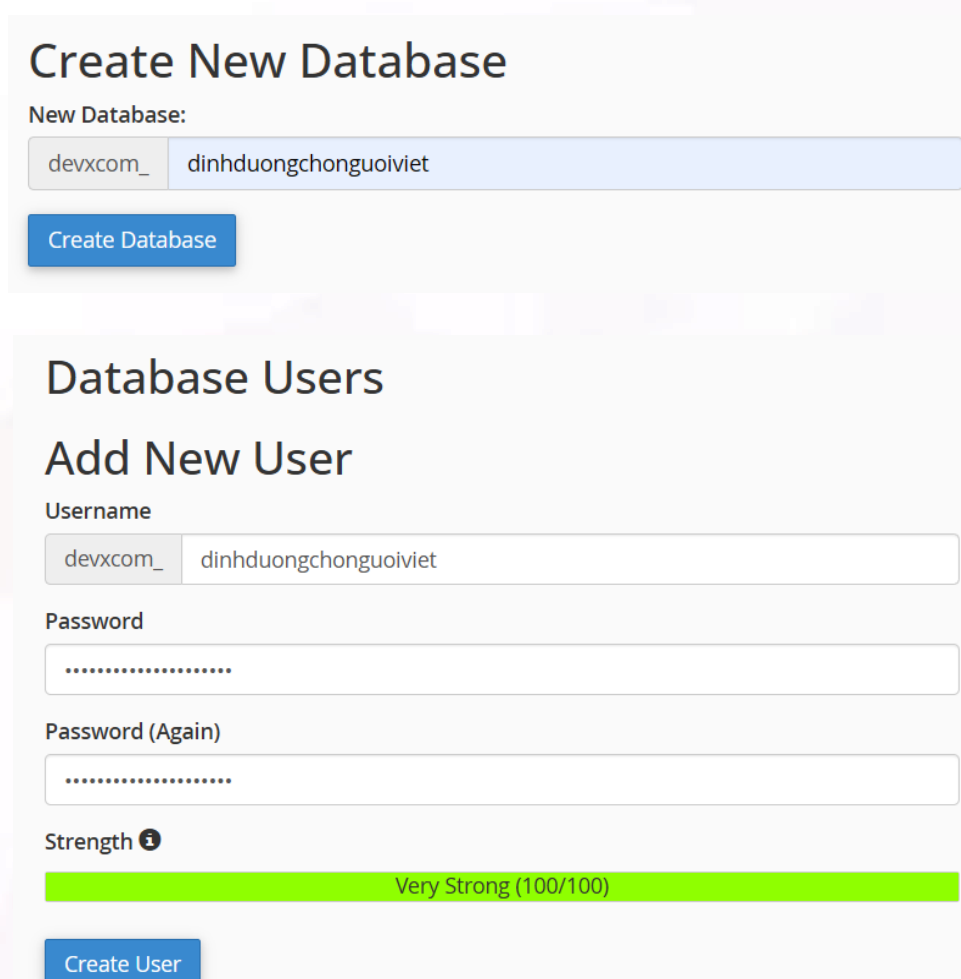
Step 4: Make the website link public and begin operation.

HOW TO ASSEMBLE AND INSTALL THE PRODUCT

Preparing the Source Code

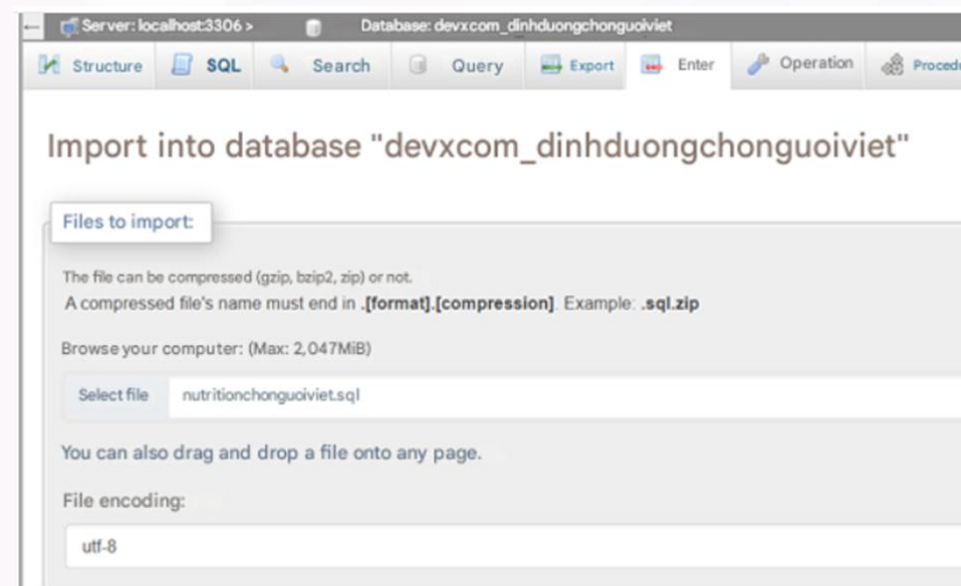


Creating the Database



Use the Manage My Databases tool in cPanel to create the database.

Next, create a new user for the database just created.



After completing the creation of the database user, you need to access the database to upload the data structure and some default information for the website.

Select the file dinhduongchonguoviet.sql, which contains the entire dataset of the website.

Complete the configuration for database connection based on the newly created information

```

1 <?php
2
3 session_start();
4 $config_local = 'localhost';
5 $config_ten = 'devxcom_dinhduongchonguoviet';
6 $config_matkhau = 'devxcom_dinhduongchonguoviet';
7 $config_dulieu = 'devxcom_dinhduongchonguoviet';
8 $ketnoi = @mysqli_connect($config_local, $config_ten,
9 @mysqli_set_charset($ketnoi, 'utf8');
10
11 $ip = $_SERVER['REMOTE_ADDR'];
12 $checkip1 = mysqli_num_rows(mysqli_query($ketnoi, "SE
13 $checkip = mysqli_fetch_array(mysqli_query($ketnoi, "
14
15 $urladmin = 'admin';
  
```

Next, go to File Manager

- public_html directory
- hethong
- config.php

to configure the database connection.

OPERATING PRINCIPLES

1. Landing Page: Welcomes users to the website. Offers login and registration. New users fill out a health profile form and receive a personalized nutrition plan analyzed by AI.

2. Login via QR Code: In addition to traditional login, the website supports fast login using QR code.

3. Homepage: Basic features such as notifications, article statistics, and a special feature that generates daily meal suggestions based on the user's health profile.

4. User Profile: Stores user information, updates medical history, activity levels, allowing doctors and AI to analyze accurately.

5. Recipe Library: Contains over 300 detailed recipes with images and calorie information for each ingredient. Recipes are collected from reputable sources such as Vinmec, National Institute of Nutrition (Vietnam), Thucphamxanh, etc.

6. Nutrition Articles: Over 350 nutrition-related articles compiled from trusted sources.

7. Calorie Database: Information on nutritional values (mainly calories) of over 700 types of food.

8. BMI/BMR Calculator: Helps users calculate two important health indicators to assess their body condition and daily energy needs.

9. Your Menu: Allows users to create custom menus from selected recipes and automatically calculates the total calorie intake.

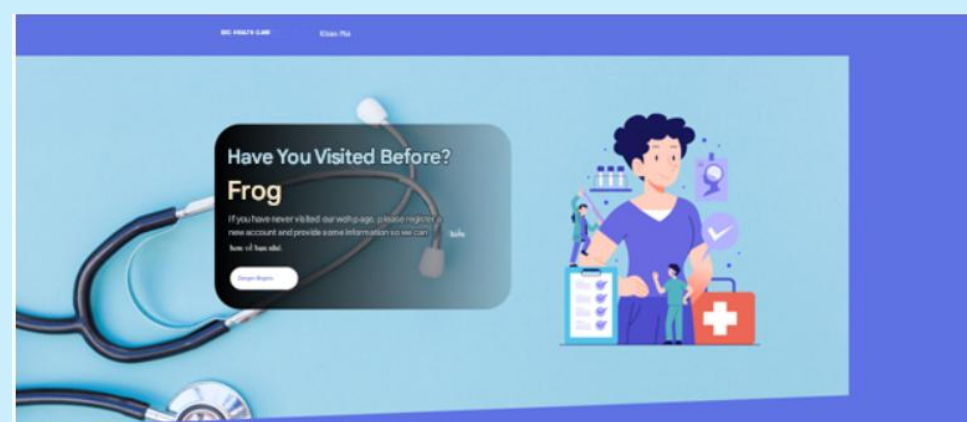
10. Chat with Doctor: Connects users with certified doctors for live consultations.

11. AI Consultation: AI health advisor capable of understanding voice, images, and text, with high accuracy.

12. Admin Panel: A feature for admin accounts, allowing content upload, editing, user management, and data tracking without requiring coding skills.

OPERATING PRINCIPLE

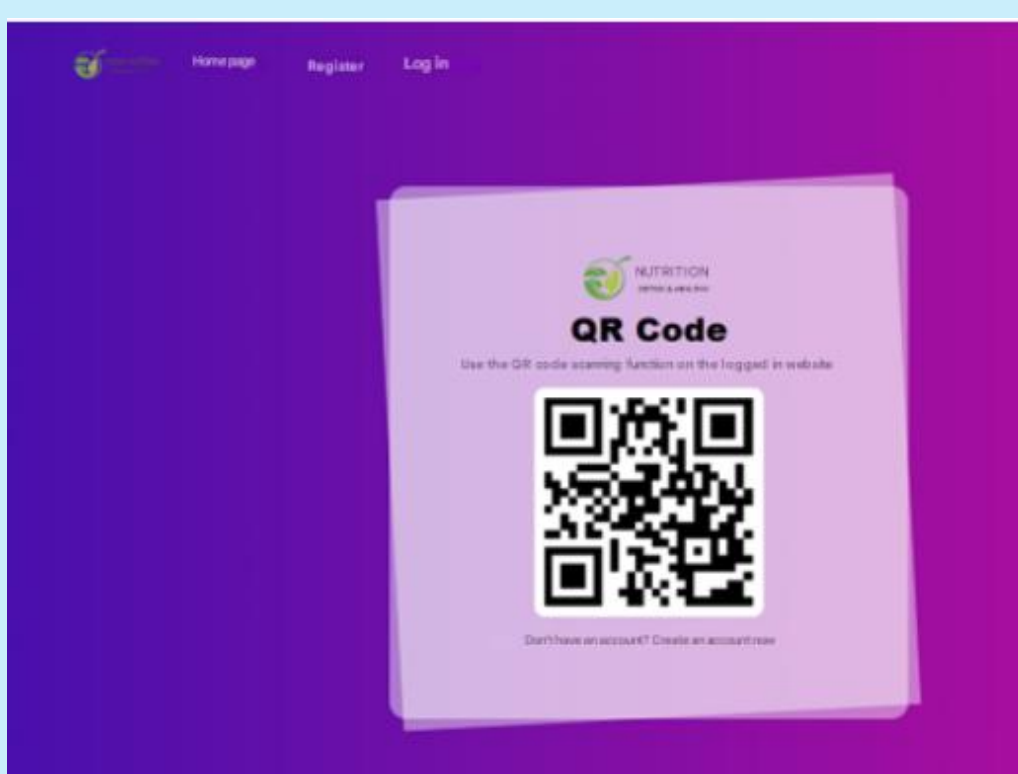
Website Landing Page



The website opens with a clean, cool-toned design to create a calm and user-friendly experience. At the bottom, users can log in or register by filling out a simple form. Once registered, the system uses AI to analyze their information and generate a personalized health plan.

Consulting Just for You
To maintain your health and ideal weight, you can follow the eatclean - healthy health roadmap below:
1. Diet:
- Limit sugar and sugary foods, choose foods low in starch and high in fiber.
- Increase your intake of green vegetables, fresh fruits, nuts and whole grains.
- Drink enough water every day, avoid sugary drinks and alcohol.
2. Exercise:
- Do at least 150 minutes of physical activity each week, including cardio and strength training.
- Do yoga or meditation exercises to reduce stress and improve your mood.
3. Keep a stable schedule:
- Make sure you get enough sleep every night, at least 7-8 hours.
- Limit stress and create a healthy living environment.
Remember to have regular health check-ups with your doctor and follow the instructions of your nutritionist.
Wish you success in maintaining your health!

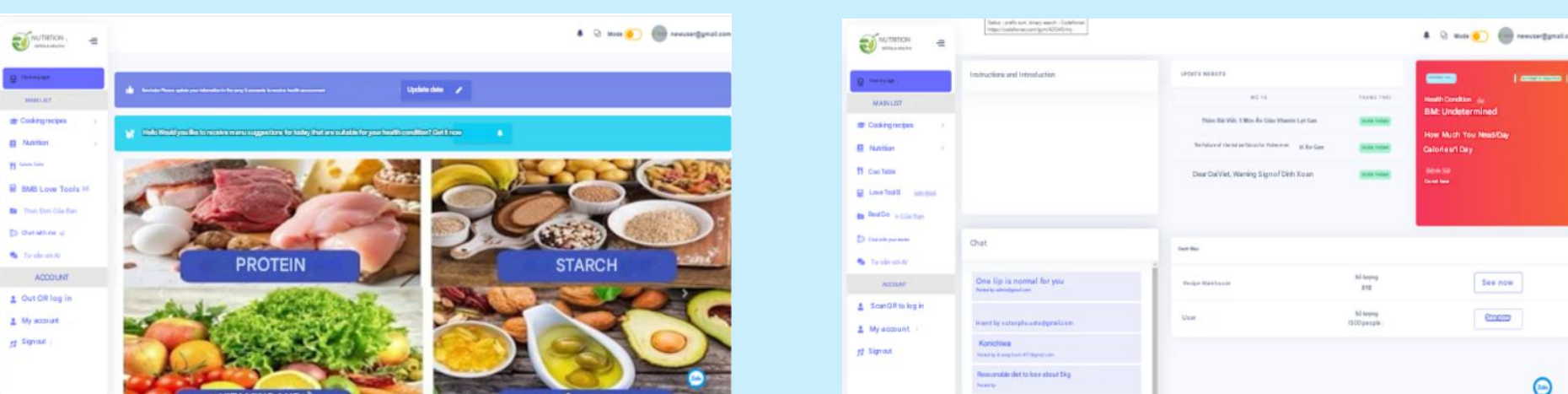
Log in via QR code



In addition to the traditional login method like many other websites, our project also offers a quick login option using a QR code. This feature is useful when a user has already logged in on one device and wants to log in on another device quickly.

Website Homepage

After completing the registration/login process, users will be directed to the homepage of the website. The homepage is designed with simplicity and includes features such as update notifications, information volume statistics, and some reminders for the user.

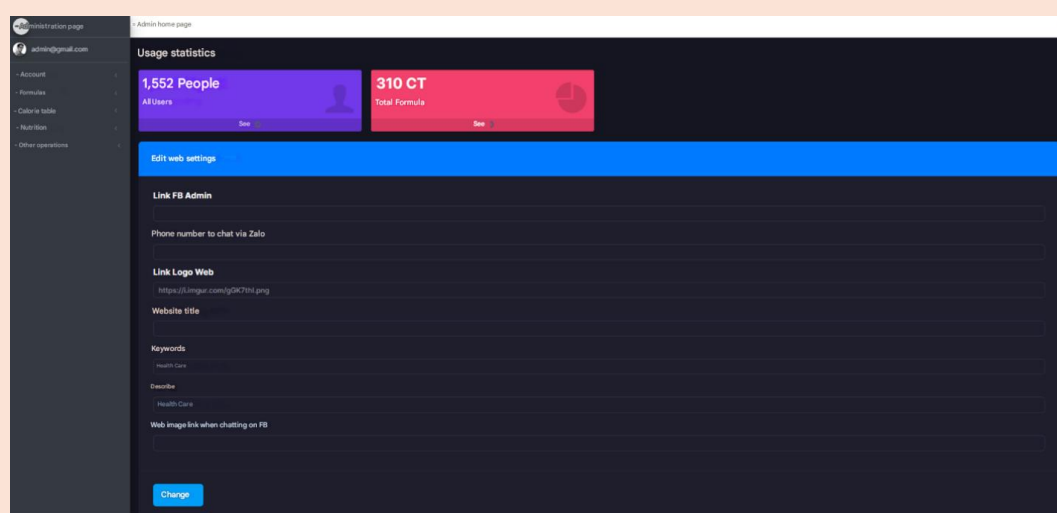


Admin Panel

The final feature is a special one, accessible only to accounts with administrative privileges.

Account: ____@gmail.com | Password: ____

This feature supports data analytics, information management, and website editing — all without requiring any programming skills.



INNOVATIVENESS

- ✓ The system is a free-to-use website, does not require specific system configuration, and features a responsive design compatible with multiple devices: PCs, laptops, tablets, smartphones, etc.
- ✓ The website is owned by our team and has not been submitted to any other competition.
- ✓ It has an extensive and in-depth EatClean database, one of the most comprehensive in its category.
- ✓ The doctor chat feature does not rely on third-party software, reducing security risks.

CREATIVITY

- ✓ Strong application of Artificial Intelligence in most tasks involving data collection and analysis.
- ✓ The **Admin Panel** enables non-programmers to manage the platform, supporting scalability and the possibility of becoming a service provider.
- ✓ Addresses the fragmented and limited availability of nutritional and EatClean information, promoting better health and nutritional care for users.

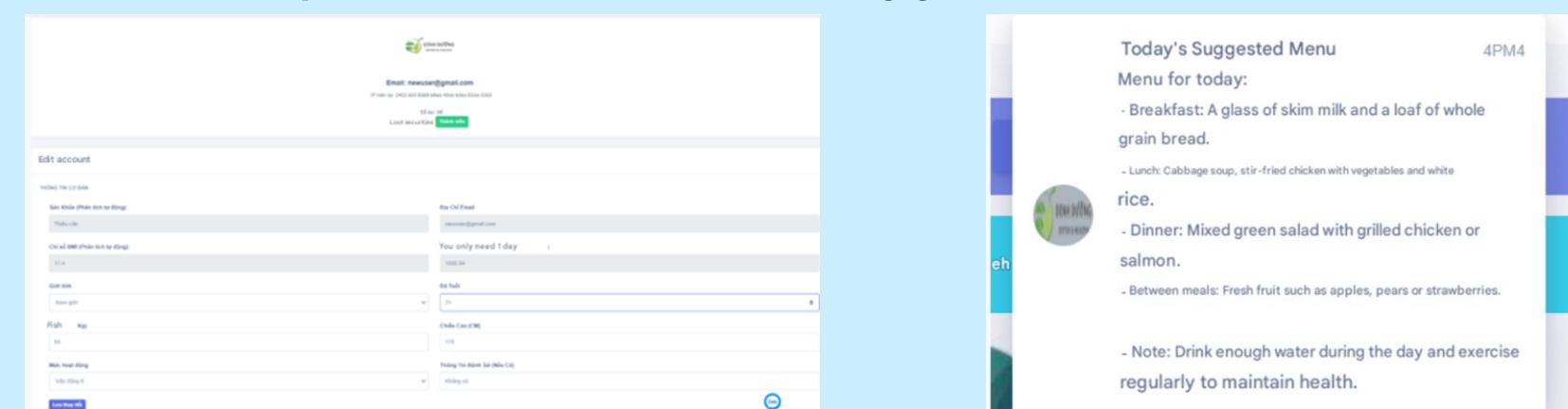
APPLICATION POTENTIAL OF THE PRODUCT

As human civilization continues to progress and modern technologies become increasingly advanced, health and physical well-being remain constant priorities that require ongoing attention and care. For this reason, our project holds lasting appeal and high practicality, regardless of time or situation.

Looking ahead, we plan to introduce the system to schools, fitness communities, and the general public, where it can support healthy living through personalized nutrition care. We believe this platform has strong potential to grow, reach more users, and make a positive impact on everyday health management.

User Profile

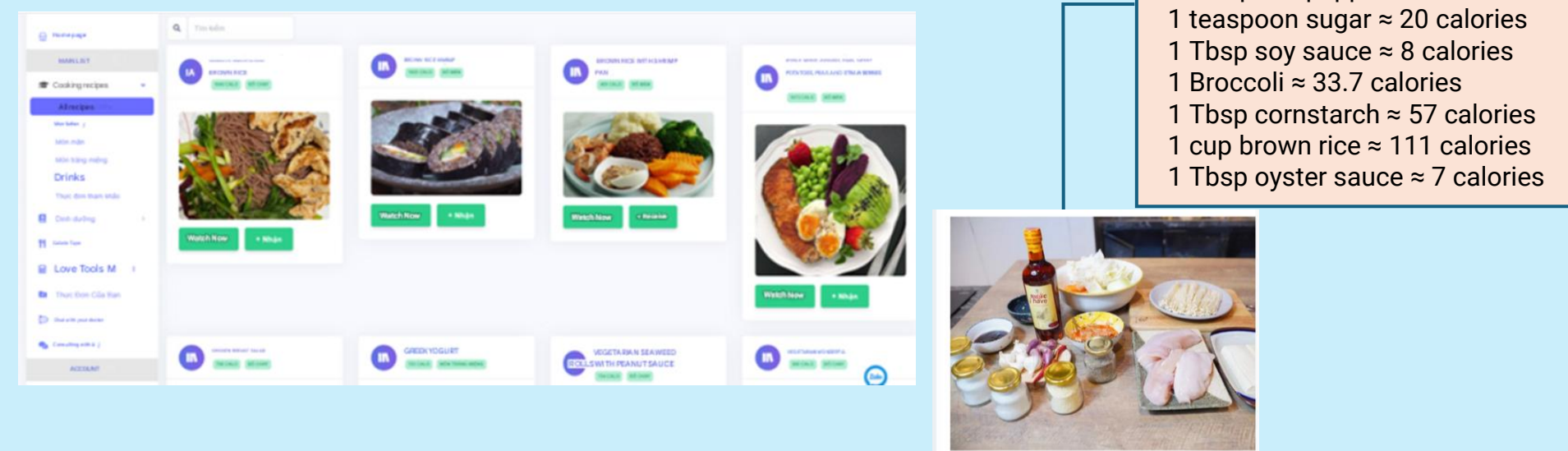
With a reminder to fully update their information from the homepage, users are guided to the next feature — the "User Profile." This section allows users to record their physical health data. Based on this information, the system will continuously analyze and update the user's BMI/BMR index and provide daily guidance and personalized meal suggestions.



Recipe Repository

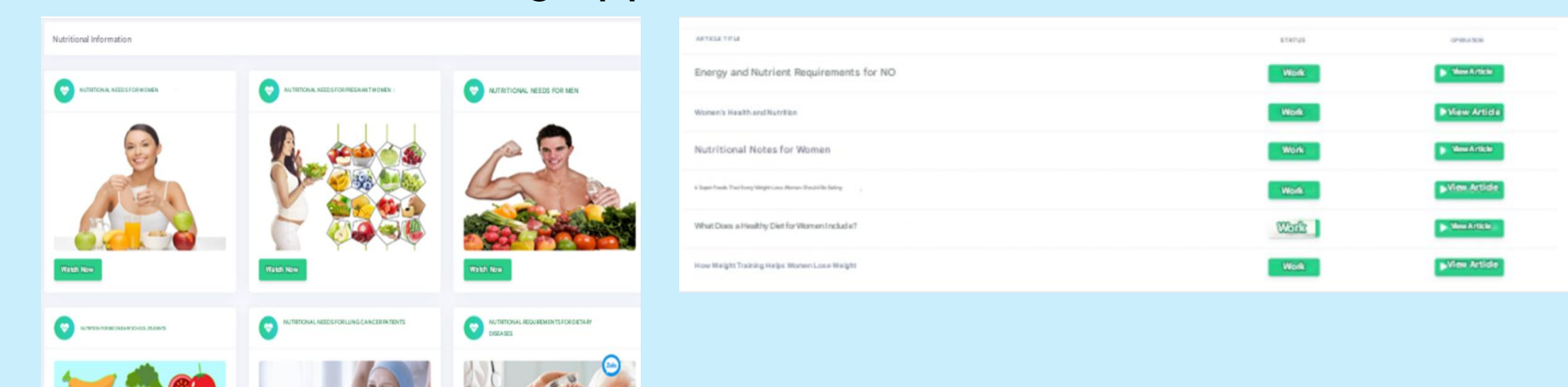
This feature required the most research time due to its complexity and the careful selection of data. It provides an online electronic recipe repository with over 300 EatClean recipes, including vegetarian and non-vegetarian dishes, meals, and beverages. The recipes are sourced from reputable organizations such as the Nutrition Institute, Vinmec, Green Food, and various health-focused newspapers and television programs.

Each recipe includes complete nutritional information, step-by-step instructions, and visual guidance through both images and written content.



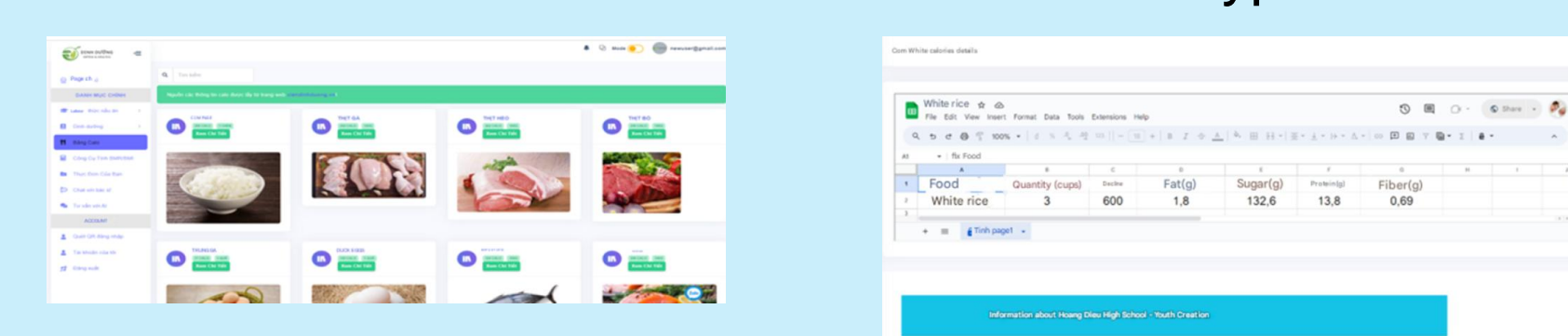
Nutrition Articles

Similar to the previous feature, this section provides a repository of nutritional knowledge, helping users better understand the website and the methods being applied.



Calorie Database

Continuing the chain of informative features, this section provides nutritional information for over 700 different types of food.



BMI/BMR Calculator

This feature helps users calculate their BMI and BMR—two basic health indicators—to assess their health status and determine their daily caloric needs.

