PROJECT REPORT

NUTRITION ASSISTANT APPLICATION

Submitted by:

PNT2022TMID03794

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PROJECT REPORT

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

Due to the ignorance of healthy food habits, obesity rates are increasing at an alarming speed, reflecting 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. It is crucial to analyze nutritional status in order to determine whether a person has nutritional imbalance as a result of an underlying condition or whether they are prone to acquire a pathological condition as a result of nutritional imbalance. An app-based nutrient dashboard system that can analyze real-time images of a meal and analyze it for nutritional content can prove to be beneficial and improve dietary habits, and therefore, can help maintain a healthy lifestyle.

1.2 PURPOSE

The project aims to build a Web-App that estimates food attributes such as nutritional value, calories, etc. by classifying the input image of food. The users learn about the effect of different foods on human health. Evidently, the ultimate aim of this application is to provide the ways in which one can lead a healthy life by maintaining his/her diet. The user can access the nutritional information by taking a photo of the food, uploading a photo from the gallery, or entering manually. Nutrition is more than just obtaining nutrients and calories from food. Nutrition, the food we eat and the way we eat it, is an integral part of life. The Nutrition Assistant Application helps users to eat nutritionally rich food which yields to lead a healthy life.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEMS

People today are often too occupied to keep track of the food they eat, and it might be challenging to determine all of the food's nutritional content. Inadequate

nutrition or excessive consumption might result in major health problems. These could be vitamin, iron, or calcium shortages, or excessive sugar and carbohydrate consumption, which leads to obesity and diabetes. This could ultimately result in critical health problems. The existing nutrition systems do not give attention to individual body conditions, rather it gives a make generic recommendation for the input given. Hence, there is a probability of suggestion of food items that are allergic to a particular user.

2.2 REFERENCES

George, Manju & Kalpana, C. (2020). DEVELOPMENT OF A CLOUD-BASED SOLUTION FOR EFFECTIVE NUTRITION INTERVENTION IN THE MANAGEMENT OF LIFESTYLE DISEASES. Asian Journal of Multidimensional Research (AJMR). 7. 339-344.

Hauptmann, H., Leipold, N., Madenach, M. *et al.* Effects and challenges of using a nutrition assistance system: results of a long-term mixed-method study. *User Model User-Adap Inter* (2021). https://doi.org/10.1007/s11257-021-09301-y

Prakash, Kamakshi & Arockiam, Dr. (2019). A SURVEY ON NUTRITION MONITORING AND DIETARY MANAGEMENT SYSTEM.

D. Kumbhar and S. Patil, "Mobile cloud-based system recognizing nutrition and freshness of food image," 2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS), 2017, pp. 709-714, DOI: 10.1109/ICECDS.2017.8389528.

M S, Kavita. (2021). APPLICATION OF ARTIFICIAL INTELLIGENCE ON NUTRITION ASSESSMENT AND MANAGEMENT. EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH. 8. 170-174.

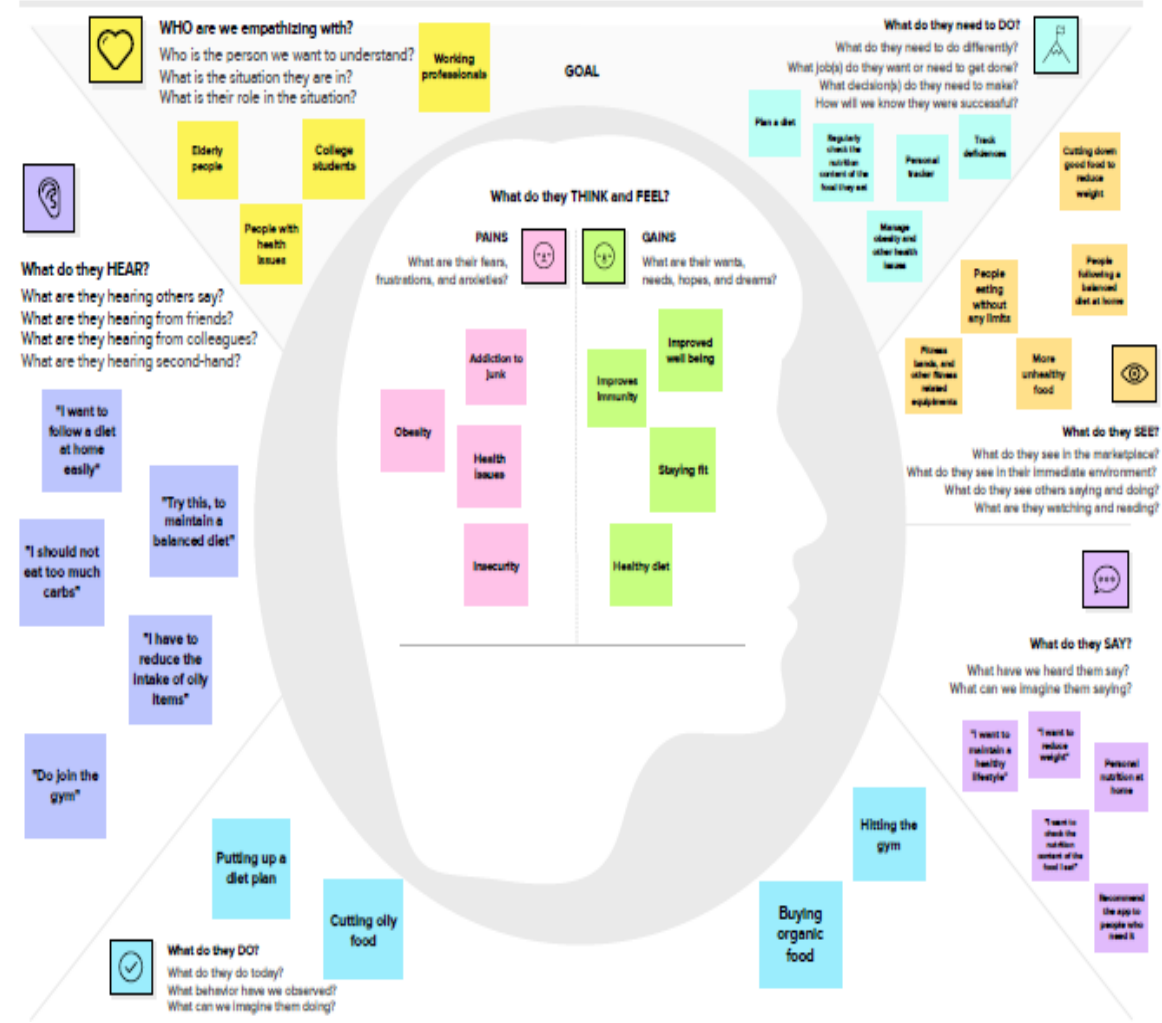
2.2 PROBLEM STATEMENT DEFINITION

People often fail to pay attention to the food they eat attributing the current lifestyle methods. This leads to several health hazards that can be avoided, prevented, or cured with the right kind of nutrient intake and healthier food. To monitor the food being eaten and track the nutrients, a system or application is necessary, where images of the food can be uploaded or entered manually, which will automatically

analyze it and give the nutrients in it along with suggestions and recommendations for the user.

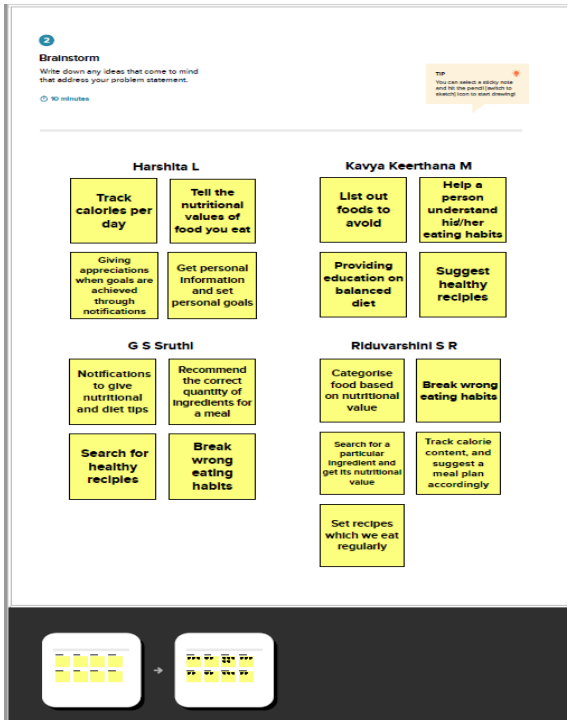
3. IDEATION AND PROPOSED SOLUTION

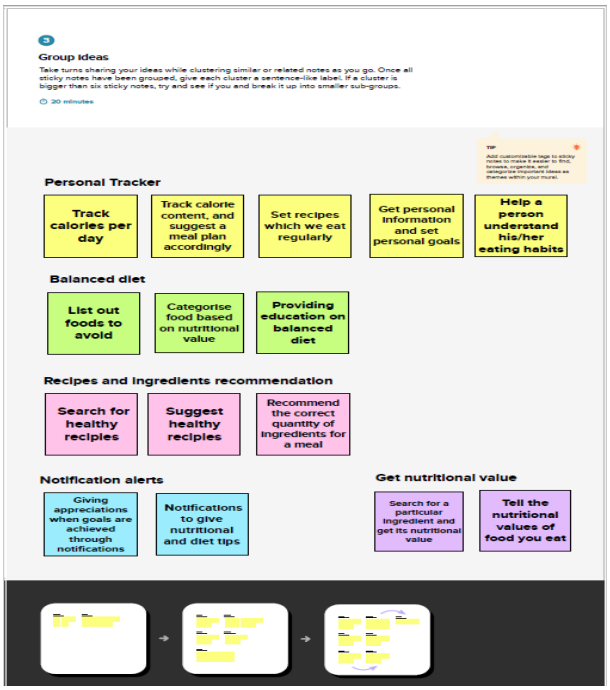
3.1 EMPATHY MAP CANVAS

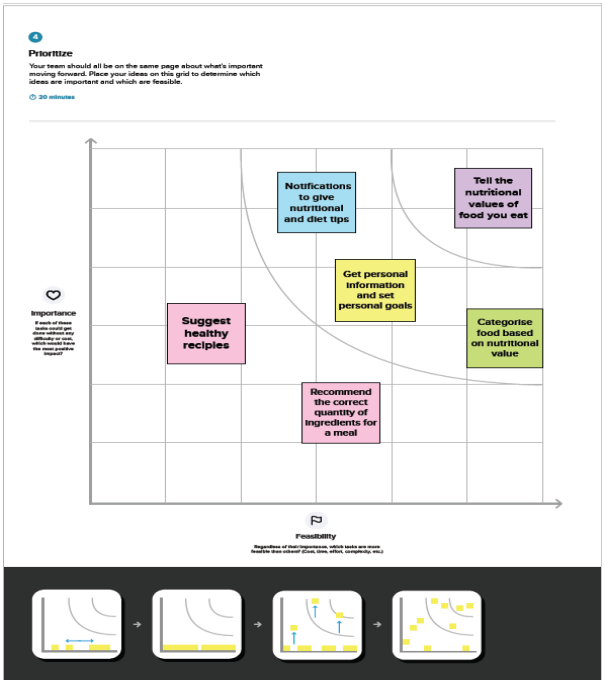

Empathy Map
WHO are we empathizing with?
Who is the person we want to understand?
What is the situation they are in?
What is their role in the situation?
Working professionals
GOAL
What do they need to DO?
What do they need to do differently?
What job(s) do they want or need to get done?
What decision(s) do they need to make?
How will we know they were successful?
Plan a diet
Track deficiences
Cutting down good food to reduce weight
Personal tracker
Manage obesity and other health issues
Elderly people
College students
People with health issues
What do they THINK and FEEL?
PAINS
What are their fears, frustrations, and anxieties?
GAINS
What are their wants, needs, hopes, and dreams?
Addiction to junk
Obesity
Health issues
Insecurity
Improves immunity
Improved well being
Staying fit
Healthy diet
What do they HEAR?
What are they hearing others say?
What are they hearing from friends?
What are they hearing from colleagues?
What are they hearing second-hand?
People eating without any limits
More unhealthy food
"I want to follow a diet at home easily"
"Try this, to maintain a balanced diet"
"I should not eat too much carbs"
"I have to reduce the intake of oily items"
"Do join the gym"
What do they SEE?
What do they see in the marketplace?
What do they see in their immediate environment?
What do they see others saying and doing?
What are they watching and reading?
What do they SAY?
What have we heard them say?
What can we imagine them saying?
Hitting the gym
Buying organic food
Putting up a diet plan
Cutting oily food
What do they DO?
What do they do today?
What behavior have we observed?
What can we imagine them doing?

3.2 IDEATION AND BRAINSTORMING


Template
Brainstorm & idea prioritization
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.
10 minutes to prepare
1 hour to collaborate
2-8 people recommended
Before you collaborate
A little bit of preparation goes a long way with this session. Here's what you need to do to get going.
10 minutes
Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.
Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.
Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.
Open article
Define your problem statement
What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.
5 minutes
How might we [provide nutrition assistance for people instantly]?
Key rules of brainstorming
To run an smooth and productive session
Stay in topic.
Encourage wild ideas.
Defer judgment.
Listen to others.
Go for volume.
If possible, be visual.
Need some inspiration?
Open example


Brainstorm
Write down any ideas that come to mind that address your problem statement.
10 minutes
Harshita L
Track calories per day
Tell the nutritional values of food you eat
Giving appreciations when goals are achieved through notifications
Get personal information and set personal goals
Kavya Keerthana M
List out foods to avoid
Help a person understand his/her eating habits
Providing education on balanced diet
Suggest healthy recipies
G S Sruthi
Notifications to give nutritional and diet tips
Recommend the correct quantity of ingredients for a meal
Search for healthy recipies
Break wrong eating habits
Riduvarshini S R
Categorise food based on nutritional value
Break wrong eating habits
Search for a particular ingredient and get its nutritional value
Track calorie content, and suggest a meal plan accordingly
Set recipes which we eat regularly

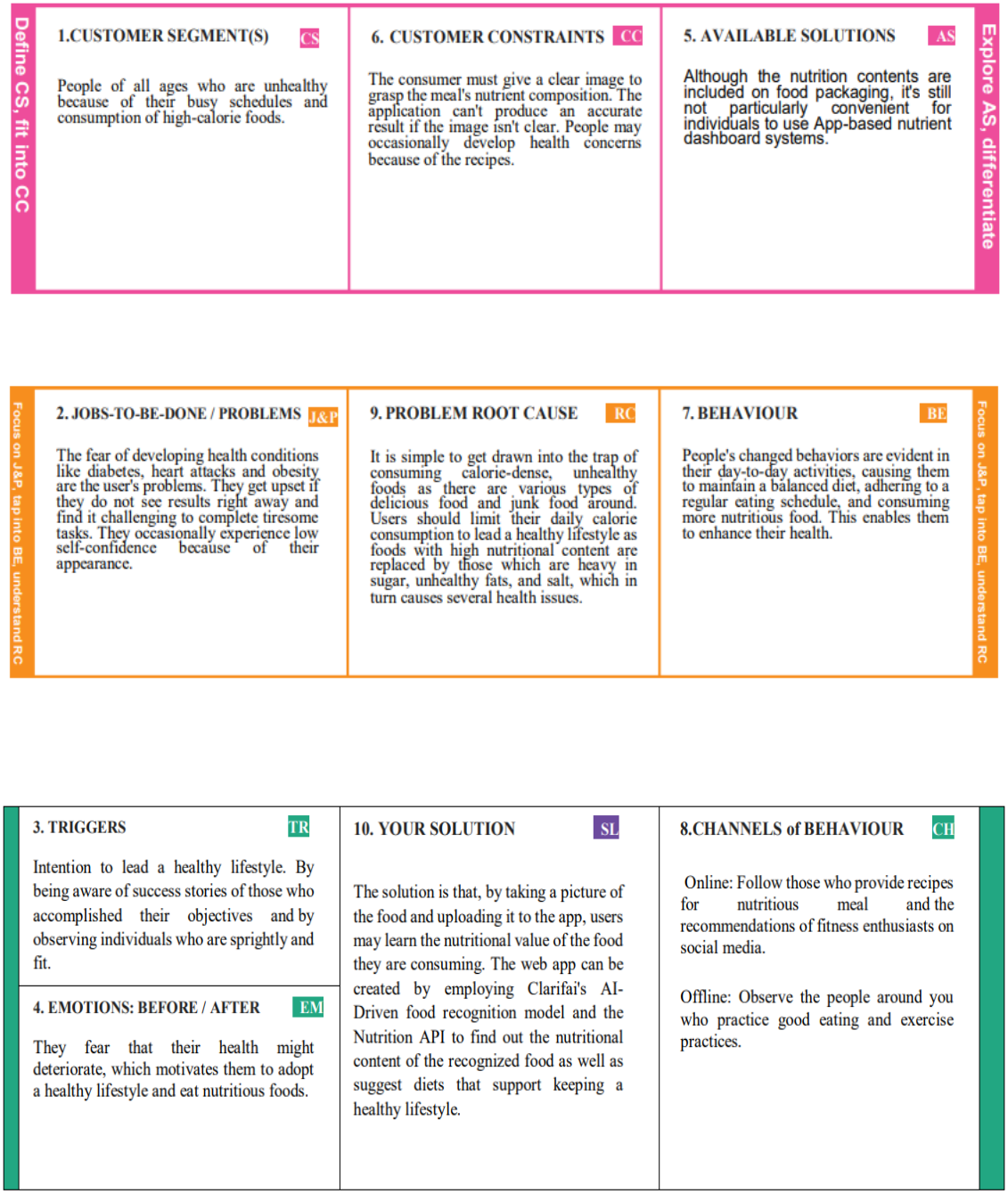

Group ideas
Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.
20 minutes
Personal Tracker
Track calories per day
Track calorie content, and suggest a meal plan accordingly
Set recipes which we eat regularly
Get personal information and set personal goals
Help a person understand his/her eating habits
Balanced diet
List out foods to avoid
Categorise food based on nutritional value
Providing education on balanced diet
Recipes and ingredients recommendation
Search for healthy recipies
Suggest healthy recipies
Recommend the correct quantity of ingredients for a meal
Notification alerts
Giving appreciations when goals are achieved through notifications
Notifications to give nutritional and diet tips
Get nutritional value
Search for a particular ingredient and get its nutritional value
Tell the nutritional values of food you eat


Prioritize
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.
20 minutes
Notifications to give nutritional and diet tips
Tell the nutritional values of food you eat
Get personal information and set personal goals
Suggest healthy recipies
Categorise food based on nutritional value
Recommend the correct quantity of ingredients for a meal
Importance
Feasibility

3.3 PROPOSED SOLUTION

S.No.	Parameter	Description
•	Problem Statement (Problem to be solved)	Due to a lack of knowledge about healthy nutrition, the rate of obesity is rising rapidly, posing threats to people's health. The simplest way to prevent obesity is for people to manage their daily calorie consumption by eating healthier meals. Some food packaging does include nutrition and calorie information, however it's not very convenient to use.
•	Idea / Solution description	The solution is that by taking a picture of the food and uploading it to the app, users may learn the nutritional value of the food they are consuming. The web app can be created by employing Clarifai's AI-Driven food recognition model to find out the nutritional content of the recognised food as well as suggest diets that support keeping a healthy lifestyle.
•	Novelty / Uniqueness	A report that includes nutritional value about the food that users eat in a day. With personalized information users can be notified with diet recommendations, provide suitable meals, and help them set goals for maintaining a healthy diet.
•	Social Impact / Customer Satisfaction	Gives each consumer a personalised diet and leads them to live a healthy life. Also seeks their suggestions on how to enhance the product further.
•	Business Model (Revenue Model)	This application can be publicized more effectively on social media by emphasising its value in improving health. Subscription or membership offers extra benefits. It also offers very low prices for subscription.
•	Scalability of the Solution	People can develop healthy eating habits by being able to measure calories and nutrition values of the food and receiving regular updates. It also can be accessed easily from anywhere, anytime, and also provides personalization.

3.4 PROBLEM SOLUTION FIT


Define CS, fit into CC
1.CUSTOMER SEGMENT(S) CS
People of all ages who are unhealthy because of their busy schedules and consumption of high-calorie foods.
6. CUSTOMER CONSTRAINTS CC
The consumer must give a clear image to grasp the meal's nutrient composition. The application can't produce an accurate result if the image isn't clear. People may occasionally develop health concerns because of the recipes.
5. AVAILABLE SOLUTIONS AS
Although the nutrition contents are included on food packaging, it's still not particularly convenient for individuals to use App-based nutrient dashboard systems.
Explore AS, differentiate
Focus on J&P, tap into BE, understand RC
2. JOBS-TO-BE-DONE / PROBLEMS J&P
The fear of developing health conditions like diabetes, heart attacks and obesity are the user's problems. They get upset if they do not see results right away and find it challenging to complete tiresome tasks. They occasionally experience low self-confidence because of their appearance.
9. PROBLEM ROOT CAUSE RC
It is simple to get drawn into the trap of consuming calorie-dense, unhealthy foods as there are various types of delicious food and junk food around. Users should limit their daily calorie consumption to lead a healthy lifestyle as foods with high nutritional content are replaced by those which are heavy in sugar, unhealthy fats, and salt, which in turn causes several health issues.
7. BEHAVIOUR BE
People's changed behaviors are evident in their day-to-day activities, causing them to maintain a balanced diet, adhering to a regular eating schedule, and consuming more nutritious food. This enables them to enhance their health.
Focus on J&P, tap into BE, understand RC
3. TRIGGERS TR
Intention to lead a healthy lifestyle. By being aware of success stories of those who accomplished their objectives and by observing individuals who are sprightly and fit.
4. EMOTIONS: BEFORE / AFTER EM
They fear that their health might deteriorate, which motivates them to adopt a healthy lifestyle and eat nutritious foods.
10. YOUR SOLUTION SL
The solution is that, by taking a picture of the food and uploading it to the app, users may learn the nutritional value of the food they are consuming. The web app can be created by employing Clarifai's AI-Driven food recognition model and the Nutrition API to find out the nutritional content of the recognized food as well as suggest diets that support keeping a healthy lifestyle.
8.CHANNELS of BEHAVIOUR CH
Online: Follow those who provide recipes for nutritious meal and the recommendations of fitness enthusiasts on social media.
Offline: Observe the people around you who practice good eating and exercise practices.

4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Track the calories	Track the calories by adding food items into the respective field
FR-4	Notifications	Get tips for balanced diet.
FR-5	Search for ingredients	Search for particular ingredient and get its nutritional value.

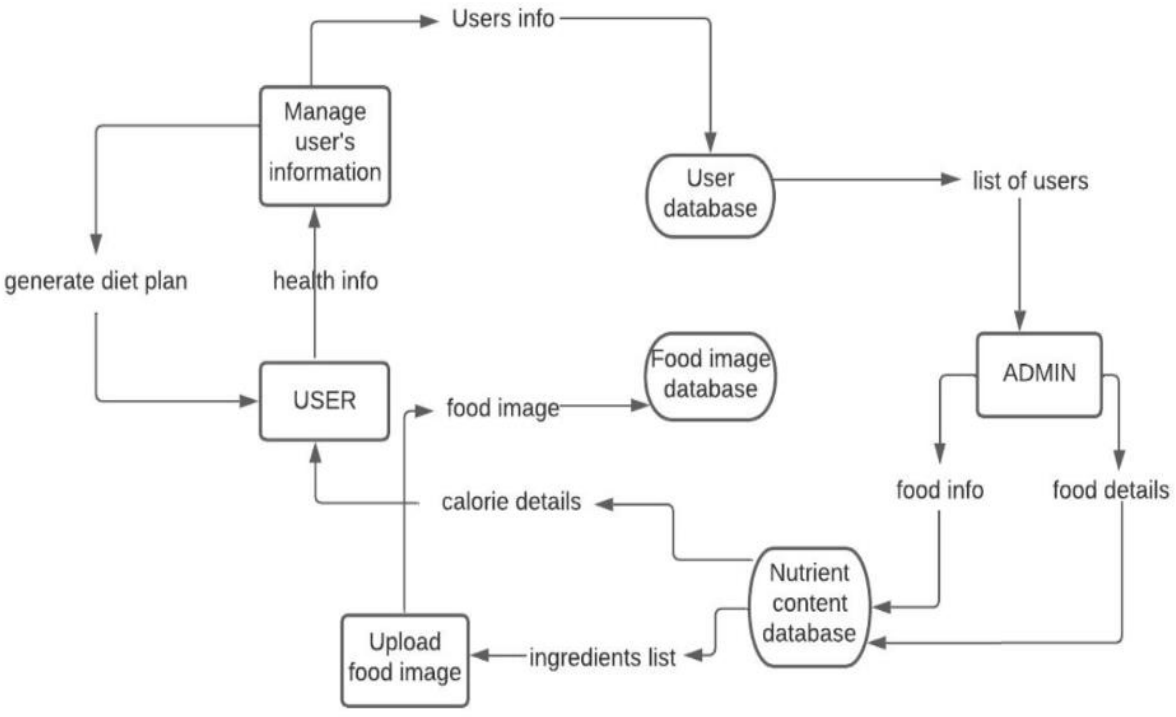
4.2 NON-FUNCTIONAL REQUIREMENTS

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	With the help of this application, you can measure your intake, check your weight trends, and establish targets based on the particular diet plan you've chosen. Additionally, it delivers a daily analysis to keep you on track as well as comprehensive nutritious information for each element in your food plan.
NFR-2	**Security**	In order to offer integrity, confidentiality, and availability, this application efficiently controls the security of its application systems, shielding data from unauthorised access, modification, or destruction.
NFR-3	**Reliability**	When used in a specific environment, this application runs without error.

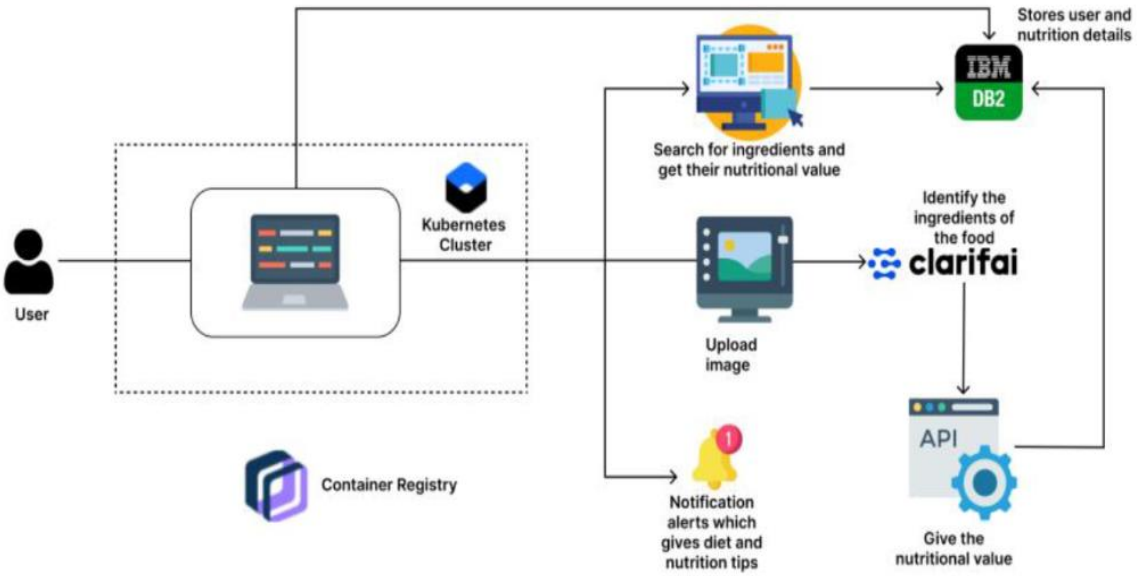
NFR-4	**Performance**	Enter everything you consume throughout the day to get an approximation of your daily caloric and nutritional intake.
NFR-5	**Availability**	You can track all of your lifestyle factors, including step count, nutrition, water intake, blood parameters, and exercise regimen, using fitness applications. The influence of this application on your health is really advantageous.
NFR-6	**Scalability**	By entering food items into the appropriate areas, users can keep track of their calorie intake, allowing the system to determine whether they consumed the required number of calories. catches sight of exercise.

5. PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS


Users info
Manage user's information
User database
list of users
generate diet plan
health info
Food image database
ADMIN
USER
food image
food info
food details
calorie details
Nutrient content database
Upload food image
ingredients list

5.2 SOLUTION & TECHNICAL ARCHITECTURE


Stores user and nutrition details
IBM
DB2
Search for ingredients and get their nutritional value
Identify the ingredients of the food
clarifai
Kubernetes Cluster
User
Upload image
API
Container Registry
Notification alerts which gives diet and nutrition tips
Give the nutritional value

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 and click confirm	high	Sprint - 1
	Login	USN-3	As a user, I can log into the application through mail.	I can access the dashboard and the application	medium	Sprint - 1
Customer (web user)	User details	USN-4	As a user, I can enter my details in the application.	I can get whether the scanned food is suitable or not	medium	Sprint - 2
	Nutritional Content	USN-5	As user, I can scan the food and get the nutritional content	I can get the nutrition details related to my search	high	Sprint - 3
	Notification	USN-6	As a user, I can get diet tips.	I can get notification related to my search	medium	Sprint - 4

6. PROJECT PLANNING & SCHEDULING

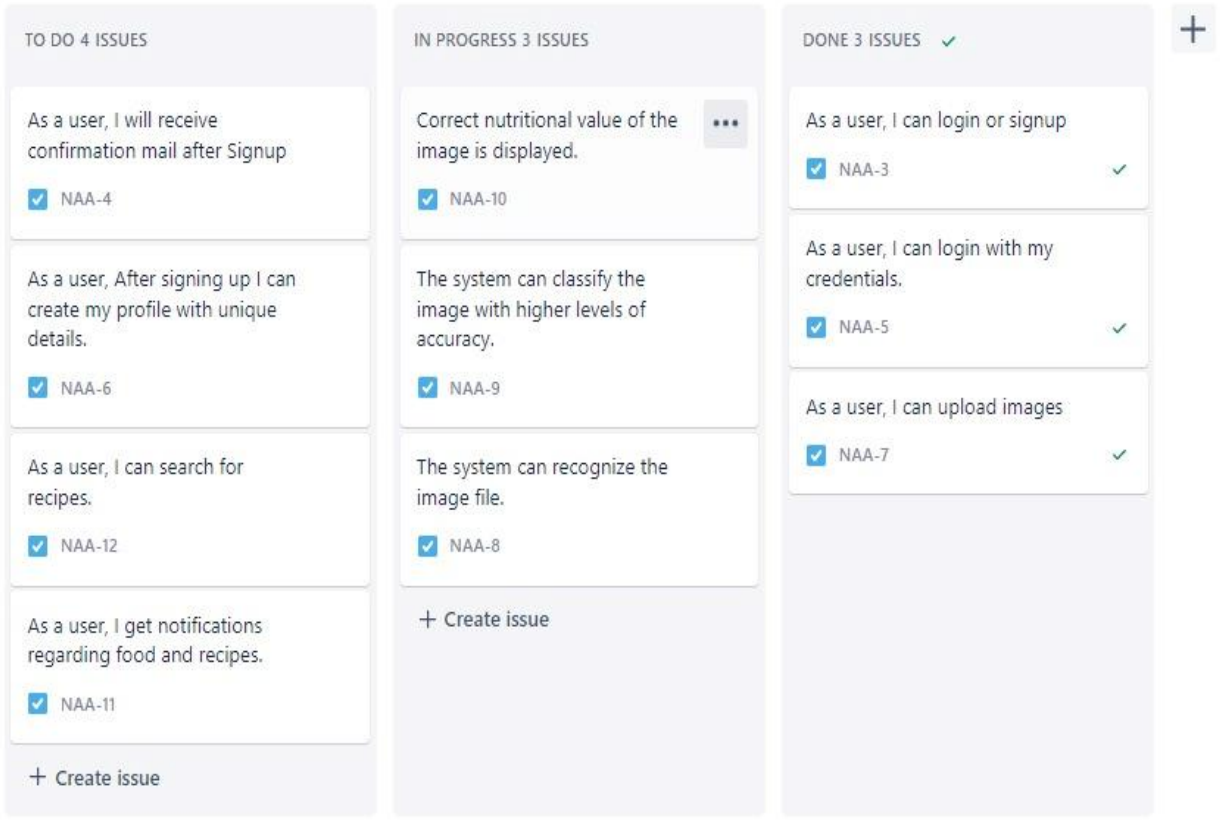
6.1 SPRINT PLANNING & ESTIMATION

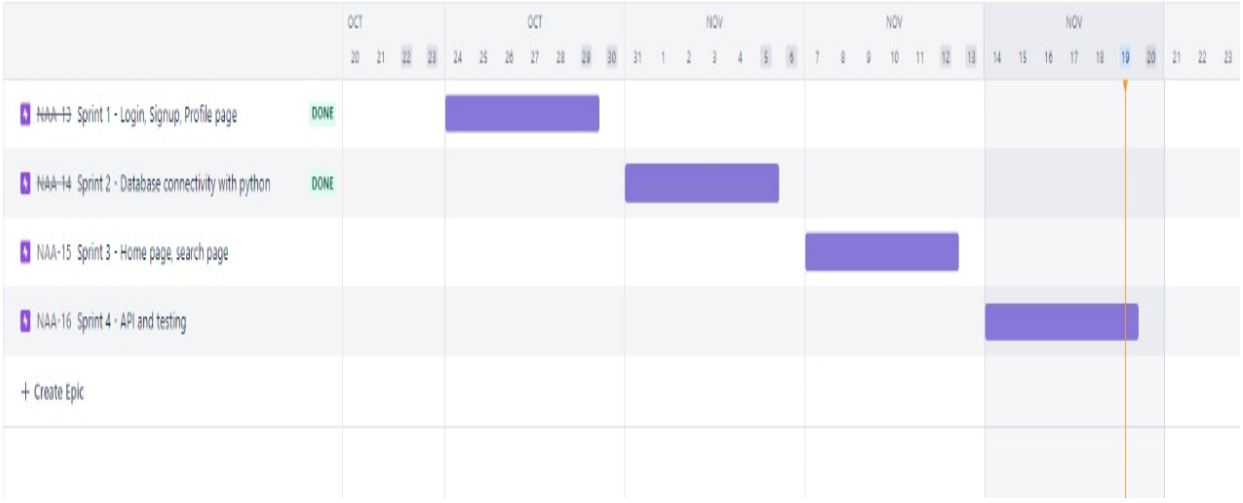
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Riduvarshini Sruthi Harshita Kavya
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Riduvarshini Sruthi Harshita Kavya
Sprint-1	Login	USN-3	As a user, I can login for the application through mail	2	Medium	Riduvarshini Sruthi Harshita Kavya
Sprint-2	User details	USN-4	As a user, I can enter my details in the application	2	Medium	Riduvarshini Sruthi Harshita Kavya
Sprint-3	Nutritional content	USN-5	As a user, I can scan the food and get the nutrient content	1	High	Riduvarshini Sruthi Harshita Kavya
Sprint-4	Notification	USN-6	As a user, I can get diet tips	2	medium	Riduvarshini Sruthi Harshita Kavya

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	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

6.3 REPORTS FROM JIRA

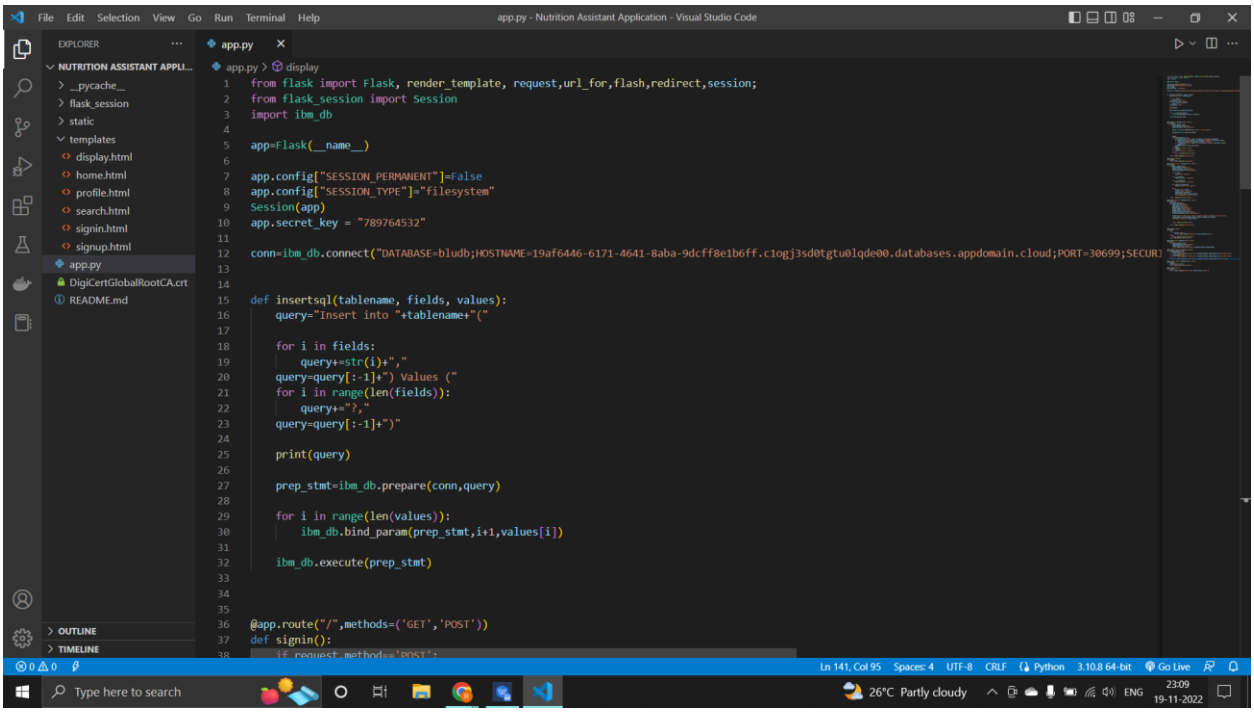

TO DO 4 ISSUES
As a user, I will receive confirmation mail after Signup
NAA-4
As a user, After signing up I can create my profile with unique details.
NAA-6
As a user, I can search for recipes.
NAA-12
As a user, I get notifications regarding food and recipes.
NAA-11
Create issue
IN PROGRESS 3 ISSUES
Correct nutritional value of the image is displayed.
NAA-10
The system can classify the image with higher levels of accuracy.
NAA-9
The system can recognize the image file.
NAA-8
Create issue
DONE 3 ISSUES
As a user, I can login or signup
NAA-3
As a user, I can login with my credentials.
NAA-5
As a user, I can upload images
NAA-7


OCT
OCT
NOV
NOV
NOV
NAA-13 Sprint 1 - Login, Signup, Profile page
DONE
NAA-14 Sprint 2 - Database connectivity with python
DONE
NAA-15 Sprint 3 - Home page, search page
NAA-16 Sprint 4 - API and testing
Create Epic

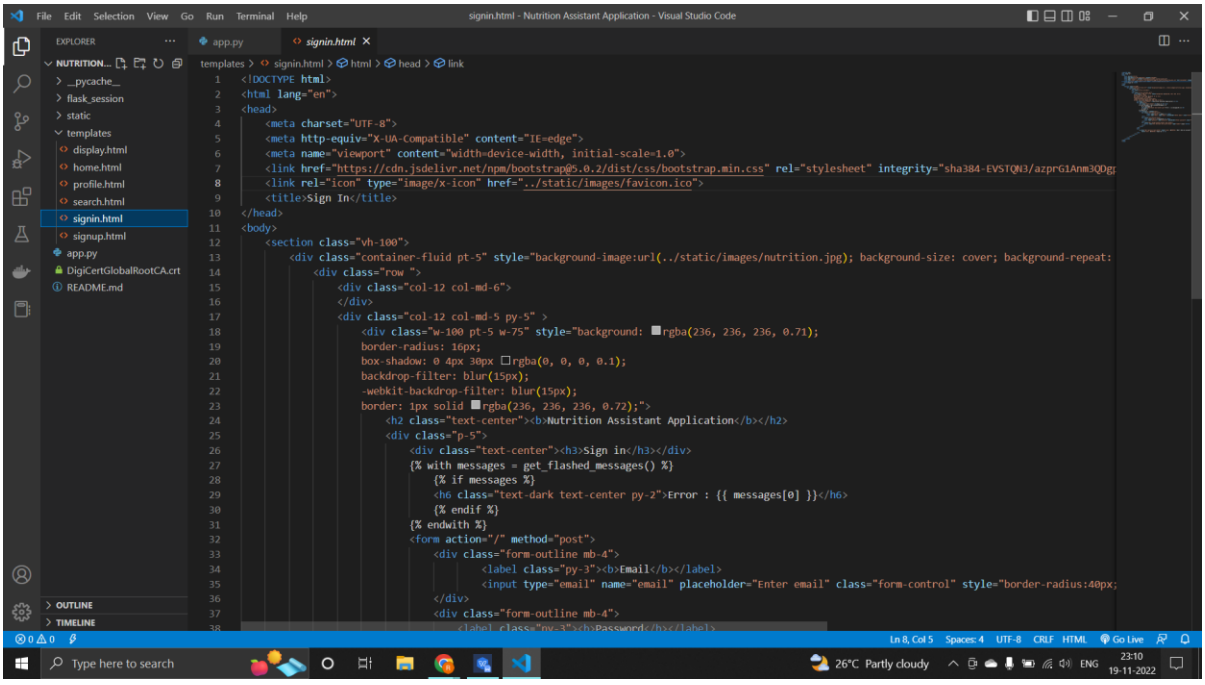
7. CODING AND SOLUTIONING

7.1 FEATURE 1

App.py


app.py - Nutrition Assistant Application - Visual Studio Code
from flask import Flask, render_template, request,url_for,flash,redirect,session;
from flask_session import Session
import ibm_db
app=Flask(__name__)
app.config["SESSION_PERMANENT"]=False
app.config["SESSION_TYPE"]="filesystem"
Session(app)
app.secret_key = "789764532"
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=19af6446-6171-4641-8aba-9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=30699;SECURI
def insertsql(tablename, fields, values):
query="Insert into "+tablename+"("
for i in fields:
query+=str(i)+","
query=query[:-1]+") Values ("
for i in range(len(fields)):
query+="?,"
query=query[:-1]+")"
print(query)
prep_stmt=ibm_db.prepare(conn,query)
for i in range(len(values)):
ibm_db.bind_param(prep_stmt,i+1,values[i])
ibm_db.execute(prep_stmt)
@app.route("/",methods=('GET','POST'))
def signin():

signin.html


signin.html - Nutrition Assistant Application - Visual Studio Code
<!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@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDg
<link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
<title>Sign In</title>
</head>
<body>
<section class="vh-100">
<div class="container-fluid pt-5" style="background-image:url(../static/images/nutrition.jpg); background-size: cover; background-repeat:

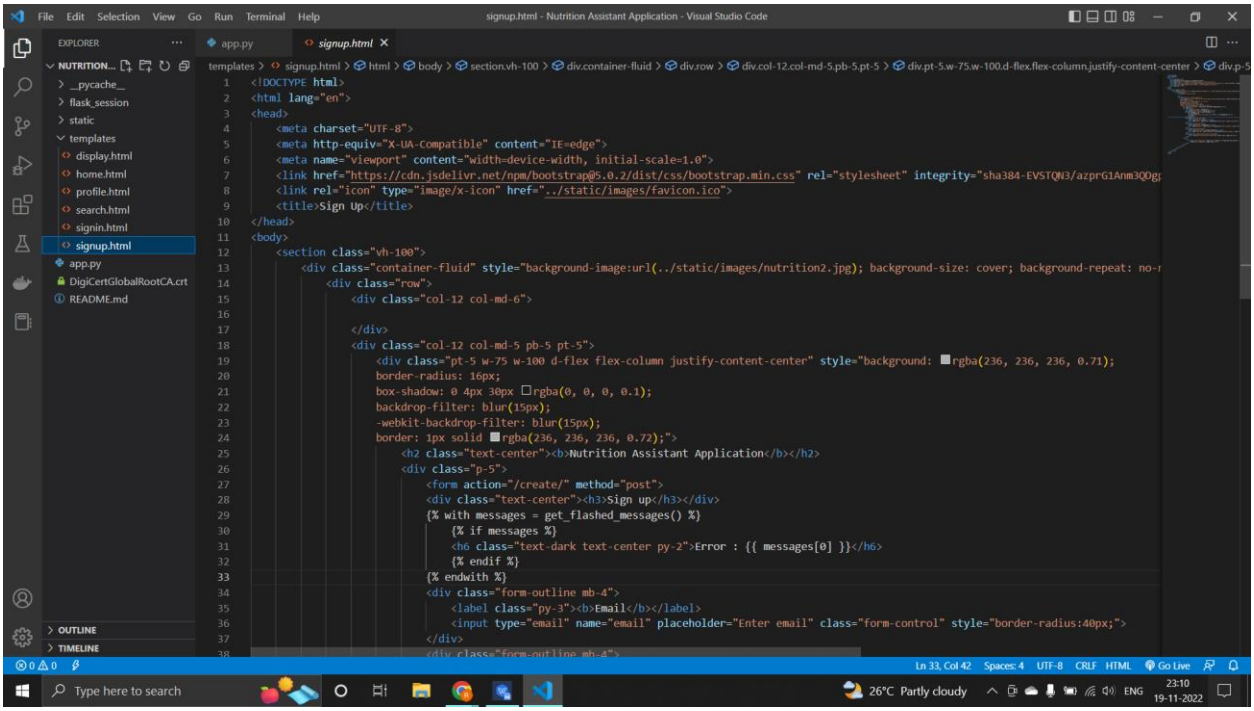
<div class="w-100 pt-5 w-75" style="background: rgba(236, 236, 236, 0.71);
border-radius: 16px;
box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
backdrop-filter: blur(15px);
-webkit-backdrop-filter: blur(15px);
border: 1px solid rgba(236, 236, 236, 0.72);">
<h2 class="text-center">Nutrition Assistant Application</h2>

<h3>Sign in</h3>
{% with messages = get_flashed_messages() %}
{% if messages %}
<h6 class="text-dark text-center py-2">Error : {{ messages[0] }}</h6>
{% endif %}
{% endwith %}
<form action="/" method="post">

<label class="py-3">Email</label>
<input type="email" name="email" placeholder="Enter email" class="form-control" style="border-radius:40px;

<label class="py-3">Password</label>

Signup.html


signup.html - Nutrition Assistant Application - Visual Studio Code
<!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@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDg
<link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
<title>Sign Up</title>
</head>
<body>
<section class="vh-100">
<div class="container-fluid" style="background-image:url(../static/images/nutrition2.jpg); background-size: cover; background-repeat: no-

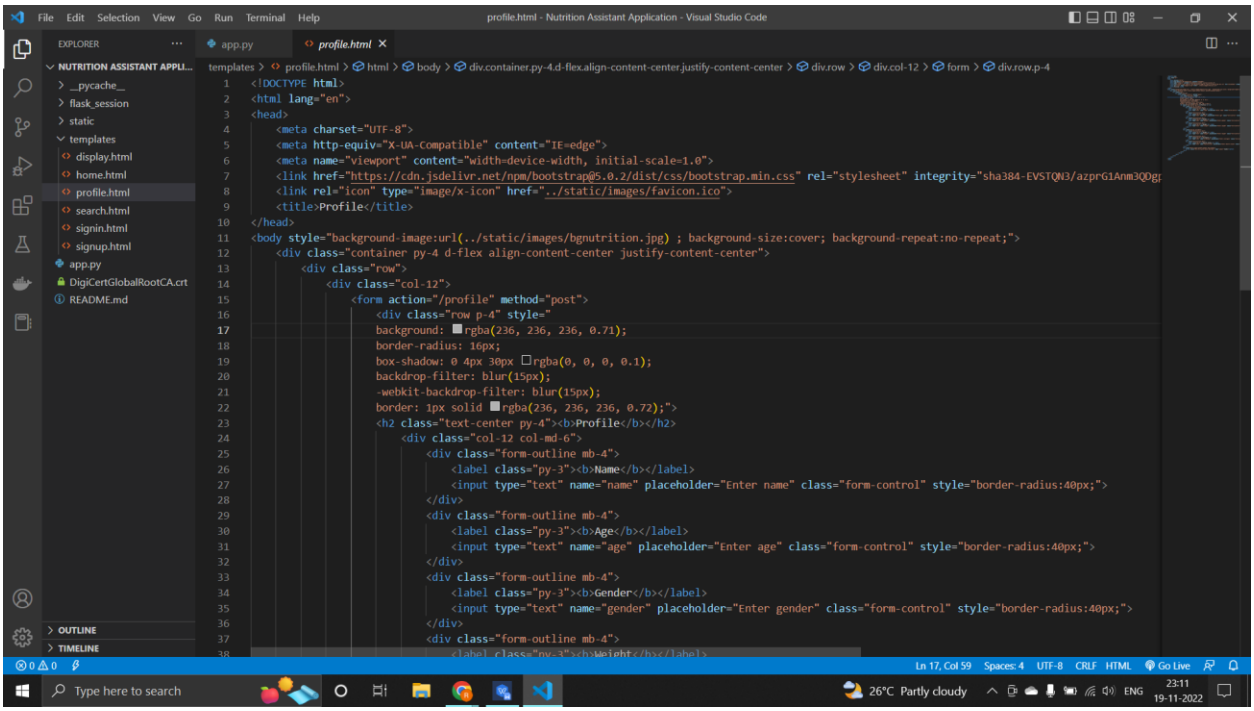
<div class="pt-5 w-75 w-100 d-flex flex-column justify-content-center" style="background: rgba(236, 236, 236, 0.71);
border-radius: 16px;
box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
backdrop-filter: blur(15px);
-webkit-backdrop-filter: blur(15px);
border: 1px solid rgba(236, 236, 236, 0.72);">
<h2 class="text-center">Nutrition Assistant Application</h2>

<form action="/create/" method="post">
<h3>Sign up</h3>
{% with messages = get_flashed_messages() %}
{% if messages %}
<h6 class="text-dark text-center py-2">Error : {{ messages[0] }}</h6>
{% endif %}
{% endwith %}

<label class="py-3">Email</label>
<input type="email" name="email" placeholder="Enter email" class="form-control" style="border-radius:40px;">

Ln 33, Col 42
Spaces: 4
UTF-8
CRLF
HTML
Go Live
Type here to search
26°C Partly cloudy
ENG
23:10
19-11-2022

Profile.html


profile.html - Nutrition Assistant Application - Visual Studio Code
<!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@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDg
<link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
<title>Profile</title>
</head>
<body style="background-image:url(../static/images/bgnutrition.jpg) ; background-size:cover; background-repeat:no-repeat;">

<form action="/profile" method="post">
<div class="row p-4" style="
background: rgba(236, 236, 236, 0.71);
border-radius: 16px;
box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
backdrop-filter: blur(15px);
-webkit-backdrop-filter: blur(15px);
border: 1px solid rgba(236, 236, 236, 0.72);">
<h2 class="text-center py-4">Profile</h2>

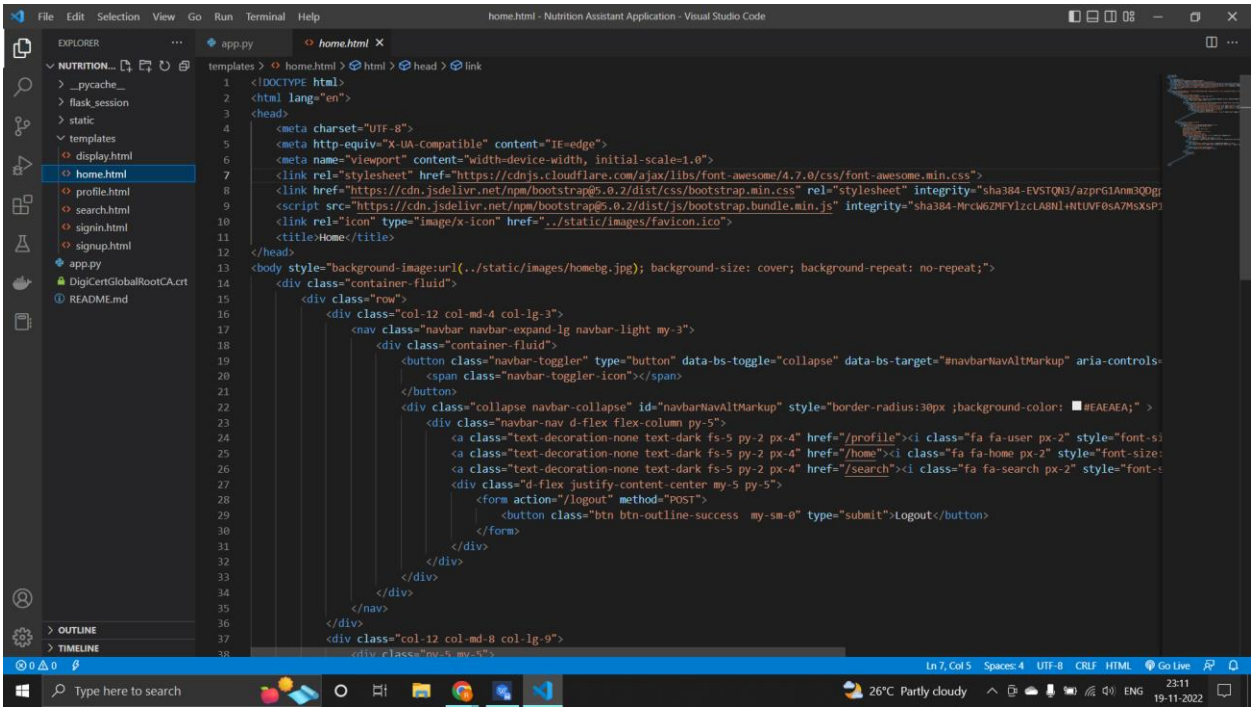
<label class="py-3">Name</label>
<input type="text" name="name" placeholder="Enter name" class="form-control" style="border-radius:40px;">

<label class="py-3">Age</label>
<input type="text" name="age" placeholder="Enter age" class="form-control" style="border-radius:40px;">

<label class="py-3">Gender</label>
<input type="text" name="gender" placeholder="Enter gender" class="form-control" style="border-radius:40px;">

Ln 17, Col 59
Spaces: 4
UTF-8
CRLF
HTML
Go Live
Type here to search
26°C Partly cloudy
ENG
23:11
19-11-2022

Home.html


home.html - Nutrition Assistant Application - Visual Studio Code
EXPLORER
NUTRITION...
__pycache__
flask_session
static
templates
display.html
home.html
profile.html
search.html
signin.html
signup.html
app.py
DigiCertGlobalRootCA.crt
README.md
OUTLINE
TIMELINE
templates > home.html > html > head > link
<!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 rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgp
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js" integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP
<link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
<title>Home</title>
</head>
<body style="background-image:url(../static/images/homebg.jpg); background-size: cover; background-repeat: no-repeat;">

<nav class="navbar navbar-expand-lg navbar-light my-3">

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls

</button>

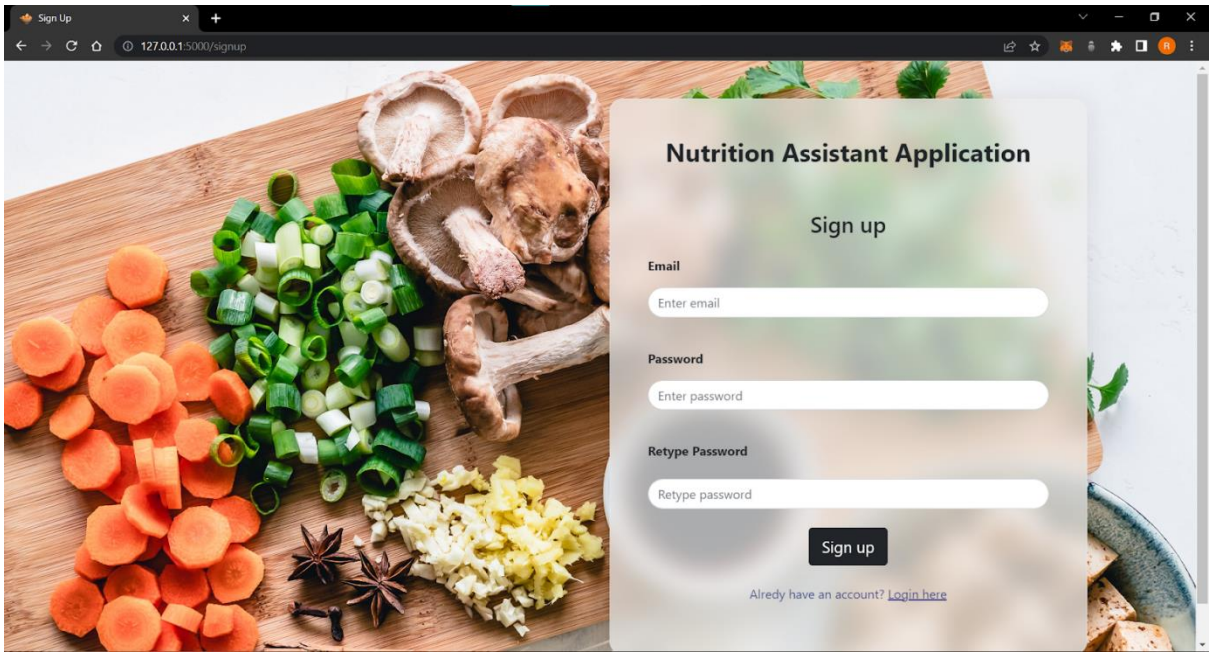
<a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/profile"><i class="fa fa-user px-2" style="font-si
<a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/home"><i class="fa fa-home px-2" style="font-size:
<a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/search"><i class="fa fa-search px-2" style="font-s

<form action="/logout" method="POST">
<button class="btn btn-outline-success my-sm-0" type="submit">Logout</button>
</form>

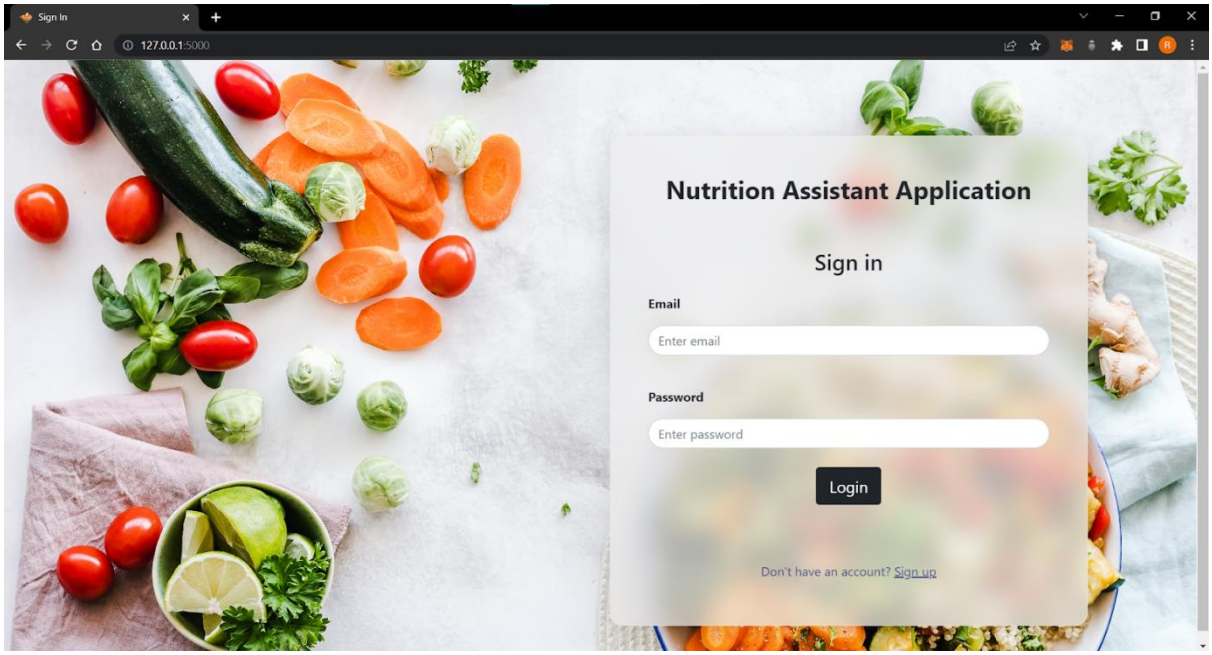
</nav>

Ln 7, Col 5 Spaces: 4 UTF-8 CRLF HTML Go Live
Type here to search
26°C Partly cloudy
ENG
23:11
19-11-2022

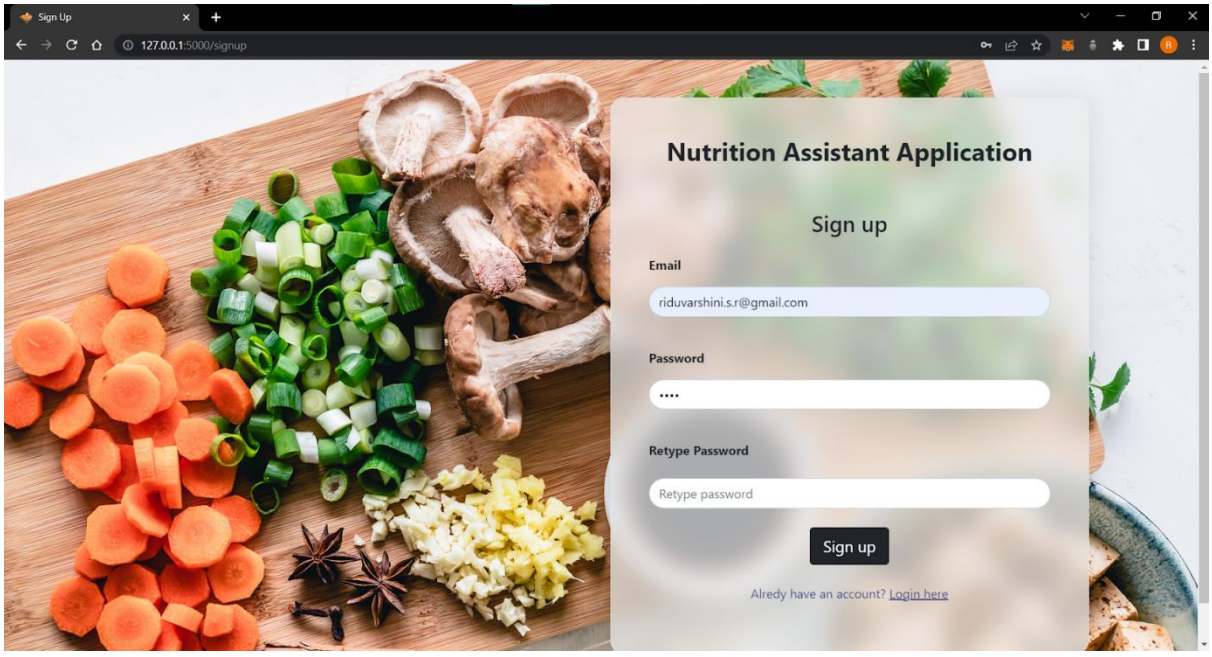
Sign up


Sign Up
127.0.0.1:5000/signup
Nutrition Assistant Application
Sign up
Email
Enter email
Password
Enter password
Retype Password
Retype password
Sign up
Already have an account? Login here

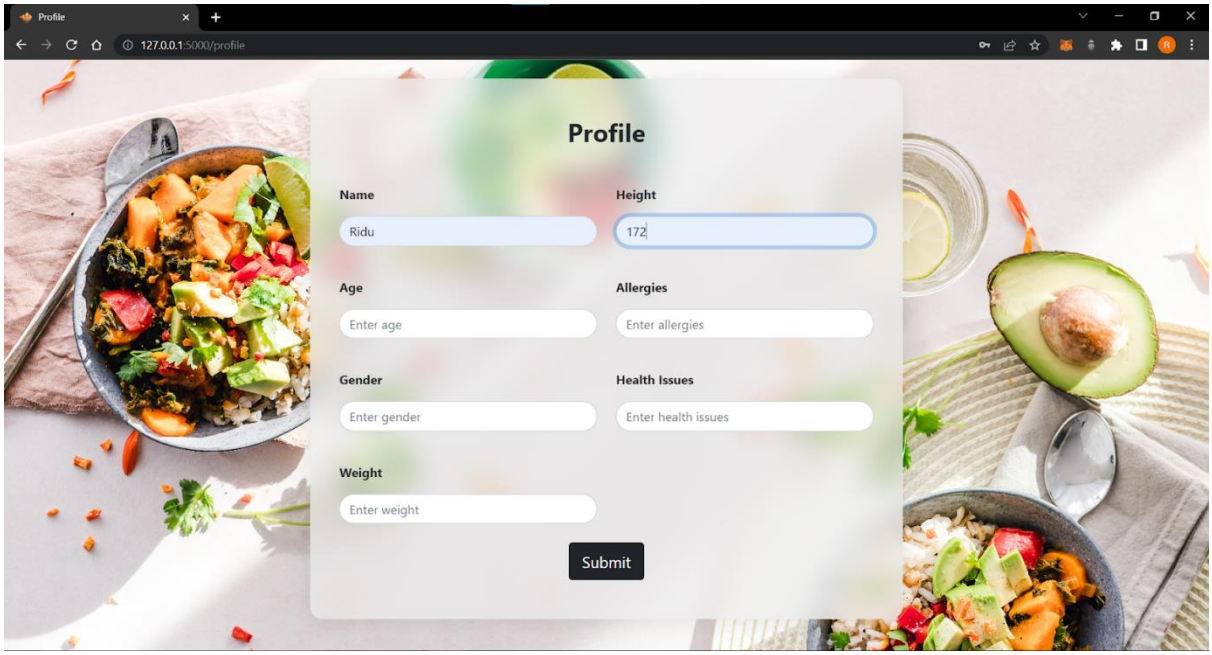
Sign In

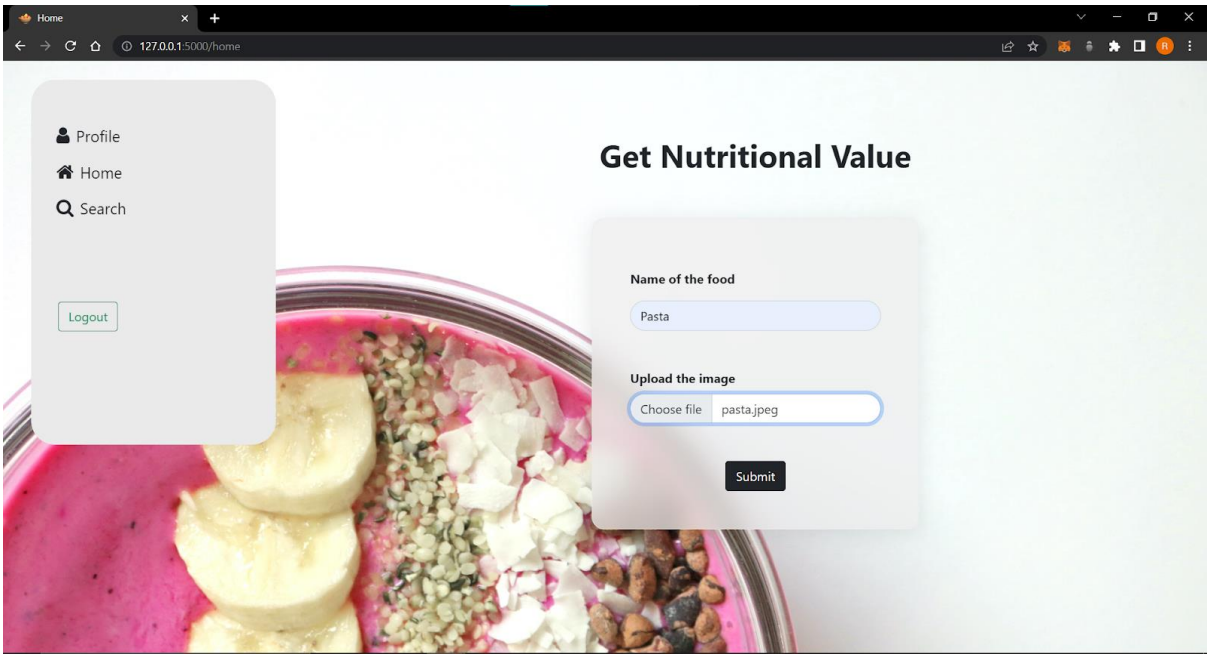

Sign In
127.0.0.1:5000
Nutrition Assistant Application
Sign in
Email
Enter email
Password
Enter password
Login
Don't have an account? Sign up

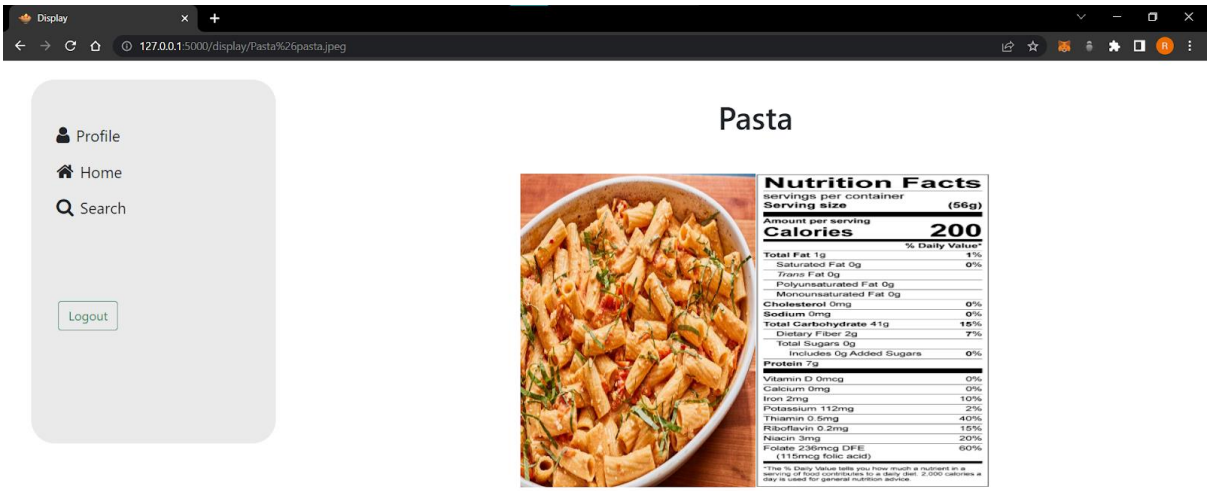
Entering Details


Sign Up
127.0.0.1:5000/signup
Nutrition Assistant Application
Sign up
Email
riduvarshini.s.r@gmail.com
Password
Retype Password
Retype password
Sign up
Alredy have an account? Login here

Profile page

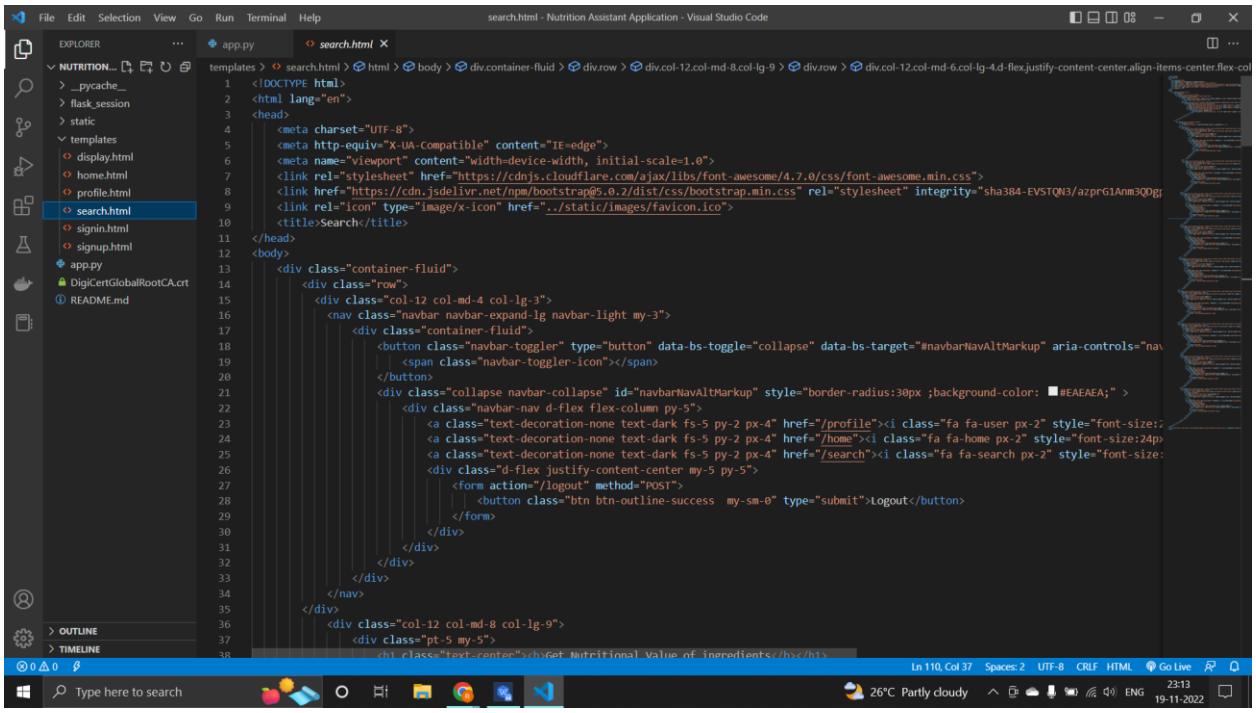

Profile
127.0.0.1:5000/profile
Profile
Name
Ridu
Height
172
Age
Enter age
Allergies
Enter allergies
Gender
Enter gender
Health Issues
Enter health issues
Weight
Enter weight
Submit

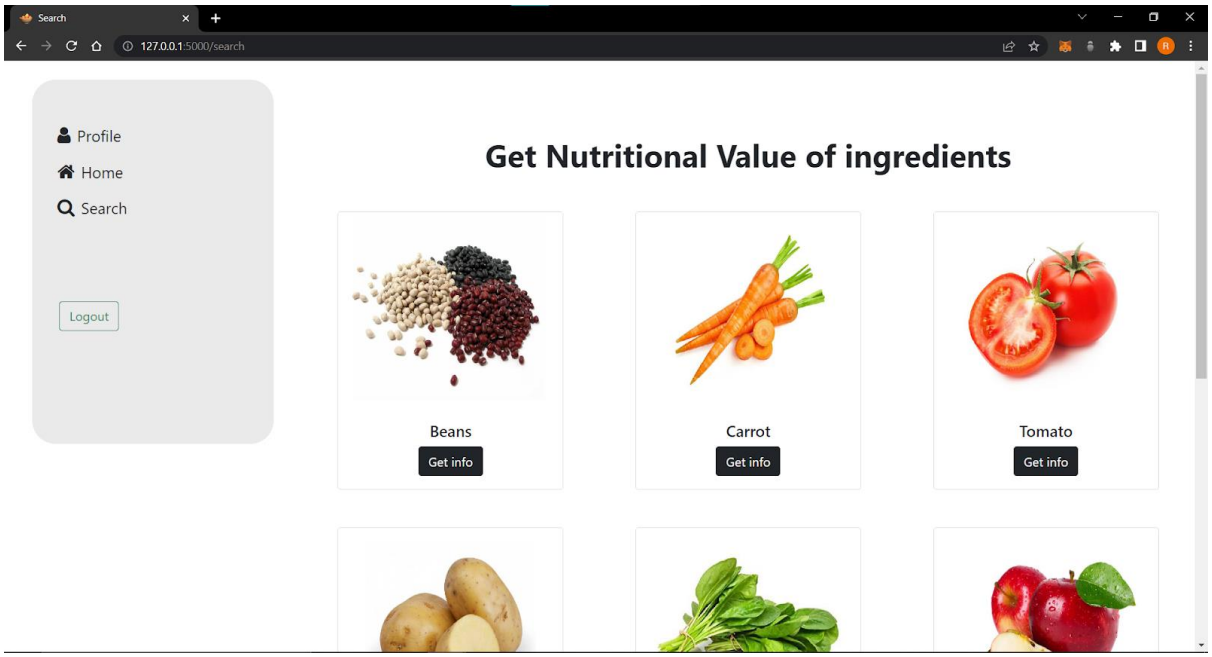

Home
127.0.0.1:5000/home
Profile
Home
Search
Logout
Get Nutritional Value
Name of the food
Pasta
Upload the image
Choose file
pasta.jpeg
Submit

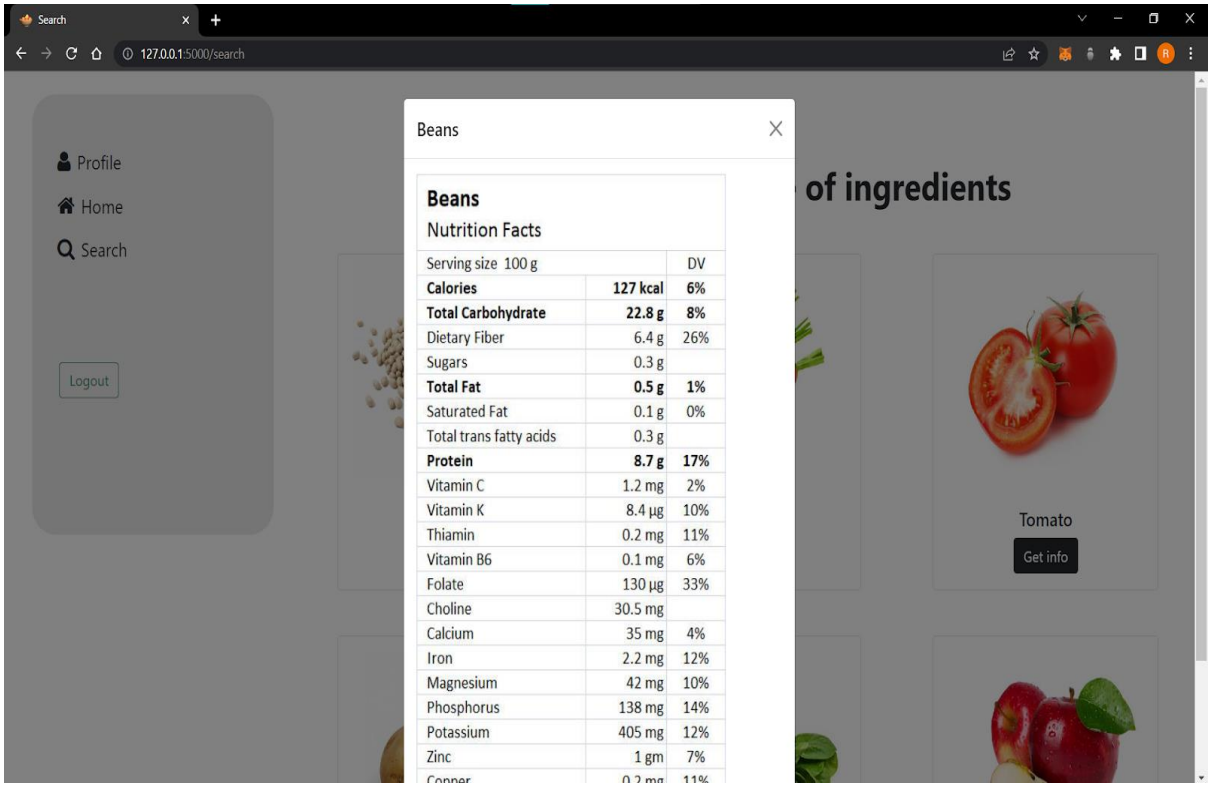

Display
127.0.0.1:5000/display/Pasta%26pasta.jpeg
Profile
Home
Search
Logout
Pasta
Nutrition Facts
servings per container
Serving size (56g)
Amount per serving
Calories 200
% Daily Value*
Total Fat 1g 1%
Saturated Fat 0g 0%
Trans Fat 0g
Polyunsaturated Fat 0g
Monounsaturated Fat 0g
Cholesterol 0mg 0%
Sodium 0mg 0%
Total Carbohydrate 41g 15%
Dietary Fiber 2g 7%
Total Sugars 0g
Includes 0g Added Sugars 0%
Protein 7g
Vitamin D 0mcg 0%
Calcium 0mg 0%
Iron 2mg 10%
Potassium 112mg 2%
Thiamin 0.5mg 40%
Riboflavin 0.2mg 15%
Niacin 3mg 20%
Folate 236mcg DFE (115mcg folic acid) 60%

7.2 FEATURE 2

Search.html


search.html - Nutrition Assistant Application - Visual Studio Code
EXPLORER
app.py
search.html
templates > search.html > html > body > div.container-fluid > div.row > div.col-12.col-md-8.col-lg-9 > div.row > div.col-12.col-md-6.col-lg-4.d-flex.justify-content-center.align-items-center.flex-col
__pycache__
flask_session
static
templates
display.html
home.html
profile.html
search.html
signin.html
signup.html
app.py
DigiCertGlobalRootCA.crt
README.md
OUTLINE
TIMELINE
Ln 110, Col 37 Spaces: 2 UTF-8 CRLF HTML Go Live
Type here to search
26°C Partly cloudy
ENG
23:13
19-11-2022


Search
127.0.0.1:5000/search
Profile
Home
Search
Logout
Get Nutritional Value of ingredients
Beans
Get info
Carrot
Get info
Tomato
Get info


Search
127.0.0.1:5000/search
Profile
Home
Search
Logout
Beans
Beans
Nutrition Facts
Serving size 100 g
DV
Calories 127 kcal 6%
Total Carbohydrate 22.8 g 8%
Dietary Fiber 6.4 g 26%
Sugars 0.3 g
Total Fat 0.5 g 1%
Saturated Fat 0.1 g 0%
Total trans fatty acids 0.3 g
Protein 8.7 g 17%
Vitamin C 1.2 mg 2%
Vitamin K 8.4 µg 10%
Thiamin 0.2 mg 11%
Vitamin B6 0.1 mg 6%
Folate 130 µg 33%
Choline 30.5 mg
Calcium 35 mg 4%
Iron 2.2 mg 12%
Magnesium 42 mg 10%
Phosphorus 138 mg 14%
Potassium 405 mg 12%
Zinc 1 gm 7%
of ingredients
Tomato
Get info

8. TESTING

8.1 TEST CASES

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Commnets	TC for Automation(Y/N)	BUG ID	Executed By
LoaderPage_TC_001	Functional	Loader Page	Displays Login or Signup actions to the user and allows to access the application	HTML, CSS, Python, Flask	1.Enter URL in the browser. 2.Homepage of the website will be displayed on the browser.		Homepage is displayed	Working as expected	Pass				Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
SignUpPage_TC_002	Functional	Signup Page	Users enter their unique credentials and is redirected to profile page.	HTML, CSS, Python, Flask	1.Signup and login is present in the dashboard of the homepage. 2.Click the signup button and it is redirected to the signup page. 3.In the sign page, the user is asked to fill the fields like email and password. 4.New users are created and	Email Id: xyz@gmail.com Password : 12345 Retype Password : 12345	Details entered by user are stored in database. After signup the page is redirected to profile page.	Working as expected	Pass	User-entered data is saved in the database. The page is forwarded to the profile page after signup.			Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
LoginPage_TC_003	Functional	Login page	User after entering their details is redirected to the dashboard	HTML, CSS, Python, Flask	1.Authenitication of the user is done with their email id and password. 2.Verified user is redirected to.	Email: xyz@gmail.com password: 12345	User is navigated to the dashboard	Working as expected	Pass	The dashboard is reached by the user.			Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
Dashboard_TC_004	Functional	Dashboard	1.Displays the calorie of scanned food. 2.Also, displays the number of searches performed and recipes frequently visited.	HTML, CSS, Python, Flask	1. The user is authenticated using their email address and password. 2. The dashboard is forwarded to the verified user.		Dashboard of specific user is displayed along with calorie details etc.	Working as expected	Pass	The dashboard of a certain person is shown together with information about calories, etc.			Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
Home_TC_004	Functional	Home page	This allows the user to upload the image of the food to get the necessary details	HTML, CSS, Python, Flask	After logging in, click the home button. User enters the food name and uploads an image. Click on the submit button.	Name of the food : Salad Upload the image of the food you eat : salad.jpg	Displays nutritional value of the food	Working as expected	Pass				Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
Search_TC_005	Functional	Search page	The user can search for the desired ingredient and its nutritive value	HTML, CSS, Python, Flask	After logging in, click the search button. User enters the name of the ingredient. Click on the get nutritional value button to get the details.	Brinjal Get nutritional value	Displays nutritional value of the ingredient	Working as expected	Pass				Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L
Notification_TC_006	UI	Notification	The user will be notified with diet tips and recipes based on the personalized details.	HTML, CSS, Python, Flask	User gives personalized details.	Height:168 Weight: 60	Notifies the user with recipes and plans	Working as expected	Pass				Riduvarshini S R Sruthi G S Kavya Keerthana M Harshita L

8.2 USER ACCEPTANCE TESTING

Acceptance Testing
UAT Execution & Report Submission

Date	19 November 2022
Team ID	PNT2022TMID03794
Project Name	Project - Nutrition Assistant Application
Maximum Marks	4 Marks

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [Nutrition Assistant Application] project at the time of the release to User Acceptance Testing (UAT).

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

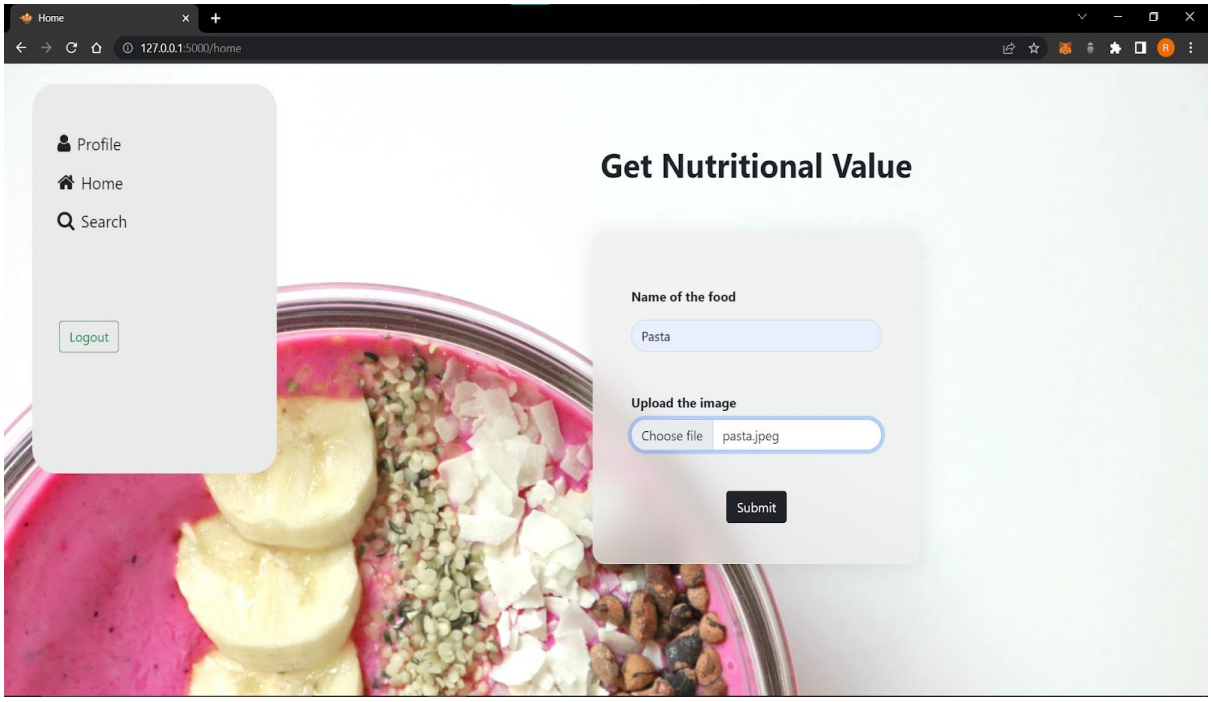
Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	9	5	1	2	19
Duplicate	2	0	3	0	4
External	1	3	0	1	7
Fixed	10	1	5	22	35
Not Reproduced	1	0	1	0	1
Skipped	0	0	1	1	1
Won't Fix	0	6	3	3	7
Totals	23	15	14	28	74

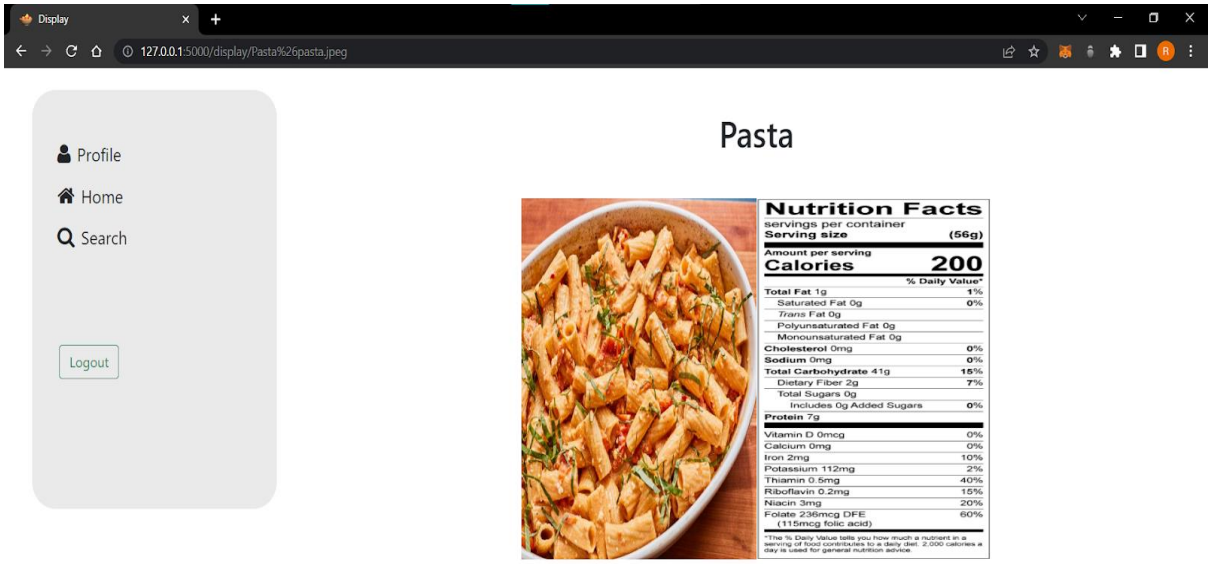
3. Test Case Analysis

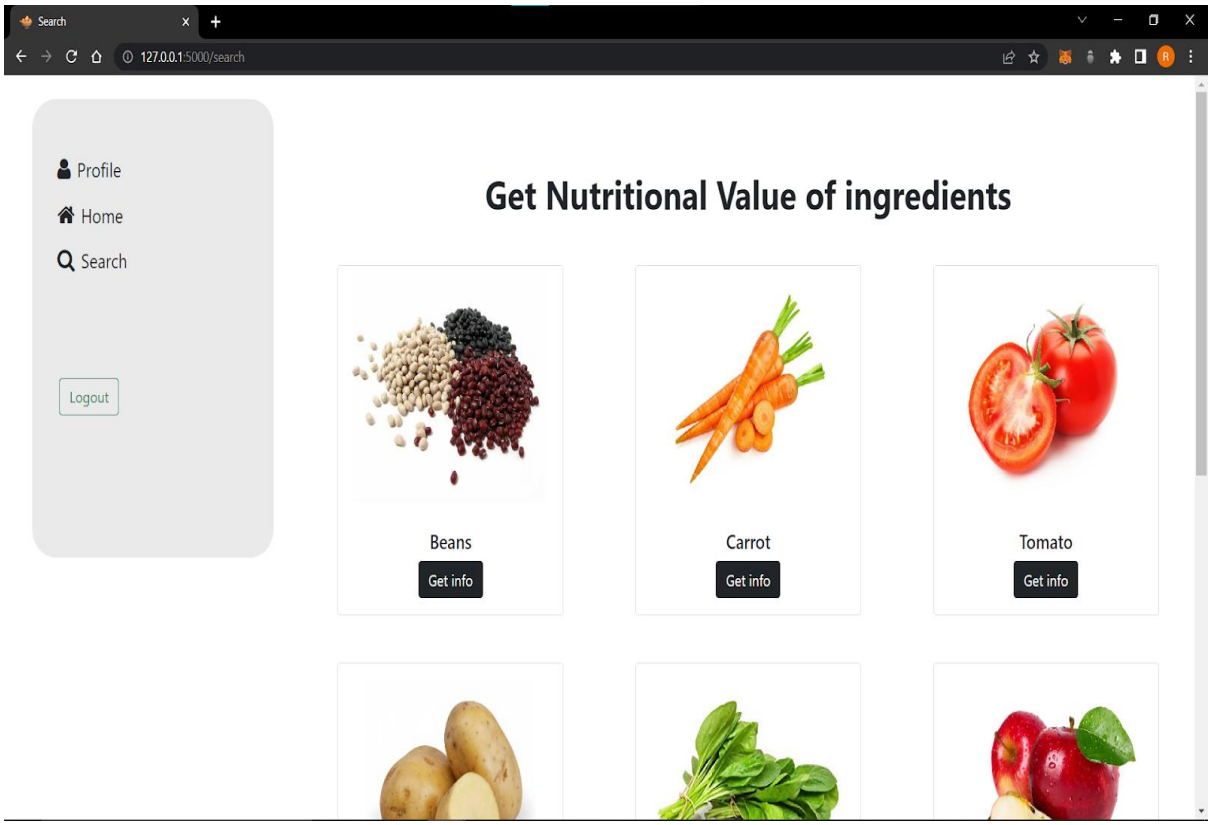
This report shows the number of test cases that have passed, failed, and untested

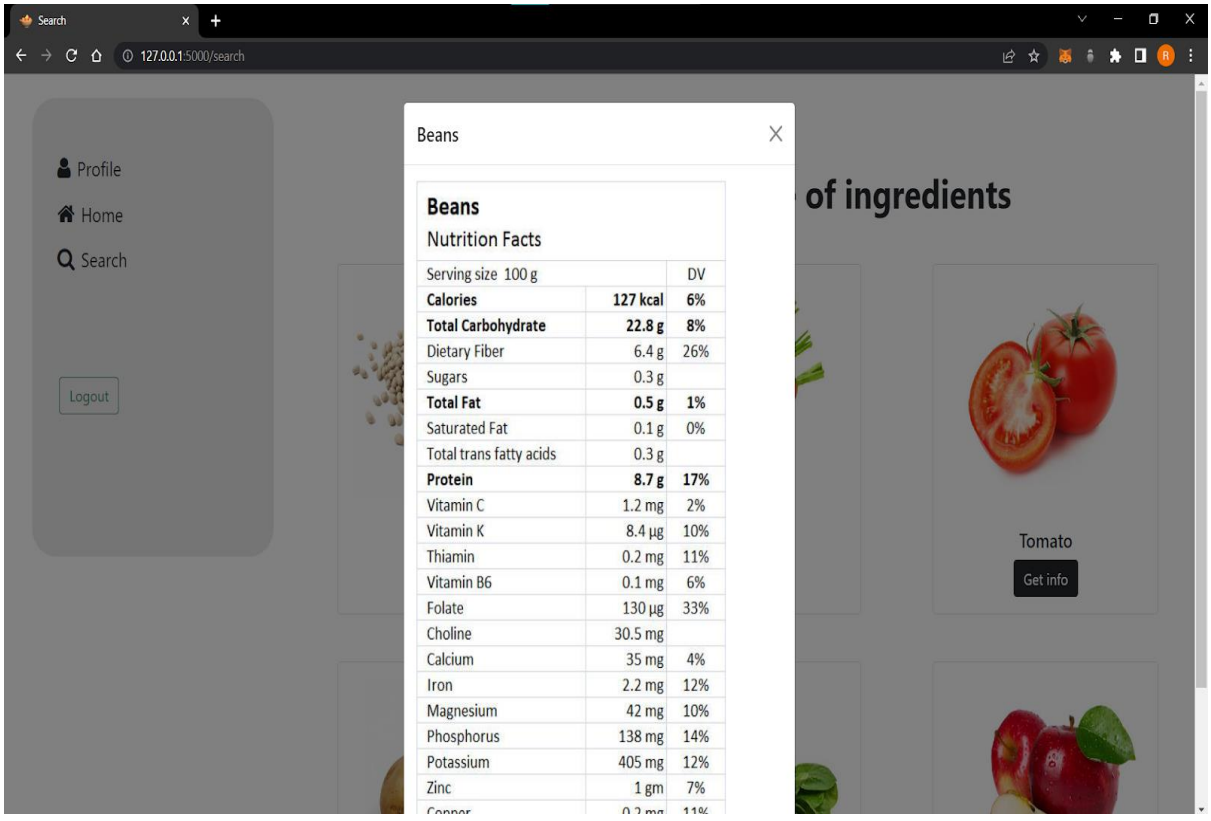
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	6	0	0	6
Client Application	49	0	0	49
Security	4	0	0	4
Outsource Shipping	2	0	0	2
Exception Reporting	8	0	0	8
Final Report Output	3	0	0	3
Version Control	2	0	0	2

9. RESULTS


Home
127.0.0.1:5000/home
Profile
Home
Search
Logout
Get Nutritional Value
Name of the food
Pasta
Upload the image
Choose file
pasta.jpeg
Submit


Display
127.0.0.1:5000/display/Pasta%26pasta.jpeg
Profile
Home
Search
Logout
Pasta
Nutrition Facts
servings per container
Serving size (56g)
Amount per serving
Calories 200
% Daily Value*
Total Fat 1g 1%
Saturated Fat 0g 0%
Trans Fat 0g
Polyunsaturated Fat 0g
Monounsaturated Fat 0g
Cholesterol 0mg 0%
Sodium 0mg 0%
Total Carbohydrate 41g 15%
Dietary Fiber 2g 7%
Total Sugars 0g
Includes 0g Added Sugars 0%
Protein 7g
Vitamin D 0mcg 0%
Calcium 0mg 0%
Iron 2mg 10%
Potassium 112mg 2%
Thiamin 0.5mg 40%
Riboflavin 0.2mg 15%
Niacin 3mg 20%
Folate 236mcg DFE (115mcg folic acid) 60%


Search
127.0.0.1:5000/search
Profile
Home
Search
Logout
Get Nutritional Value of ingredients
Beans
Get info
Carrot
Get info
Tomato
Get info


Search
127.0.0.1:5000/search
Profile
Home
Search
Logout
Beans
Beans
Nutrition Facts
Serving size 100 g
DV
Calories 127 kcal 6%
Total Carbohydrate 22.8 g 8%
Dietary Fiber 6.4 g 26%
Sugars 0.3 g
Total Fat 0.5 g 1%
Saturated Fat 0.1 g 0%
Total trans fatty acids 0.3 g
Protein 8.7 g 17%
Vitamin C 1.2 mg 2%
Vitamin K 8.4 µg 10%
Thiamin 0.2 mg 11%
Vitamin B6 0.1 mg 6%
Folate 130 µg 33%
Choline 30.5 mg
Calcium 35 mg 4%
Iron 2.2 mg 12%
Magnesium 42 mg 10%
Phosphorus 138 mg 14%
Potassium 405 mg 12%
Zinc 1 gm 7%
of ingredients
Tomato
Get info

10. ADVANTAGES AND DISADVANTAGES

ADVANTAGES

- Early Detection of health problems
- Easy to learn about nutritional values
- User-Friendly Web Application
- Data Privacy
- Easy to Understand

DISADVANTAGES

- The clarity of the image being uploaded must be high
- Training with respect to all types of food from all over the world, covering a wide range of users is difficult.
- Internet Connection is mandatory
- Requires training with a large dataset

11. CONCLUSION

As people's standards of living rise, a properly balanced diet are neglected, which is a reflection of the health hazards to people. By consuming healthier meals, people can reduce their daily calorie intake. The system stores the details of the user's health, calculates various parameters like BMI, etc., classifies the food data (images) according to its nutritional values, updates the status of their health condition, and generates periodic reports. It logs the user's meals as images and shows the nutrients they take in, allowing them to determine which nutrients and in what quantities it is required for a healthier lifestyle.

12. FUTURE SCOPE

This application can be further developed to integrate with other fitness tracker apps like Google fit, to track other aspects of the user's health. In addition to that, recommendations and consultations with qualified dieticians and doctors can be made available as a feature

to the users. Other advanced training models can be used to train the system and improve accuracy and efficiency.

13. APPENDIX

13.1 SOURCE CODE

App.py

```
from flask import Flask, render_template, request,url_for,flash,redirect,session;
from flask_session import Session
import ibm_db

app=Flask(__name__)

app.config["SESSION_PERMANENT"]=False
app.config["SESSION_TYPE"]="filesystem"
Session(app)
app.secret_key = "789764532"

conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=19af6446-6171-4641-8aba-
9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=30699;SECURI
TY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=prr47494;PWD=ggtIQb5
SN8tno7qc",",")

def insertsql(tablename, fields, values):
    query="Insert into "+tablename+"("

    for i in fields:
        query+=str(i)+","
    query=query[:-1]+") Values ("
    for i in range(len(fields)):
```

```
        query+="?,"
    query=query[:-1]+")"

    print(query)

    prep_stmt=ibm_db.prepare(conn,query)

    for i in range(len(values)):
        ibm_db.bind_param(prep_stmt,i+1,values[i])

    ibm_db.execute(prep_stmt)



@app.route("/",methods=('GET','POST'))
def signin():
    if request.method=='POST':
        email=request.form["email"]
        password=request.form["password"]

        query= ibm_db.exec_immediate(conn,"select * from userauth")

        userdetails=ibm_db.fetch_assoc(query)



        flag=0
        while userdetails!=False:
            print(userdetails['EMAIL'],email,userdetails['PASSWORD']==password)
            if userdetails['EMAIL']==email and userdetails["PASSWORD"]==password.strip():
                flag=2;session["email"]=userdetails["EMAIL"];break
                                                elif userdetails["EMAIL"]==email and
userdetails["PASSWORD"]!=password.strip():
```

```
            flag=1;break
        userdetails=ibm_db.fetch_assoc(query)
    if flag==0:
        flash("User doesn't exist")
    elif flag==1:
        flash("Password is incorrect")
    else:
        return redirect(url_for("home"))

  return render_template("signin.html")

@app.route("/signup")
def signup():
  return render_template('signup.html')

@app.route('/create/',methods=('GET','POST'))
def create():
  if request.method=="POST":
    email=request.form['email']
    password=request.form['password']
    repassword=request.form['repassword']

    if not email:
        flash('Email required')

    elif not password:
        flash('Password is required')

    elif not repassword:
        flash('Password is required')
```

```
        elif password!=repassword:
            flash('Password did not match')

        else:
            session['email']=email
            fields=["email","password"]
            values=[email,password]
            insertsql("userauth",fields,values)
            return redirect(url_for("profile"))

    return  redirect(url_for("signup"))

@app.route("/profile",methods=('POST','GET'))
def profile():
    email=session['email']
    if request.method=="POST":
        name=request.form['name']
        age=request.form['age']
        gender=request.form['gender']
        weight=request.form['weight']
        height=request.form['height']
        allergies=request.form['allergies']
        healthissues=request.form['healthissues']

        fields=["email","name","age","gender","weight","height","allergies","healthissues"]
        values=[email,name,age,gender,weight,height,allergies,healthissues]
        insertsql("userdetails",fields,values)


        return redirect(url_for('home'))
```

```
    return render_template('profile.html')



@app.route("/home")
def home():
    try:
        if session["email"]:
            return render_template("home.html",email=session["email"])
    except:
        return redirect(url_for("login"))
    return redirect(url_for("login"))

@app.route("/get",methods=('POST','GET'))
def get():
    if request.method=="POST":
        foodname=request.form['foodname']
        image=request.form['image']
        return redirect(url_for("display",foodname=foodname,image=image))

@app.route("/display/<foodname>&<image>")
def display(foodname,image):
    if foodname=="Pasta":
                                                                                return
render_template("display.html",foodname=foodname,image=image,nutri="pastanutri.pn
g")
    elif foodname=="Pizza":
                                                                                return
render_template("display.html",foodname=foodname,image=image,nutri="pizzanutri.pn
g")
    else:
```

```
                                                                    return
render_template("display.html",foodname=foodname,image=image,nutri="nutri.png")

@app.route("/logout",methods=('POST','GET'))
def logout():
    session['userid']=None
    return redirect(url_for("signin"))

@app.route("/search")
def search():
    return render_template("search.html",email=session['email'])
```

Signin.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@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"                                                    integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
    <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
    <title>Sign In</title>
</head>
<body>
    <section class="vh-100">
```

```
                    <div class="container-fluid pt-5" style="background-image:url(../static/images/nutrition.jpg); background-size: cover; background-repeat: no-repeat;">
        <div class="row ">
            <div class="col-12 col-md-6">
            </div>
            <div class="col-12 col-md-5 py-5" >
                <div class="w-100 pt-5 w-75" style="background: rgba(236, 236, 236, 0.71);
                border-radius: 16px;
                box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
                backdrop-filter: blur(15px);
                -webkit-backdrop-filter: blur(15px);
                border: 1px solid rgba(236, 236, 236, 0.72);">
                    <h2 class="text-center"><b>Nutrition Assistant Application</b></h2>
                    <div class="p-5">
                        <div class="text-center"><h3>Sign in</h3></div>
                        {% with messages = get_flashed_messages() %}
                            {% if messages %}
                            <h6 class="text-dark text-center py-2">Error : {{ messages[0] }}</h6>
                            {% endif %}
                        {% endwith %}
                        <form action="/" method="post">
                            <div class="form-outline mb-4">
                                    <label class="py-3"><b>Email</b></label>
                                        <input type="email" name="email" placeholder="Enter email" class="form-control" style="border-radius:40px;">
                            </div>
                            <div class="form-outline mb-4">
                                <label class="py-3"><b>Password</b></label>
                                    <input type="password" name="password" placeholder="Enter password" class="form-control" style="border-radius:40px ;">
```

```
                    </div>
                    <div class="mb-4 align-content-center text-center">
                                        <button class="btn btn-dark btn-lg btn-block"
type="submit">Login</button>
                    </div>
                  </form>
                </div>
                <div>
                  <p class="mb-5 pb-lg-2 text-center" style="color: #393f81;">Don't have
an account? <a href="/signup"
                    style="color: #393f81;">Sign up</a></p>
                </div>
              </div>
            </div>
          </div>
    </section>
</body>
</html>
```

Signup.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@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"                                                    integrity="sha384-
```

```
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
    <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
    <title>Sign In</title>
</head>
<body>
    <section class="vh-100">
                                <div class="container-fluid pt-5" style="background-
image:url(../static/images/nutrition.jpg); background-size: cover; background-repeat: no-
repeat;">
            <div class="row ">
                <div class="col-12 col-md-6">
                </div>
                <div class="col-12 col-md-5 py-5" >
                    <div class="w-100 pt-5 w-75" style="background: rgba(236, 236, 236, 0.71);
                    border-radius: 16px;
                    box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
                    backdrop-filter: blur(15px);
                    -webkit-backdrop-filter: blur(15px);
                    border: 1px solid rgba(236, 236, 236, 0.72);">
                        <h2 class="text-center"><b>Nutrition Assistant Application</b></h2>
                        <div class="p-5">
                            <div class="text-center"><h3>Sign in</h3></div>
                            {% with messages = get_flashed_messages() %}
                                {% if messages %}
                                <h6 class="text-dark text-center py-2">Error : {{ messages[0] }}</h6>
                                {% endif %}
                            {% endwith %}
                            <form action="/" method="post">
                                <div class="form-outline mb-4">
                                        <label class="py-3"><b>Email</b></label>
```

```
                                <input type="email" name="email" placeholder="Enter email"
class="form-control" style="border-radius:40px;">
                            </div>
                            <div class="form-outline mb-4">
                               <label class="py-3"><b>Password</b></label>
                                  <input type="password" name="password" placeholder="Enter
password" class="form-control" style="border-radius:40px ;">
                            </div>
                            <div class="mb-4 align-content-center text-center">
                                                <button class="btn btn-dark btn-lg btn-block"
type="submit">Login</button>
                            </div>
                        </form>
                    </div>
                    <div>
                        <p class="mb-5 pb-lg-2 text-center" style="color: #393f81;">Don't have
an account? <a href="/signup"
                            style="color: #393f81;">Sign up</a></p>
                    </div>
                </div>
            </div>
        </div>
    </section>
</body>
</html>
```

Profile.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@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet"                                                    integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
    <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
    <title>Profile</title>
</head>
<body    style="background-image:url(../static/images/bgnutrition.jpg)    ;    background-
size:cover; background-repeat:no-repeat;">
    <div class="container py-4 d-flex align-content-center justify-content-center">
        <div class="row">
            <div class="col-12">
                <form action="/profile" method="post">
                    <div class="row p-4" style="
                    background: rgba(236, 236, 236, 0.71);
                    border-radius: 16px;
                    box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
                    backdrop-filter: blur(15px);
                    -webkit-backdrop-filter: blur(15px);
                    border: 1px solid rgba(236, 236, 236, 0.72);">
                    <h2 class="text-center py-4"><b>Profile</b></h2>
                        <div class="col-12 col-md-6">
                            <div class="form-outline mb-4">
                                <label class="py-3"><b>Name</b></label>
                                        <input  type="text"  name="name"  placeholder="Enter  name"
class="form-control" style="border-radius:40px;">
                            </div>
```

```
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Age</b></label>
                      <input type="text" name="age" placeholder="Enter age" class="form-control" style="border-radius:40px;">
                    </div>
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Gender</b></label>
                            <input type="text" name="gender" placeholder="Enter gender" class="form-control" style="border-radius:40px;">
                    </div>
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Weight</b></label>
                             <input type="text" name="weight" placeholder="Enter weight" class="form-control" style="border-radius:40px;">
                    </div>
                  </div>
                  <div class="col-12 col-md-6">
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Height</b></label>
                              <input type="text" name="height" placeholder="Enter height" class="form-control" style="border-radius:40px;">
                    </div>
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Allergies</b></label>
                         <input type="text" name="allergies" placeholder="Enter allergies" class="form-control" style="border-radius:40px;">
                    </div>
                    <div class="form-outline mb-4">
                       <label class="py-3"><b>Health Issues</b></label>
                        <input type="text" name="healthissues" placeholder="Enter health issues" class="form-control" style="border-radius:40px;">
```

```
                    </div>
                </div>
                <div class="mb-4 align-content-center text-center">
                                    <button class="btn btn-lg btn-block btn-dark"
type="submit">Submit</button>
                </div>
            </div>
        </form>
    </div>
  </div>
</body>
</html>
```

Home.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 rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
                                                                    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
```

```
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
    <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
    <title>Home</title>
</head>
<body style="background-image:url(../static/images/homebg.jpg); background-size: cover; background-repeat: no-repeat;">
    <div class="container-fluid">
        <div class="row">
            <div class="col-12 col-md-4 col-lg-3">
                <nav class="navbar navbar-expand-lg navbar-light my-3">
                    <div class="container-fluid">
                        <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">
                            <span class="navbar-toggler-icon"></span>
                        </button>
                            <div class="collapse navbar-collapse" id="navbarNavAltMarkup" style="border-radius:30px ;background-color: #EAEAEA;" >
                            <div class="navbar-nav d-flex flex-column py-5">
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/profile"><i class="fa fa-user px-2" style="font-size:24px;"></i>Profile</a>
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/home"><i class="fa fa-home px-2" style="font-size:24px;"></i>Home</a>
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/search"><i class="fa fa-search px-2" style="font-size:24px;"></i>Search</a>
                                <div class="d-flex justify-content-center my-5 py-5">
                                    <form action="/logout" method="POST">
                                        <button class="btn btn-outline-success my-sm-0" type="submit">Logout</button>
                                    </form>
```

```
                    </div>
                </div>
            </div>
        </nav>
    </div>
    <div class="col-12 col-md-8 col-lg-9">
        <div class="py-5 my-5">
            <h1 class="text-center"><b>Get Nutritional Value</b></h1>
            <div class="d-flex justify-content-center py-5">
                <form class="p-5" style="
                background: rgba(236, 236, 236, 0.71);
                border-radius: 16px;
                box-shadow: 0 4px 30px rgba(0, 0, 0, 0.1);
                backdrop-filter: blur(15px);
                -webkit-backdrop-filter: blur(15px);
               border: 1px solid rgba(236, 236, 236, 0.72);" action="/get" method="post">
                    <div class="form-outline mb-5">
                        <label class="py-3"><b>Name of the food</b></label>
                                <input type="text" name="foodname" class="form-control"
style="border-radius:40px ;">
                    </div>
                    <div class="mb-5">
                                <label for="formFile" class="form-label"><b>Upload the
image</b></label>
                     <input class="form-control" name="image" style="border-radius:40px ;"
type="file" id="formFile">
                    </div>
                    <div class="d-flex justify-content-center">
                        <button class="btn btn-dark">Submit</button>
                    </div>
```

```
                </form>
                <div class="my-5">
                    <div id="html">
                    </div>
                </div>
            </div>
        </div>
    </div>
</body>
</html>
```

Search.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 rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">
    <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
    <title>Search</title>
</head>
<body>
```

```
<div class="container-fluid">
  <div class="row">
    <div class="col-12 col-md-4 col-lg-3">
      <nav class="navbar navbar-expand-lg navbar-light my-3">
        <div class="container-fluid">
          <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">
            <span class="navbar-toggler-icon"></span>
          </button>
            <div class="collapse navbar-collapse" id="navbarNavAltMarkup" style="border-radius:30px ;background-color: #EAEAEA;" >
            <div class="navbar-nav d-flex flex-column py-5">
             <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/profile"><i class="fa fa-user px-2" style="font-size:24px;"></i>Profile</a>
             <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/home"><i class="fa fa-home px-2" style="font-size:24px;"></i>Home</a>
                <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/search"><i class="fa fa-search px-2" style="font-size:24px;"></i>Search</a>
              <div class="d-flex justify-content-center my-5 py-5">
                <form action="/logout" method="POST">
                  <button class="btn btn-outline-success my-sm-0" type="submit">Logout</button>
                </form>
              </div>
            </div>
          </div>
        </div>
      </nav>
    </div>
      <div class="col-12 col-md-8 col-lg-9">
```

```
<div class="pt-5 my-5">
    <h1 class="text-center"><b>Get Nutritional Value of ingredients</b></h1>
</div>
<div class="row">
  <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
      <div class="card mb-5" style="width: 18rem;">
        <img src="../static/images/Beans.jpeg" class="card-img-top" alt="beans" width="250" height="250">
        <div class="card-body">
          <h5 class="card-title text-center">Beans</h5>
          <div class="d-flex justify-content-center">
            <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal">Get info</button>
          </div>
          <!-- Modal -->
            <div class="modal fade" id="exampleModal" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
            <div class="modal-dialog">
              <div class="modal-content">
                <div class="modal-header">
                  <h5 class="modal-title" id="exampleModalLabel">Beans</h5>
                  <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                </div>
                <div class="modal-body">
                  <img src="../static/images/beansnutri.jpeg">
                </div>
              </div>
            </div>
          </div>
```

```
                    </div>
                  </div>
                </div>
                <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
                  <div class="card mb-5" style="width: 18rem;">
                    <img src="../static/images/carrot.jpeg" class="card-img-top" alt="carrot" width="250" height="250">
                    <div class="card-body">
                      <h5 class="card-title text-center">Carrot</h5>
                      <div class="d-flex justify-content-center">
                          <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal1">Get info</button>
                      </div>
                      <!-- Modal -->
                          <div class="modal fade" id="exampleModal1" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
                        <div class="modal-dialog">
                          <div class="modal-content">
                            <div class="modal-header">
                              <h5 class="modal-title" id="exampleModalLabel">Carrot</h5>
                              <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                            </div>
                            <div class="modal-body">
                              <img src="../static/images/Carrotnutri.jpeg">
                            </div>
                          </div>
                        </div>
                      </div>
```

```
                </div>
            </div>
            <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
                <div class="card mb-5" style="width: 18rem;">
                    <img src="../static/images/tomato.jpg" class="card-img-top" alt="tomato" width="250" height="250">
                    <div class="card-body">
                        <h5 class="card-title text-center">Tomato</h5>
                        <div class="d-flex justify-content-center">
                            <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal2">Get info</button>
                        </div>
                        <!-- Modal -->
                        <div class="modal fade" id="exampleModal2" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
                            <div class="modal-dialog">
                                <div class="modal-content">
                                    <div class="modal-header">
                                        <h5 class="modal-title" id="exampleModalLabel2">Tomato</h5>
                                        <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                                    </div>
                                    <div class="modal-body">
                                        <img src="../static/images/tomatonutri.jpeg">
                                    </div>
                                </div>
                            </div>
                        </div>
                    </div>
                </div>
```

```
            </div>
            <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
              <div class="card mb-5" style="width: 18rem;">
                  <img src="../static/images/potato.jpg" class="card-img-top" alt="potato" width="250" height="250">
                <div class="card-body">
                  <h5 class="card-title text-center">Potato</h5>
                  <div class="d-flex justify-content-center">
                      <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal3">Get info</button>
                  </div>
                  <!-- Modal -->
                      <div class="modal fade" id="exampleModal3" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
                    <div class="modal-dialog">
                      <div class="modal-content">
                        <div class="modal-header">
                          <h5 class="modal-title" id="exampleModalLabel">Potato</h5>
                            <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                        </div>
                        <div class="modal-body">
                          <img src="../static/images/potatonutri.jpeg">
                        </div>
                      </div>
                    </div>
                  </div>
                </div>
              </div>
```

```
            <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
                <div class="card mb-5" style="width: 18rem;">
                    <img src="../static/images/spinach.jpg" class="card-img-top" alt="spinach" width="250" height="250">
                  <div class="card-body">
                    <h5 class="card-title text-center">Spinach</h5>
                    <div class="d-flex justify-content-center">
                      <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal4">Get info</button>
                    </div>
                    <!-- Modal -->
                          <div class="modal fade" id="exampleModal4" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
                      <div class="modal-dialog">
                        <div class="modal-content">
                          <div class="modal-header">
                            <h5 class="modal-title" id="exampleModalLabel">Spinach</h5>
                              <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                          </div>
                          <div class="modal-body">
                            <img src="../static/images/spinachnutri.jpeg">
                          </div>
                        </div>
                      </div>
                    </div>
                  </div>
                </div>
            </div>
```

```
            <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
              <div class="card mb-5" style="width: 18rem;">
                    <img  src="../static/images/apple.jpg"  class="card-img-top"  alt="apple" width="250" height="250">
                <div class="card-body">
                  <h5 class="card-title text-center">Apple</h5>
                  <div class="d-flex justify-content-center">
                    <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal5">Get info</button>
                  </div>
                  <!-- Modal -->
                        <div  class="modal  fade"  id="exampleModal5"  tabindex="-1"  aria-labelledby="exampleModalLabel" aria-hidden="true">
                    <div class="modal-dialog">
                      <div class="modal-content">
                        <div class="modal-header">
                          <h5 class="modal-title" id="exampleModalLabel">Apple</h5>
                          <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                        </div>
                        <div class="modal-body">
                          <img src="../static/images/applenutri.jpeg">
                        </div>
                      </div>
                    </div>
                  </div>
                </div>
              </div>
            </div>
```

```
            <div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
            <div class="card mb-5" style="width: 18rem;">
                <img src="../static/images/banana.jpg" class="card-img-top" alt="banana" width="250" height="250">
              <div class="card-body">
                <h5 class="card-title text-center">Banana</h5>
                <div class="d-flex justify-content-center">
                  <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal6">Get info</button>
                </div>
                <!-- Modal -->
                    <div class="modal fade" id="exampleModal6" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
                  <div class="modal-dialog">
                    <div class="modal-content">
                      <div class="modal-header">
                        <h5 class="modal-title" id="exampleModalLabel">Banana</h5>
                        <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
                      </div>
                      <div class="modal-body">
                        <img src="../static/images/bananananutri.jpeg">
                      </div>
                    </div>
                  </div>
                </div>
              </div>
            </div>
            </div>
```

```
<div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
 <div class="card mb-5" style="width: 18rem;">
  <img src="../static/images/grapes.jpg" class="card-img-top" alt="grapes" width="250" height="250">
  <div class="card-body">
   <h5 class="card-title text-center">Grapes</h5>
   <div class="d-flex justify-content-center">
    <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal7">Get info</button>
   </div>
   <!-- Modal -->
    <div class="modal fade" id="exampleModal7" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
     <div class="modal-dialog">
      <div class="modal-content">
       <div class="modal-header">
        <h5 class="modal-title" id="exampleModalLabel">Grapes</h5>
         <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
       </div>
       <div class="modal-body">
        <img src="../static/images/grapenutri.jpeg">
       </div>
      </div>
     </div>
    </div>
  </div>
 </div>
</div>
```

```
<div class="col-12 col-md-6 col-lg-4  d-flex justify-content-center align-items-center flex-column">
 <div class="card mb-5" style="width: 18rem;">
   <img src="../static/images/custard.jpg" class="card-img-top" alt="custard" width="250" height="250">
   <div class="card-body">
    <h5 class="card-title text-center">Custard Apple</h5>
    <div class="d-flex justify-content-center">
        <button type="button" class="btn btn-dark" data-bs-toggle="modal" data-bs-target="#exampleModal8">Get info</button>
    </div>
    <!-- Modal -->
        <div class="modal fade" id="exampleModal8" tabindex="-1" aria-labelledby="exampleModalLabel" aria-hidden="true">
     <div class="modal-dialog">
      <div class="modal-content">
       <div class="modal-header">
      <h5 class="modal-title" id="exampleModalLabel">Custard Apple</h5>
          <button type="button" class="btn-close" data-bs-dismiss="modal" aria-label="Close"></button>
       </div>
       <div class="modal-body">
        <img src="../static/images/custardnutri.jpeg">
       </div>
      </div>
     </div>
    </div>
   </div>
  </div>
 </div>
```

```
        </div>
      </div>
   </div>
</body>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
</html>
```

Display.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 rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">
                                                                    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
   <link rel="icon" type="image/x-icon" href="../static/images/favicon.ico">
```

```
    <title>Display</title>
</head>
<body>
    <div class="container-fluid">
        <div class="row">
            <div class="col-12 col-md-4 col-lg-3">
                <nav class="navbar navbar-expand-lg navbar-light my-3">
                    <div class="container-fluid">
                        <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">
                            <span class="navbar-toggler-icon"></span>
                        </button>
                            <div class="collapse navbar-collapse" id="navbarNavAltMarkup" style="border-radius:30px ;background-color: #EAEAEA;" >
                            <div class="navbar-nav d-flex flex-column py-5">
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/profile"><i class="fa fa-user px-2" style="font-size:24px;"></i>Profile</a>
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/home"><i class="fa fa-home px-2" style="font-size:24px;"></i>Home</a>
                                    <a class="text-decoration-none text-dark fs-5 py-2 px-4" href="/search"><i class="fa fa-search px-2" style="font-size:24px;"></i>Search</a>
                                <div class="d-flex justify-content-center my-5 py-5">
                                    <form action="/logout" method="POST">
                                        <button class="btn btn-outline-success my-sm-0" type="submit">Logout</button>
                                    </form>
                                </div>
                            </div>
                        </div>
                    </div>
```

```
            </nav>
        </div>
        <div class="col-12 col-md-8 col-lg-9">
            <h1 class="text-center my-5">{{foodname}}</h1>
            <div class="d-flex justify-content-center align-content-center">
                <img src="../static/images/{{image}}" width="300" height="400">
                <img src="../static/images/{{nutri}}" width="300" height="400">
            </div>
        </div>
</body>
</html>
```

13.2 GITHUB AND PROJECT DEMO LINK

Github link : https://github.com/IBM-EPBL/IBM-Project-27373-1660054853

Project Demo link : https://youtu.be/rrxJ1dxDAsQ