Project report

IBM

Nutrition Assistant

[Modern Web Application]

Project by,

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FOOD DETAILS & NUTRIENT

If you enter the image of the food we can give you the list of nutrient values it has. we also provide a service that can tell you the list of ingridents just by entering the food name

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1. Introduction

1.1 Overview

As there is improvement in people's standards of living, obesity rates are increasing at an alarming speed, and this is reflective of the risks to people's health. People need to control their daily calorie intake by eating healthier foods. However, most of food packaging comes with nutrition labels, it's still not very convenient for people to refer.

Most people understand the repercussions of eating fast food but sometimes the repercussions are unexpected and may require the services of a personal injury lawyer. Most of my favorite foods cause weight gain and if eaten consistently, could lead to diabetes. In the last several years, there have been a handful of displeased fast-food eaters who took legal action against the fast-food chains to either make an easy buck or hold them accountable for their lousy products.

1.2 Purpose

The main purpose of this Web application is to help people know the nutrient value of the food they eat. This web app provides a service where the user can feed the food image/ food name/image URL and the app provides the nutrient value of the food. The user can also feed the daily consumption of food with time and date.Then he can access the food details whenever required.The nutrient details are also sent to the user mail.

This application can be used personally to take of ones health, recommended by hospitals or the doctors to track the user daily food consumption, We will know more about this further.

2. LITRATURE SURVEY

2.1 Existing problem

In this busy world people can't track the food they consume and it is difficult to find the nutrients of all the food they consume. Over consumption or under nutrition can lead to serious health issues. These may be calcium/ iron/vitamin deficiencies or the over consumption of carbohydrates and sugar that causes obesity and diabetes. Which may further lead to serious health issues. There is urgent action required to maintain a balanced diet in order to have a good immunity.

2.2 Proposed solution

Our web app used the food image given by the user then processes that to the nutrient values of the food then displays to the user.these can reduce the user's effort to enter the food details.he can simply capture the food image and enter into the web app.

The user can enter the food details that he consumes daily on the basis of time and date of consumption. we then add the food details into the user table. the user can then go to the diary page and view the data entered by him betweenany particular dates. He can also view the aggregate nutrient details. We have provided an email service where users will get the aggregate nutrient details.

This application can be used on the recommendation of the doctor or the hospitals where one can track all the data that the patient consumed to track the nutrient details of the patient.
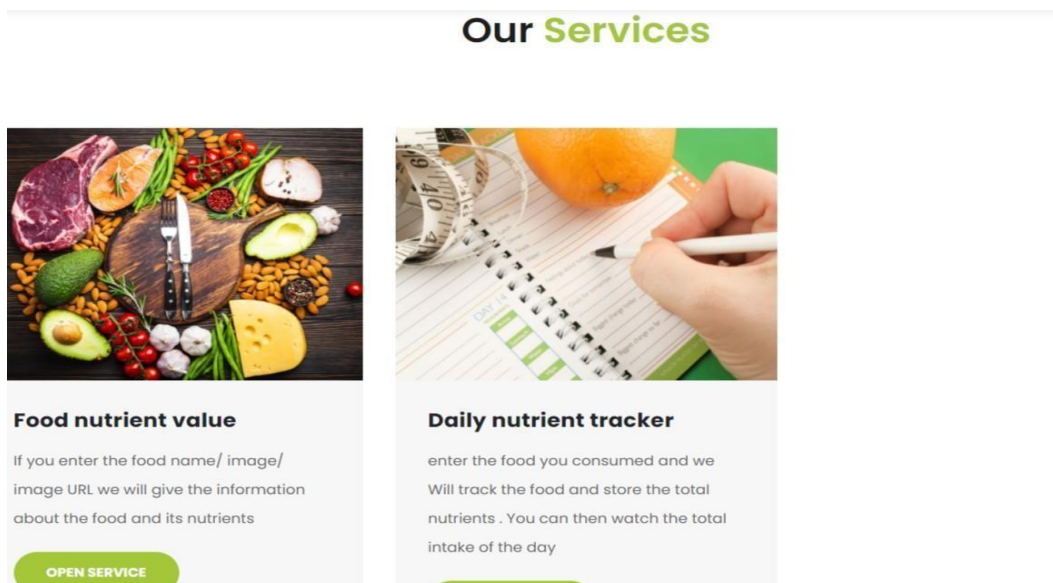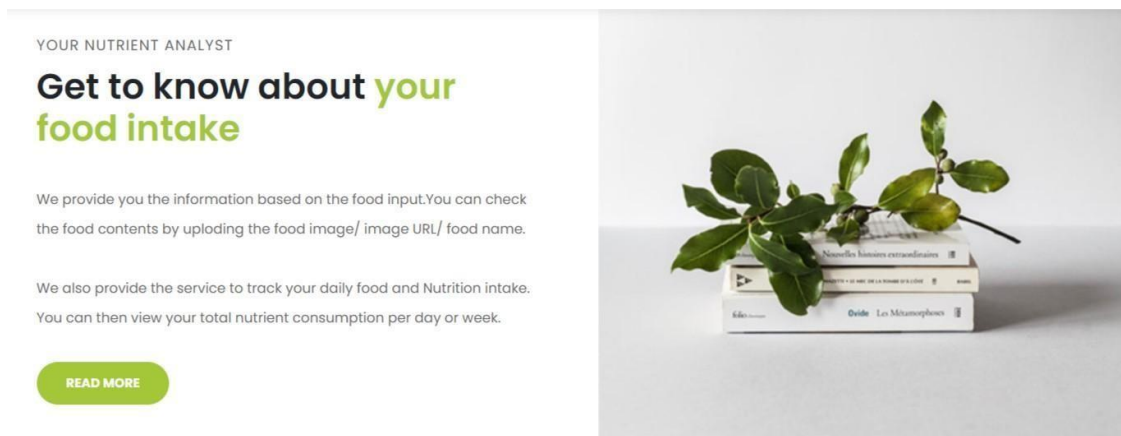
fig : Our services from dashboard page

fig : 'About Us' page from web app

3. THEORITICAL ANALYSIS

3.1 Block diagram
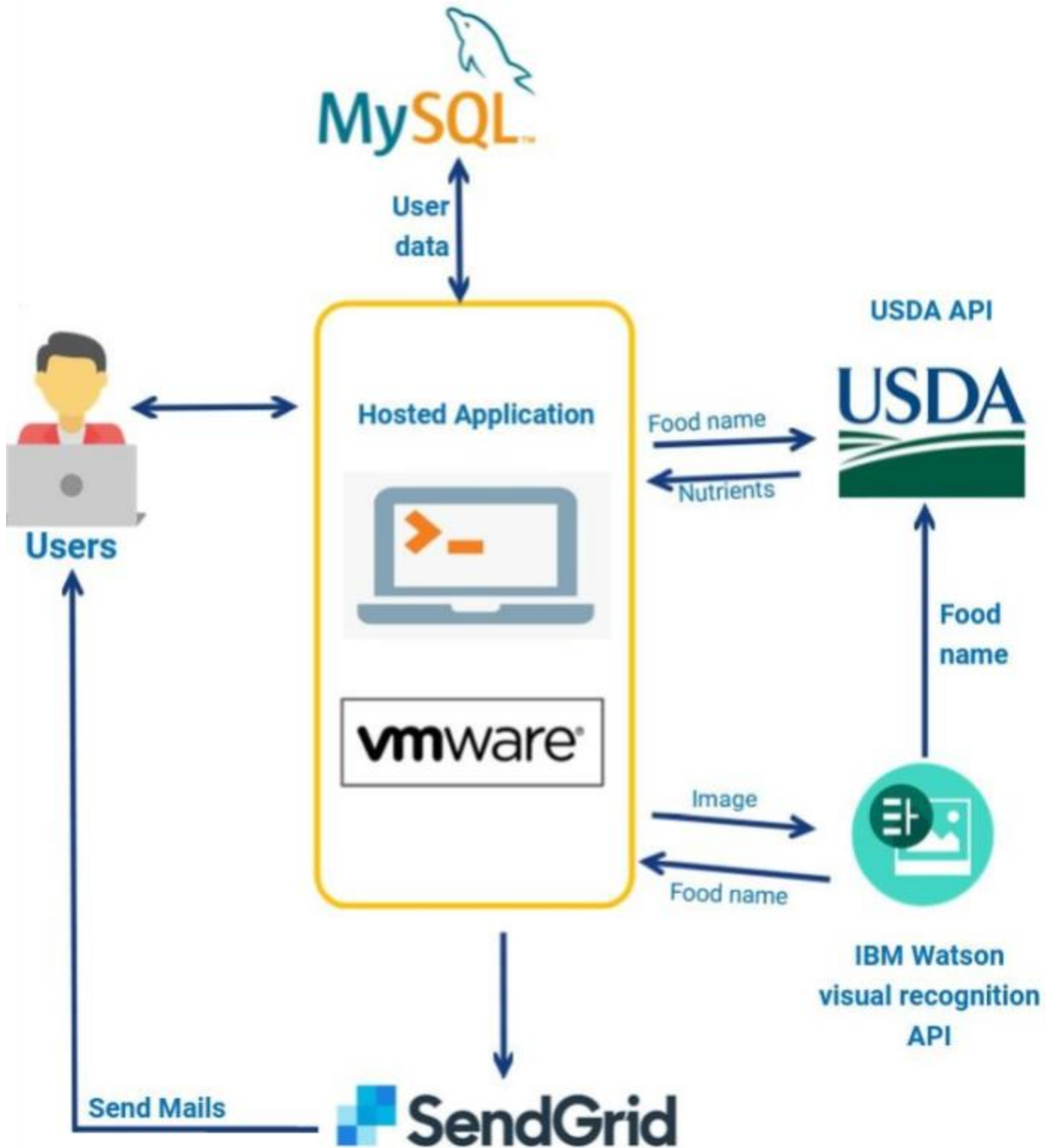
3.2 Ideation and Brainstroming

This project aims at building a web App that automatically estimates food nutrients by the input image/name of the food. I have used the IBMs visual recognition-v3 Api to find the food by the given food image or the image URL.

Application then takes the processed data and then sends it to the USDA API which then estimates the nutrient values of the food and returns the nutrients and their nutrient value.Which we then process and store in the database if the user wants to enter.

I have used python for programming and HTML, CSS, JS for designing pages And SendGrid for email services.

3.3 Proposed Solution

With all the above factors I have included some more services that would be useful to the user.some of these are listed below.

- A demo service where the user can just enter the food name and the web app will tell the nutrients.This can be accessed without the registration whereas other pages can be accessed only after the user registration.

3.4 Empathy map

Nutrition Assistant Application

Empathy Map Canvas

Gain insight and understanding on solving customer problems.

1

Build empathy and keep your focus on the user by putting yourself in their shoes.

REQUIREMENT ANALYSIS

While analyzing the problem , I found that as people in their busy life can't track the nutrients they consume,and can't find the nutrients of the

food.Because it impacts badly on their health.

3.5 Functional Requirements

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through E-mail and Phone number
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Profile Completion	Get personal details like height, weight, etc.
FR-4	Gather meal image	Upload photo Take live photo of the meal
FR-5	Display calorie information	Integrate Clarifai API to get name of the food Integrate Nutrition API (rapid API) to collect calorie information

3.6 Non-Functional Requirements

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Provide user friendly UI Simple and intuitive design
NFR-2	**Security**	Comprehensive authorization and authentication scheme for each system actor
NFR-3	**Reliability**	The system must perform without failure in 95 percent of use cases
NFR-4	**Performance**	The landing page supporting several users must provide 5 seconds or less response time
NFR-5	**Availability**	Uninterrupted services must be available all time except the time of server updation.
NFR-6	**Scalability**	Provide horizontal or vertical scaling for higher workloads

4. PROJECT DESIGN
4.1 Data Flow Diagram

Nutrition Assistant Application
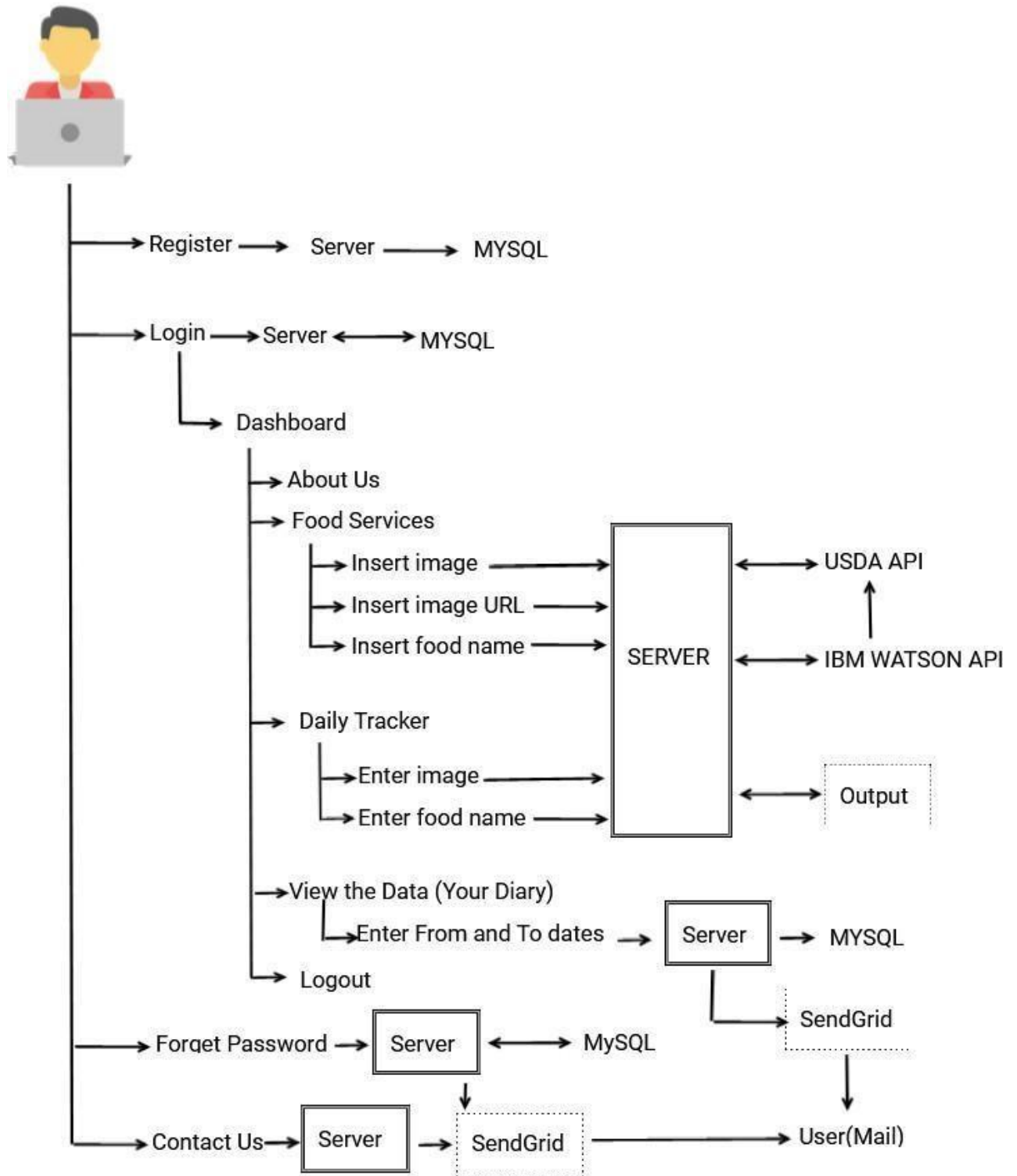
4.2 Solution and Technical Attributes

fig : Output shown to the user.

- I have added a page COVID PRECATIONS.where user can get the information about the nutrients to consume in this pandemic according to the AYUSH Ministry.

fig : A screen-shoot from Covid precaution page.

- I have added a ABOUT US page which gives information about our webpage. NUTRIENT page gives information about the nutrient details.
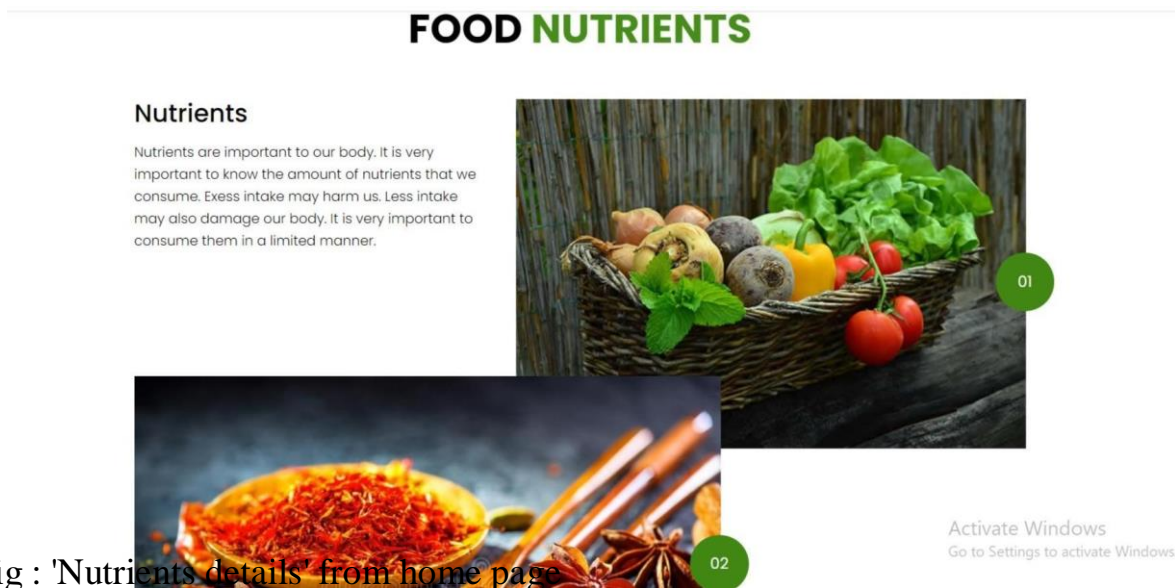
fig : 'Nutrients details' from home page
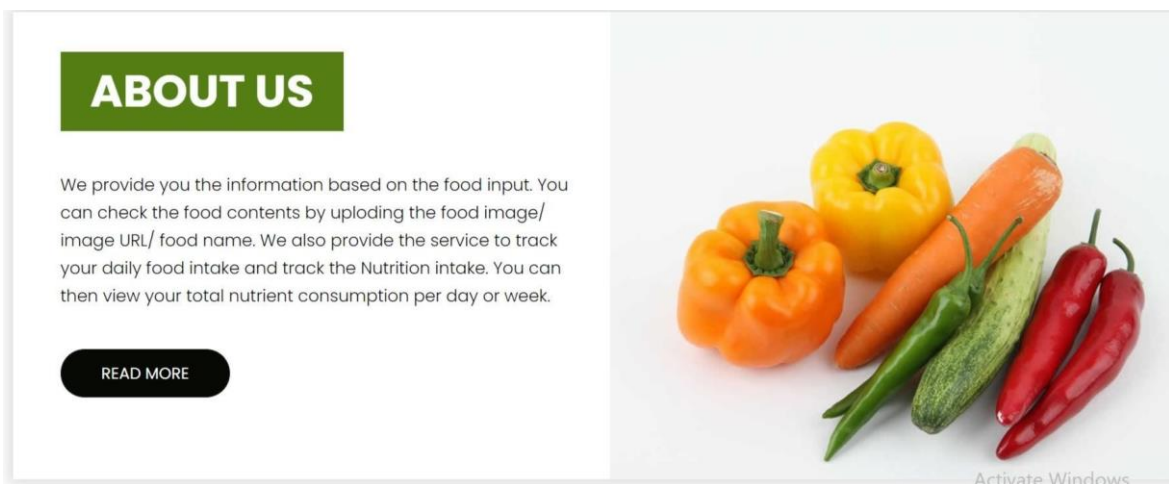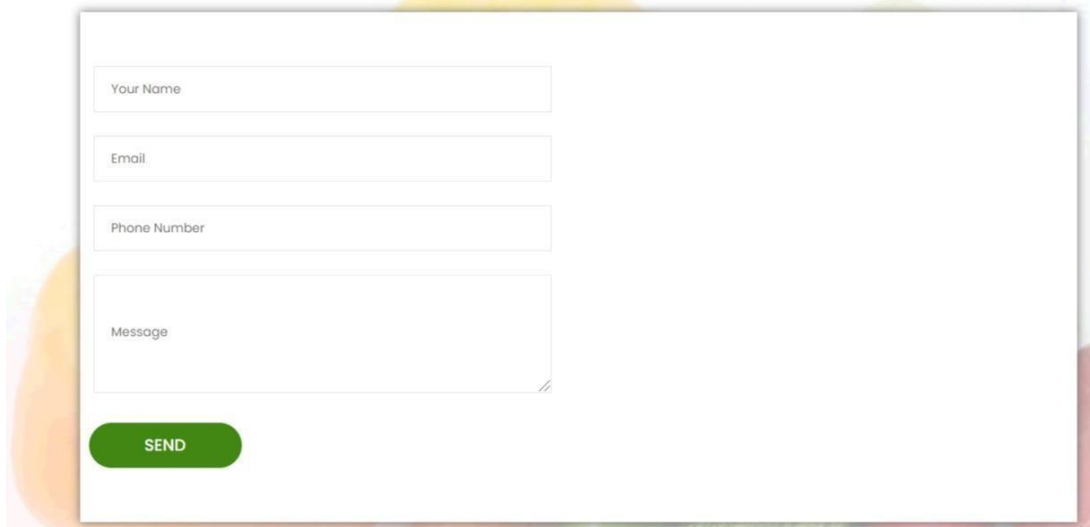
fig : 'About Us' from home page

- I have added the CONTACT US page from where the user can enter the Queries.

CONTACT US

- I have added the email services using send grid. which sends the email to the user.the following are the email services.
  - As soon the user gets registered he will receive the mail.
  - If the user has forgotten the credentials he can get the user id and password to his mail.
  - Whenever the user watches his calorie consumption he get the nutrient details in his mail.
  - If the user uses our contact us page he gets the mail.

4.3 User Stories

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User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer	Registration	USN-1	As a user, I can register for the application by entering my Name, Age, Gender, E-mail, password, and confirming my password.	I can access my account / dashboard.	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application.	I can receive confirmation email & click confirm.	High	Sprint-1
	Profile updation	USN-3	As a user, I have to enter my height, weight and daily activity details.	I can update these information on Dashboard.	High	Sprint-1
	Login	USN-4	As a user, I can login to the application by entering E-mail and password.	I can access my account/ dashboard.	High	Sprint-1
	Dashboard	USN-5	As a user, I can upload or capture live image of the meal	I can get the nutritional value of that particular meal.	High	Sprint-2
		USN-6	As a user, I can track my daily calorie intake.	I can access my account/ Dashboard.	Medium	Sprint-2
Administrator	Maintain the Application	USN-7	Maintaining details for users.	I can access database.	High	Sprint-3

5. PROJECT PLANNING AND SCHEDULING

5.1 Sprint Planning and Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Panel	USN-1	The user will login into the website and gothrough the products available on the website.	20	High	Jai sree A Ilakkiya G Hariharan G Ankit Kumar Maurya R
Sprint-2	Admin Panel	USN-2	The role of the admin is to check out the database about the stock and have a truck ofall the things that the users are purchasing.	20	High	Jai sree A Ilakkiya G Hariharan G Ankit Kumar Maurya R
Sprint-3	Chat Bot	USN-3	The user can directly talk to Chatbot regarding the products. Get the recommendations based on informationprovided by the user	20	High	Jai sree A Ilakkiya G Hariharan G Ankit Kumar Maurya R
Sprint-4	Final Delivery	USN-4	Container of applications using docker Kubernetes and development the application.Create the documentation and final submit the application	20	High	Jai sree A Ilakkiya G Hariharan G Ankit Kumar Maurya R

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Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 NOV 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 NOV 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 NOV 2022

Velocity:

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

5.2 Sprint Delivery and Schedule

Index.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi" crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>

    <title>Nutrition Assistant</title>

    <link rel="stylesheet" href="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/index.css">
    <style>
      .options
      {
        background-color: #d3ccb7;

      }
      .lot
      {
        color: #d3ccb7;

      }
    </style>
</head>
<body style="background-image: url('https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/homebg.jpg');">


    <div class="container-fluid">
      <div class="row">
        <div class="col-lg-5 colh heading">
          <p class="display-3">Nutrition Assistant</p>
        </div>
        <div class="col-lg-7 colh">
          <div>
            <ul class="lists">
              <li> <a id="c1" class="lot" href="#cont_1">Home</a></li>
              <li onmouseover = "signinOne(this)" onmouseout="unsignin(this)"> <a id="c2"
class="lot">SignIn</a></li>
              <li onmouseover = "signinTwo(this)" onmouseout="unsignin(this)"> <a id="c3"
class="lot">SignUp</a></li>
              <li onmouseover = "visible(this)" onmouseout="unsignin(this)"> <a class="lot"
id="c4" href="#abouts">About</a></li>
```

```
              </ul>
           </div>
        </div>
     </div>
  </div>

  <div class="container-fluid content">
     <div class="row">
        <div class="col-lg info">
           <p>
              Nutritional support is the provision of adequate nutrients to maintain a
              healthy body weight and avoid malnutrition. The continuous delivery of
              high-quality and cost-effective nutritional care to patients has been
              shown to be an increasingly difficult task. It is observed that dieticians
              are requested to carry out the nutritional assessment, to manually
              calculate the nutritional needs and to design the everyday meal plan for
              each patient. In most cases, these time-consuming tasks are not completed
              due to lack of time or inadequate number of personnel. Development of a web-
based
              tool for calculating nutrition in food, which will help patients and clients
maintain
              their healthier lifestyles. The nutrient content calculation was planned to
undertake with
              commonly consumed traditional as well as junk foods
           </p>
        </div>
        <div class="col-lg info" id="infos">
           <div class="cont_1 pb-0">
              <div onclick="ont()" id="l1" class="options">
                 <p><img src="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/home.png" width="60" height="60" alt=""><p class="list">Home</p>
              </div>
              <div id="l2" class="options">
                 <p><img src="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/login.png" width="60" height="60" alt=""><p class="list">Sign
In</p>
              </div>
              <div id="l3" class="options">
                 <p><img src="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/sign-up.png" width="60" height="60" alt=""><p class="list">Sign
Up</p>
              </div>
              <div id="l4" class="options">
                 <p><img src="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/info.png" width="60" height="60" alt=""><p class="list">about</p>
              </div>

           <div id="logins" class="login">
              <div class="container" id="container">
                 <div class="form-container sign-up-container">
                    <form onsubmit="return false" method="POST" enctype="multipart/form-data">
                       <h1>Create Account</h1>
```

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```html
                <input type="text" name="name" placeholder="Name" required />
                <input type="email" name="email" id="signup-mail" placeholder="Email"
required />
                <input type="password" name="pass" id="signup-pass" placeholder="Password"
required />
                <button onclick="signup_data()">Sign Up</button>
                </form>
            </div>
            <div class="form-container sign-in-container">
                <form method="POST" id="gotodash" enctype="multipart/form-data">
                <h1>Sign in</h1>
                    <input STYLE="display:none" type="text" name="name" placeholder="Name"/>
                    <input type="email" name="email" id="signin-mail" placeholder="Email"
required />
                    <input type="password" name="pass" id="signin-pass"
placeholder="Password" required />
                    <a href="/forgot">Forgot your password?</a>
                    <button onclick="validate()">Sign In</button>
                </form>

            </div>
            <div class="overlay-container">
                <div class="overlay">
                <div class="overlay-panel overlay-left">
                    <h1>Welcome Back!</h1>
                    <p>To keep connected with us please login with your personal info</p>
                    <button class="ghost" id="signIn">Sign In</button>
                </div>
                <div class="overlay-panel overlay-right">
                    <h1>Hello, Friend!</h1>
                    <p>Enter your personal details and start journey with us</p>
                    <button class="ghost" id="signUp">Sign Up</button>
                </div>
                </div>
                </div>
            </div>
        </div>
        <div class="about" id="abouts">
          <p>
            Nutrition Assistant is a web-based tool that is capable of calculating
nutrition
            from an image. It uses a food model to detect food items from images and a
nutrition
            API to calculate nutrition information.
          </p>
        </div>
        </div>
      </div>
    </div>
  </div>
```

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```
</body>
<script>

  const signUpButton = document.getElementById('signUp');
  const signInButton = document.getElementById('signIn');
  const container = document.getElementById('container');

  const switchone = document.getElementById('c1');
  const switchtwo = document.getElementById("c2");
  const switchthree = document.getElementById('c3');
  const switchfour = document.getElementById('c4');

  const Fswitchone = document.getElementById('l1');
  const Fswitchtwo = document.getElementById("l2");
  const Fswitchthree = document.getElementById('l3');
  const Fswitchfour = document.getElementById('l4');

  const space = document.getElementById('infos');

  var pre_state = 0;
  var stateone = 0;
  var statetwo = 0;
  var statethree = 0;

  signUpButton.addEventListener('click', () => {o
  container.classList.add("right-panel-active");
});

  signInButton.addEventListener('click', () => {
  container.classList.remove("right-panel-active");
});

switchone.addEventListener('click', remover);
switchtwo.addEventListener('click', signin);
switchthree.addEventListener('click', Signup)
switchfour.addEventListener('click', about);

Fswitchone.addEventListener('click', remover);
Fswitchtwo.addEventListener('click', signin);
Fswitchthree.addEventListener('click', Signup)
Fswitchfour.addEventListener('click', about);


function remover() {

  if(pre_state == 1){
    pre_state = 0;
    space.classList.remove("spaceimp");
    document.getElementById("abouts").style.display = "none";
    document.getElementById("logins").style.display = "none";
    document.getElementById("l1").style.display = "flex";
    document.getElementById("l2").style.display = "flex";
```

```javascript
      document.getElementById("l3").style.display = "flex";
      document.getElementById("l4").style.display = "flex";
}
}

function div_adder () {
  space.classList.add("spaceimp");
  document.getElementById("abouts").style.display = "none";
  document.getElementById("logins").style.display = "block";
  document.getElementById("l1").style.display = "none";
  document.getElementById("l2").style.display = "none";
  document.getElementById("l3").style.display = "none";
  document.getElementById("l4").style.display = "none";
}

function about_adder () {
  //space.classList.add("spaceimp");
 // remover();
  document.getElementById("abouts").style.display = "block";
  document.getElementById("l1").style.display = "none";
  document.getElementById("l2").style.display = "none";
  document.getElementById("l3").style.display = "none";
  document.getElementById("l4").style.display = "none";
}


function signin() {
console.log("hi");
  if(pre_state == 0) {
    pre_state = 1;
    stateone = 1;
    statetwo = 0;
    statethree = 0;
    container.classList.remove("right-panel-active");
    div_adder();
  }else {
    if(stateone == 0) {
      pre_state = 1;
      stateone = 1;
      statetwo = 0;
      statethree = 0;
      container.classList.remove("right-panel-active");
      div_adder();
    }else {
      remover();
    }
  }

}

function Signup() {
```

```
  if(pre_state == 0) {
    pre_state = 1;
    stateone = 0;
    statetwo = 1;
    statethree = 0;
    container.classList.add("right-panel-active");
    div_adder();
  }else {
    if(statetwo == 0) {
      pre_state = 1;
      stateone = 0;
      statetwo = 1;
      statethree = 0;
      container.classList.add("right-panel-active");
      div_adder();
    }else {
      remover();
    }
  }
}

function about() {
  if(pre_state == 0){
    pre_state = 1;
    stateone = 0;
    statetwo = 0;
    statethree = 3;
    about_adder();
  }else{
    if(statethree == 0){
      remover();
      pre_state = 1;
      stateone = 0;
      statetwo = 0;
      statethree = 3;
      about_adder();
    }else{
      remover();
    }
  }

}

function unvisible(x) {
    if(pre_state == 0) {
      document.getElementById("l1").style.display = "none";
      document.getElementById("l2").style.display = "none";
      document.getElementById("l3").style.display = "none";
      document.getElementById("l4").style.display = "none";
    }

  }
```

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```javascript
function visible(x){
  if(pre_state == 0) {
    document.getElementById("abouts").style.display = "block";
    //space.classList.add("spaceimp");
    container.classList.add("right-panel-active");
    document.getElementById("l1").style.display = "none";
    document.getElementById("l2").style.display = "none";
    document.getElementById("l3").style.display = "none";
    document.getElementById("l4").style.display = "none";
  }
}

function unsignin(x) {
  if(pre_state == 0){
    container.classList.remove("right-panel-active");
    space.classList.remove("spaceimp");
    document.getElementById("logins").style.display = "none";
    document.getElementById("abouts").style.display = "none";
    document.getElementById("l1").style.display = "flex";
    document.getElementById("l2").style.display = "flex";
    document.getElementById("l3").style.display = "flex";
    document.getElementById("l4").style.display = "flex";
  }

}


function signinOne(x){
  if(pre_state == 0) {
    container.classList.remove("right-panel-active");
    space.classList.add("spaceimp");
    document.getElementById("logins").style.display = "block";
    document.getElementById("l1").style.display = "none";
    document.getElementById("l2").style.display = "none";
    document.getElementById("l3").style.display = "none";
    document.getElementById("l4").style.display = "none";
  }
}

function signinTwo(x){
  if(pre_state == 0) {
    document.getElementById("logins").style.display = "block";
    space.classList.add("spaceimp");
    container.classList.add("right-panel-active");
    document.getElementById("l1").style.display = "none";
    document.getElementById("l2").style.display = "none";
    document.getElementById("l3").style.display = "none";
    document.getElementById("l4").style.display = "none";
  }

function setcon(x) {
```

```javascript
    if(pre_state == 0) {
      document.getElementById("abouts").style.display = "block";
        //space.classList.add("spaceimp");
      container.classList.add("right-panel-active");
      document.getElementById("l1").style.display = "none";
      document.getElementById("l2").style.display = "none";
      document.getElementById("l3").style.display = "none";
      document.getElementById("l4").style.display = "none";
      }
  }

}

    var signup_username;
    var signup_password;
    console.log(signup_username);

    console.log(signup_password);

    function signup_data(){
    signup_username = document.getElementById("signup-mail").value;
    signup_password = document.getElementById("signup-pass").value;
    console.log(signup_username);

    console.log(signup_password);
    signin();
  }

  function validate(){
    console.log(signup_username);

    console.log(signup_password);
    var username = document.getElementById("signin-mail").value;
    var password = document.getElementById("signin-pass").value;
    console.log(signup_username);
    console.log(username);
    console.log(signup_password);
    console.log(password);
    if(username == ""){
        alert("Please enter a User Name")
        formLogin.username.focus()
        return false
    }
    if(password == ""){
        alert("Please enter a Password")
        formLogin.password.focus()
        return false
    }
    if( username == signup_username && password == signup_password){
        alert("Login successfully");
        document.getElementById('gotodash').action = "dashboard.html";
    }
```

```
    else{
     alert("Login failed - Please enter correct Username and Password")
    }
    }
  </script>
<script>

  function ont() {
    document.getElementById('info').style.color = ' #d3ccb7';
  }

</script>
</html>
```

Dashboard.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi" crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>

    <link rel="stylesheet" href="dashboard.css">
    <link rel="icon" href="/static/src/cardiogram.png">
    <title>Welcome</title>

</head>
<body style="background-image: url('https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/homebg.jpg');">




    <div class="container-fluid dash" >
        <div class="header p-3" style="background-color:#d3ccb7">

            <h3"><img src="user.jpg" alt="ico" width="50px" height="50px">Dashboard</h3>
            <div style="display:flex; justify-content: right;align-items:
center;">Welcome<form action="" method="post" enctype="multipart/form-data"><button
type="submit" name="logout" class="combutton btns">Log Out</button></form></div>
        </div>
    </div>

    <div class="container-fluid">
```

Nutrition Assistant Application

```
        <div class="row rowh">
            <div class="col-lg-4 colh">
                <div class="maincon comcolor">
                    <h4>Control panel</h4>
                    <h5><form action="" name="deleteHistory" method="post"
enctype="multipart/form-data"><input style="width: 200px;border:0px;padding:10px
40px;border-radius:20px;" type="submit" name="deleteHistory" value="Delete All
History"></form></h5>
                    <table style="width: 100%;">
                        <tr>
                            <th>History</th>
                        </tr>

                        <tr>
                            <td>2022-11-19 10:14:29</td>
                            <td><form method="post" action="" onsubmit="return false"
class="inline">
                                    <input type="hidden" name="extra_submit_param_view"
value="0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,cal,g,g,g,g,g,g,g,g,g,g,g,g,g,g,g">
                                    <button type="submit" name="submit_param"
onclick="setImage()" value="submit_value" class="btn btn-primary p-1 mb-1">
                                        View
                                    </button>
                                </form>
                            </td>
                            <td><form method="post" action="/home" class="inline">
                                    <input type="hidden" name="extra_submit_param_delete"
value="2022-11-19 10:14:29">
                                    <button type="submit" name="submit_param"
value="submit_value" class="btn btn-danger p-1 mb-1">
                                        Delete
                                    </button>
                                </form>
                            </td>
                        </tr>

                    </table>

                </div>
            </div>
            <div class="col-lg-8 row colh">
                <div class="row normsize">
                    <div class="col-lg normsize roudcorner comcolor">
                        <div class="comflex-col">
                            <img id="myImage" class="normsize" style="border: 5px solid
rgb(25, 25, 25);;" src="https://nutrition-project.s3.jp-tok.cloud-object-
storage.appdomain.cloud/food.jpg" alt="food" width="300" height="300">
                            <button class="combutton btns" onclick="setImage()" >Clear
Image</button>
                        </div>
                    </div>
                    <div class="col-lg normsize roudcorner comcolor">
```

Nutrition Assistant Application

```html
                    <div class="comflex lesssize normpadding">
                        <div>
                            <h1>Upload Image</h1>
                            <form action="" onsubmit="return false" method="post"
enctype="multipart/form-data">
                                <input type=file onchange="readURL(this);" id="file"
name="file">
                                <input style="margin: 10px 0px;" onclick="setImage()"
type=submit value=Upload name="upload">
                            </form>
                        </div>
                    </div>

                </div>
            </div>
        </div>
    </div>
    <div class="container-fluid float" style="display:none">
        <div class="containers floatcontainer ">
            <div class="box1">
                <div class="close">
                    <a href="dashboard.html" class="closes"></a>
                </div>
            </div>
            <div style="background-color: rgb(105, 102, 102);margin-top: 25px;font-size:
30px;font-weight: bold;padding-left: 15px;"><p>Nutrition Facts</p></div>
            <div class="box2">
                <div class="bcol">
                    <table style="width:100%;">
                        <tr>
                          <th>Calories</th>
                          <th>245.43cal</th>
                        </tr>
                        <tr>
                          <th></th>
                          <th>Daily Value</th>
                        </tr>
                        <tr>
                          <th>Total Fat</th>
                          <th>23.45g</th>
                        </tr>
                        <tr>
                            <td>Saturated Fat</td>
                            <td>4.76g</td>
                        </tr>
                        <tr>
                            <td>Polyunsaturated Fat</td>
                            <td>13.43g</td>
                        </tr>
                        <tr>
                            <td>Monounsaturated Fat</td>
```

```
                            <td>7.76g</td>
                        </tr>
                        <tr>
                            <th>Cholesterol</th>
                            <th>123.54g</th>
                        </tr>
                        <tr>
                            <th>Sodium</th>
                            <th>324.76g</th>
                        </tr>
                        <tr>
                            <th>Potassium</th>
                            <th>453.65g</th>
                        </tr>
                        <tr>
                            <th>Sugar</th>
                            <th>0.7g</th>
                        </tr>
                        <tr>
                            <th>Protein</th>
                            <th>43.76g</th>
                        </tr>
                        <tr>
                            <th>Carbohydrates</th>
                            <th>32g</th>
                        </tr>
                        <tr>
                            <th>Vitamin A</th>
                            <th>54IU</th>
                        </tr>
                        <tr>
                            <th>Vitamin C</th>
                            <th>345g</th>
                        </tr>
                        <tr>
                            <th>Vitamin D</th>
                            <th>5.7mg</th>
                        </tr>
                        <tr>
                            <th>Vitamin B5</th>
                            <th>0.4g</th>
                        </tr>
                        <tr>
                            <th>Calcium</th>
                            <th>98.6g</th>
                        </tr>
                    </table>
                </div>

        </div>

    </div>
```

Nutrition Assistant Application

```html
    </div>


[]

    <script>
        //image = document.getElementById('myImage');
        const image = document.getElementById('myImage');


function readURL(input)
{
    //document.getElementById("bannerImg").style.display = "block";

    if (input.files && input.files[0]) {
        var reader = new FileReader();

        reader.onload = function (e) {
            image.src =  e.target.result;
        }

        reader.readAsDataURL(input.files[0]);
    }
}
        function clearImage() {
            image.src = "https://nutrition-project.s3.jp-tok.cloud-object-storage.appdomain.cloud/user.jpg";  //onclick="document.getElementById('myImage').src='src/omplate.png'"
        }

        function setImage() {
            var image = document.getElementById('file');

            var image = document.getElementById('myimage');
            document.getElementsByClassName('float')[0].style.display="block";


        };
    </script>



</body>
</html>
```

Adminpanel.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```html
    <title>Admin Panal</title>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi" crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>

    <link rel="stylesheet" href="{{url_for( 'static', filename = 'css/admin.css')}}">
    <link rel="stylesheet" href="{{url_for('static', filename= 'css/dashboard.css')}}">
    <link rel="icon" href="{{url_for('static', filename= 'src/admin_panal.png')}}">

</head>
<body>

    {% if msg %}
    <div class="msg bg-info" style="padding: 0px 0 0px 50px;margin: 20px 20px 0
20px;border-radius: 20px;">
        <h4>{{msg}}</h4>
    </div>
    {% endif %}

    <div class="container-fluid dash">
        <div class="header p-3">
            <h3><img src="{{url_for('static', filename= 'src/admin.png')}}" alt="ico"
width="50px" height="50px">  Admin Panal</h3>
            <div style="display:flex; justify-content: right;align-items: center;">Welcome
{{user}},  <form action="" method="post" enctype="multipart/form-data"><button
type="submit" name="logout" class="combutton btns">Log Out</button></form></div>
        </div>
    </div>

    <div class="container-fluid">
        <div class="row rowh">
            <div class="col-lg-4 colh">
                <div class="maincon comcolor">
                    <h4>Control panal</h4>
                    <table style="width: 100%;">
                        <tr>
                            <th>Users</th>
                        </tr>
                        {% for row in list %}
                        <tr>
                            <td>{{ row['NAME'] }}</td>
                            <td><form method="post" action="" class="inline">
                                    <input type="hidden" name="extra_submit_param_record"
value="{{row['EMAIL']}}">
                                    <button type="submit" name="submit_param"
value="submit_value" class="link-button">
                                        View Record
                                    </button>
```

```
                                        </form>
                            </td>
                            <td><form method="post" action="" class="inline">
                                    <input type="hidden"
name="extra_submit_param_delete_user" value="{{row['EMAIL']}}">
                                    <button type="submit" name="submit_param"
value="submit_value" class="link-button">
                                            Delete User
                                    </button>
                                </form>
                            </td>
                        </tr>
                        {% endfor %}
                    </table>

                </div>
            </div>
            <div class="col-lg-3 colh">
                <div class="maincon comcolor">
                    <h4>User History</h4>
                    <table>
                        <tr>
                            <th>Records</th>
                        </tr>
                        {% for row in history %}
                        <tr>
                            <td>{{ row['TIME'] }}</td>
                            <td><form method="post" action="{{url_for('homepage')}}"
class="inline">
                                    <input type="hidden"
name="extra_submit_param_nutritions" value="{{row['TIME']}}">
                                    <button type="submit" name="submit_param"
value="submit_value" class="link-button">
                                            View
                                    </button>
                                </form>
                            </td>
                            <td><form method="post" action="{{url_for('homepage')}}"
class="inline">
                                    <input type="hidden"
name="extra_submit_param_delete_record" value="{{row['TIME']}}">
                                    <button type="submit" name="submit_param"
value="submit_value" class="link-button">
                                            Delete
                                    </button>
                                </form>
                            </td>
                        </tr>
                        {% endfor %}
                    </table>

            </div>
```

Nutrition Assistant Application

```html
        </div>

        <div class="col-lg-5 colh">
            <div class="normsize roudcorner comcolor">
                <div class="maincon comcolor">
                    <h4>Nutrition Chart</h4>
                    {% if data %}
                    <table style="width:100%;">
                        <tr>
                          <th>Calories</th>
                          <th>{{data[0]}}</th>
                        </tr>
                        <tr>
                          <th></th>
                          <th>Daily Value</th>
                        </tr>
                        <tr>
                          <th>Total Fat</th>
                          <th>{{data[1]}}mg</th>
                        </tr>
                        <tr>
                            <td>Saturated Fat</td>
                            <td>{{data[2]}}mg</td>
                        </tr>
                        <tr>
                            <td>Polyunsaturated Fat</td>
                            <td>{{data[3]}}mg</td>
                        </tr>
                        <tr>
                            <td>Monounsaturated Fat</td>
                            <td>{{data[4]}}mg</td>
                        </tr>
                        <tr>
                            <th>Cholesterol</th>
                            <th>{{data[5]}}mg</th>
                        </tr>
                        <tr>
                            <th>Sodium</th>
                            <th>{{data[6]}}mg</th>
                        </tr>
                        <tr>
                            <th>Potassium</th>
                            <th>{{data[7]}}mg</th>
                        </tr>
                        <tr>
                            <th>Sugar</th>
                            <th>{{data[8]}}mg</th>
                        </tr>
                        <tr>
                            <th>Protein</th>
                            <th>{{data[9]}}mg</th>
```

```
                                  </tr>
                                  <tr>
                                    <th>Carbohydrates</th>
                                    <th>{{data[10]}}mg</th>
                                  </tr>
                                  <tr>
                                    <th>Vitamin A</th>
                                    <th>{{data[11]}}mg</th>
                                  </tr>
                                  <tr>
                                    <th>Vitamin C</th>
                                    <th>{{data[12]}}mg</th>
                                  </tr>
                                  <tr>
                                    <th>Vitamin D</th>
                                    <th>{{data[13]}}mg</th>
                                  </tr>
                                  <tr>
                                    <th>Vitamin B5</th>
                                    <th>{{data[14]}}mg</th>
                                  </tr>
                                  <tr>
                                    <th>Calcium</th>
                                    <th>{{data[15]}}mg</th>
                                  </tr>
                                </table>
                              {% endif %}


                      </div>
                    </div>
                  </div>
                </div>
            </div>


</body>
</html>
```

8. TESTING

Title	Description	Date
Literature Survey & Information Gathering	**Literature survey on the selected project & gathering information by referring the, technical** **papers, research publications**	**24 September 2022**

Nutrition Assistant Application

Prepare Empathy Map	**Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements**	**25 September 2022**
Ideation	**List the by organizing the brainstorming session and prioritize the top 3 ideas based on the feasibility & importance**	**20 September 2022**
Proposed Solution	**Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc**	**19 September 2022**
Problem Solution Fit	**Prepare problem solution fit document**	**20 September 2022**
Solution Architecture	**Prepare solution architecture document**	**19 September 2022**
Customer Journey	**Prepare the customer journey maps to understand the user interactions & experiences with the application**	**03 October 2022**

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Functional Requirement	**Prepare the functional requirement document**	**03 October 2022**
Data Flow Diagrams	**Draw the data flow diagrams and submit for review**	**03 October 2022**
Technology Architecture	**Prepare the technology architecture diagram**	**03 October 2022**
Prepare Milestone & Activity List	**Prepare the milestones & activity list of the project**	**22 October 2022**
Project Development - Delivery **of Sprint-1, 2, 3 , 4**	**Develop & submit the developed code by testing it**	**In Progress…**

9.RESULT

        This web app provides the food details if the food image/ URL/ Name is entered. It provides the nutrients involved in it and also the nutrient value.

fig : web page to select the service image URL/ food image /food name.
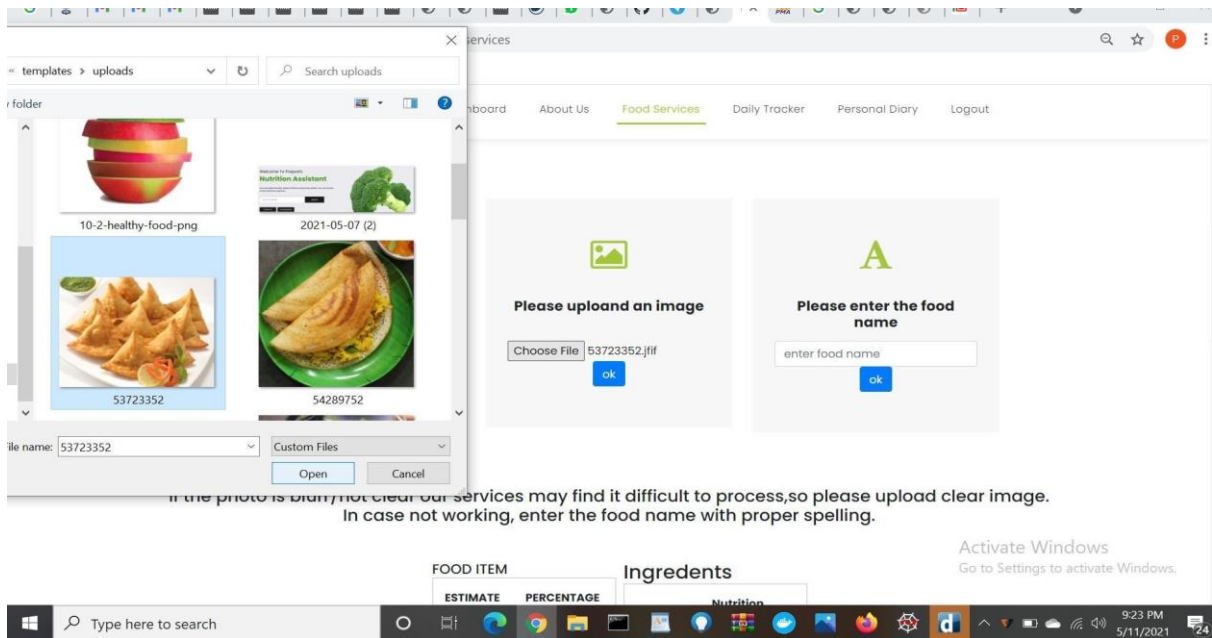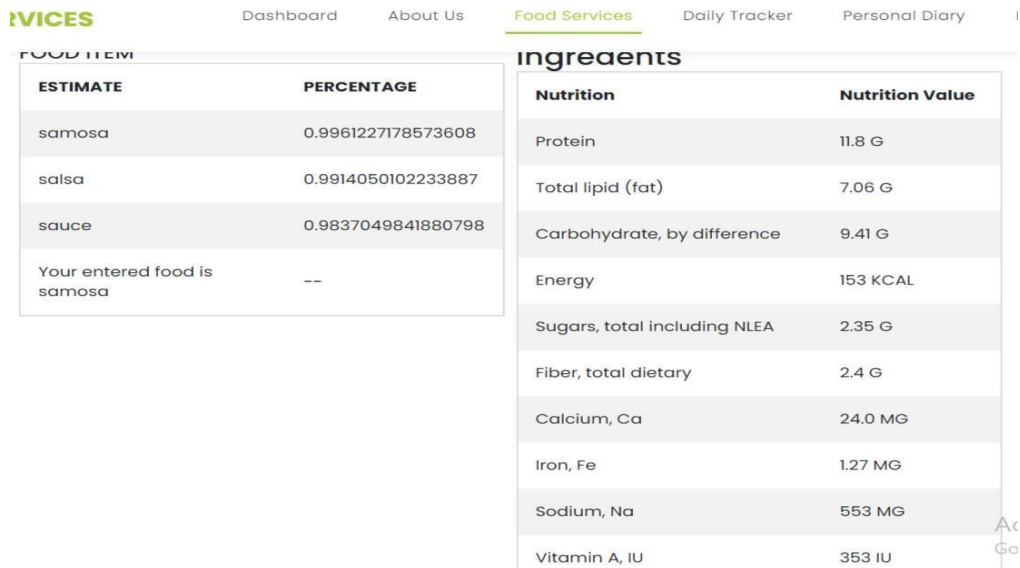
fig : Web page to choose the image

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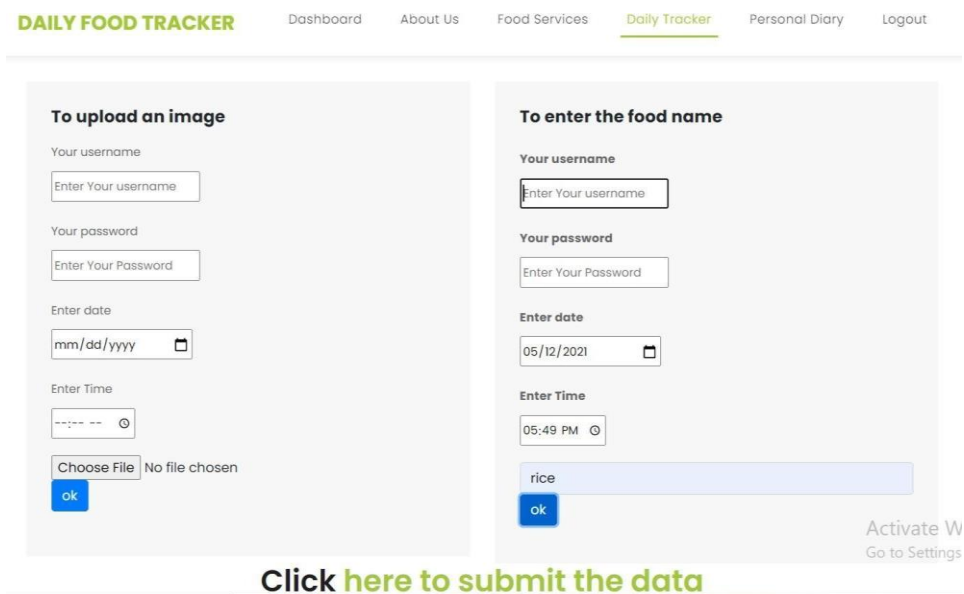
fig : Showing the output of the food entered

- Our another service provides the input of aggregate values of the nutrient consumed, as per the user requirements.

fig : Daily tracker page asking the user to enter the data.

Nutrition Assistant Application

fig : Web page asking the user to submit the data to database

fig : Diary page asking the user to enter the dates he wan to see he information

Total Nutrients consumed

Protein(g)	lipid(g)	Carbohydrate(g)	Energy(kcal)	Sugars(g)	Fiber(g)	Calcium(mg)	Iron(mg)	Sodium(mg)	Vitamin A(iu)	Vitamin C(iu)	Cholesterol(mg)	Fatty acids trans(g)	Fatty acids saturated(g)
88.19	65.27	313.0	4673.0	58.28	25.74	0.72	22.1	1488.0	918.82	4943.0	2009.0	16.7	167.0

Your data

Id	Date	Time	Food	Protein(g)	lipid(g)	Carbohydrate(g)	Energy(kcal)	Sugars(g)	Iron(mg)	Sodium(mg)	Vitamin A(iu)	Vitamin C(iu)	Cholesterol(mg)	Fatty acids trans(g)	Fatty acids saturated(g)	Calcium(mg)
17	2021-05-05	16:46	PIZZA	10.2	10.8	28.0	242.0	1.27	1.9	127.0	127.0	669.0	0.0	0.0	22.0	0.0

fig : Display page showing the aggregate details of the user food nutrients

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17	2021-05-05	16:46	PIZZA	10.2	10.8	28.0	242.0	1.27	1.9	127.0	127.0	669.0	0.0	0.0	22.0	0.0	5.1
22	2021-05-07	02:17	SAMOSA SEASONED WHOLE BLENDS, SAMOSA	11.8	7.06	9.41	153.0	2.35	2.4	24.0	24.0	553.0	353.0	2.8	41.0	0.0	2.35
23	2021-05-07	22:54	SAMOSA SEASONED WHOLE BLENDS, SAMOSA	11.8	7.06	9.41	153.0	2.35	2.4	24.0	24.0	553.0	353.0	2.8	41.0	0.0	2.35
24	2021-05-07	22:56	Food you had is = pizza	11.4	9.69	33.3	1110.0	3.58	2.3	188.0	2.48	598.0	358.0	1.4	17.0	0.241	4.46
25	2021-05-07	23:02	Food you had is = Milk shakes, thick vanilla	3.86	3.03	17.8	112.0	17.8	0.0	146.0	0.1	95.0	91.0	0.0	12.0	0.0	1.39
27	2021-05-07	23:32	Food you had is = PIZZA	11.4	9.69	33.3	1110.0	3.58	2.3	188.0	2.48	598.0	358.0	1.4	17.0	0.241	4.46
28	2021-05-07	23:54	PIZZA	11.4	9.69	33.3	1110.0	3.58	2.3	188.0	188.0	598.0	358.0	1.4	17.0	0.241	4.46
29	2021-05-08	12:52	RICE	3.47	2.43	26.4	139.0	1.39	1.4	28.0	1.88	465.0	69.0	2.5	0.0	0.0	0.0
30	2021-05-08	15:41	SUGAR	6.19	2.3	85.8	344.0	17.8	3.8	535.0	535.0	13.0	0.0	1.3	0.0	0.0	0.143
32	2021-05-10	02:40	RICE	3.47	2.43	26.4	139.0	1.39	1.4	28.0	1.88	465.0	69.0	2.5	0.0	0.0	0.0
33	2021-05-10	02:41	pea soup	3.2	1.09	9.88	61.0	3.19	1.9	12.0	12.0	336.0	0.0	0.6	0.0	0.0	0.524

fig : Display of user food details

fig : Dashboard of the web app

Nutrition Assistant Application

FOOD DETAILS & NUTRIENT

If you enter the image of the food we can give you the list of nutrient values it has. we also provide a service that can tell you the list of ingredients just by entering the food name

CHECK HERE

Hello pranav,

You have consumed the following nutrients From - 2021-05-05 To-2021-05-10,

Protein   88.19g,

lipid   65.27g,

Carbohydrate   313.0g,

Energy   4673.0kcal,

Sugars   58.28g,

Fiber   25.74g,

Calcium   0.72mg,

Iron   22.1mg,

Sodium   1488.0mg,

Vitamin_A   918.82u,

Vitamin_C   4943.0iu,

Cholesterol   2009.0mg,

Fatty_acids_trans   16.7g,

Fatty_acids_saturated   167.0g

We provide you the information based on the food input.You can check the food contents by uploading the food image/image URL/food name.
We also provide the service to track your daily food intake and track the Nutrition intake. you can then view your total nutrient consumption per day or week.

TRACK YOUR FOOD & ASSIST YOU

For any query, message to this mail

or

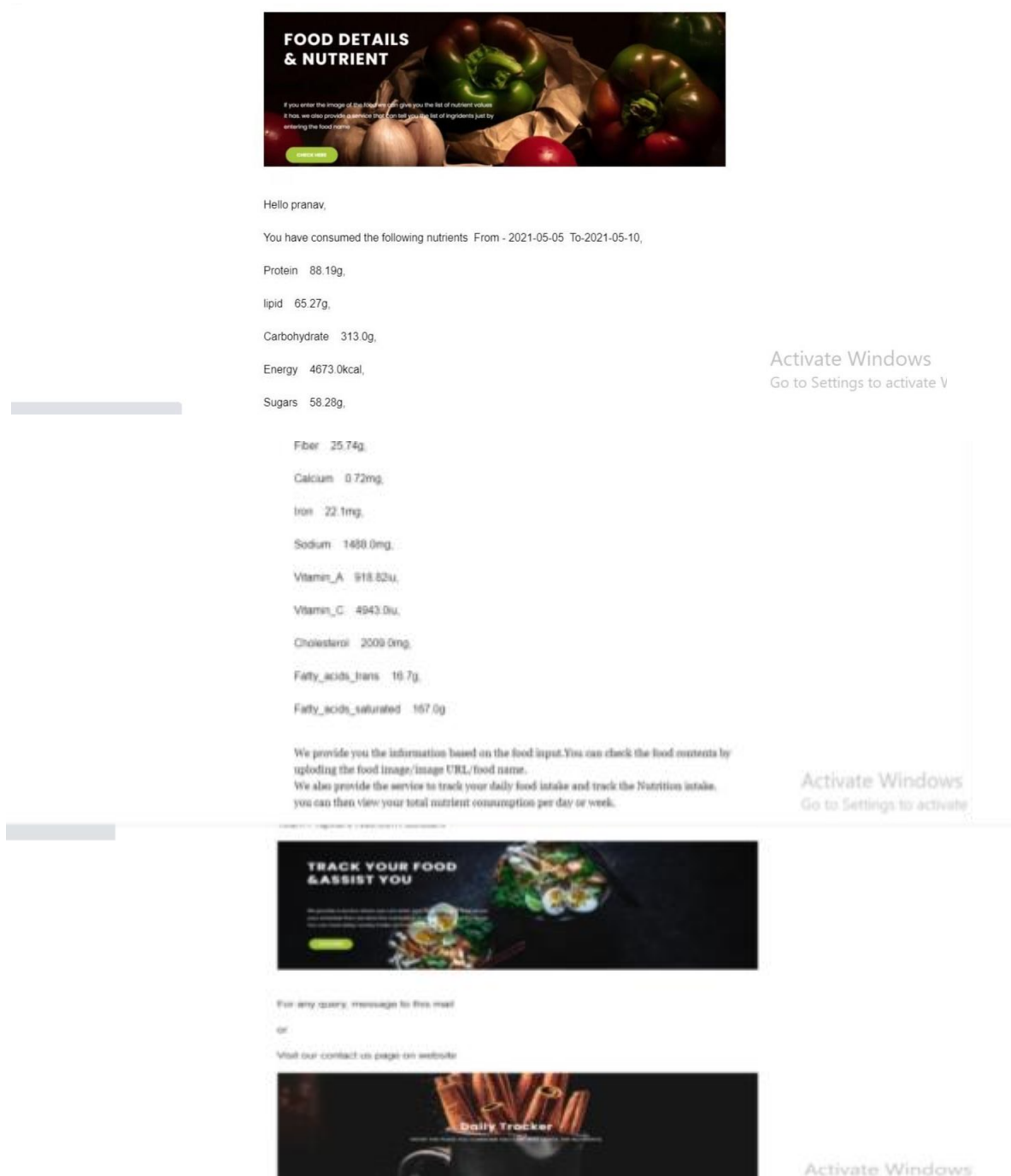Visit our contact us page on website

Daily Trocker

fig : Mail received by the app regarding the nutrient information

10 ADVANTAGES AND DISADVANTAGES

10.1 Advantage

Our web app uses the food image given by the user then processes that to the nutrient values of the food then displays to the user. The user can enter the food details that he consumes daily based on time and date of consumption. The user can then go to the diary page and view the data entered by him between any particular dates. He can also view the aggregate nutrient details.

This application can be used on the recommendation of the doctor or the hospitals where one can track all the data that the patient consumed to track the nutrient details of the patient.

10.2 Disadvantages

As the food around the world is very diverse, it is difficult to recognize some of the local foods. Both the APIs are having a very wide range of food images. But its difficult to find all the food images.

In order to overcome the above disadvantages I have given the field where one can directly enter the food name. We then process the name to the nutrient values.

11. CONCLUSION

As there is improvement in people's standards of living, there is neglect in the proper balanced diet and this is reflective of the risks to people's health. People need to control their daily calorie intake by eating healthier foods.

My web app keeps the record of what the user eat and displays the nutrients he consumed which makes the user to find what nutrients he consumedin what amounts.

12. FUTURE SCOPE

As people are in this fast and busy world, it becomes important to track the food details. I have planed to add a feature where the user can set the goal of taking the nutrients per day / week. then our app tells whether he has reached

the goal.

I will also include the service where the user can update his weight and height based on which our app gives the Nutrients data that one needs to consume.

I have also planned to link the daily trackers in the mobiles like Google fit, from where we can get the calories lost and our web app give the data of nutrients to be consumed.

APPLICATIONS

This application has the following applications.

- The uploaded food image is processed and then its the nutrient value is displayed.
- The URL/The food name can also be given as food input.
- The user can track the daily intake of food
- User can track the nutrient values of the food that He consume.
- User can store the data in his table in the database.
- He can access the data whenever he wishes.
- Users can watch their aggregate nutrients consumed and also received the mail of the aggregate report.
- This application can be recommended by the doctor/ hospitals who wishes to track the food/nutrient consumption of the patient.

13.APPENDIX

- I have used IBM Watson Visual recognition v3 API for Food Model for food recognition. Where it take the food image/URL as input and give the food name as output.
- USDA API uses the food name given and then processes it to the nutrient list.

Nutrition Assistant Application

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