

NUTRITION ASSISTANCE APPLICATION

PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

In

COMPUTER SCIENCE ENGINEERING



JERUSALEM COLLEGE OF ENGINEERING

(An Autonomous Institution, Affiliated to Anna University, Chennai)

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Narayanapuram, Pallikaranai, Chennai - 600100**

1. INTRODUCTION

a. Project Overview

Nutrify app is a type of nutrition tracking app that helps users lose weight, be healthy, and get stronger. There are different nutrition apps, including a calorie counter, diet trackers, nutrition planner apps, and marketplace platforms that connect users and nutrition coaches.

Apart from this, there are also apps designed for niches: app-based food diaries, pregnancy nutrition apps, bodybuilding nutrition applications, vegan nutrition apps, diet-tracking apps, health activity tracker apps, etc.

b. Purpose

To keep track of daily intake. To monitor calories intake and consumed. To provide you with guidance on healthy and nutritious food. To create a personalized meal plan.

One of the most basic functions of nutrify app is to guide its users towards a healthy diet and assist them to achieve their health goals. So, once your user specifies the goal like desired weight goal, body type, food habits, and preferred food items, your app must suggest them with a proper diet accordingly.

2. LITERATURE SURVEY

2.1 Existing problem

With diet and nutrition analyzer apps, you can analyze your client's current goal of diet and provide them with effective feedback on what to improve. It is possible to create personalized meal plans and healthy recipes and generate nutrient analysis reports by using barcodes and other relevant nutrition tracking tools compared to the users' nutritional requirements.

2.2 References

1. UK (United Kingdom) Department of Health. Dietary reference values for food energy and nutrients in the United Kingdom (Report on health and social subjects; 41). London, UK: Her Majesty's Stationery Office; 1991. [March 4, 2018].

https://www.nutrition.org.uk/attachments/article/234/Nutrition%20Requirements_Revised%20Oct%2020

16.pdf.

2. “Leading health and fitness,” April 2017 [Online]. Available:
<https://www.statista.com/statistics/650748/health-fitness-app-usage-usa>

3. Mukasine Angelique (2014). “Ontology-Based Personalized System to Support Patients at Home.” Research paper [Online]. Available: <https://brage.bibsys.no/xmlui/bitstream/handle/11250/221227/IKT-590%20Spring%20Matster's%20thesis%20Angelique%20MUKASINE.pdf?sequence=1>

4. Nutritionix API, June 2107 [Online]. Available :<https://www.nutritionix.com/business/api>

5. Run Android Application, April 2017 [Online] Available:
<https://developer.android.com/training/basics/firstapp/running-app.html>

2.3 Problem Statement Definition

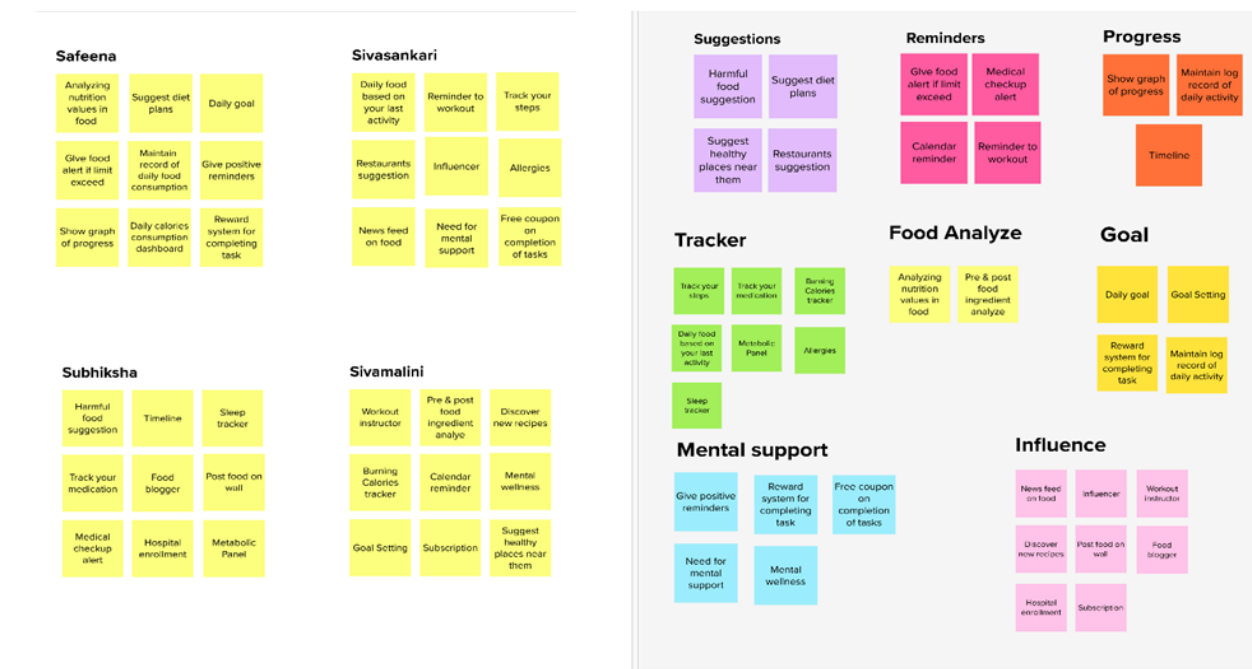
A program is needed to help users who want to manage their weight and calculate calories based on their daily activity and diet. Our project has the privilege of developing this program that can help the average person calculate their calorie intake and how much weight they are expected to lose or gain. People every day are concerned about their health. Often times, reading the nutritional label of the food being consumed isn't enough to determine if a calorie balance goal is being met. It is also difficult to calculate what is expended based on the activities performed each day. Even now, there are those who are willing to record such information on paper to do the math themselves. This can prove to be quite trivial and tedious, especially in our modern technological world. Others will often be deterred from calculating calorie balance because of this as well.

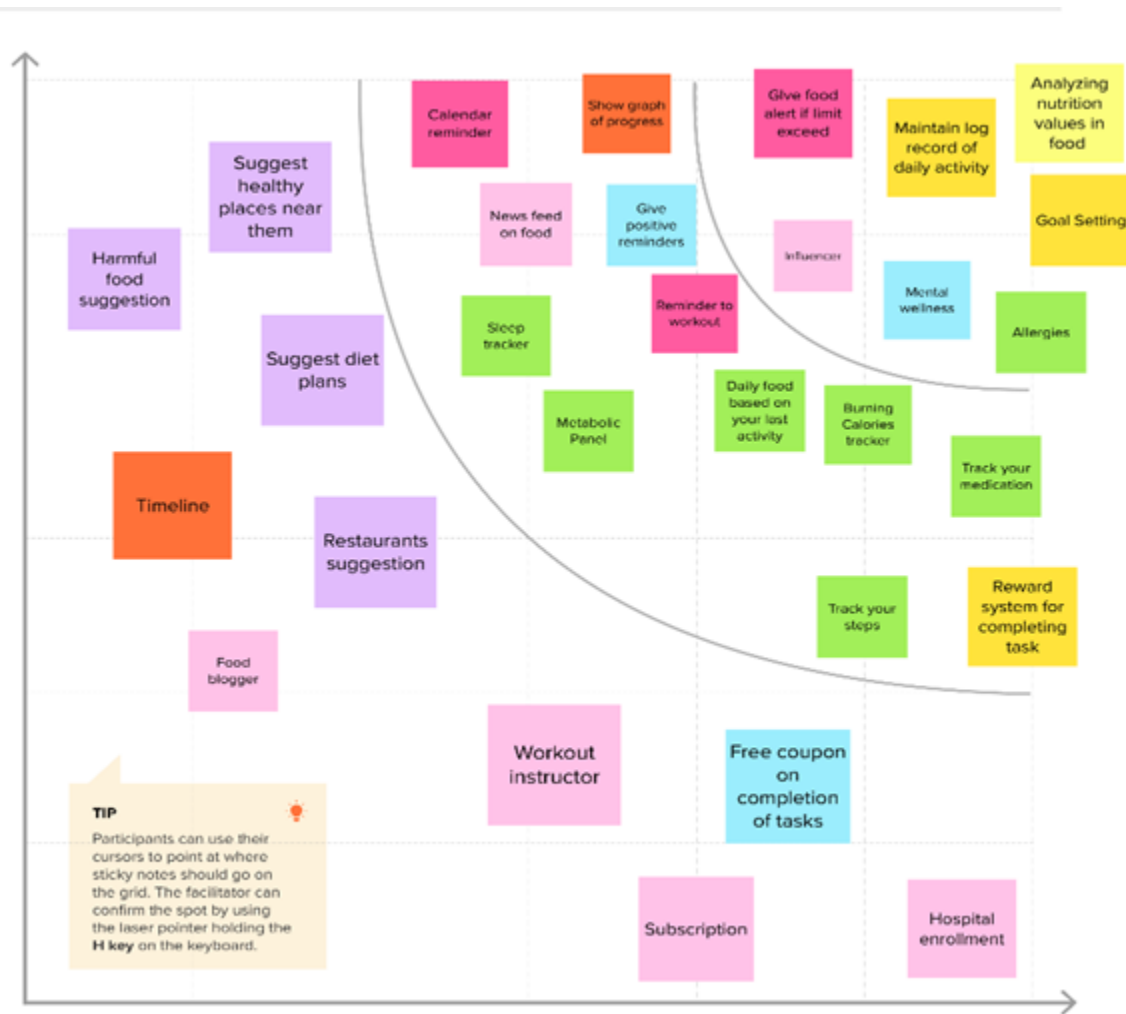
3. IDEATION & PROPOSED SOLUTION

a. Empathy Map Canvas



b. Ideation & Proposed solution





c. Proposed Solution

People have a hard time maintaining their calorie intake and other nutrients which makes people ignore their healthy habits and cause obesity.

Create app-based nutrient dashboard systems that can analyze real-time images of a meal and analyze it for nutritional content.

The proposed solution provides users a service that helps prepare a diet plan that fits their tight schedule and pre-plan their food schedule with food within their reach.

It helps people control their daily calorie intake by eating healthier foods which help to avoid obesity and obtain a healthy lifestyle.

The project team shall fill in the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	People have a hard time maintaining their calorie intake and other nutrients which makes people ignore their healthy habits and cause obesity.
2.	Idea / Solution description	Create app-based nutrient dashboard systems that can analyze real-time images of a meal and analyze it for nutritional content.
3.	Novelty / Uniqueness	The proposed solution provides users a service that helps prepare a diet plan that fits their tight schedule and pre-plan their food schedule with food within their reach.
4.	Social Impact / Customer Satisfaction	It helps people control their daily calorie intake by eating healthier foods which help to avoid obesity and obtain a healthy lifestyle.
5.	Business Model (Revenue Model)	Freemium business model
6.	Scalability of the Solution	For scalability, the cloud is used which can handle any number of users and provide on-demand service and it helps different types of customers.

d. Problem Solutionfit

Define CS, fit into CC	<div>1. CUSTOMER SEGMENT(S) <small>Who is your customer? i.e. working parents of 0-5 y.o. kids</small></div> <div>CS</div> <div><ul style="list-style-type: none">Parents in a hurrySingle parentsSport studentsBusy studentsWorking parentsHousewives</div>	<div>6. CUSTOMER CONSTRAINTS <small>What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.</small></div> <div>CC</div> <div><ul style="list-style-type: none">Busy ScheduleNot proper environmentMedical conditionsOver the BudgetProblem in the Network connection</div>	<div>5. AVAILABLE SOLUTIONS <small>Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking</small></div> <div>AS</div> <div><ul style="list-style-type: none">Short circuits are alternate to group exerciseHomemade food which is fresh instead of restaurantAnalyzing ingrained and tracking the intakesLook for related & accurate information on the internetSeeking professional help in their locality.</div>	Explore AS, differentiate
	<div>2. JOBS-TO-BE-DONE / PROBLEMS <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small></div> <div>J&P</div> <div><ul style="list-style-type: none">Unhealthy food habitsUnbalanced calories and nutrients intakeInaccurate InformationTight schedules and expensive memberships of gymsLack of mental support.Wastage of food</div>	<div>9. PROBLEM ROOT CAUSE <small>What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations</small></div> <div>RC</div> <div><ul style="list-style-type: none">Customers who have tight schedules have difficulty maintaining healthy food habits.Most customers are not able to differentiate between facts and myths and are not able to find accurate information.Customers may not be able to perform proper exercise due to expensive memberships and their busy schedules.Most customers may find it difficult to stay true to their goals and need proper mental support.</div>	<div>7. BEHAVIOUR <small>What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefit; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)</small></div> <div>BE</div> <div><ul style="list-style-type: none">Try to go on an improper diet plan.Listening to the wrong people's advice or suggestions which may not suit them.Try spending too much money on food without a proper food schedule and wasting foodFrustrated or overwhelmed and may quit their goals.</div>	Focus on J&P, up into BE, understand RC
Identify strong & E	<div>3. TRIGGERS <small>What triggers customers to act? i.e. seeing their neighbours installing solar panels, reading about a more efficient solution in the news.</small></div> <div>TR</div> <div><ul style="list-style-type: none">Influence on social mediaInfluence of their friends and neighboursAdvice from their loved ones</div>	<div>10. YOUR SOLUTION <small>If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.</small></div> <div>SL</div> <div><ul style="list-style-type: none">Helps to track their calories and nutrients intakeHelps to perform short circuits workouts that fit their tight scheduleHelps to keep track of their Local supermarkets and grocery delivery.Helps to suggest recipes from their fridge to avoid wastage of foodHelps to preplan their food scheduleHelps to seek professional help and trainer from anywhere around the worldHelps people to stay focused and determinantHelps to gain healthy food habits</div>	<div>8. CHANNELS of BEHAVIOUR 8.1 ONLINE <small>What kind of actions do customers take online? Extract online channels from #7</small></div> <div>CH</div> <div><ul style="list-style-type: none">Trying to access related information for dietGetting influenced by influencers in social mediaTrying online workoutsGet Information on their nearby healthy placesTrying to find discounts.</div> <div>8.2 OFFLINE <small>What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small></div> <div><ul style="list-style-type: none">Trying to eat less food and lose their appetitesGet expensive membership for gyms and group exercisesGet Healthy food from their local supermarket</div>	Identify strong & E
	<div>4. EMOTIONS: BEFORE / AFTER <small>How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure > confident, in control - use it in your communication strategy & design.</small></div> <div>EM</div> <div><p>Insecure > Confident</p><p>Lost about where to start > Proper guidance</p><p>Messy food habits > Healthy food habits</p><p>Confused > In control</p><p>Lost of appetite > Proper diet plan</p><p>Distractions > Helps to stay focus</p></div>			

4. REQUIREMENT ANALYSIS

a. Functional requirement

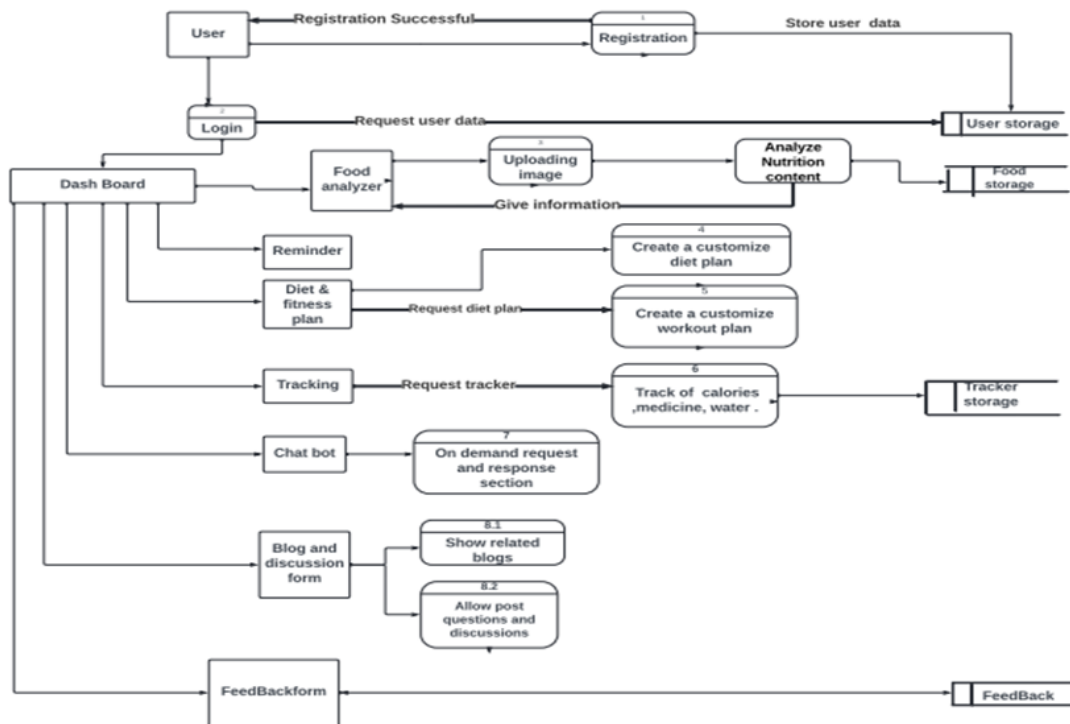
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User personal details	Enter personal details through a form
FR-4	Upload Food Image	Using Clarifai's AI food detection model analyses the food calories
FR-5	Alert Message	Remind it that specified Nutrition exceeds
FR-5	Diet plan & routine schedule	Customer choose their goal and create a diet plan for them

b. Non-Functional requirements

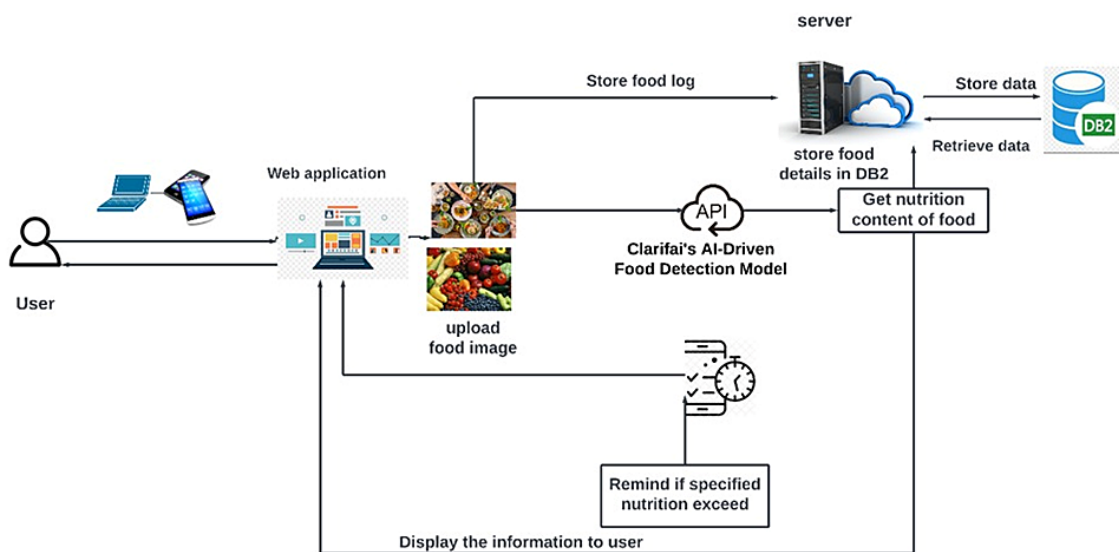
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Using a multi-method approach involving protocol analysis, interviews, and a system usability scale (SUS) was adopted
NFR-2	Security	The user's personal details are secured in the cloud.
NFR-3	Reliability	The application is verified through verified customers and only authenticate information will be displayed
NFR-4	Performance	A service that helps prepare a diet plan that fits their tight schedule and pre-plan their food schedule with food within their reach
NFR-5	Availability	The application service is available to all customers and provide support.
NFR-6	Scalability	The cloud is used which can handle any number of users and provide on-demand service and it helps different types of customers.

5. PROJECT DESIGN

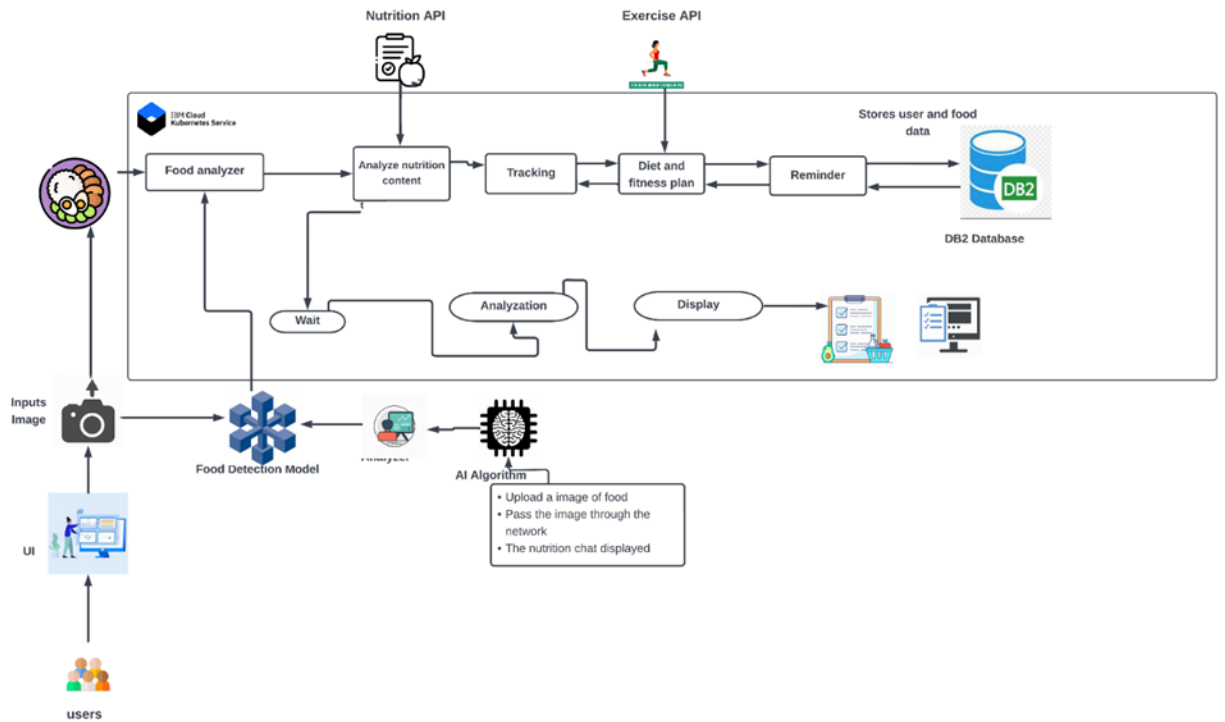
a. DataFlowDiagram



b. Solution Architecture



5.3 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 and confirming my password.	I can access my account/dashboard	High	Sprint-1
		USN-2	As a user, I will receive a confirmation email once I have registered for the application.	I can receive a confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Gmail.	I can automatically move on to the dashboard	Medium	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering my email & password.	I can access the dashboard	High	Sprint-1

		USN-5	As a user, I can reset my password if I have forgotten my password	I can reset my password again.	Medium	Sprint-1
	My Account	USN-6	As a user, I can view my personal information	I can view my details	High	Sprint-1
		USN-7	As a user, I can edit my profile photo	I can view my profile photo	Medium	Sprint-1
		USN-8	As a user, I can edit my email I will receive the confirmation email to my new email address	I can change my email address	Low	Sprint-1
		USN-9	As a user, I can log out of the application from my account	I can exit my account	Medium	Sprint-1
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	I can access my account/dashboa rd	High	Sprint-1
		USN-2	As a user, I will receive a confirmation mail once I have registered for the application	I can receive a confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Gmail.	I can automatically move on to the dashboard	Medium	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering my email & password.	I can access the dashboard	High	Sprint-1
		USN-5	As a user, I can reset my password if I have forgotten my password	I can reset my password again	Medium	Sprint-1
	My Account	USN-6	As a user, I can view my personal information	I can view my details	High	Sprint-2
		USN-7	As a user, I can edit my profile photo	I can view my profile photo	Medium	Sprint-2
		USN-8	As a user, I can edit my email I will receive the confirmation email to my new email address	I can change my email address	Low	Sprint-2
		USN-9	As a user, I can log out of the application from my account	I can exit my account	Medium	Sprint-1

Customer Care Executive	Dashboard	USN-1	As a user, I want to upload an image to get a food analyzing	I can get my nutritious chart	High	Sprint-2
		USN-2	As a user, I can get my remainder	I can get my daily schedule	High	Sprint-3
		USN-3	As a user, I can get diet and fitness plan	I can get my customized diet and workout plan	High	Sprint-3
		USN-4	As a user, I can track my health	I can get my track of calories, medicine, and sleep.	High	Sprint-3
		USN-5	As a user, I can have a commentary session	I can have question and answer section	Medium	Sprint-3
		USN-6	As a user, I can read blogs and discussions about my query	I can have my related blogs and discussion about it	Medium	Sprint-4
Administrator		USN-2	As an admin, I have a feedback form from my customer	I can have my ups and down in my review session	High	Sprint-4
		USN-3	As an admin, I can view how many customers use their app	I can view how users are interested in it	Medium	Sprint -4

6. PROJECT PLANNING & SCHEDULING

a. Sprint Planning & Estimation

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Priority	Team members
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email and confirming my password.	High	Safeenathalath
		USN-2	As a user, I will receive a confirmation email once I have registered for the	High	Sivasankari

			application.		
		USN-3	As a user, I can register for the application through Gmail.	Medium	Safeenathalath
	Login	USN-4	As a user, I can log into the application by entering my email & password.	High	Sivamalini
		USN-5	As a user, I can reset my password if I have forgotten my password	Medium	Subhiksha
	My Account	USN-6	As a user, I can view my personal information	High	Subhiksha
		USN-7	As a user, I can edit my profile photo	Medium	Sivamalini
		USN-8	As a user, I can edit my email I will receive the confirmation email to my new email address	Low	Sivasankari
		USN-9	As a user, I can log out of the application from my account	Medium	Sivamalini
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	High	Safeenathalath
		USN-2	As a user, I will receive a confirmation mail once I have registered for the application	High	Sivasankari
		USN-3	As a user, I can register for the application through Gmail.	Medium	Safeenathalath
	Login	USN-4	As a user, I can log into the application by entering my email & password.	High	Sivamalini

		USN-5	As a user, I can reset my password if I have forgotten my password	Medium	Subhiksha
	My Account	USN-6	As a user, I can view my personal information	High	Subhiksha
		USN-7	As a user, I can edit my profile photo	Medium	Siva Malini
		USN-8	As a user, I can edit my email I will receive the confirmation email to my new email address	Low	Sivasankari
		USN-9	As a user, I can log out of the application from my account	Medium	Sivamalini
Customer Care Executive	Dashboard	USN-1	As a user, I want to upload an image to get a food analyzing	High	Safeenathalath
		USN-2	As a user, I can get my remainder	High	Sivamalini
		USN-3	As a user, I can get diet and fitness plan	High	Safeenathalath
		USN-4	As a user, I can track my health	High	Subhiksha
		USN-5	As a user, I can have a commentary session	Medium	Safeenathalath
		USN-6	As a user, I can read blogs and discussions about my query	Medium	Subhiksha
Administrator		USN-2	As an admin, I have a feedback form from my customer	High	Sivasankari
		USN-3	As an admin, I can view how many customers use their app	Medium	Subhiksha

b. 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	34	6 Days	31 Oct 2022	05 Nov 2022	30	05 Nov 2022
Sprint-3	60	6 Days	07 Nov 2022	12 Nov 2022	60	12 Nov 2022
Sprint-4	40	6 Days	14 Nov 2022	19 Nov 2022	40	19 Nov 2022

7. CODING & SOLUTIONING

a. Food Analyzer (Feature 1)

Food analyzer is an important feature that help people understand their daily nutrients intake .It is important to a healthy lifestyle. This feature used to analyze the food items in the picture using clarify food detection model and on entering the items and hitting the submit button it will call the CalorieNinjas API to calculate the calories and other micronutrients. The food detection model can now automatically recognize more than a thousand different foods in images all the way down to the ingredient level. The names are stored in a list and sent requests to the respective API endpoints.

The CaloriesNinja API will Natural language API to extract nutrition data from any text.This API extract nutrition data from any text or image containing text (such as menus and recipes) with natural language engine and database of over 100,000 foods and drinks This help us to understand different micronutrients present in the different items.

b. View Recipes (Feature 2)

Cooking is a passionate job that allows people to turn an ordinary meal into a tempting and mesmerizing one and there are a number of people who take up this art as a hobby or make it their profession. Especially during the initial Covid19 phase when the entire world was locked up

in their homes, the one thing they genuinely bonded over was cooking and this is why for the first two months there were a plethora was food pictures being shared by people who loved to spend the lockdown exploring their culinary skills.

This application presents a variety of different recipes according to user preferences using Low Carb Recipes API which is a highly flexible search over thousands of low-carb/keto recipes with rich nutrient information. This API also provides calories of nutrients of each recipe so that user can have a better understanding of their nutrients intakes

c. Feedback Form (Feature 3)

The feedback form is important to understand users so user-based feedback can improve the development process, allows to create better applications and help you grow. In addition to helping you determine your priorities, user-based feedback can help you with design and thus improve the final product. Improving the usability of your software is essential to long-term success, and it should never be an afterthought. The feedback is collected through a form which is stored in the database

d. Database Schema

The database used for this application is IBM cloud where the necessary information is stored in the database. This The database schema here is GQN68734 which it consists of 4 tables namely USER, where the registered details are stored and USER_DETAILS where the user's personal information is stored and thirdly we have food details where the details about the food are stored and finally have feedback table where the feedback of the user is stored so administer can view the feedback and make the necessary improvements in the application.

The screenshot displays the IBM Db2 on Cloud web interface. The top navigation bar includes links for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The main content area is divided into two panels: Schemas and Tables. The Schemas panel shows a table with columns Name, Type, and Tables. The Tables panel shows a table with columns Name, Schema, and Properties. Both panels list the database GQN68734 and its four tables: FEEDBACK, FOOD_DETAIL, USER, and USER_DETAILS.

Name	Type	Tables
GQN68734	User	4

Name	Schema	Properties
FEEDBACK	GQN68734	---
FOOD_DETAIL	GQN68734	---
USER	GQN68734	---
USER_DETAILS	GQN68734	---

8. ADVANTAGES & DISADVANTAGES

Advantages:

1. Interface is extremely friendly and easy to use. – Helps count calories while tracking weight loss.
2. Analyzes a person's age and weight with how they want to improve their health.
3. You can upload food pictures and type food without having to type in the nutritional values.
4. Provides a daily report of caloric intake.
5. Has a feature where users can calculate their food nutrients by taking a picture of their dish.

Disadvantages:

1. You have to manually input your daily food intake once a weight loss plan has been created
2. It doesn't track your intake of minerals and vitamins.
3. Food database is not that large. It is missing a lot of the popular food brands, which means users have to manually type the nutritional values in.”

9. CONCLUSION

In the journey of developing this nutritify application, I got an opportunity to learn the detail process of developing Android applications with the help of material design concepts to built beautiful yet elegant user interface. In this process I also able to learn how to develop and use a RESTful API from scratch with the help of Python. Moreover, I even get a chance to learn how to use different Android libraries such as MPAndroidChart, Zxing, FitChart and so on. I also learn about the various food ontology APIs on how to use them and even by developing the client-server application helped me to understand the communication calls between them. FUTURE SCOPE

In the future scope, the application can enhance its functionality by adding image recognition which can be used to analyze the food image and produce the result with the nutrition values contained in that particular food item. A Google map can be added to track the distance covered by the user using the Activity Tracker to provide a more visual representation of the activity to the user. The activity tracker can also be updated using the Google fit API for the more accurate result.

10. APPENDIX

a. Source Code:

The following code is the uses python

```
from flask import Flask,render_template,request,redirect,url_for ,session
import ibm_db
```

```

import re
import os
import math
import random
import smtplib
import requests
import json
app=Flask(__name__,template_folder='templates',static_folder='static')
app.secret_key='a'
conn          =          ibm_db.connect("Database=bludb;Hostname=1bbf73c5-d84a-4bb0-85b9-ab1a4348f4a4.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;Port=32286;Security=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=gqn68734;PWD=IJvrQlkrmlUdQzP",",")
print("successfully connected")
@app.route('/')
def home():
    return render_template('index.html')

@app.route('/login',methods=['GET','POST'])
def login():
    global userid
    msg=""

    if request.method=='POST':
        username=request.form.get('username',False)
        password=request.form.get('password',False)
        sql='SELECT * FROM USER WHERE username=? AND password=?'
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,username)
        ibm_db.bind_param(stmt,2,password)
        ibm_db.execute(stmt)
        account=ibm_db.fetch_assoc(stmt)
        print(account)

```

```

if account:
    session['Logged in']=True
    session['id']=account['USERNAME']
    userid=account['USERNAME']
    session['username']=account['USERNAME']
    msg='Logged in successfully'
    return redirect(url_for('dashboard'))
else:
    msg='Incorrect username/password'
return render_template('login.html',msg=msg)

@app.route('/register',methods=['GET','POST'])
def register():
    msg=""
    if request.method == 'POST':
        username=request.form.get('username',False)
        email=request.form.get('email',False)
        password=request.form.get('password',False)
        Firstname=request.form.get('firstname',False)
        lastname=request.form.get('lastname',False)
        #phoneno=request.form['phoneno']
        sql='SELECT * FROM USER WHERE username=?'
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,username)
        #ibm_db.bind_param(stmt,2,password)
        ibm_db.execute(stmt)
        account=ibm_db.fetch_assoc(stmt)
        session['mail']=email
        print(account)
    if account:
        msg="Account already exist!"
    elif not re.match(r'^[a-zA-Z0-9]+@[a-zA-Z0-9]+\.[a-zA-Z0-9]+',email):
        msg="Invalid email address"

```

```

elif not re.match(r'[A-Za-z0-9]+' ,username):
    msg="name must contain character and numbers"

else:
    insert_sql='INSERT INTO USER values(?,?,?,?,'
    prep_stmt=ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt,1,username)
    ibm_db.bind_param(prepare_stmt,2,email)
    ibm_db.bind_param(prepare_stmt,3,password)
    ibm_db.bind_param(prepare_stmt,4,Firstname)
    ibm_db.bind_param(prepare_stmt,5,lastname)
    ibm_db.execute(prepare_stmt)
    msg="You have successfully registered"
    return render_template('register.html',msg=msg)
elif request.method=="POST":
    msg="Please fill out the form"
    return render_template('register.html',msg=msg)

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

@app.route('/verify')
def verify():
    email=session['mail']
    server=smtplib.SMTP('smtp.gmail.com',587)
    server.starttls()
    password="nsgeuedwbzptosyp"
    server.login("active.1468@gmail.com",password)
    otp="".join([str(random.randint(0,9))for i in range(4)])
    msg=' YOUR OTP IS'+str(otp)
    server.sendmail("active.1468@gmail.com",email,msg)
    server.quit()

```

```

if request.method=='POST':
    verify=request.method['code']
    if verify==otp:
        return render_template('login.html')
    return render_template('verify.html')

```

```

@app.route('/frgpwd', methods=['GET','POST'])

```

```

def frgpwd():

```

```

    msg = " "
    print(request.form)
    username1=request.form.get("uname", False)
    oldpassword=request.form.get("oldpassword", False)
    newpassword=request.form.get("newpassword", False)
    sql='SELECT * FROM USER WHERE username=?'
    stmt=ibm_db.prepare(conn,sql)
    ibm_db.bind_param(stmt,1,username1)
    #ibm_db.bind_param(stmt,2,password)
    ibm_db.execute(stmt)
    account=ibm_db.fetch_assoc(stmt)
    print(account)
    if account:
        chgpwd_sql='UPDATE USER SET password = ? WHERE username = ?'
        prep_stmt=ibm_db.prepare(conn, chgpwd_sql)
        ibm_db.bind_param(prepare_stmt,1,newpassword)
        ibm_db.bind_param(prepare_stmt,2,username1)
        ibm_db.execute(prepare_stmt)
        msg="You have successfully changed password"
        return render_template('forgot password.html',msg=msg)
    return render_template('forgot password.html',msg=msg)

```

```

url = "https://low-carb-recipes.p.rapidapi.com"

```

```

headers = {

```

```
"x-rapidapi-key": "ad933ea36amsh6b0a83e514b1a58p14bc9ejsne745a5851a1b",
"x-rapidapi-host": "low-carb-recipes.p.rapidapi.com"
}
```

```
searchForRecipes = "/search"
getRecipe="/recipes/"
getImage="/images/"
getRandomRecipe="/random"
```

```
@app.route('/dash')
def dashboard():
    return render_template('dash.html')
```

```
@app.route('/dash/viewprofile')
def viewprofile():
    username=session['id']
    sql='SELECT * FROM USER_DETAILS WHERE name=?'
    stmt=ibm_db.prepare(conn,sql)
    ibm_db.bind_param(stmt,1,username)
    ibm_db.execute(stmt)
    account=ibm_db.fetch_assoc(stmt)
    print(account)
    if account:
        return render_template('viewprofile.html',account=account)
    else:
        return render_template('peronal info.html')
```

```
@app.route('/personinfo',methods=['GET','POST'])
def per_info():
    msg=""
    if request.method =='POST':
        Name=request.form.get('name',False)
```

```
gender=request.form.get('gender',False)
tar_weight=request.form.get('Target Weight',False)
Age=request.form.get('Age',False)
Height=request.form.get('Height',False)
Weight=request.form.get('Weight',False)
health=request.form.get('Health',False)
location=request.form.get('Location',False)
phoneno=request.form.get('Phone Number',False)
```

```
insert_sql='INSERT INTO USER_DETAILS values(?,?,?,?,?,?,?,?)'
```

```
prep_stmt=ibm_db.prepare(conn, insert_sql)
```

```
ibm_db.bind_param(prepare_stmt,1,Name)
```

```
ibm_db.bind_param(prepare_stmt,2,gender)
```

```
ibm_db.bind_param(prepare_stmt,3,Age)
```

```
ibm_db.bind_param(prepare_stmt,4,Height)
```

```
ibm_db.bind_param(prepare_stmt,5,Weight)
```

```
ibm_db.bind_param(prepare_stmt,6,tar_weight)
```

```
ibm_db.bind_param(prepare_stmt,7,health)
```

```
ibm_db.bind_param(prepare_stmt,8,location)
```

```
ibm_db.bind_param(prepare_stmt,9,phoneno)
```

```
ibm_db.execute(prepare_stmt)
```

```
msg="Your details are successfully saved"
```

```
return redirect(url_for('viewprofile',msg=msg))
```

```
else:
```

```
msg="Please fill out the form"
```

```
return render_template('peronal info.html',msg=msg)
```

```
@app.route('/feedback',methods=['GET','POST'])
```

```
def feedback():
```

```
msg=""
```

```
if request.method == 'POST':
```

```
    Name=request.form['name']
```

```
email=request.form['email']
Feedback=request.form['feedback']
sql='SELECT * FROM USER WHERE username=?'
stmt=ibm_db.prepare(conn,sql)
ibm_db.bind_param(stmt,1,Name)
ibm_db.execute(stmt)
account=ibm_db.fetch_assoc(stmt)
print(account)
if account:
    insert_sql='INSERT INTO FEEDBACK values(?,?,?)'
    prep_stmt=ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt,1,Name)
    ibm_db.bind_param(prepare_stmt,2,email)
    ibm_db.bind_param(prepare_stmt,3,Feedback)
    ibm_db.execute(prepare_stmt)
    msg="Your Feedback has been stored"
    return render_template('ratings.html',msg=msg)
elif request.method=="POST":
    msg="Please fill out the form"
return render_template('ratings.html',msg=msg)

@app.route('/dash/view recipe')
def search_page():
    #session ['item']=request.form.get("Ingridients", False)
    return render_template('search.html')

@app.route('/recipes')
def get_recipes():
    #food=session['item']
    if (str(request.args['ingridients']).strip() != ""):
        print(request.args['ingridients'])
        # If there is a list of ingridients -> list
        querystring = "name":request.args['ingridients'], "tags":request.args['tag'], "includeIngredients":request.args['included'], "
```



```
excludeIngredients":request.args['excluded'], "maxPrepareTime":"30", "maxCookTime":"20", "maxCalories":
":500", "maxNetCarbs":5, "maxSugar":3, "maxAddedSugar":0, "limit":10}
```

```
response = requests.request("GET", url + searchForRecipes, headers=headers, params=querystring)
data=response.json()
```

```
return render_template('recipes.html', recipes=data)
```

```
else:
```

```
# Random recipes
```

```
response = requests.request("GET", url+ getRandomRecipe , headers=headers)
```

```
data=response.json()
```

```
return render_template('recipes.html', recipes=data)
```

```
@app.route('/recipe')
```

```
def get_recipe():
```

```
recipe_id = request.args['id']
```

```
recipe_info_endpoint = "/recipes/{0}".format(recipe_id)
```

```
print(recipe_info_endpoint)
```

```
recipe_info = requests.request("GET", url + recipe_info_endpoint, headers=headers)
```

```
data=recipe_info.json()
```

```
return render_template('recipe.html', recipe=data)
```

```
@app.route('/food', methods=['POST','GET'])
```

```
def get_nutri():
```

```
msg="
```

```
url = "https://nutrition-by-api-ninjas.p.rapidapi.com/v1/nutrition"
```

```
headers = {
```

```
    "X-RapidAPI-Key": "ad933ea36amsh6b0a83e514b1a58p14bc9ejsne745a5851a1b",
```

```
    "X-RapidAPI-Host": "nutrition-by-api-ninjas.p.rapidapi.com"
```

```
}
```

```
if request.method == 'POST':
```

```
food=request.form.get('food')
```

```
if (str(food).strip() != ""):
```

```
    querystring = {"query":food}
    response = requests.request("GET", url, headers=headers, params=querystring)
    data=response.json()
    #data=json.load(response)
    #datas=data.json()
    print(data)
    return render_template("foodanalyzer.html", result=data)
return render_template("foodanalyzer.html")
```

```
@app.route('/logout')
def logout():
    session.pop('loggedin',None)
    session.pop('id',None)
    return render_template("index.html")
```

```
if __name__=="__main__":
    app.run(debug=True ,host='0.0.0.0',use_reloader=False)
```

OUTPUT:



GET YOUR
NUTRITIONS CHECK
WITH NUTRIFY



About us

Login

Logged in successfully

Username

Password

Login

☒ Remember me

Cancel

[Forgot password?](#)

[View Profile](#)[Food analyzer](#)[Recipes](#)[Feedback](#)[Logout](#)

GET YOUR
NUTRITIONS CHECK
WITH NUTRIFY



It's time for cooking! What do you have in the fridge?

cake egg cinnamon keto Search

Recipes for you:



Keto Chocolate Cake Donuts

How many minutes for preparation? 10

How many minutes for cooking? 15

How many servings has this recipe? 6



Keto Funfetti Mug Cake

How many minutes for preparation? 5

How many minutes for cooking? 0

How many servings has this recipe? 1



Keto Chocolate Chip Cookie Cake

How many minutes for preparation? 30

How many minutes for cooking? 20

How many servings has this recipe? 16



Keto Chocolate Coconut Mug Cake

How many minutes for preparation? 4

How many minutes for cooking? 1

How many servings has this recipe? 1



Keto Death by Chocolate Cake

How many minutes for preparation? 20

How many minutes for cooking? 20

How many servings has this recipe? 12



Keto Funfetti Mug Cake

This is a delicious mug cake that would be perfect for breakfast. Light, tender and moist vanilla cake is studded with sweet and tart dried strawberries and blueberries.

Ingredients

Butter

(units: 'tablespoon', 'desc: '1 tablespoon', 'qty: 1.0, 'grams: 14.0, 'scale: 1.0) The Ultimate Icing Sugar Replacement by Swerve

(units: 'tablespoon', 'desc: '2-1/2 tablespoon', 'qty: 2.5, 'grams: 38.0, 'scale: 7.5) Baking Powder

(units: 'teaspoon', 'desc: '1/2 teaspoon', 'qty: 0.5, 'grams: 2.0, 'scale: 0.5) Almond Flour

(units: 'tablespoon', 'desc: '2-1/2 tablespoon', 'qty: 2.5, 'grams: 18.0, 'scale: 0.156) Raw Egg

(units: 'large', 'desc: '1 large', 'qty: 1.0, 'grams: 50.0, 'scale: 1.0) Vanilla Extract

(units: 'teaspoon', 'desc: '1/2 teaspoon', 'qty: 0.25, 'scale: 0.25) Freeze Dried Strawberries by Open Nature

(units: 'gram', 'desc: '14 gram', 'qty: 0.25, 'scale: 0.028) Freeze Dried Blueberries by Trader Joe's

(units: 'gram', 'desc: '14 gram', 'qty: 0.25, 'scale: 0.007)

Steps

Melt butter in a tall microwave safe mug.

Add the sweetener, baking powder, stirred flour and a pinch of salt. Then mix in the egg and stir in

192.168.82.46:3000/recipe?id=d15c569f-7944-49b1-b573-0766e098955d

Not secure | 192.168.82.46:3000/recipe?id=d15c569f-7944-49b1-b573-0766e098955d

{'units': 'gram', 'desc': '¼ gram', 'qty': 0.25, 'scale': 0.007}

Steps

Melt butter in a tall microwave safe mug.

Add in sweetener, baking powder, almond flour and a pinch of salt. Then mix in the egg and extract.

Crush the freeze dried fruit and place on top of the batter in the mug. Give it a light stir.

Microwave on HIGH for 1 minute until the cake has puffed considerably and is cooked through.

Nutrients

caloriesKcal :300.804

caloriesKJ :1250.563

totalCarbs :27.715

diabetesCarbsADA :16.44

netCarbs :3.19

diabetesCarbs :14.466

NUTRIFY

View ProfileFood analyzerRecipesFeedbackLogout

Upload a food picture

UPLOAD IMAGE

Enter the food name

Enter the name food

Submit

Nutrients	Nutrients value
	B
	F
	F
	D
	F

[View Profile](#)
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[Recipes](#)
[Feedback](#)
[Logout](#)

Upload a food picture

UPLOAD IMAGE

Enter the food name

Submit

Nutrients	Nutrients value
name	corn
calories	93.9
serving_size_g	100.0
fat_total_g	1.5
fat_saturated_g	0.2
protein_g	3.4
sodium_mg	1
potassium_mg	75
cholesterol_mg	0
carbohydrates_total_g	21.0
fiber_g	2.4
sugar_g	4.6
name	broccoli
calories	35.0
serving_size_g	100.0
fat_total_g	0.4
fat_saturated_g	0.1
protein_g	2.4
sodium_mg	41
potassium_mg	65
cholesterol_mg	0
carbohydrates_total_g	7.3
fiber_g	3.3
sugar_g	1.4

FEEDBACK FORM

Username

Email

Feedback

SUBMIT

Your Feedback has been stored

11.2 GitHub & Project Demo Link

Github link: <https://github.com/IBM-EPBL/IBM-Project-25896-1659976830>

Project Demo Link:

<https://drive.google.com/file/d/189t4pX3H5GAnTyZETJL19dCLdPMyiHbc/view?usp=drivesdk>

Please copy and paste the link in browser to see the project demo video.