HoneyCare

AI-Based Food Health Advisor

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CpE 116 – SOFTWARE DESIGN
ENGR. JAY AR PENTECOSTES

INTRODUCTION

HoneyCare is a proposed *AI-based food health advisor app*, where in a user have the access to explore within the NutriChat, NutriSuggest, NutriProfile. HoneyCare would be an innovative and helpful tool for individuals looking to improve their diet and overall health. With the increasing availability of technology and the growing importance of healthy eating, an app that utilizes artificial intelligence to provide personalized recommendations for users could be highly beneficial.

OVERALL DESCRIPTION

HoneyCare is an independent and selft-contained product that does require an interface with other systems. However, it may require integration with other third-party APIs to provide additional features and functionality. Our app is intended to be operated on mobile devices such as smartphones and tablets.

Here are some of the AI-powered features that can provide even more personalized recommendations and support:

1. **NutriChat -** A chatbot can be integrated into the app to provide real-time advice and support for healthy eating habits.
2. **NutriSuggest -** The app can provide the client with healthy suggestions based on AI and nutritional needs.
3. **NutriFacts -** This feature gives nutritional facts to the client.

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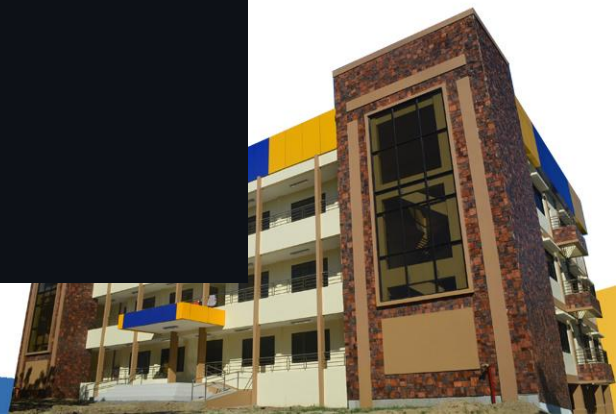
Targeted Date	Description
3rd week of April, 2023	Data Collection, Research, Finalization of App Features, and Identifying the skills to be needed to develop the app.
May, 2023	Wireframes, Mockups, Prototyping, Designing, and Development
1st to 3rd week of June, 2023	App Development, Testing, Debugging, and Documentation Writing
4th week of June 2023	Final Testing, Finalization of Documentation Writing, and Deployment

NON-FUNCTIONAL REQUIREMENTS

Functional	**HoneyCare is an app that focuses on healthy diet or healthy eating and also on people who want to be more healthy and fit. This app is dedicated for people who want to track and monitor their health progress daily.**
Usability	Our app, HoneyCare features a user-friendly interface that is easy to navigate, ensuring users of all levels can track food, view nutrient information, and explore recipe suggestions without hassle.
Reliability	HoneyCare accurately records and securely stores user data, maintaining the privacy and integrity of the information.
Performance	This provides efficient performance, minimizing loading times and response delays for a seamless user experience.
Supportability	The app accommodates a growing user base and increased data storage needs, ensuring its

CODES

```
const searchTermInput = document.querySelector('.searchTerm');
const searchButton = document.querySelector('.searchButton');
const messageContainer = document.querySelector('.messageContainer');

// Add event listener to the search button
searchButton.addEventListener('click', () => {
  const userInput = searchTermInput.value;
  if (userInput) {
    chatWithBot(userInput);
    searchTermInput.value = ''; // Clear the input field
  }
});

// Function to send user input to the ChatGPT API and display the response
async function chatWithBot(userInput) {
  const botResponse = await sendChatMessage(userInput);
  displayBotResponse(botResponse);
}

// Function to display the bot's response
function displayBotResponse(response) {
    const botMessageElement = document.createElement('div');
    botMessageElement.classList.add('message');
    botMessageElement.textContent = response;
    messageContainer.appendChild(botMessageElement);
    messageContainer.scrollTop = messageContainer.scrollHeight; // Scroll to the bottom
}

// Function to make a POST request to the ChatGPT API
async function sendChatMessage(message) {
  const response = await fetch('https://api.openai.com/v1/chat/completions', {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json',
      'Authorization': 'Bearer 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'
    },
    body: JSON.stringify({
      'model': 'gpt-3.5-turbo',
      'messages': [{'role': 'system', 'content': 'You are a chatbot'}, {'role': 'user', 'content': message}]
    })
  });

  const data = await response.json();
  return data.choices[0].message.content;
}
```



```
// Get reference to the HTML element
const genButton = document.getElementById('genButton');
const factsDescriptionElement = document.getElementById('factsDescription');

// Function to make an API request
function sendRequest(prompt) {
  // Make your API request here and return a Promise with the response data
  // Replace this with your actual API call implementation
  return fetch('https://api.openai.com/v1/chat/completions', {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json',
      'Authorization': 'Bearer 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' // Replace with your ChatGPT API key
    },
    body: JSON.stringify({
      model: 'gpt-3.5-turbo',
      messages: [
        { role: 'system', content: 'You are a chatbot' },
        { role: 'user', content: prompt }
      ]
    })
  })
    .then(response => response.json())
    .then(data => data.choices[0].message.content)
    .catch(error => {
      console.error('Error:', error);
      throw new Error('An error occurred. Please try again.');
    });
}

// Event listener for the genButton click
genButton.addEventListener('click', () => {
  sendRequest('Give me a 3-4 sentences of "Did you know?" question about healthy food')
    .then(description => {
      factsDescriptionElement.textContent = description;
    })
    .catch(error => {
      console.error(error);
      // Handle the error
    });
});

```

```javascript
// Get references to the HTML elements
const recipeNameElement = document.getElementById('recipeName');
const recipeDescriptionElement = document.getElementById('recipeDescription');
const recipeIngredientsElement = document.getElementById('recipeIngredients');
const recipeStepsElement = document.getElementById('recipeSteps');
const generateButton = document.getElementById('generateButton');
const saveButton = document.getElementById('saveButton');

let recipeName;
let recipeDescription;
let recipeIngredients;
let recipeSteps;

// Function to update the recipe details in HTML
function updateRecipe() {
  recipeNameElement.textContent = recipeName;
  recipeDescriptionElement.textContent = recipeDescription;
  recipeIngredientsElement.textContent = recipeIngredients;
  recipeStepsElement.textContent = recipeSteps;
}

// Function to make an API request
function sendRequest(prompt) {
  // Make your API request here and return a Promise with the response data
  // Replace this with your actual API call implementation
  return fetch('https://api.openai.com/v1/chat/completions', {
    method: 'POST',
    headers: {
      'Content-Type': 'application/json',
      'Authorization': 'Bearer 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'
    },
    body: JSON.stringify({
      model: 'gpt-3.5-turbo',
      messages: [
        { role: 'system', content: 'You are a chatbot' },
        { role: 'user', content: prompt }
      ]
    })
  })
    .then(response => response.json())
    .then(data => data.choices[0].message.content)
    .catch(error => {
      console.error('Error:', error);
      throw new Error('An error occurred. Please try again.');
    });
}
```

```
        throw new Error('An error occurred. Please try again.');
      });
}

// Event listener for the generateButton click
generateButton.addEventListener('click', () => {
  sendRequest('Give me a healthy recipe that is available in the Philippines (name only)')
    .then(name => {
      recipeName = name;
      return sendRequest('Give me 3-5 sentences description of ' + recipeName);
    })
    .then(description => {
      recipeDescription = description;
      updateRecipe();
    })
    .catch(error => {
      console.error(error);
      // Handle the error
    });
});

// Event listener for the saveButton click
saveButton.addEventListener('click', () => {
  if (!recipeName) {
    console.error('Recipe name is missing. Please generate a recipe first.');
    return;
  }

  sendRequest('Give me the INGREDIENTS ONLY for ' + recipeName)
    .then(ingredients => {
      recipeIngredients = ingredients;
      return sendRequest('Give me the INSTRUCTIONS to cook ONLY for ' + recipeName);
    })
    .then(steps => {
      recipeSteps = steps;
      updateRecipe();
    })
    .catch(error => {
      console.error(error);
      // Handle the error
    });
});
```

```
var userName = "Hilda Contaoi";
var getUserName = document.getElementById("name-value");
getUserName.innerHTML = userName;

// Retrieve the current date
var currentDate = new Date();

// Set the user's birthdate
var birthDate = new Date("1985-10-11"); // Replace with the user's birthdate

// Calculate the user's age
var age = currentDate.getFullYear() - birthDate.getFullYear();

// Check if the birthday has not yet been reached this year
if (
  currentDate.getMonth() < birthDate.getMonth() ||
  (currentDate.getMonth() === birthDate.getMonth() &&
    currentDate.getDate() < birthDate.getDate())
) {
  age--;
}

// Update the age value in the HTML
var getUserAge = document.getElementById("age-value");
getUserAge.innerHTML = age;

```

EXTERNAL INTERFACE REQUIREMENTS

2:37 74%

NutriChat

Hi, I'm Honey!

You can ask me anything, send your message below

One health tip is to make sure you stay hydrated by drinking plenty of water throughout the day. Dehydration can lead to headaches, fatigue, and even more serious health

Send me a message

2:37 74%

NutriFacts

Did you know?

Generate

Did you know that blueberries are packed with antioxidants that help protect our bodies from damage caused by free radicals? Or that leafy greens like spinach and kale are great sources of vitamin K, which helps build strong bones? Additionally, adding nuts like almonds and walnuts to your diet can provide healthy fats and protein that keep you feeling full and satisfied throughout the day.


2:38
74%
NutriSuggest
Food Name
Sinigang.
Description
Sinigang is a Filipino sour soup that is typically made with tamarind as the souring agent. It can be made with a variety of meats such as pork, beef, shrimp, or fish, and is typically loaded with vegetables like bok choy, eggplant, radish, tomatoes, and green beans. The soup is usually served over a bed of steamed rice and is a comforting and flavorful dish that is enjoyed by many Filipinos across the world.
Generate
Let's Cook!
Ingredients & Instructions


2:38
74%
NutriProfile
Name:
Hilda Contaoi
Age
37 yrs. old

1. User Interfaces

HoneyCare uses the interface design using HTML (HyperText Markup Language) and CSS (Cascading Style Sheets). Since HoneyCare is a mobile app, Android Studio's WebView kit helps it to make the web look like a mobile app.

2. Hardware Interfaces

There is no hardware that is used to make HoneyCare since it is a software only application.

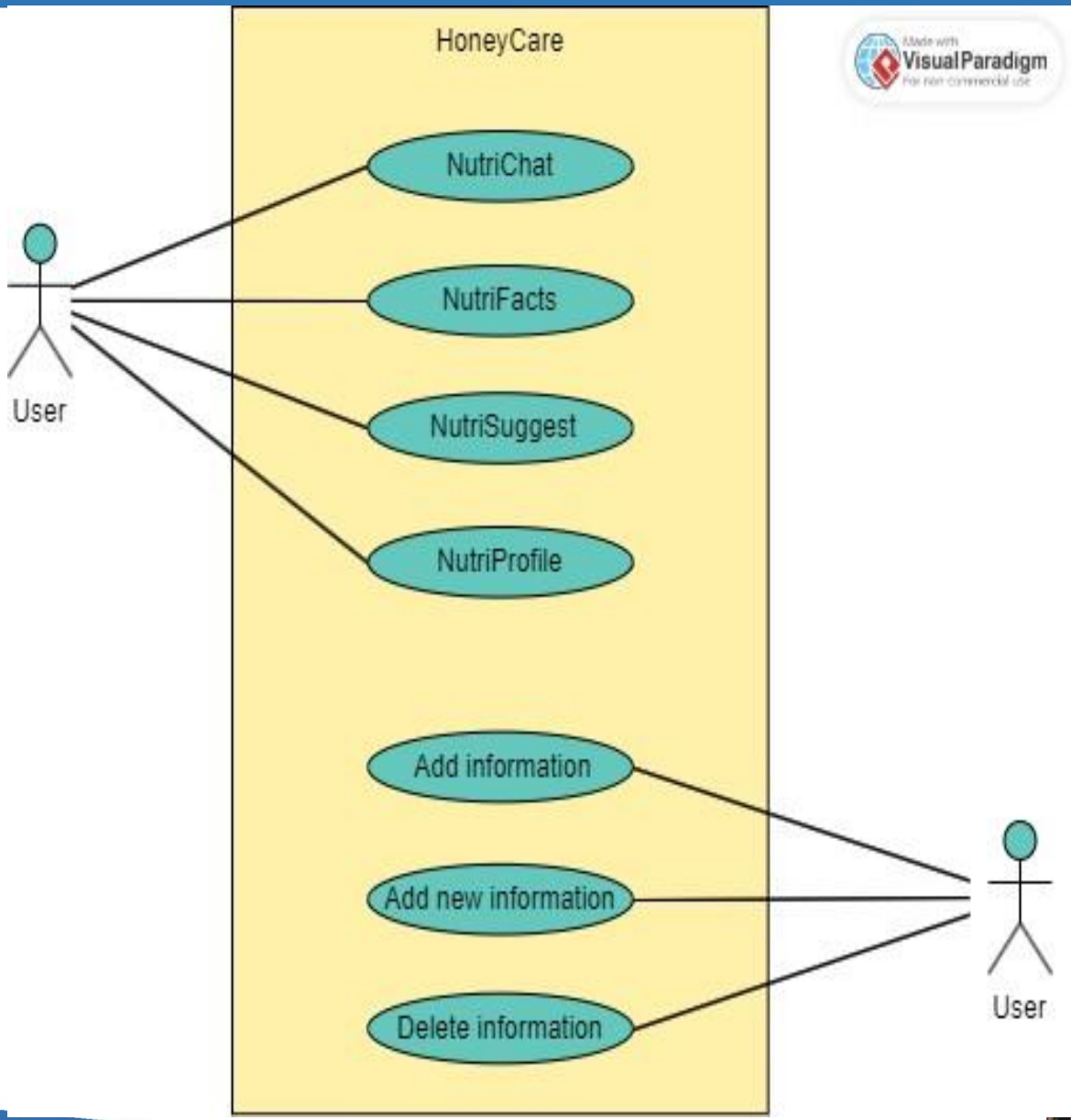
3. Software Interfaces

HoneyCare features were created and helped by OpenAI API (ChatGPT). External libraries, frameworks, and etc. also helped HoneyCare to be working and done.

4. Communication Interfaces

The only communication that is done here is calling the APIs from the servers of OpenAI. HoneyCare and OpenAI communicate with each other to pass and get values.

DETAILED USE CASES


HoneyCare
NutriChat
NutriFacts
NutriSuggest
NutriProfile
Add information
Add new information
Delete information
User
User

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April 3rd week, 2023	Data Collection, Research, Finalization of App Features, and Identifying the skills to be needed to develop the app
April 4th week, 2023	Wireframes, Prototyping, and Start of the Development
May 2023	App Development, Testing, Debugging, and Documentation Writing
June 1st week, 2023	Final Testing, Finalization of Documentation, and Deployment

PROJECT PROPONENTS

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Project Leader: Gio **Rivera**

Development Lead: Marc Andrey **Torralba**

Documentation Lead: Miccah **Poquiz**

Team Members:

- Aila **Datanagan**
- Syriel **Bonode**
- Adoniz John **Maglaque**
- Michelle Anne **Orlanda**
- Star Life **Macabio**
- Louis Miguel **Arcadio**

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