PROJECT REPORT

Nutrition Assistant Application

Project By:

Shanmuga Sundareswari S.M

Jemima Rubavathi J

Santhiya S

Priya Dharsini K

Kaviyaa V

Department of Computer Science Engineering

2019-2023

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Overview

As there is improvement in people's standards of living, obesity rates are also 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 the food packaging comes with nutrition labels, it's still not very convenient for people to refer.

Most of the 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 the application is to help people know about the nutrient value of the food they eat. This application provides a service where the user can upload the food image / food name/image URL and the app provides the nutrient value of the food. This application can be used personally to take care of ones health.

2. LITERATURE SURVEY

2.1 Existing Problem

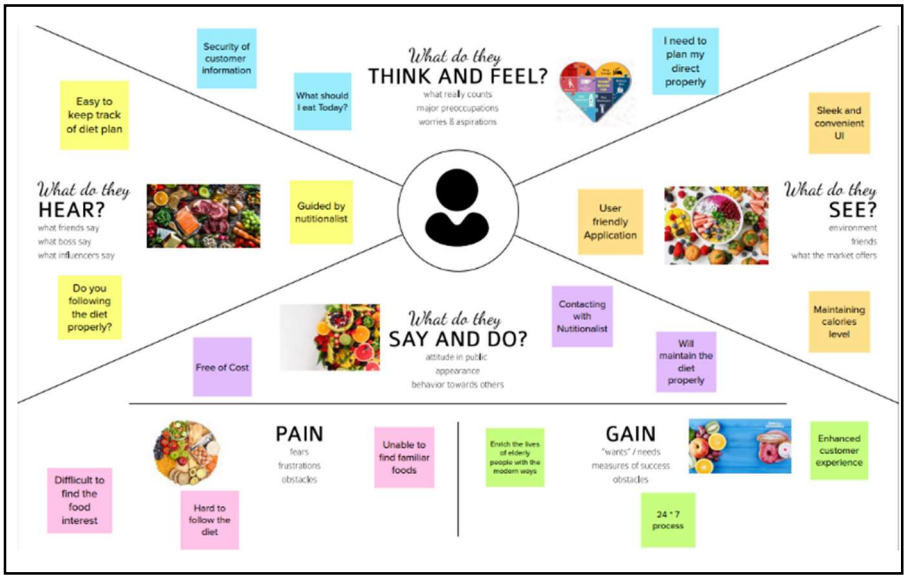
In the current generation people eat lot of junk and other fast foods which may lead to obesity and other diseases. So, it is important to maintain a healthy diet. But people find it difficult to prepare the diet plan and find the nutritional value for each food. Thus if we provide an application to fetch the nutritional value for the given food it will help the diet freaky persons to maintain their diet.

2.2 Proposed solution

This project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food. Our method employs Clarifai's AI-Driven Food Detection Model for accurate food identification and Food API's to give the nutritional value of the identified food.

3. IDEATION AND PROPOSED SOLUTION

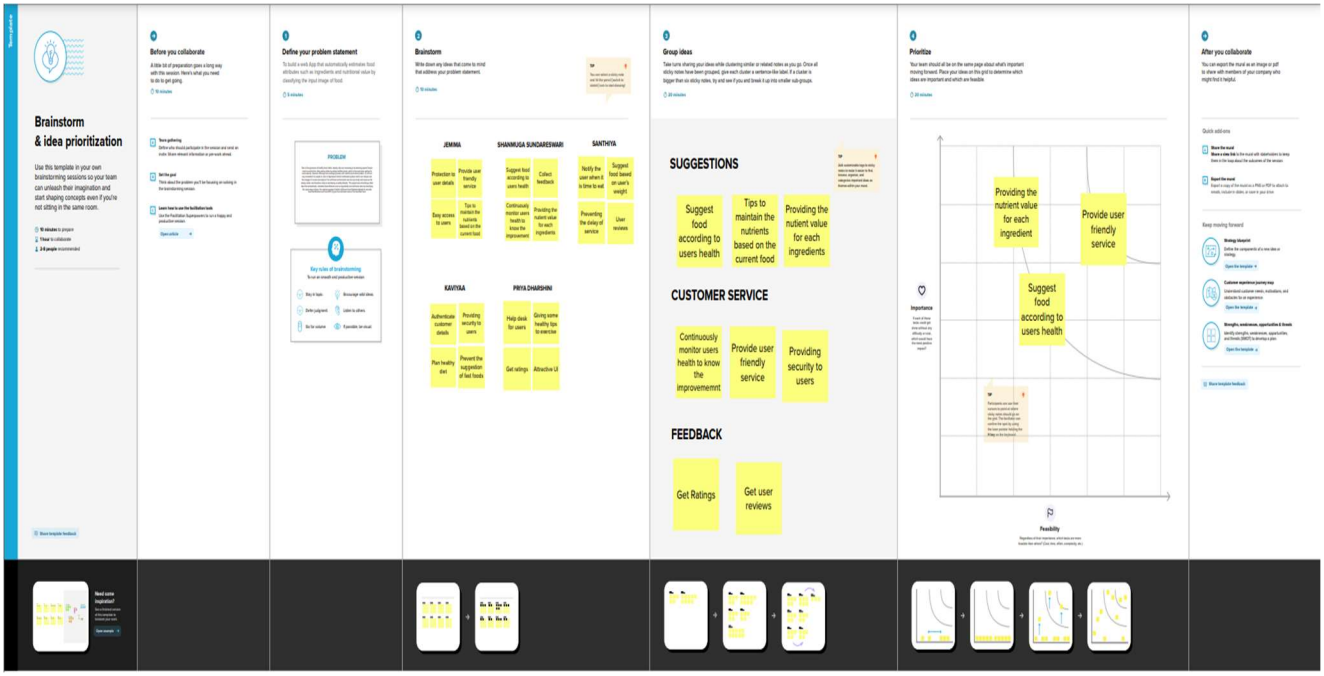
3.1 Empathy Map



3.2 Ideation

The user uploads the image of the food for which they require the nutritional value. Once the image is uploaded, the food image is identified and its ingredients are fetched and from the API we can get the nutritional value of each ingredient.

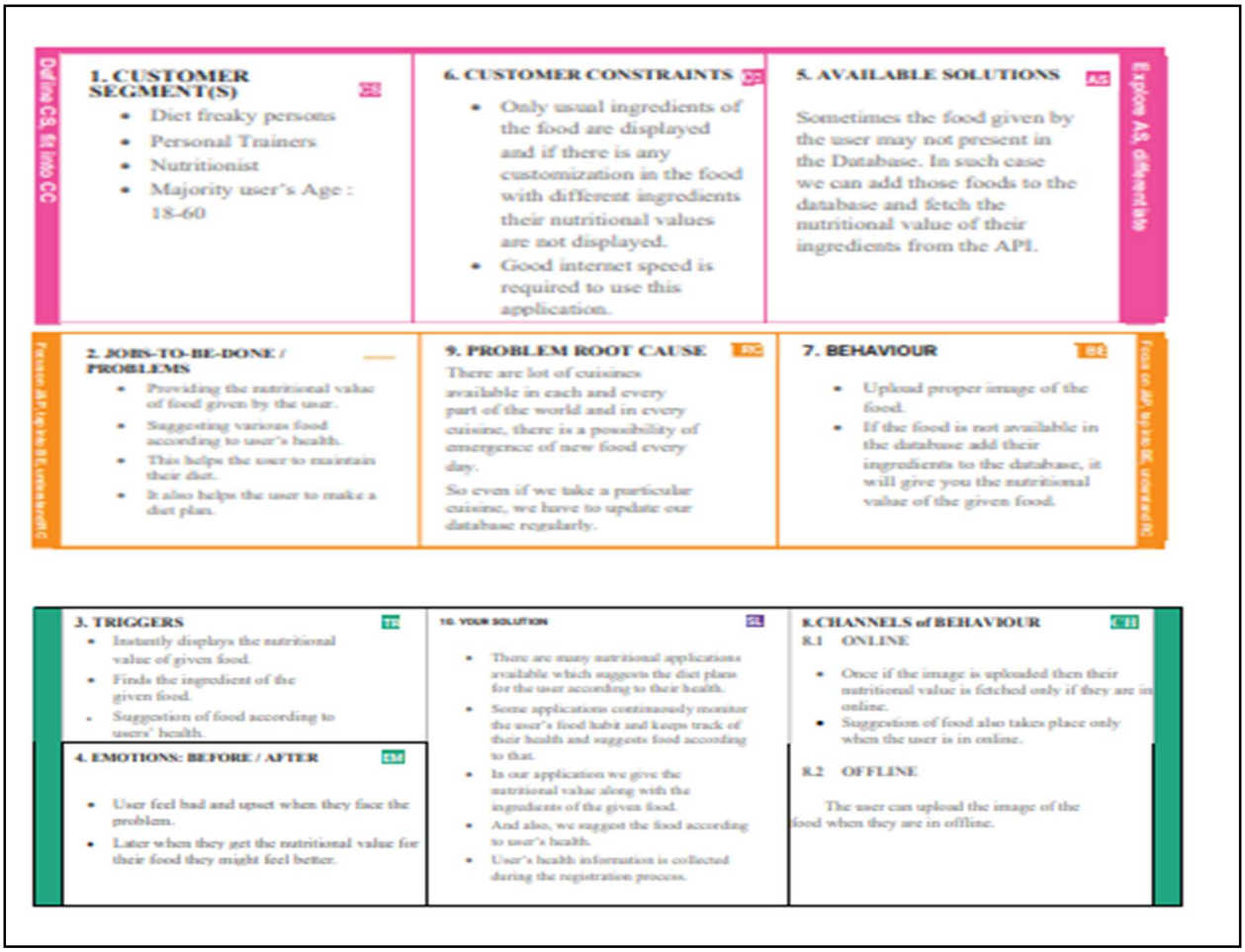
3.3 BrainStorming



3.4 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Due to the ignorance of healthy food habits, 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, which is the most basic method to avoid obesity. However, although food packaging comes with nutrition (and calorie) labels, it's still not very convenient for people to refer to Appbased nutrient dashboard systems which can analyze real-time images of a meal and analyze it for nutritional content which can be very handy and improves the dietary habits, and therefore, helps in maintaining a healthy lifestyle.
2.	Idea / Solution description	This project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food. Our method employs Clarifai's AI-Driven Food Detection Model for accurate food identification and Food API's to give the nutritional value of the identified food.
3.	Novelty / Uniqueness	• Nutritional value for each ingredient is displayed. • Suggests food based on user's health condition.
4.	Social Impact / Customer Satisfaction	• This application is used to reduce obesity. • This application helps to lead a healthy life.
5.	Business Model (Revenue Model)	NUTRITIONAL ASSISTANT APPLICATION Display the nutritional value of identified food Display the ingridients present in the food Suggest food based on user's health
6.	Scalability of the Solution	This application is widely used by heath conscious people and people who follow diet.

3.5 Problem Solution Fit



4. REQUIREMENT ANALYSIS

4.1 Functional Requirement

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 Form.
FR-2	User Confirmation	Confirmation via Retyping the password.
FR-3	Uploading Image	The system should able to get the image from the user.
FR-4	Identification of image	The system should able to identify the image of the food given using AI Driven model.
FR-5	Obtain the ingredients	The system must able to obtain the ingredients of the given food image.
FR-6	Display the nutritional value	The system must able to display the nutritional value of the food with the help of nutritional API.

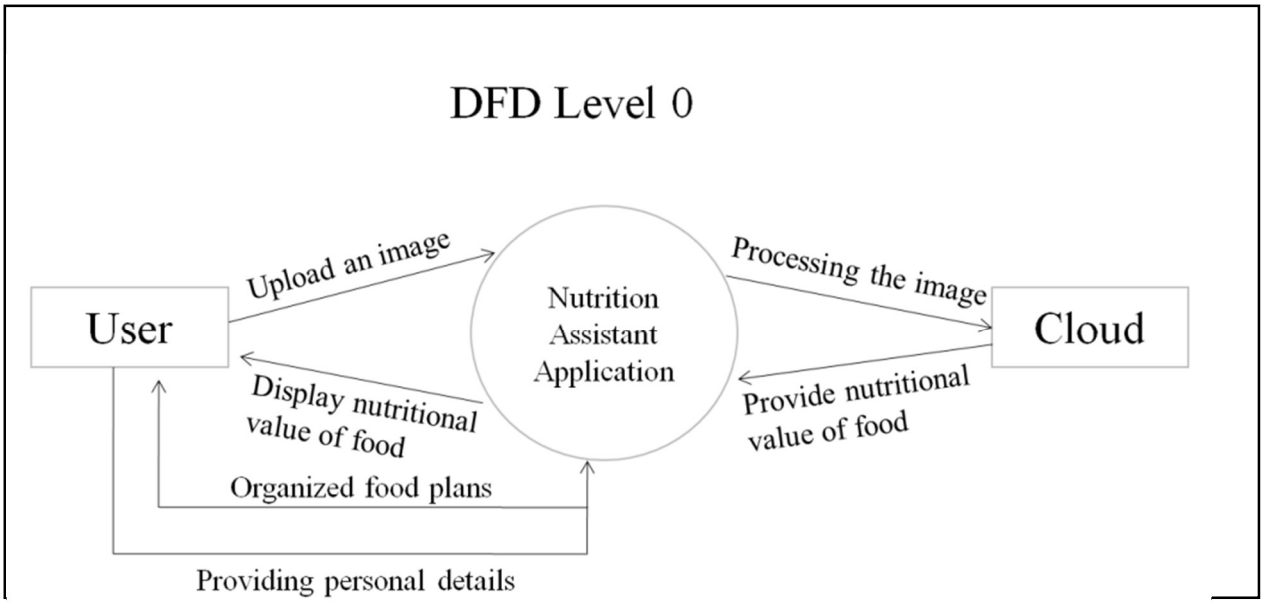
4.2 Non-Functional Requirement

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

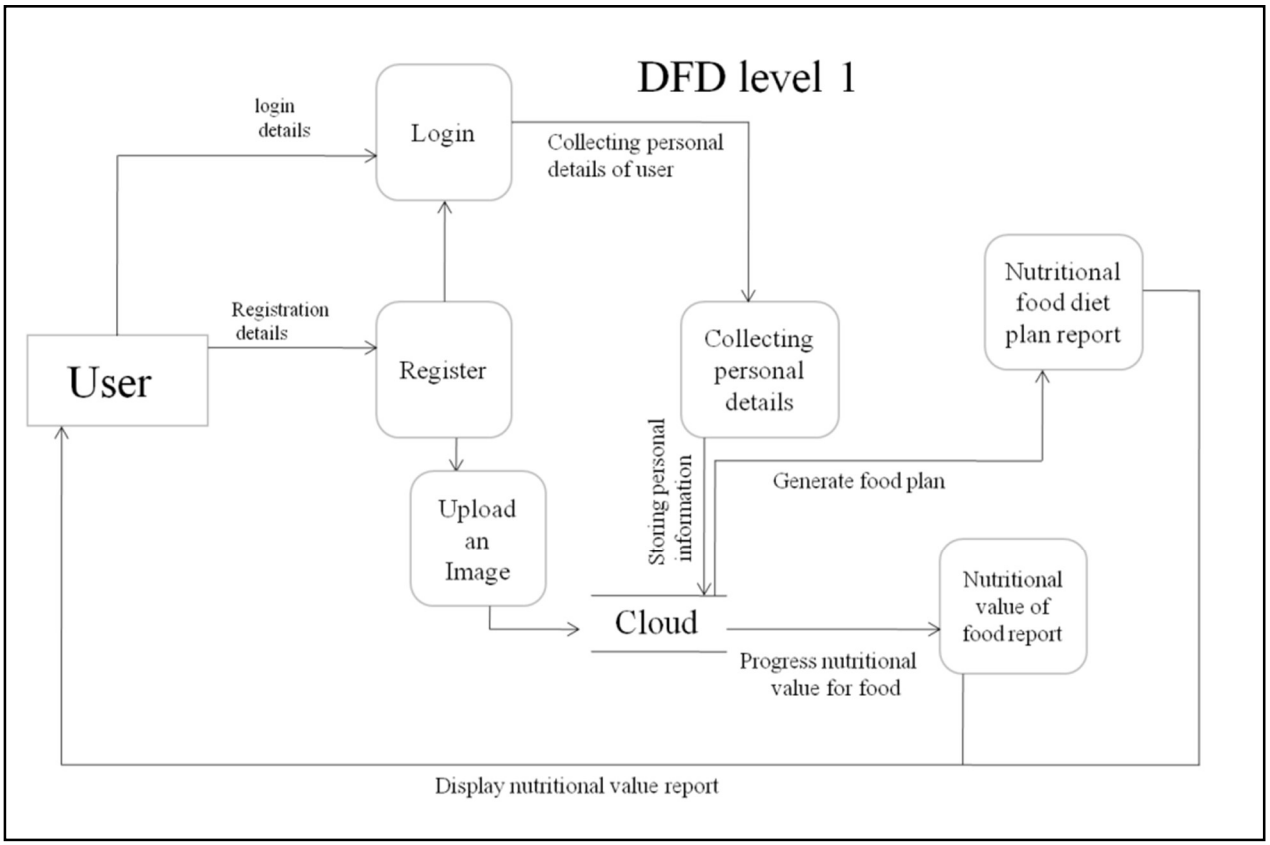
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Only registered user is allowed to use the application.
NFR-2	**Security**	Authentication of user is done for security purpose.
NFR-3	**Reliability**	The user gets the standard nutritional value of the given food.
NFR-4	**Performance**	User satisfaction is ensured by getting their feedback.
NFR-5	**Availability**	This application can be used by the user when they are in online.
NFR-6	**Scalability**	This application can be used in all operating system and it can handle quite large number of users too.

5. PROJECT DESIGN

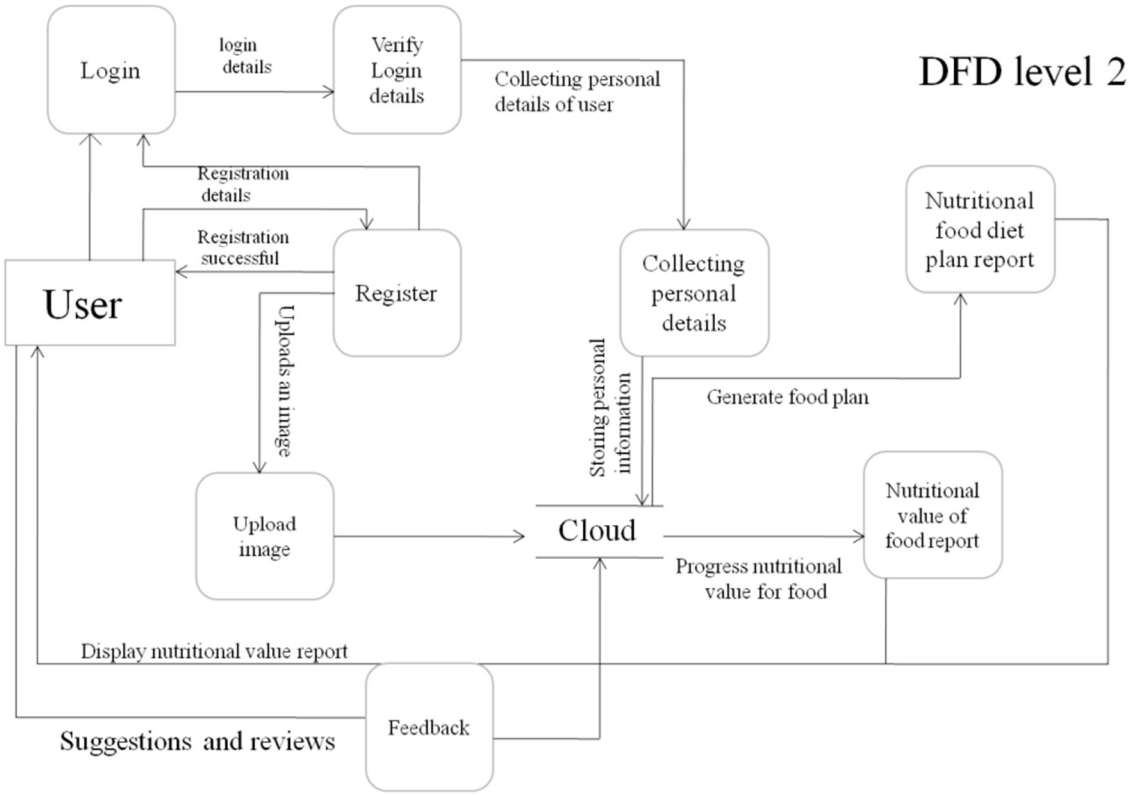
5.1 Data Flow Diagrams



DFD Level 0

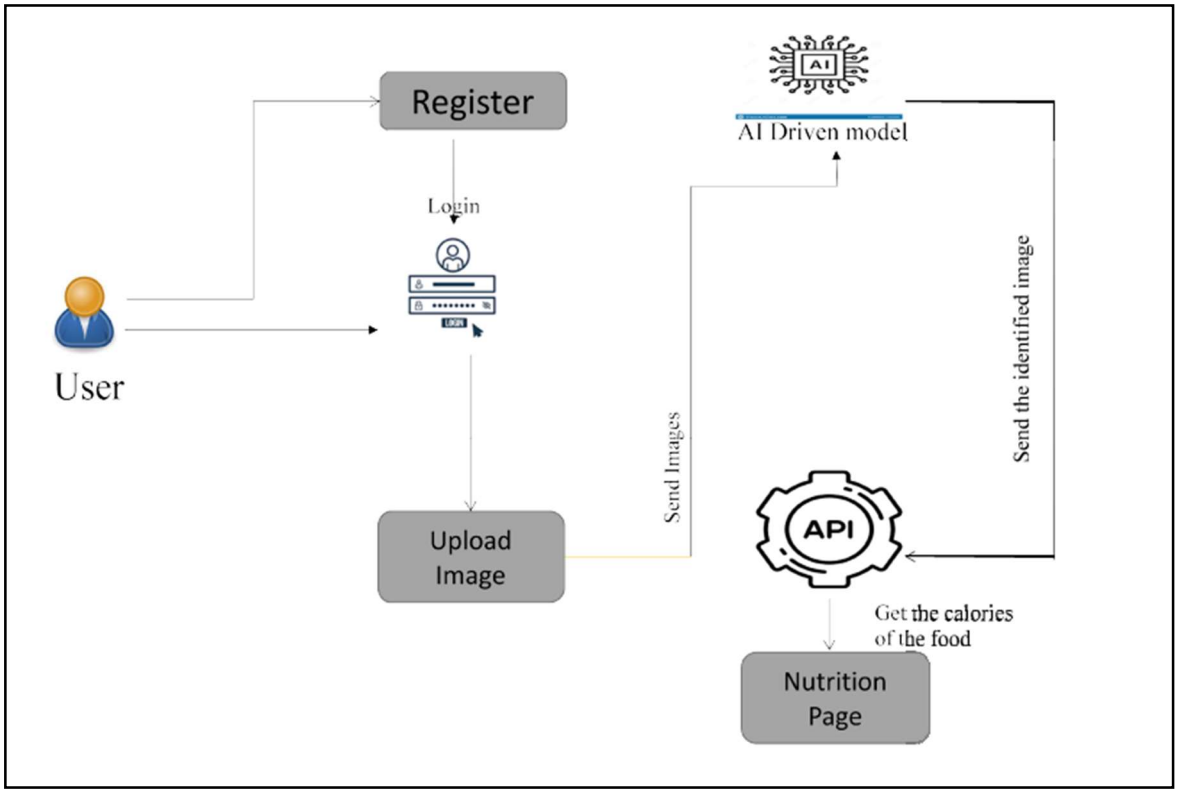


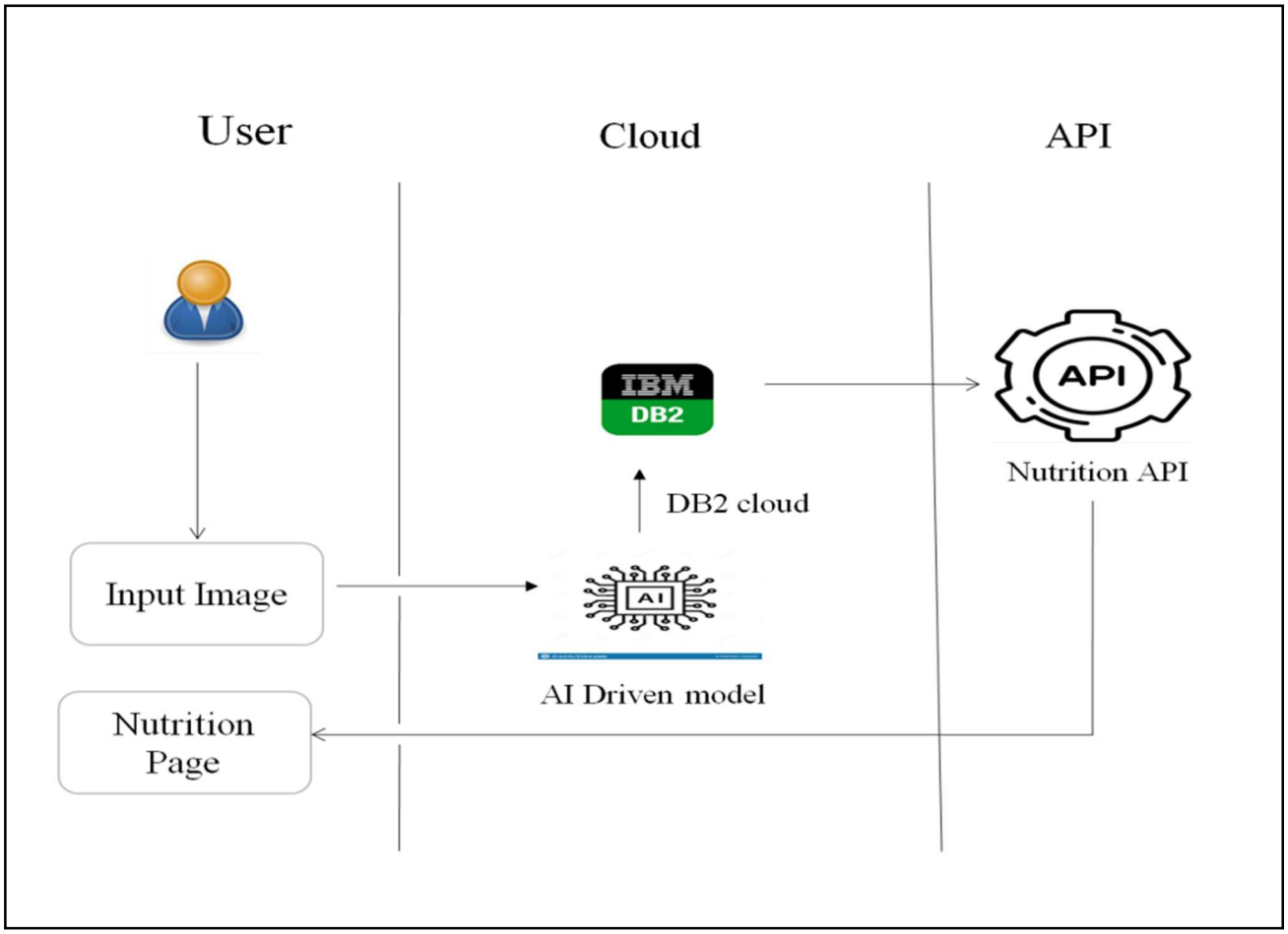
DFD Level 1



5.2 Solution and Technical Architecture

Solution Architecture





Technical Architecture

5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, 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
	Login	USN-3	As a user, I can log into the application by entering email & password	I can login when password and email are correct	High	Sprint-1
	Collecting personal details	USN-4	As a user,I can provide a personal information for processing	I can enter the personal details	Medium	Sprint-1
	Upload image	USN-5	As a user,I can upload an image for the processing of food.	I can upload a food image.	High	Sprint-1
	Feedback	USN-6	As a user,I can give feedback	I can give feedback about the application	Low	Sprint-1
Cloud	Nutritional value of report	USN-7	In cloud the food image is processed and provides the nutritional value of food.	It gives the nutritional value of food.	High	Sprint-2
	Nutritional food diet plan report	USN-8	In cloud the food diet plan based on nutritional value is generated based on the personal information provided by the user.	It provides the diet nutritional plan.	Medium	Sprint-2

6. PROJECT PLANNING AND SCHEDULING

6.1 Sprint Planning and Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering the username, password, and confirming my password.	10	High	2
Sprint-1		USN-2	As a user, I will enter all health-related details which are asked.	10	High	2
Sprint-2	Login	USN-3	As a user, I can log into the application by entering the username and password.	20	High	1
Sprint-3	Image uploading page	USN-4	As a user, I can upload the image either by choosing the file from my device or dragging and dropping the image from my device.	20	High	2
Sprint-4	Nutritional Page	USN-5	As a user, I can view the nutritional value of given input image of food.	10	High	3
Sprint-4		USN-6	As a user, I can get the suggestion from the application based on my heath details.	10	Medium	2

6.2 Sprint Delivery Schedule

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	28 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	04 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	11 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	15 Nov 2022

Velocity:

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)

$$AV = \frac{sprint\ duration}{velocity}$$

= 20/6 =3.33

7. CODING AND SOLUTIONING

Css

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@300&display=swap');


* {
  margin: 0;
  padding: 0;
  font-family: "Poppins", sans-serif;
}


}
div {
  position: absolute;
}
#rangeValue {
  position: relative;
  display: block;
  font-size: 2em;
  color: #FF0000;
```

```
  font-weight: 400;
}
.range {
  width: 100px;
  height: 15px;
  -webkit-appearance: none;
  background: #111;
  outline: none;
  border-radius: 15px;
  overflow: hidden;
  box-shadow: inset 0 0 5px rgba(0, 0, 0, 1);
}
.range::-webkit-slider-thumb {
  -webkit-appearance: none;
  width: 15px;
  height: 15px;
  border-radius: 50%;
  background: #00fd0a;
  cursor: pointer;
  border: 4px solid #333;
  box-shadow: -407px 0 0 400px #00fd0a;
}

body {
```

```
  background-color: #328f8a;
  background-image: linear-gradient(45deg,#328f8a,#08ac4b);
  font-family: "Roboto", sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.container {
    padding: 50px;
    background-color: #328f8a;
    background-image: linear-gradient(45deg,#328f8a,#08ac4b);
}

input[type=text], input[type=password], textarea {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}

input[type=range] {
  width: 50%;
```

```
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}
input[type=text]:focus, input[type=password]:focus {
  background-color: orange;
  outline: none;
}

input[type=date], input[type=number]  {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
select {
  width: 100%;
  padding: 100px;
```

```
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
 div {
            padding: 10px 0;
         }
hr {
  border: 1px solid #f1f1f1;
  margin-bottom: 25px;
}
.registerbtn {
  background-color: #4CAF50;
  color: white;
  padding: 16px 20px;
  margin: 8px 0;
  border: none;
  cursor: pointer;
  width: 80%;
  opacity: 0.9;
  position:center;
}
.registerbtn:hover {
```

```
  opacity: 1;
}
</style>
</head>
<body>
<form>
  <div class="container">
  <center>  <h1> Registration Form</h1> </center>
  <hr>
  <label>Firstname:   </label>  <br>
<input type="text" name="firstname" placeholder= "Firstname" size="15" required /> <br>
<label> Middlename:    </label>   <br>
<input type="text" name="middlename" placeholder="Middlename" size="15" required />
<br>
<label> Lastname:      </label>    <br>
<input type="text" name="lastname" placeholder="Lastname" size="15"required /> <br>
<label> Date of Birth: </label>    <br>
<input type="date" name="dob" placeholder="Date of Birth" size="15"required /> <br>
<label> Height:        </label>    <br>
<input type="number" name="height" placeholder="Height" size="15"required /> <br>
<label> Weight:        </label>   <br>
<input type="number" name="weight" placeholder="Weight" size="15"required /> <br>
<label> Blood Group:   </label>    <br>
<input type="text" name="blood" placeholder="Blood Group" size="15"required /> <br>
```

```
<div>
<label>
Gender :
</label><br>
<input type="radio" value="Male" name="gender" checked > Male
<input type="radio" value="Female" name="gender"> Female
<input type="radio" value="Other" name="gender"> Other

</div>
<label>
Phone :
</label>    <br>
<input type="text" name="phone" placeholder="phone no." size="10"/ required>  <br>
<label>
Current Address :
</label>    <br>
<textarea cols="80" rows="5" placeholder="Current Address" value="address" required>
</textarea> <br>

<div>
 <label><h1>Details</h1></label><br>
 <input type="radio" value="Diabetics" name="details" checked >   Diabetics
<input type="radio" value="cholestrol" name="details"> Cholestrol <br><br>
<label>Pressure:</label><br>
```

```
<div>
        <span id="rangeValue">0</span>
        <Input class="range" type="range" name "" value="0" min="150" max="200"
onChange="rangeSlide(this.value)" onmousemove="rangeSlide(this.value)"></Input>
    </div>
    <script type="text/javascript">
        function rangeSlide(value) {
            document.getElementById('rangeValue').innerHTML = value;
        }
    </script>
</div>
 <label><h1>Sign Up</h1></label><br>
 <label for="email"><b>Email</b></label> <br>
 <input type="text" placeholder="Enter Email" name="email" required> <br>

    <label for="psw"><b>Password</b></label>  <br>
    <input type="password" placeholder="Enter Password" name="psw" required>  <br>

    <label for="psw-repeat"><b>Re-type Password</b></label>  <br>
    <input type="password" placeholder="Retype Password" name="psw-repeat" required>
<br>
    <button type="submit" class="registerbtn"><a href="login.html">Register</a></button>
</form>
</body>
</html>
```

Login

```
<html>
<head>
<link rel = "stylesheet" type="text/css" href="style.css">
<title>Nutritution Assistent</title>
</head>
<body>
   <form>
      <div class="login-page">
     <div class="form">
      <div class="login">
        <div class="login-header">
          <h3>LOGIN</h3>
          <p>Please enter your credentials to login.</p>
        </div>
      </div>
      <form class="login-form">
        <input type="text" placeholder="username"/>
        <input type="password" placeholder="password"/>
        <button>Register</button>
        <p class="message">Not registered? <a href="register.html">Create an
account</a></p>
      </form>
     </div>
   </div>
```

```
    </form>
</body>
</html>
```

Register

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@300&display=swap');


* {
  margin: 0;
  padding: 0;
  font-family: "Poppins", sans-serif;
}


}
div {
  position: absolute;
}
#rangeValue {
  position: relative;
  display: block;
```

```
  font-size: 2em;
  color: #FF0000;
  font-weight: 400;
}
.range {
  width: 100px;
  height: 15px;
  -webkit-appearance: none;
  background: #111;
  outline: none;
  border-radius: 15px;
  overflow: hidden;
  box-shadow: inset 0 0 5px rgba(0, 0, 0, 1);
}
.range::-webkit-slider-thumb {
  -webkit-appearance: none;
  width: 15px;
  height: 15px;
  border-radius: 50%;
  background: #00fd0a;
  cursor: pointer;
  border: 4px solid #333;
  box-shadow: -407px 0 0 400px #00fd0a;
}
```

```
body {
  background-color: #328f8a;
  background-image: linear-gradient(45deg,#328f8a,#08ac4b);
  font-family: "Roboto", sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.container {
    padding: 50px;
    background-color: #328f8a;
    background-image: linear-gradient(45deg,#328f8a,#08ac4b);
}

input[type=text], input[type=password], textarea {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}
```

```
input[type=range] {
  width: 50%;

  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}
input[type=text]:focus, input[type=password]:focus {
  background-color: orange;
  outline: none;
}

input[type=date], input[type=number]  {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
select {
```

```
  width: 100%;
  padding: 100px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
 div {
            padding: 10px 0;
         }
hr {
  border: 1px solid #f1f1f1;
  margin-bottom: 25px;
}
.registerbtn {
  background-color: #4CAF50;
  color: white;
  padding: 16px 20px;
  margin: 8px 0;
  border: none;
  cursor: pointer;
  width: 80%;
  opacity: 0.9;
  position:center;
```

```
}
.registerbtn:hover {
  opacity: 1;
}
</style>
</head>
<body>
<form>
  <div class="container">
  <center>  <h1> Registration Form</h1> </center>
  <hr>
  <label>Firstname:   </label>  <br>
<input type="text" name="firstname" placeholder= "Firstname" size="15" required /> <br>
<label> Middlename:    </label>   <br>
<input type="text" name="middlename" placeholder="Middlename" size="15" required />
<br>
<label> Lastname:      </label>    <br>
<input type="text" name="lastname" placeholder="Lastname" size="15"required /> <br>
<label> Date of Birth: </label>    <br>
<input type="date" name="dob" placeholder="Date of Birth" size="15"required /> <br>
<label> Height:        </label>    <br>
<input type="number" name="height" placeholder="Height" size="15"required /> <br>
<label> Weight:        </label>   <br>
<input type="number" name="weight" placeholder="Weight" size="15"required /> <br>
<label> Blood Group:   </label>    <br>
```

```
<input type="text" name="blood" placeholder="Blood Group" size="15"required /> <br>


<div>

<label>

Gender :

</label><br>

<input type="radio" value="Male" name="gender" checked > Male

<input type="radio" value="Female" name="gender"> Female

<input type="radio" value="Other" name="gender"> Other


</div>

<label>

Phone :

</label>    <br>

<input type="text" name="phone" placeholder="phone no." size="10"/ required>  <br>

<label>

Current Address :

</label>    <br>

<textarea cols="80" rows="5" placeholder="Current Address" value="address" required>

</textarea> <br>


<div>

 <label><h1>Details</h1></label><br>

 <input type="radio" value="Diabetics" name="details" checked >   Diabetics
```

```
<input type="radio" value="cholestrol" name="details"> Cholestrol <br><br>

<label>Pressure:</label><br>

<div>

      <span id="rangeValue">0</span>

      <Input class="range" type="range" name "" value="0" min="150" max="200"
onChange="rangeSlide(this.value)" onmousemove="rangeSlide(this.value)"></Input>

   </div>

   <script type="text/javascript">

      function rangeSlide(value) {

         document.getElementById('rangeValue').innerHTML = value;

      }

   </script>



</div>

 <label><h1>Sign Up</h1></label><br>

 <label for="email"><b>Email</b></label> <br>

 <input type="text" placeholder="Enter Email" name="email" required> <br>


   <label for="psw"><b>Password</b></label>  <br>

   <input type="password" placeholder="Enter Password" name="psw" required>  <br>


   <label for="psw-repeat"><b>Re-type Password</b></label>  <br>

   <input type="password" placeholder="Retype Password" name="psw-repeat" required>
<br>
```

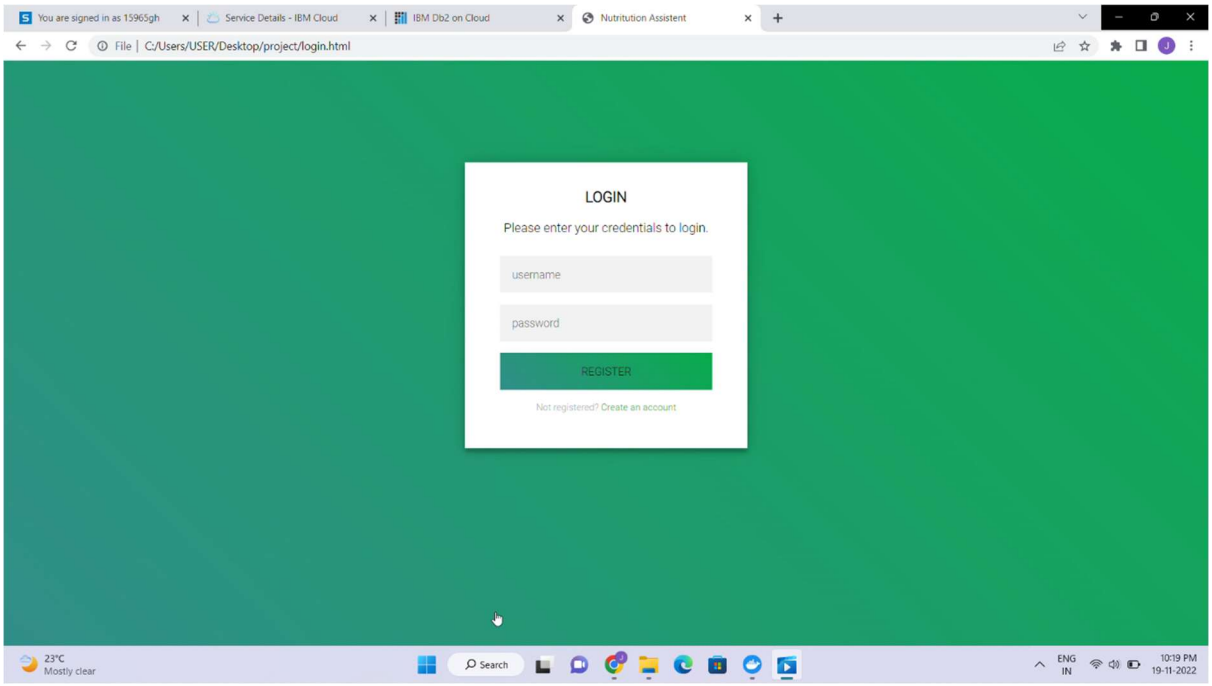
```
    <button type="submit" class="registerbtn"><a href="login.html">Register</a></button>
</form>
</body>
</html>
```

Input.html

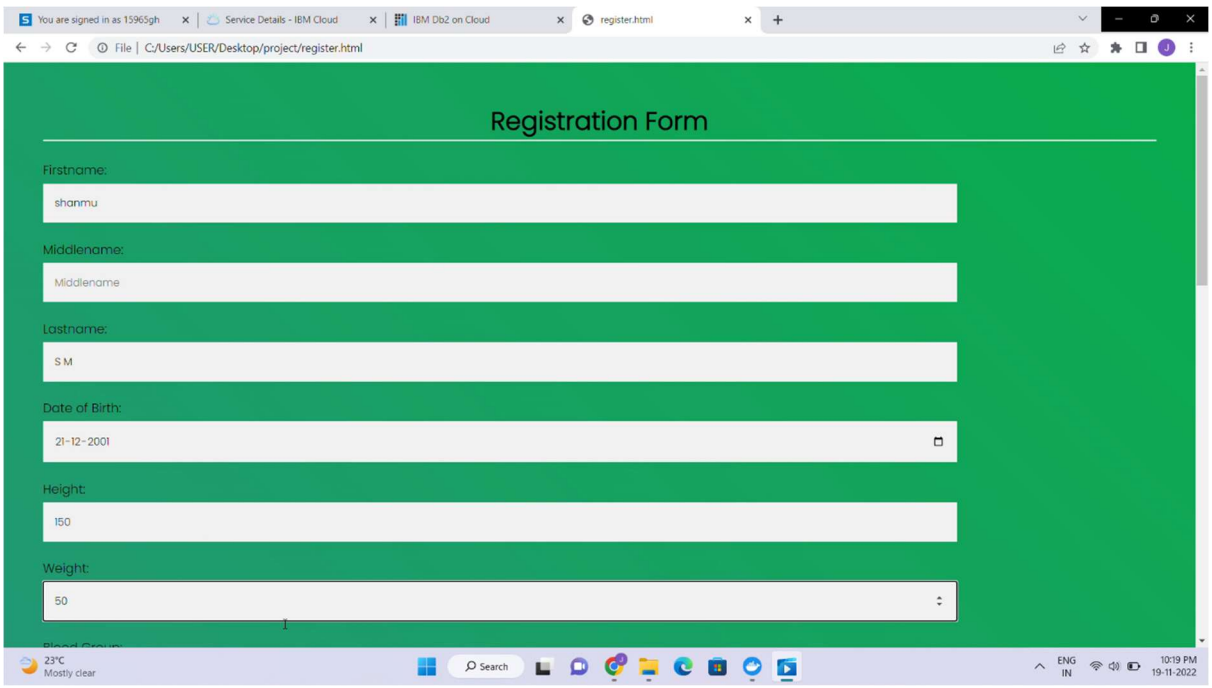
```
<html>
<head>
  <title>Image Upload</title>
  <link rel = "stylesheet" type="text/css" href="style.css">
</head>
<body>
<center>
<form style="text-align: center;">
  <p  style="color:brown;"><h1>Upload the image of the food</h1></p>
  <br>
  <br>
  <h2><input type="file" id="myFile" name="filename" style="cursor:pointer;width:
200px;height: 300px;border: black;"></h2>
  <br>
  <button><a href="content.html" style="color: rgb(9, 9, 9);">Fetch Nutritional
value</a></button>
</form>
</center>
</body>
</html>
```

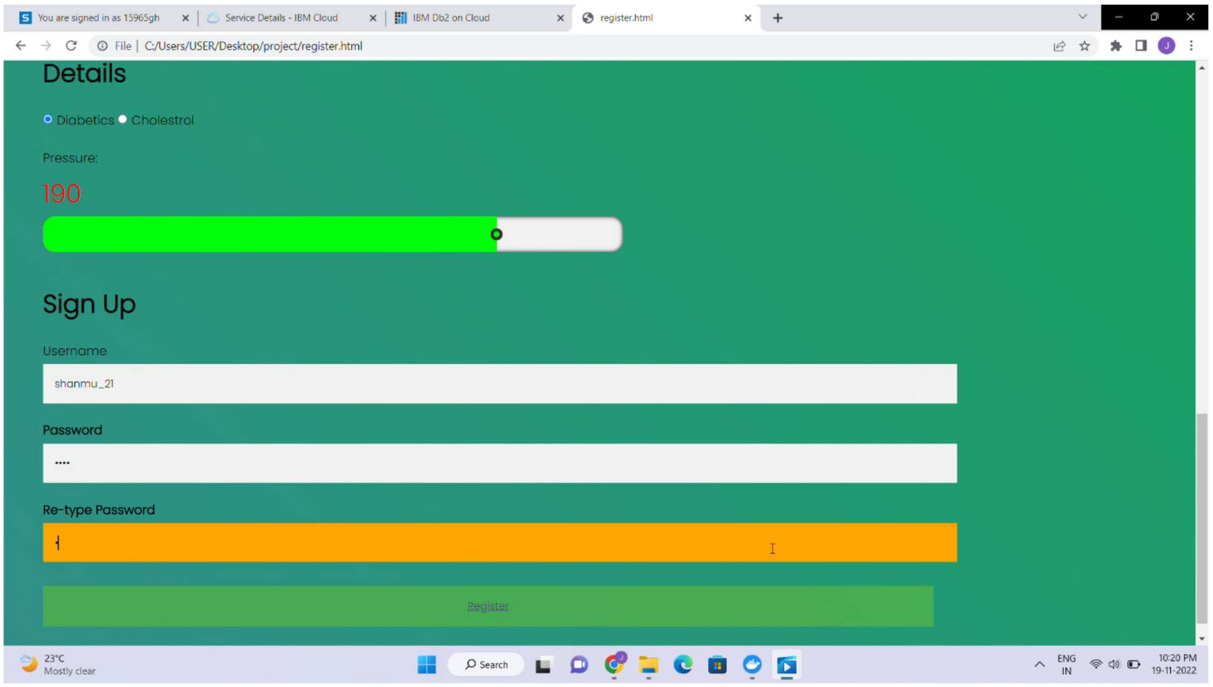
OUTPUT :

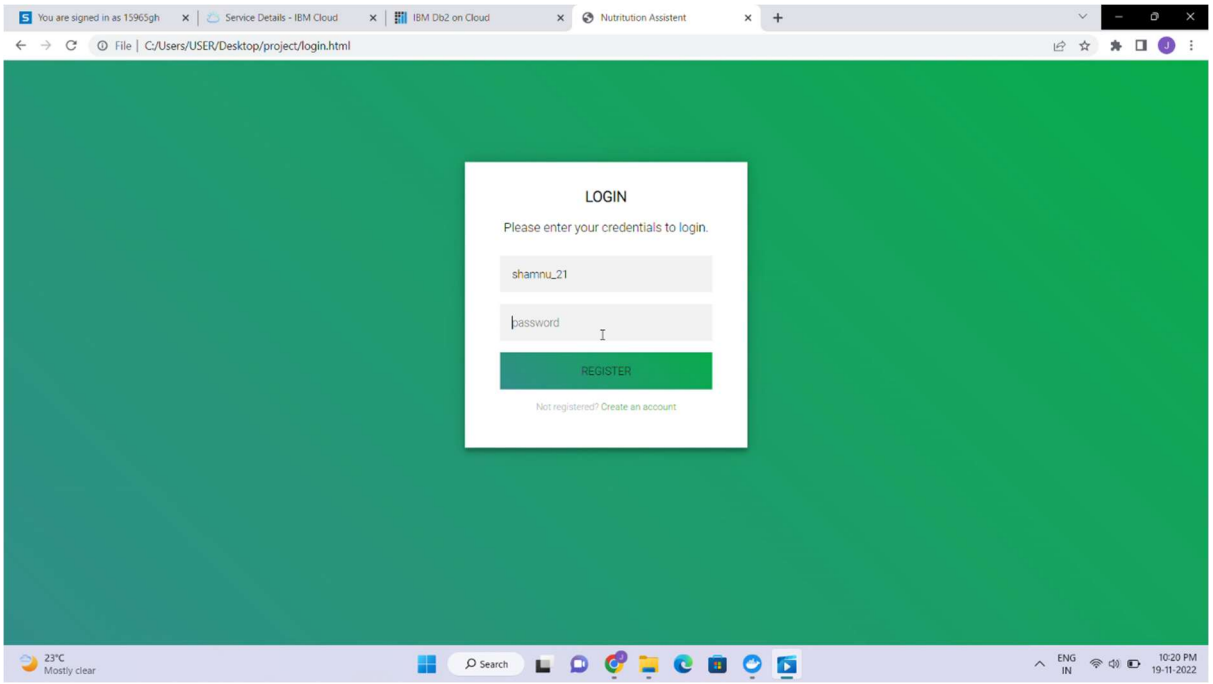
LOGIN:



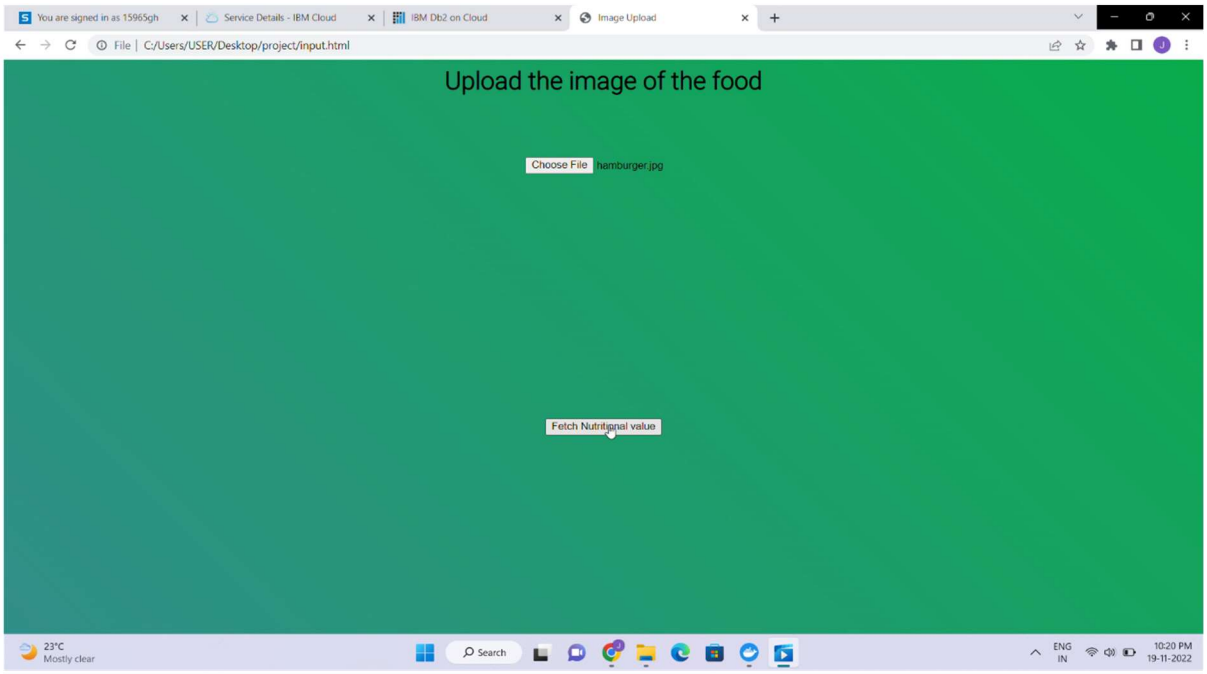
REGISTER :



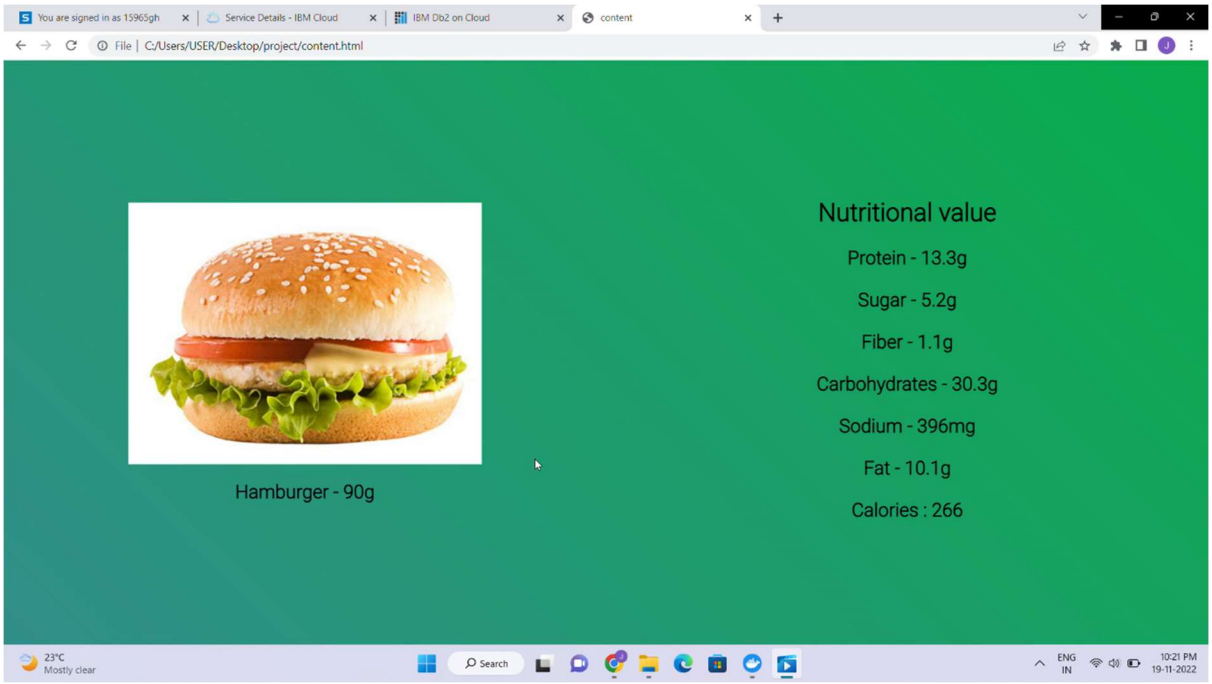

You are signed in as 15965gh
Service Details - IBM Cloud
IBM Db2 on Cloud
register.html
File | C:/Users/USER/Desktop/project/register.html
Details
Diabetics
Cholestrol
Pressure:
190
Sign Up
Username
shanmu_21
Password
Re-type Password
Register
23°C
Mostly clear
Search
ENG
IN
10:20 PM
19-11-2022


You are signed in as 15965gh
Service Details - IBM Cloud
IBM Db2 on Cloud
Nutritution Assistent
File | C:/Users/USER/Desktop/project/login.html
LOGIN
Please enter your credentials to login.
shamnu_21
password
REGISTER
Not registered? Create an account
23°C
Mostly clear
Search
ENG
IN
10:20 PM
19-11-2022

UPLOAD IMAGE :



FETCH NUTRITIONAL VALUE :



8. TESTING

8.1 User Acceptance Testing

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	20	5	10	15	50
Duplicate	5	4	7	2	18
External	6	4	0	3	13
Fixed	11	2	4	20	37
Not Reproduced	0	0	1	0	1
Skipped	3	1	1	1	6
Won't Fix	10	5	2	1	18
Totals	79	21	25	42	209

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	10	0	3	7
Client Application	10	0	0	10
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	10	0	1	9
Final Report Output	2	0	0	2
Version Control	2	0	0	2

9. Result

This application provides the nutritional content of the food for ingredients present in the food.The nutritional value is displayed for the food which is uploaded in the image format.

10. ADVANTAGES

By using this app, we can fetch the nutritional value of each ingredient just by uploading the image of food. This helps to plan the diet chart. It helps to maintain the healthy diet and helps people to avoid food with high calories.

DISADVANTAGES

There are a wide variety of cuisines available but the API contains only limited food so it is difficult to infer the ingredients and nutritional value for some of the home foods.

11. CONCLUSION

The improvement in standard of living, and the diet plan followed by people ,there is a need to control their daily calorie intake by eating habits. Without the knowledge of planning for the diet plan, Nutrition Assistant Application plays a major role for managing the diet plans .

12. FUTURE SCOPE

In the busy world, proper nutrition intake and a balanced diet is not maintained properly by the people.It is very important to maintain a balanced diet. The calorie intake of the food by the people is stored and notified for the people about the calories of the food consumed. With the user's information, the calorie intake for the person for a day is calculated and notified to the user.

13. APPENDIX

13.1 SOURCE CODE

Css

```
<!DOCTYPE html>

<html>

<head>

<meta name="viewport" content="width=device-width, initial-scale=1">

<style>

@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@300&display=swap');



* {

  margin: 0;
```

```
  padding: 0;
  font-family: "Poppins", sans-serif;
}


}
div {
  position: absolute;
}
#rangeValue {
  position: relative;
  display: block;
  font-size: 2em;
  color: #FF0000;
  font-weight: 400;
}
.range {
  width: 100px;
  height: 15px;
  -webkit-appearance: none;
  background: #111;
  outline: none;
  border-radius: 15px;
  overflow: hidden;
  box-shadow: inset 0 0 5px rgba(0, 0, 0, 1);
```

```
}
.range::-webkit-slider-thumb {
  -webkit-appearance: none;
  width: 15px;
  height: 15px;
  border-radius: 50%;
  background: #00fd0a;
  cursor: pointer;
  border: 4px solid #333;
  box-shadow: -407px 0 0 400px #00fd0a;
}

body {
  background-color: #328f8a;
  background-image: linear-gradient(45deg,#328f8a,#08ac4b);
  font-family: "Roboto", sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.container {
    padding: 50px;
    background-color: #328f8a;
    background-image: linear-gradient(45deg,#328f8a,#08ac4b);
}
```

```
input[type=text], input[type=password], textarea {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}

input[type=range] {
  width: 50%;

  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}
input[type=text]:focus, input[type=password]:focus {
  background-color: orange;
  outline: none;
```

```
}

input[type=date], input[type=number]  {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
select {
  width: 100%;
  padding: 100px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
 div {
          padding: 10px 0;
        }
hr {
  border: 1px solid #f1f1f1;
  margin-bottom: 25px;
```

```
}
.registerbtn {
  background-color: #4CAF50;
  color: white;
  padding: 16px 20px;
  margin: 8px 0;
  border: none;
  cursor: pointer;
  width: 80%;
  opacity: 0.9;
  position:center;
}
.registerbtn:hover {
  opacity: 1;
}
</style>
</head>
<body>
<form>
  <div class="container">
  <center>  <h1> Registration Form</h1> </center>
  <hr>
  <label>Firstname:   </label>  <br>
<input type="text" name="firstname" placeholder= "Firstname" size="15" required /> <br>
```

<label> Middlename: </label>

<input type="text" name="middlename" placeholder="Middlename" size="15" required />

<label> Lastname: </label>

<input type="text" name="lastname" placeholder="Lastname" size="15"required />

<label> Date of Birth: </label>

<input type="date" name="dob" placeholder="Date of Birth" size="15"required />

<label> Height: </label>

<input type="number" name="height" placeholder="Height" size="15"required />

<label> Weight: </label>

<input type="number" name="weight" placeholder="Weight" size="15"required />

<label> Blood Group: </label>

<input type="text" name="blood" placeholder="Blood Group" size="15"required />

<label>

Gender :

</label>

<input type="radio" value="Male" name="gender" checked > Male

<input type="radio" value="Female" name="gender"> Female

<input type="radio" value="Other" name="gender"> Other

<label>

Phone :

```
</label>    <br>
<input type="text" name="phone" placeholder="phone no." size="10"/ required>  <br>
<label>
Current Address :
</label>    <br>
<textarea cols="80" rows="5" placeholder="Current Address" value="address" required>
</textarea> <br>


<div>
 <label><h1>Details</h1></label><br>
 <input type="radio" value="Diabetics" name="details" checked >   Diabetics
<input type="radio" value="cholestrol" name="details"> Cholestrol <br><br>
<label>Pressure:</label><br>
<div>
      <span id="rangeValue">0</span>
      <Input class="range" type="range" name "" value="0" min="150" max="200"
onChange="rangeSlide(this.value)" onmousemove="rangeSlide(this.value)"></Input>
   </div>
   <script type="text/javascript">
      function rangeSlide(value) {
         document.getElementById('rangeValue').innerHTML = value;
      }
   </script>
</div>
 <label><h1>Sign Up</h1></label><br>
```

```
 <label for="email"><b>Email</b></label> <br>
 <input type="text" placeholder="Enter Email" name="email" required> <br>

   <label for="psw"><b>Password</b></label>  <br>
   <input type="password" placeholder="Enter Password" name="psw" required>  <br>

   <label for="psw-repeat"><b>Re-type Password</b></label>  <br>
   <input type="password" placeholder="Retype Password" name="psw-repeat" required>
<br>
   <button type="submit" class="registerbtn"><a href="login.html">Register</a></button>
</form>
</body>
</html>
```

Login

```
<html>
<head>
<link rel = "stylesheet" type="text/css" href="style.css">
<title>Nutritution Assistent</title>
</head>
<body>
   <form>
      <div class="login-page">
     <div class="form">
      <div class="login">
        <div class="login-header">
```

```
          <h3>LOGIN</h3>
          <p>Please enter your credentials to login.</p>
         </div>
        </div>
        <form class="login-form">
          <input type="text" placeholder="username"/>
          <input type="password" placeholder="password"/>
          <button>Register</button>
          <p class="message">Not registered? <a href="register.html">Create an
account</a></p>
        </form>
      </div>
    </div>
    </form>
</body>
</html>
```

Register

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
@import url('https://fonts.googleapis.com/css2?family=Poppins:wght@300&display=swap');

* {
```

```
  margin: 0;
  padding: 0;
  font-family: "Poppins", sans-serif;
}


}
div {
  position: absolute;
}
#rangeValue {
  position: relative;
  display: block;
  font-size: 2em;
  color: #FF0000;
  font-weight: 400;
}
.range {
  width: 100px;
  height: 15px;
  -webkit-appearance: none;
  background: #111;
  outline: none;
  border-radius: 15px;
  overflow: hidden;
```

```
  box-shadow: inset 0 0 5px rgba(0, 0, 0, 1);
}
.range::-webkit-slider-thumb {
  -webkit-appearance: none;
  width: 15px;
  height: 15px;
  border-radius: 50%;
  background: #00fd0a;
  cursor: pointer;
  border: 4px solid #333;
  box-shadow: -407px 0 0 400px #00fd0a;
}

body {
  background-color: #328f8a;
  background-image: linear-gradient(45deg,#328f8a,#08ac4b);
  font-family: "Roboto", sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}
.container {
    padding: 50px;
    background-color: #328f8a;
    background-image: linear-gradient(45deg,#328f8a,#08ac4b);
```

```
}

input[type=text], input[type=password], textarea {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}

input[type=range] {
  width: 50%;

  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  position: center;
  background: #f1f1f1;
}
input[type=text]:focus, input[type=password]:focus {
  background-color: orange;
```

```
  outline: none;
}

input[type=date], input[type=number]  {
  width: 80%;
  padding: 15px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
select {
  width: 100%;
  padding: 100px;
  margin: 5px 0 22px 0;
  display: inline-block;
  border: none;
  background: #f1f1f1;
}
 div {
            padding: 10px 0;
         }
hr {
  border: 1px solid #f1f1f1;
```

```
  margin-bottom: 25px;
}
.registerbtn {
  background-color: #4CAF50;
  color: white;
  padding: 16px 20px;
  margin: 8px 0;
  border: none;
  cursor: pointer;
  width: 80%;
  opacity: 0.9;
  position:center;
}
.registerbtn:hover {
  opacity: 1;
}
</style>
</head>
<body>
<form>
  <div class="container">
  <center>  <h1> Registration Form</h1> </center>
  <hr>
  <label>Firstname:   </label>  <br>
```

```
<input type="text" name="firstname" placeholder= "Firstname" size="15" required /> <br>
<label> Middlename:    </label>   <br>
<input type="text" name="middlename" placeholder="Middlename" size="15" required />
<br>
<label> Lastname:      </label>    <br>
<input type="text" name="lastname" placeholder="Lastname" size="15"required /> <br>
<label> Date of Birth: </label>    <br>
<input type="date" name="dob" placeholder="Date of Birth" size="15"required /> <br>
<label> Height:        </label>    <br>
<input type="number" name="height" placeholder="Height" size="15"required /> <br>
<label> Weight:        </label>   <br>
<input type="number" name="weight" placeholder="Weight" size="15"required /> <br>
<label> Blood Group:   </label>    <br>
<input type="text" name="blood" placeholder="Blood Group" size="15"required /> <br>

<div>
<label>
Gender :
</label><br>
<input type="radio" value="Male" name="gender" checked > Male
<input type="radio" value="Female" name="gender"> Female
<input type="radio" value="Other" name="gender"> Other

</div>
<label>
```

```
Phone :
</label>    <br>
<input type="text" name="phone" placeholder="phone no." size="10"/ required>  <br>
<label>
Current Address :
</label>    <br>
<textarea cols="80" rows="5" placeholder="Current Address" value="address" required>
</textarea> <br>


<div>
 <label><h1>Details</h1></label><br>
 <input type="radio" value="Diabetics" name="details" checked >   Diabetics
<input type="radio" value="cholestrol" name="details"> Cholestrol <br><br>
<label>Pressure:</label><br>
<div>
      <span id="rangeValue">0</span>
      <Input class="range" type="range" name "" value="0" min="150" max="200"
onChange="rangeSlide(this.value)" onmousemove="rangeSlide(this.value)"></Input>
   </div>
   <script type="text/javascript">
      function rangeSlide(value) {
         document.getElementById('rangeValue').innerHTML = value;
      }
   </script>
```

```
</div>
 <label><h1>Sign Up</h1></label><br>
 <label for="email"><b>Email</b></label> <br>
 <input type="text" placeholder="Enter Email" name="email" required> <br>

    <label for="psw"><b>Password</b></label>  <br>
    <input type="password" placeholder="Enter Password" name="psw" required>  <br>

    <label for="psw-repeat"><b>Re-type Password</b></label>  <br>
    <input type="password" placeholder="Retype Password" name="psw-repeat" required>
<br>
    <button type="submit" class="registerbtn"><a href="login.html">Register</a></button>
</form>
</body>
</html>
```

Input.html

```
<html>
<head>
  <title>Image Upload</title>
  <link rel = "stylesheet" type="text/css" href="style.css">
</head>
<body>
<center>
<form style="text-align: center;">
```

```
 <p  style="color:brown;"><h1>Upload the image of the food</h1></p>

 <br>

 <br>

 <h2><input type="file" id="myFile" name="filename" style="cursor:pointer;width:
200px;height: 300px;border: black;"></h2>

 <br>

 <button><a href="content.html" style="color: rgb(9, 9, 9);">Fetch Nutritional
value</a></button>

</form>

</center>

</body>

</html>
```

SEND GRID CONNECTION

```
# using SendGrid's Python Library

# https://github.com/sendgrid/sendgrid-python

import os

from sendgrid import SendGridAPIClient

from sendgrid.helpers.mail import Mail

# from_address we pass to our Mail object, edit with your name

FROM_EMAIL = 'Your_Name@SendGridTest.com'

def SendEmail(to_email):

    """ Send an email to the provided email addresses

    :param to_email = email to be sent to

    :returns API response code

    :raises Exception e: raises an exception """
```

```
    message = Mail(
        from_email=FROM_EMAIL,
        to_emails=to_email,
        subject='A Test from SendGrid!',
        html_content='<strong>Hello there from SendGrid your URL is: ' +
        '<a href="https://github.com/cyberjive">right here!</a></strong>')
    try:
        sg = SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
        response = sg.send(message)
        code, body, headers = response.status_code, response.body, response.headers
        print(f"Response Code: {code} ")
        print(f"Response Body: {body} ")
        print(f"Response Headers: {headers} ")
        print("Message Sent!")
    except Exception as e:
        print("Error: {0}".format(e))
    return str(response.status_code)
if __name__ == "__main__":
    SendEmail(to_email=input("Email address to send to? "))
```

IBMDB2 connection

```
rom flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re
app = Flask(_name_)
```

```
hostname = '19af6446-6171-4641-8aba-
9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud'

uid = 'sfr69790'

pwd = 'VFRS0bFKFeIhMbcq'

driver = "{IBM DB2 ODBC DRIVER}"

db_name = 'Bludb'

port = '30699'

protocol = 'TCPIP'

cert = "C:/Users/Prithiarun/Desktop/IBM/TEST/certi.crt"

dsn = (

 "DATABASE ={0};"

 "HOSTNAME ={1};"

 "PORT ={2};"

 "UID ={3};"

 "SECURITY=SSL;"

 "PROTOCOL={4};"

 "PWD ={6};"

).format(db_name, hostname, port, uid, protocol, cert, pwd)

connection = ibm_db.connect(dsn, "", "")

print()

# query = "SELECT username FROM USER1 WHERE username=?"

# stmt = ibm_db.prepare(connection, query)

# ibm_db.bind_param(stmt, 1, username)

# ibm_db.execute(stmt)

# username = ibm_db.fetch_assoc(stmt)
```

```
# print(username)

app.secret_key = 'a'
```

INTEGRATION WITH NUTRITION API

```
import http.client

conn=http.client.HTTPSConnection("spoonacular-recipe-food-nutrition-v1.p.rapidapi.com")

headers = {

 'X-rapidapi-host': "spoonacular-recipe-food-nutrition-v1.prapidapi.com"

 'X-rapidapi-key': "93706bmsh70946cd35d92e9bp1ea575jsn75fb7b705b36"

 }

conn.request("GET", "/recipes/guessNutrition?title=cereal", headers)

res = conn.getresponse{} data=res.read{} print[data.decode{"utf 8"}]
```

12.2 GITHUB and Project Demo Link

Demo Link:

Drive link : https://drive.google.com/file/d/1_uI0Bue6qLHy8wFw-JqNr3nH8PPbD6SM/view?usp=sharing

YouTube link : https://www.youtube.com/watch?v=sJKrWusiovk