NUTRITION ASSISTANT APPLICATION

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PROJECT REPORT

CHAPTER -1

1.INTRODUCTION

1.1 PROJECT OVERVIEW

Food is essential for human life and has been the concern of many healthcare conventions. Nowadays new dietary assessment and nutrition analysis tools enable more opportunities to help people understand their daily eating habits, exploring nutrition patterns and maintain a healthy diet. Nutritional analysis is the process of determining the nutritional content of food. It is a vital part of analytical chemistry that provides information about the chemical composition, processing, quality control and contamination of food.

Nutritional intake is the basis for human growth and health, and the intake of different types of nutrients and micronutrients can affect health. Most diseases are inextricably linked to diet. The development of the Internet has made it possible to conduct online nutrition surveys through large-scale food and nutrition databases linked to automated dietary records, and there are now a growing number of software, platforms, and applications for nutrition surveys.

The application overcomes the issue of overcoming the fear of eating unknown foods,foods without nutritional label and foods with nutritional label.The application helps the user to overcome fear of getting or malnourished.The application makes the user to be more aware of what they eat every day.

1.2 PURPOSE

The purpose of the application is to make the users aware of their day to day nutritional and help users to take more or less depending upon their nutritional contents to keep the user happy and be more aware of their eating habits.

This technique allows the user to determine the nutritional content of food. However, the quality of the analysis largely depends on how accurate and standardized the recipes are.Standardized recipes are ones that are adapted and retrieved for use by a

foodservice operation. Using the same quantity and quality of ingredients in standardized recipes yield the same results in the nutrition analysis.The purpose of nutritional assessment, on the other hand, is to define a patient's nutritional status,

to identify clinically relevant malnutrition and to monitor changes in the patient's nutritional status. It records anthropometric, dietary and bio-chemical measurements, clinical history, findings at physical examination and other parameters.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

There is a uncontrolled food market where the origin of the ingredients is not known to a large of the consumer,sometimes they fell sick because of this.
Existing solution for this particular problem is that it doesn't work everywhere and anywhere,so future solution should be made to overcom

2.2 REFERENCE

1. Pinstrup-Andersen P, et al. Protein-energy malnutrition. In: Jamison DT, et al., editors. Disease control priorities in developing countries. New York: Oxford Medical Publications; 1993. pp. 391–420.

2.Allen LH, Gillespie SR. What works? A review of the efficacy and effectiveness of nutriton interventions. Geneva and Manila: ADB and ACC/SCN, Manila; 2001. (ACC/SCN Nutrition Policy Paper No. 19; ADB Nutrition and Development Series No. 5)

3.Gwatkin D, Wilcox J, Wray J. Can health and nutrition interventions make a difference? Washington DC: Overseas Development Council; 1980. (Monograph 13)

4.WHO; UNICEF. The declaration of Alma Ata. International conference on primary health care jointly sponsored by WHO and UNICEF. Geneva: WHO; 1978.

5.UNICEF. The state of the world's children. New York: UNICEF; 1982–1983.

6.United Nations. World declaration and plan of action. World Summit for

Children. New York: United Nations; 1990.

7.WHO; UNICEF. Integrated Management of Childhood Illness, chart booklet. Geneva: WHO; 2008.

2.3 PROBLEM STATMENT

When taking an unknown food, food without Nutrition label, when a person wants to know they are taking enough protein everyday problem arises as the person doesn’t know anything about the nutritional content of the food.

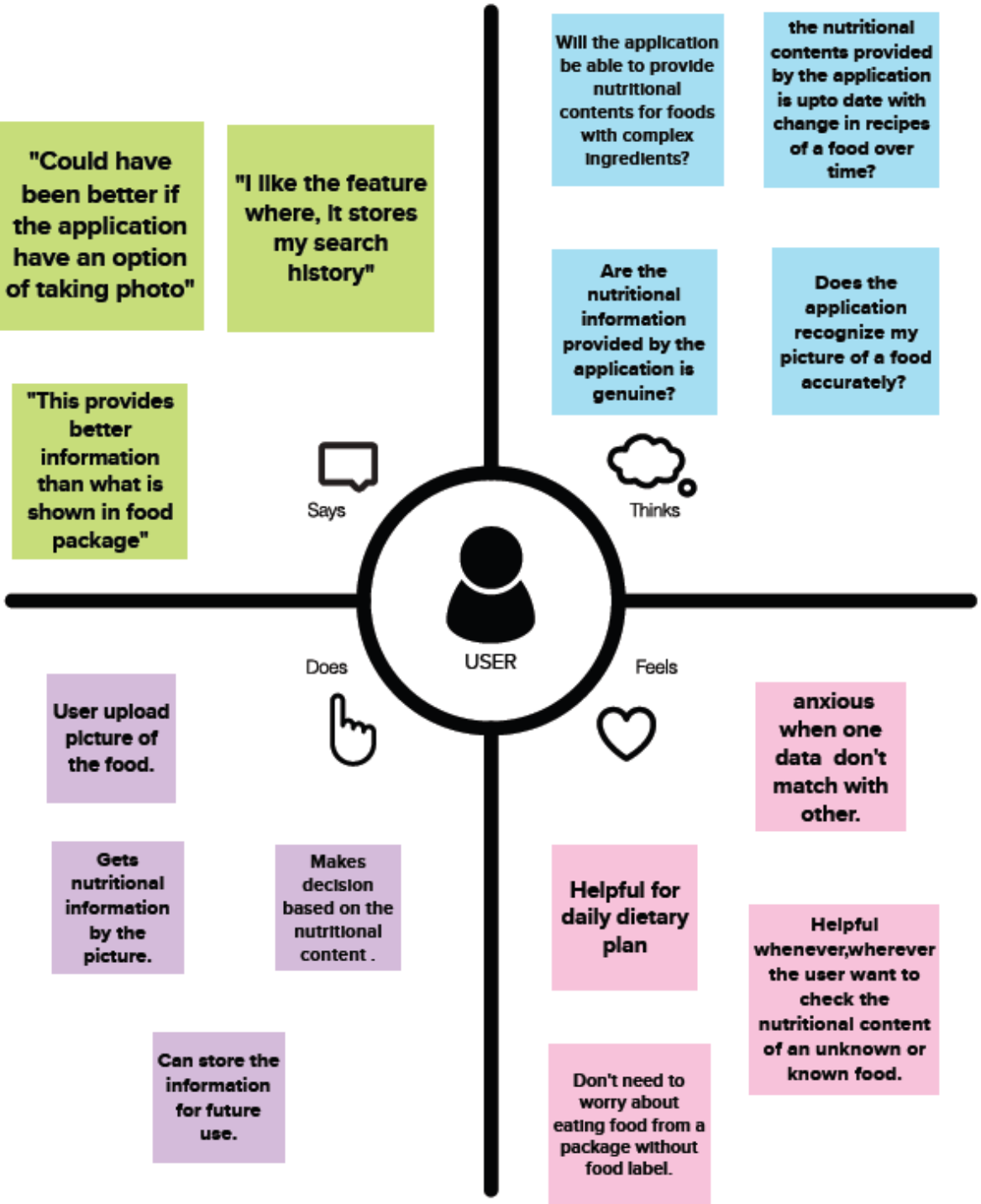
Users who are not sure whether they can take the food which doesn't have a food label ,food label with in accurate results can get benefiited from it.

User	wants to	Find the nutritional information about a food.	so	that they can make sure they can fiind if there is enough protein available
User	when	they are following a diet plan can get the nutritional information about the food they take	So that	They can choose whether not to take the food or not.
User	needs a way to	choose the best food for the day	inorder to	stay energetic through out the day.
User	who are	allergic to certain kind of vegetables,fruit, spices etc..	can find	if they are included in the food and can decide whether to take it or not.
User	who prefers not to	take food which doesn't have nutritional information in the food package	can take	the food after finding out the nutritional information of the food.

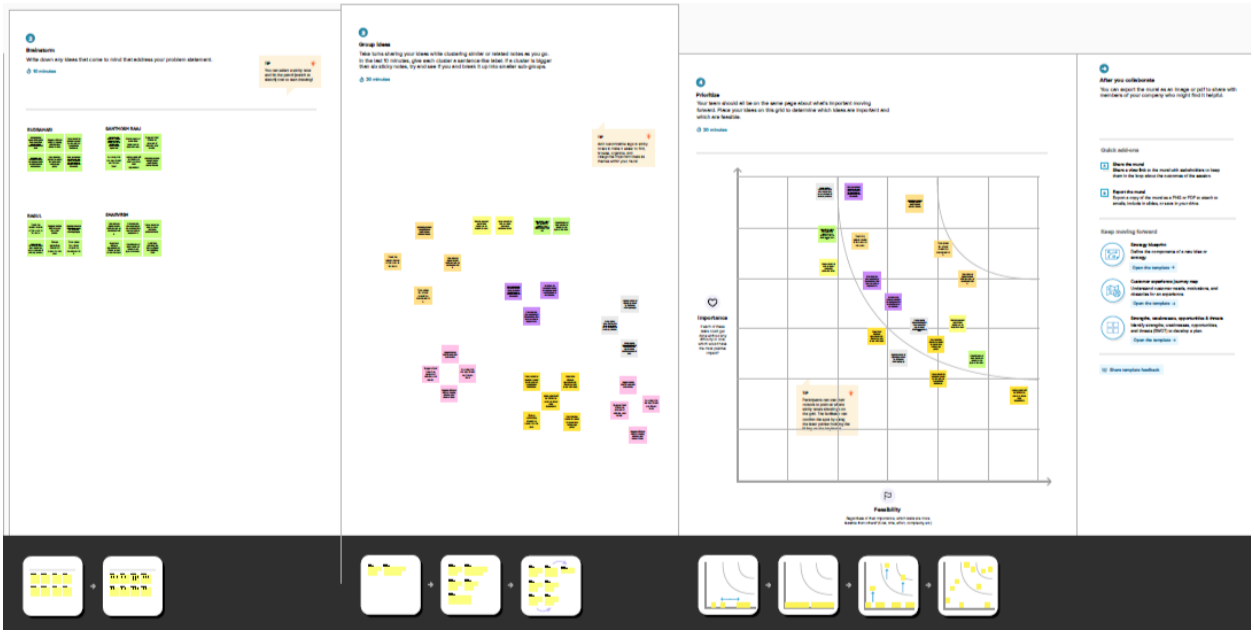
3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

Empathy map helps to synthesize your team's collective knowledge about your users as a group, bringing you closer to a common understanding of who they are. We can use empathy mapping to refresh your team's understanding before an important decision, or to quickly synthesize the data directly after an observation session. It is best treated as an ongoing activity. It is only as reliable as the data that brings to the table, so we should have defensible data based on the real observation.


"Could have been better if the application have an option of taking photo"
"I like the feature where, it stores my search history"
"This provides better information than what is shown in food package"
Says
Will the application be able to provide nutritional contents for foods with complex ingredients?
the nutritional contents provided by the application is upto date with change in recipes of a food over time?
Are the nutritional information provided by the application is genuine?
Does the application recognize my picture of a food accurately?
Thinks
USER
Does
User upload picture of the food.
Gets nutritional information by the picture.
Makes decision based on the nutritional content .
Can store the information for future use.
Feels
anxious when one data don't match with other.
Helpful for daily dietary plan
Helpful whenever,wherever the user want to check the nutritional content of an unknown or known food.
Don't need to worry about eating food from a package without food label.

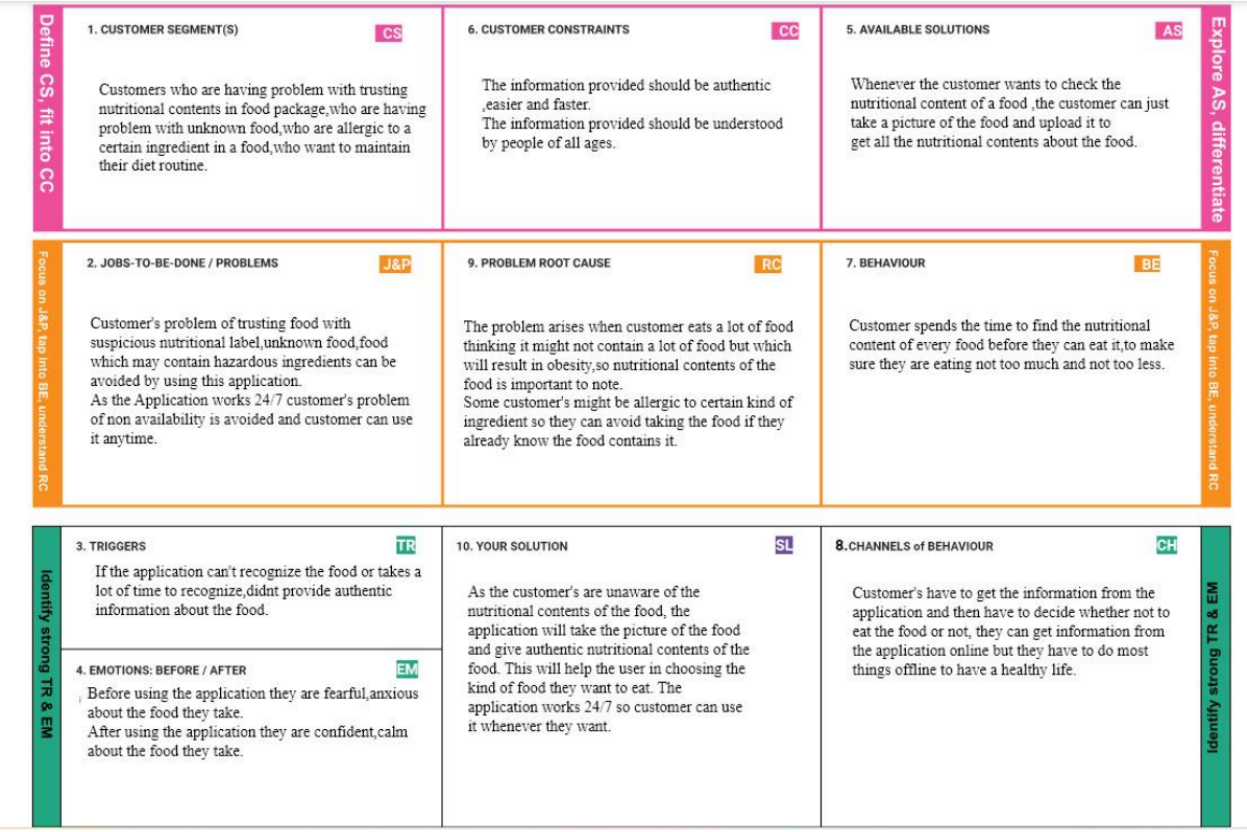
3.2 Ideation & Brainstorming



3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	When taking an unknown food, food without Nutrition label, when a person wants to know they are taking enough protein everyday problem arises as the person doesn't know anything about the nutritional content of the food.
2.	Idea / Solution description	As the users are unaware of the nutritional contents of the food, the application will take the picture of the food and give authentic nutritional contents of the food. This will help the user in choosing the kind of food they want to eat.
3.	Novelty / Uniqueness	User can just take the picture of the food and upload it in the application to get the information which makes it unique than the traditional nutrition label in the food package or information about the food online.
4.	Social Impact / Customer Satisfaction	By doing this user exactly know how much protein, what food to take every day which leads to a healthy diet plan which makes the user happy about themselves. Obesity, Excessive intake of junk foods are avoided by the user.
5.	Business Model (Revenue Model)	Revenue can be generated through a monthly based subscription plan where different diet routine, diet recommendation, Food recommendation based on user specification will be available. Additional features will only be available for subscribed users.
6.	Scalability of the Solution	In the early days of the application very few food items can be recognized and in the upcoming months with help of the application can detect and recognize foods with complex ingredients and extra features with various diet plan, routine, food recommendation.

3.4 Problem Solution fit



4. REQUIREMENT ANALYSIS

4.1 Functional requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form in our Web Application.
FR-2	User Confirmation	Confirmation via Email.
FR-3	User Interaction	User interaction happens with our web application in the browser.
FR-4	User Registration Confirmation	Registration confirmation via Email.
FR-5	User Updates	Updates can be sent via Email.
FR-6	Dashboard	A dashboard to upload the image and get the information about it.

4.2 Non-Functional requirements

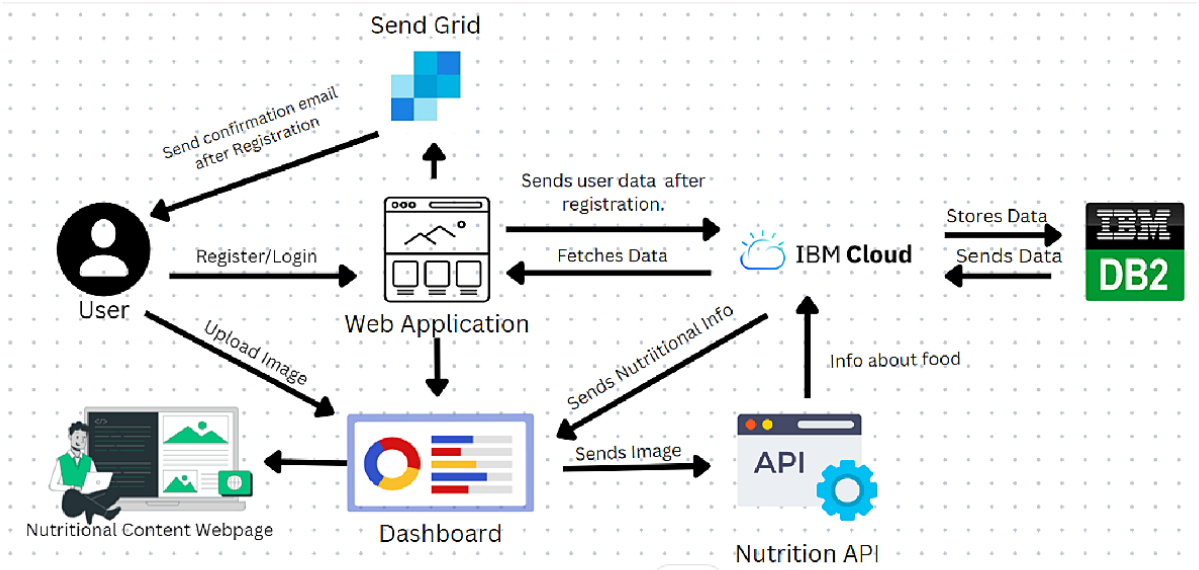
Non-functional Requirements:

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

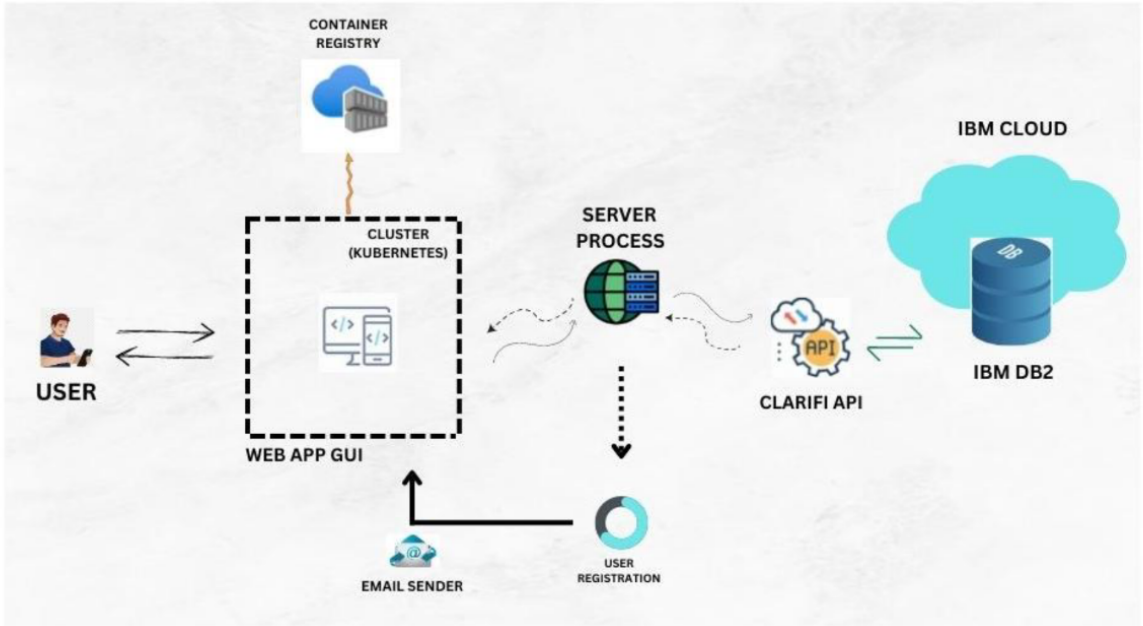
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The web application should be designed and developed in an user friendly manner, so that users of various age group can use the application with ease.
NFR-2	**Security**	The web application should follow certain security measures to make sure user data is not misused.
NFR-3	**Reliability**	The information provided by the web application should be authentic.
NFR-4	**Performance**	Irrespective of more number of users trying to view the website, it should be able to handle all the requests by the user.
NFR-5	**Availability**	The Web application is available to the users at any point of time.
NFR-6	**Scalability**	Increasing the data set size can help improve the application to recognize foods with complex ingredients.

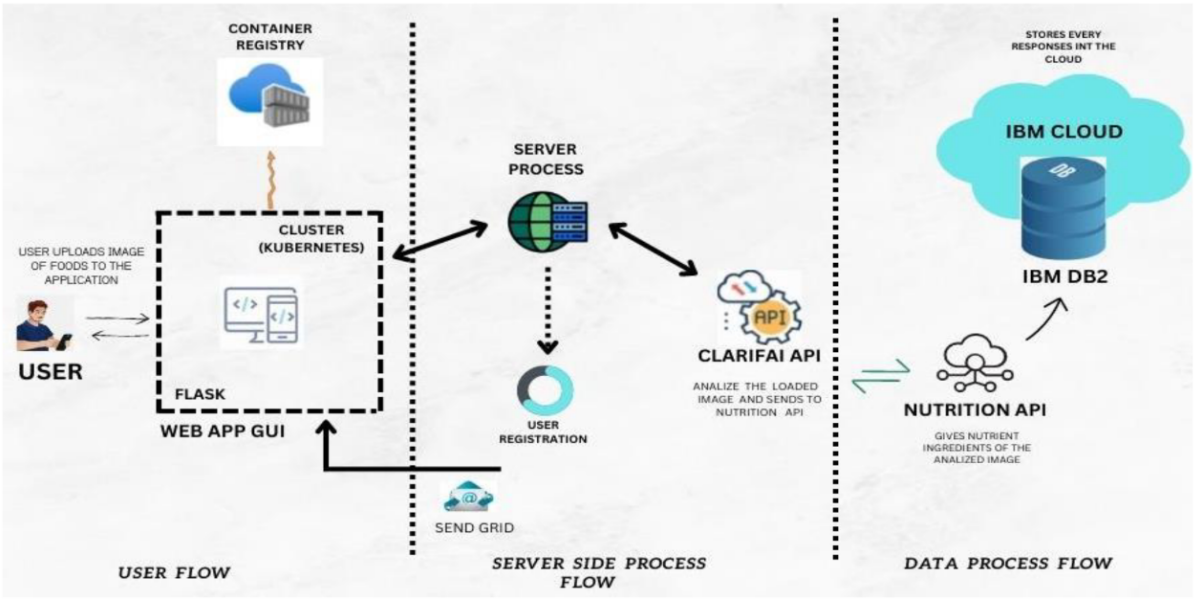
5. PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution & Technical Architecture





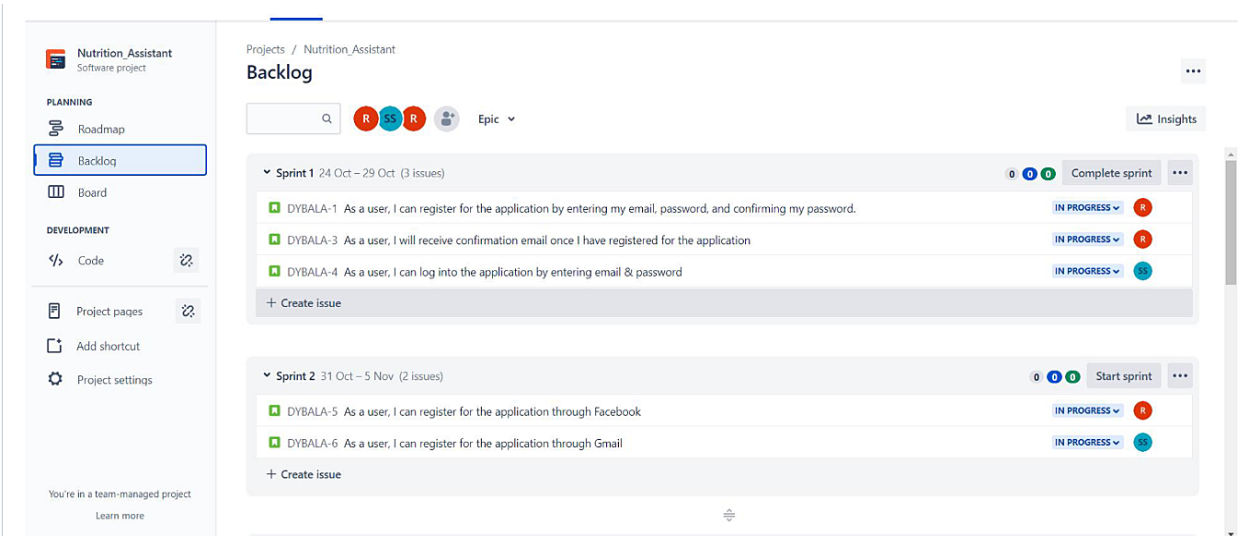
5.3 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can register by using Gmail ..	Medium	Sprint-2
	Login	USN-5	As a user, I can log into the application by entering email & password	I can login to my account by entering email & password.	High	Sprint-1
	Dashboard	USN-6	As a user, I can navigate through the dashboard.	I can navigate through the dashboard and upload the photo.	High	Sprint-3
	Forgot Password	USN-7	As a user, I can reset my password using my Gmail.	I can reset my account password.	High	Sprint-4
	Upload Image	USN-8	As a user, I can upload image in the application.	I can upload image in the application.	High	Sprint-3
	View Food Information	USN-9	As a user, after uploading the image the application should redirect to this page.	I can view the nutritional contents of the	High	Sprint-3
	View History of items	USN-10	As a user, I can be able to view history of items.	I can view the previous image uploads, that I have searched in the application.	Low	Sprint-4
Admin(Web User)	Registration	USN-11	As a user, I can register for the application.	I can access my account / dashboard	Medium	Sprint-4
	Login	USN-12	As a user, I can log into the application.	I can login to my account by entering admin credentials	Medium	Sprint-4
	Dashboard	USN-13	As a user, I can navigate through the dashboard.	I can navigate through the dashboard and perform admin specific tasks.	Medium	Sprint-4

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

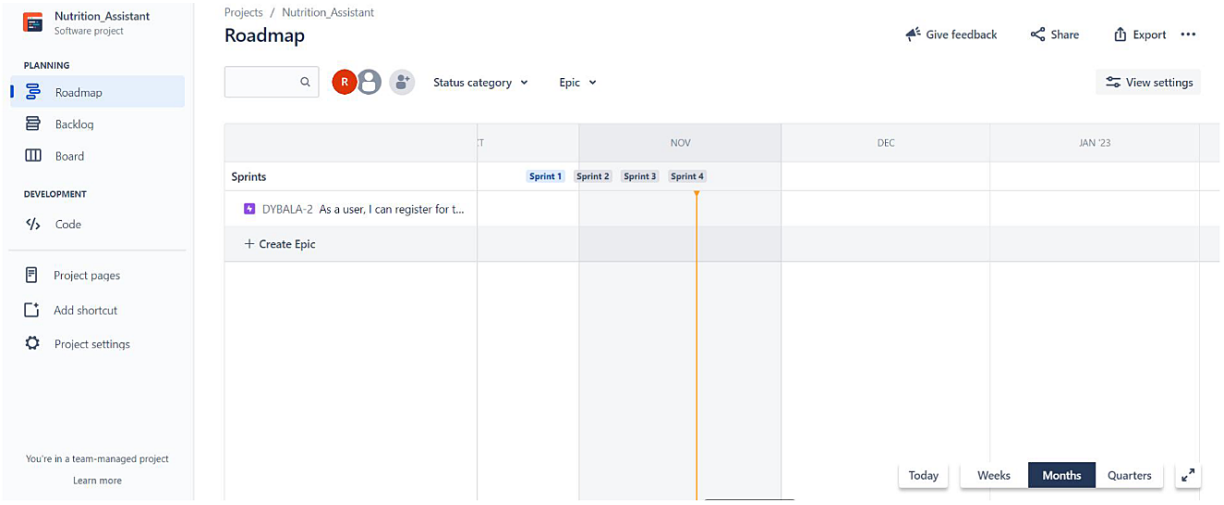
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	3	High	Rudrahari SanthoshRaaj
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	3	High	Rudrahari Sharvesh
Sprint-1		USN-3	As a user, I can register for the application through Facebook	1	Low	Sharvesh Ragul
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Rudrahari Ragul
Sprint-2	Login	USN-5	As a user, I can log into the application by entering email & password	3	High	SanthoshRaaj Sharvesh
Sprint-2	Dashboard	USN-6	As a user, I can navigate through the dashboard.	3	High	Sharvesh Ragul
Sprint-2	Forgot Password	USN-7	As a user, I can reset my password using my Gmail.	3	High	Rudrahari SanthoshRaaj
Sprint-3	Upload Image	USN-8	As a user, I can upload image in the application.	3	High	Rudrahari Ragul
Sprint-3	View Food Information	USN-9	As a user, after uploading the image the application should redirect to this page.	3	High	Sharvesh Ragul

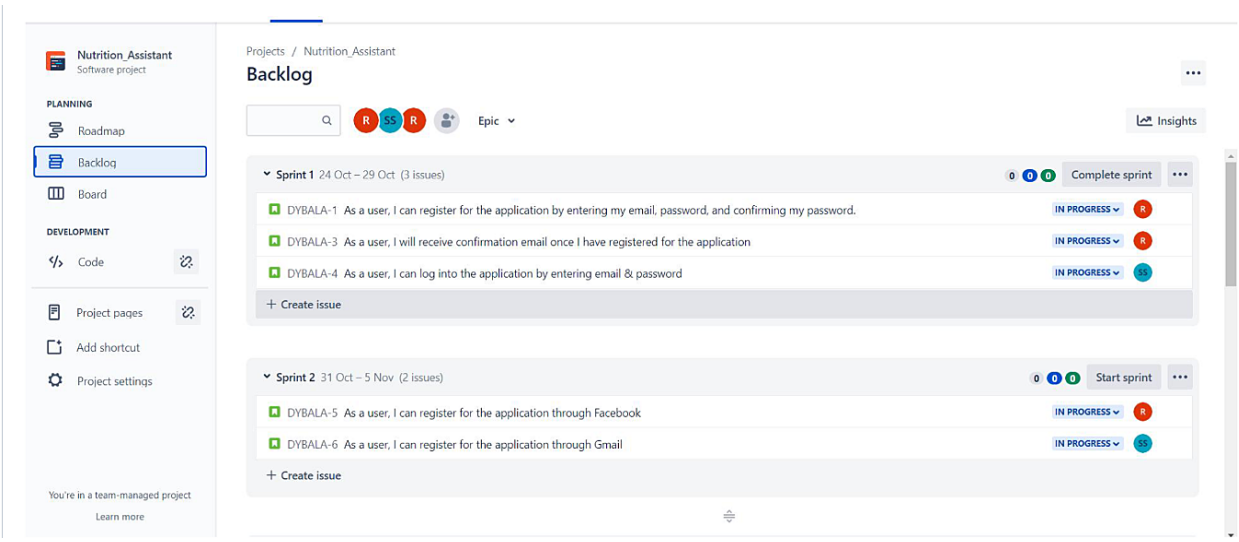


6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	28 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	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

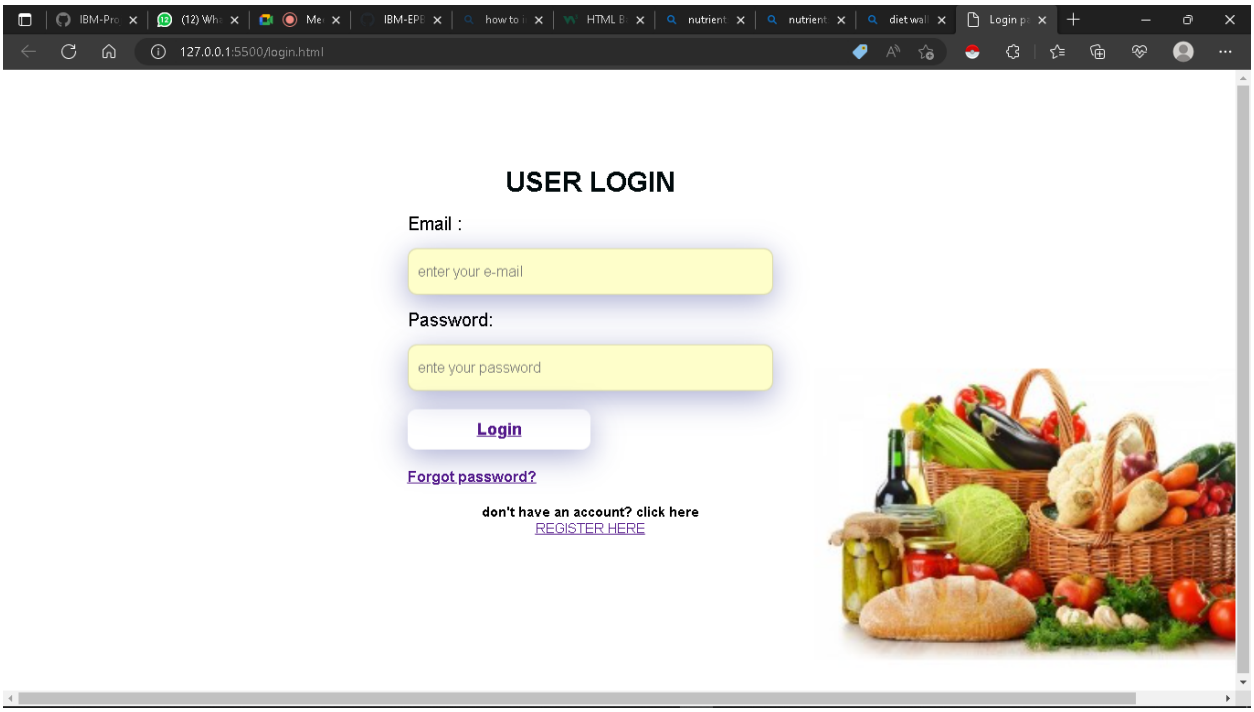


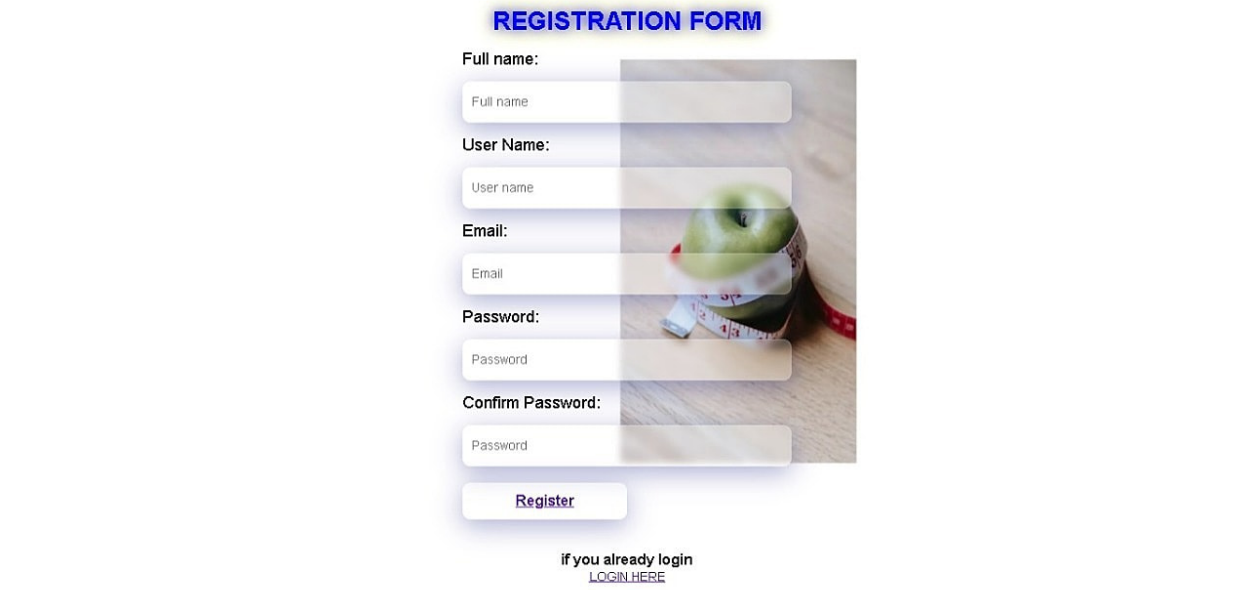


7. CODING & SOLUTIONING

7.1 Feature 1

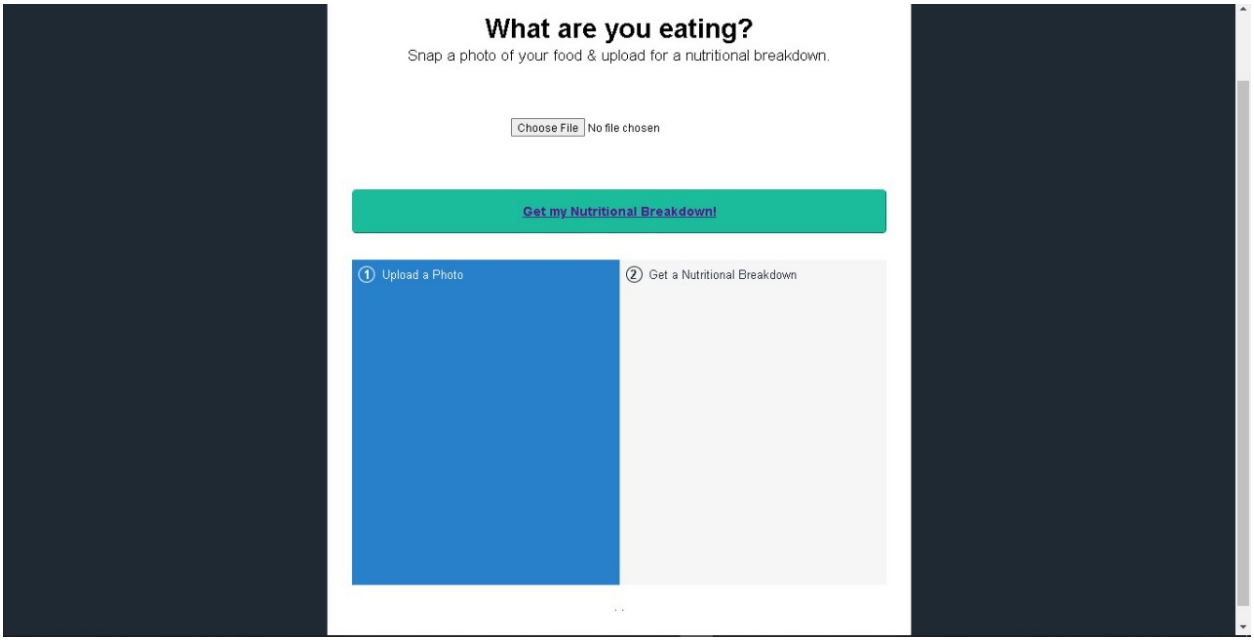
The login and register page helps users to login and signup.


127.0.0.1:5500/login.html
USER LOGIN
Email :
enter your e-mail
Password:
ente your password
Login
Forgot password?
don't have an account? click here
REGISTER HERE


REGISTRATION FORM
Full name:
Full name
User Name:
User name
Email:
Email
Password:
Password
Confirm Password:
Password
Register
if you already login
LOGIN HERE

7.2 Feature 2

The upload page helps users to upload the photo and get nutritional comtent as their result.



8. TESTING

8.1 Test Cases

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).

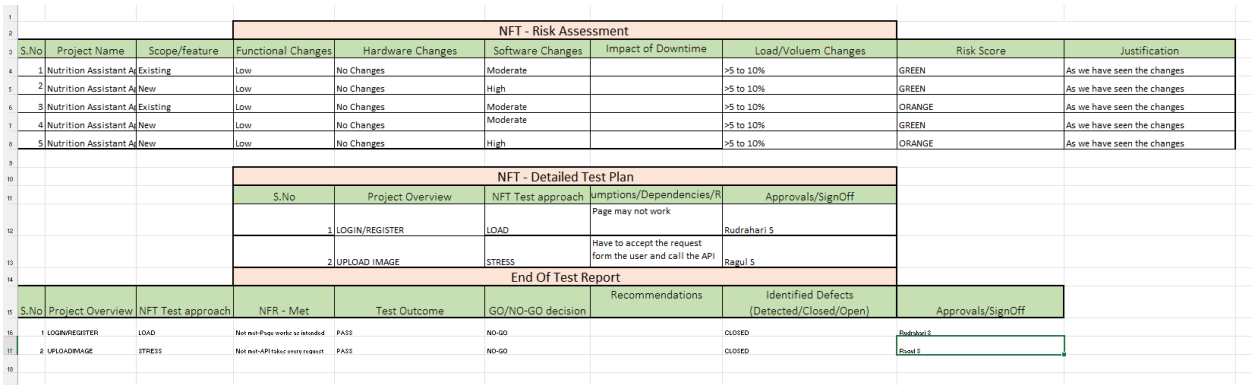
Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3

8.2 User Acceptance Testing

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	5	2	3	20
Duplicate	1	0	2	1	4
External	2	3	0	1	6
Fixed	11	3	4	20	38
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	24	10	13	16	63

9. RESULTS

9.1 Performance Metrics



NFT - Risk Assessment

S.No	Project Name	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Voluem Changes	Risk Score	Justification
1	Nutrition Assistant A	Existing	Low	No Changes	Moderate		>5 to 10%	GREEN	As we have seen the changes
2	Nutrition Assistant A	New	Low	No Changes	High		>5 to 10%	GREEN	As we have seen the changes
3	Nutrition Assistant A	Existing	Low	No Changes	Moderate		>5 to 10%	ORANGE	As we have seen the changes
4	Nutrition Assistant A	New	Low	No Changes	Moderate		>5 to 10%	GREEN	As we have seen the changes
5	Nutrition Assistant A	New	Low	No Changes	High		>5 to 10%	ORANGE	As we have seen the changes

NFT - Detailed Test Plan

S.No	Project Overview	NFT Test approach	umptions/Dependencies/R	Approvals/SignOff
1	LOGIN/REGISTER	LOAD	Page may not work	Rudrahari S
2	UPLOAD IMAGE	STRESS	Have to accept the request form the user and call the API	Ragul S

End Of Test Report

S.No	Project Overview	NFT Test approach	NFR - Met	Test Outcome	GO/NO-GO decision	Recommendations	Identified Defects (Detected/Closed/Open)	Approvals/SignOff
1	LOGIN/REGISTER	LOAD	Not met-Page works as intended	PASS	NO-GO		CLOSED	Rudrahari S
2	UPLOADIMAGE	STRESS	Not met-API takes empty request	PASS	NO-GO		CLOSED	Ragul S

10. ADVANTAGES & DISADVANTAGES

Advantage:

The emergence of technology has lazed out the generation. For technical reasons, the actual workload has almost dropped, which is the reason for various problems. According to a new study, about 30% of the world's population are overweight or obese. These statistics show that we live in the dark, and health and fitness challenges are urgently needed. The number of gym and nutrition centers around the world is increasing.

Gym was a success. However, everyone does not have time to join the gym. There are also people who take part in the New Year's Eve on a particular year and delay the remaining days when they start with gym.

Therefore, the need of apps arise in the market…

Diet and Nutrition app ideas for every mobile app developer

You can use a variety of power app in the AppStore and Google game. The basic functions of these applications is slightly different. In addition, they will support a variety of target users. We have prepared a list of applications that are listed at the top of the table.

Calorie Calculating apps

As its name suggests, the main function of this type of application is to calculate calories. In this application, the user is usually the target, enter the body weight. They are, like their activities and eat food, and add other information.App is absorbed, the

number of calories burned measured, it suggests the recommended food. MyFitnessPal is a perfect example of such an application created by an expert iPhone development company. It is very popular, the fact is it has around 11.7 million users.
Meal Planning app

These types of apps are, for a meal before controlling the calorie intake of the user, different from the old. In this app, the user, you must complete the required body weight, a set of meals and exercises. After that, apply the date on the basis of demographics, create a diet chart of the week or month. Is eating a lot of food aid and this is two of the apps that fall into this category?
Social Networking in diet planning

This is an app that connects users to diet and nutritional advice. These coach, provides professional advice and skills. When rising, according to their strict diet, which is an example of such an app, so as to be able to drive them to track their progress, the user, the commission of the diet coaches.
Diet and fitness apps for niche audience

Most applications developed by any iPhone app development company that appear are common to all users. However, there is another way to lose weight. These are called special diet application. You can filter target effectively public. For example, you can create a diet application of pregnant women and diabetes for patients.

Disadvantage:

You will gain weight if you consume more calories than you expend. A poor diet may result from frequent consumption of convenience foods, such as french fries, dried snack foods and hamburgers, pizza or fried chicken. These foods are calorie-dense, which means that they have a relatively high number of calories in a serving. Consuming these foods frequently makes you more likely to gain weight than if you base your diet on less calorie-dense options, such as vegetables, fruits, beans and lean proteins.
Nutrient Deficiencies:

While it is likely to be adequate in protein and total fat, a poor diet can lead to deficiencies of certain nutrients. Good sources of calcium, an essential nutrient for building strong bones, include reduced-fat milk, cheese and yogurt, as well as some green vegetables, fortified soy products and breakfast cereals. Iron, vitamin D and folic

acid are other vitamins and minerals that can be deficient. Long-chain omega-3 fatty acids called docosahexaenoic acid and eicosapentaenoic acid can lower your risk for heart disease. They are in fish and shellfish, which are frequently lacking in poor diets.
High Blood Pressur:e

A high-sodium diet is a risk factor for high blood pressure, which can increase your risk for stroke, heart disease and kidney disease. Processed foods tend to be high in sodium. Major contributors of sodium to the American diet include bread, cold cuts, sauces, condiments and dressings, pizza, burgers, Mexican-style dishes and pasta dishes. A high-potassium diet can help lower blood pressure, but a diet with poor nutrition can be low in potassium if it is low in sources such as vegetables, fruit, legumes, fish and reduced-fat dairy products.
High Cholesterol Levels:

Many dietary factors affect your cholesterol levels, and your cholesterol levels affect your risk for heart disease. Pizza, baked desserts, ice cream and processed meats, such as sausage and bacon, are among the top sources of saturated fat. Processed snack foods and fried foods, such as french fries, doughnuts and onion rings, can contain trans fats, which raise "bad" cholesterol known as low-density lipoprotein and lower healthy or "good" cholesterol called high-density lipoprotein. A low intake of fruits, vegetables, beans and whole grains can keep your intake of dietary fiber low. Fiber lowers LDL cholesterol levels and your risk for heart disease.

11. CONCLUSION

One should develop good nutritional habits with a balanced diet right from early age. Since such habits cannot be changed overnight, children should be taught the value of eating nutritional food and ill effects of junk food in life. A balance diet and appropriate meal timings are important for a healthy body and mind. Eating nutritious food not only helps in weight management and disease prevention in adults but also contributes proper growth of children and their better performance in studies and sports.

Nutrition is the broader term which is not limited to developing only healthy dietary habits but also a healthy lifestyle patterns from an early age. A healthy lifestyle excludes smoking, alcohol consumption etc and includes regular exercise, regular meals as well as appropriate sleeping hours. Learning such things from early age helps one to lead a

healthy life as an adult and even in old age. Thus a proper nutrition for everyone can enhance the productivity of individuals and contribute to development of a nation as a whole.

Nutrition education is an important factor in overall improvement for society health and prevention of all forms of malnutrition. For spreading such education schools are ideal platforms, for promoting lifelong healthy eating habits and lifestyles in community. Most countries nowadays implement health education programme in schools which include feeding to students, deworming, vitamin and mineral supplementation, etc. Children must understand the importance of minerals, vitamins proteins, fluid balance etc as well as limiting calorific value of food that one should consume at different ages.

All of us must realize the value and significance of good nutritional habits for a longer and healthier life

12. FUTURE SCOPE

Holistic Nutritionist: Primary works of a nutritionist includes providing proper guidance related to food and the nutritional value associated with it. A holistic nutritionist is generally someone who takes care of a person's eating habits so as to improve his/her health.

Clinical Dietetics/Nutrition: A clinical dietitian/nutritionist takes care of a particular sect of people. As the name suggests, clinical dietitian works in either inpatient settings or outpatient settings. He/she is a medical specialist and under this head, the candidate has to take care of a particular area of the health. These medical specialties include pediatrics, renal, diabetes, nutrition support, etc.

Sports Nutritionist: In order to participate in sports, one has to be quite healthy. As different foods have different impacts on the body, it becomes really important to monitor what one eats. A Sports nutritionist is a person who prepares a proper diet for the sportspersons so that they become able to give optimum output in the field.

Health Coach: It might sound like something associated with sports but actually, it is not. Health coaching is one type of constructive and strategically executed program where the nutritionists put evidence-based skillful conversation and clinical interventions to use so as to safely engage the patients into a health behavior change.

Public Health Nutrition: As of now, the need to reform the health standards and food consumption is alarmingly high. Numbers and numbers of health issues are encircling humankind. The Governments of various countries have constituted the specific government, non-government, and government-aided bodies to meet the provided standards of health. The UNO has brought about 10 major health issues which have plagued human health across the globe. With a thought of combating those issues, there have been numerous bodies incepted and so one can become a part of those teams.

Nutrition Education and Research: For some, it might look like a way simple job but it is important. Even in complex lives we live, the simpler things have proved to be of great importance. The candidates always have an option to start teaching in any of the schools or colleges. If not so, the students can conduct researches in specific areas of nutrition and dietetics. The students have a leeway to join research settings, overseeing clinical trials and interventions.

Business and Industry: there are innumerable industries and organizations which have food as their primary product/service. Due to a lot of health concerns, these companies need to employ a nutritionist or a specialist in order to monitor their productions. In Pharmaceutical companies, food manufacturing companies, eating franchises, etc there is a need for nutritionists who can work in marketing, quality control, and development.

Private Practice/Consulting: You always have an option to be your own boss, thanks to privatization! You certainly are at liberty to work on your own conditions. After this program, you can easily and very effectively practice this by commencing your own business. In this consulting job sphere, the students have to guide the clients on areas such as Diabetes management, weight management, eating disorder and many more.

Nutritionist in school/clubs/restaurants/hotels: All the sectors such as schools, clubs, hotels, restaurants, etc need to have someone who overviews and examines the food being served. Nobody wants to become notorious by serving bad quality food or food which proves to be fatal. So, the graduates have one more career option for them. Moreover, there are numerous options to becoming a nutritionist.

Medical Nutrition Therapy: Quite often it happens that you think you have a disease and when you reach the doctor's cabin he tells you that actually, it is your diet that is interrupting your health. Then what to do? Turn to a medical nutrition therapist. This is

an important branch where the specialists try to put food into use to treat a specific condition. Although it is practice long known but has become an application in recent year

13. APPENDIX

GITHUB LINK:
https://github.com/IBM-EPBL/IBM-Project-8488-1658920854

WORKDEMO LINK:
https://drive.google.com/drive/folders/1S9NeXa7-kct-zL1SLp8zr6Z--9S8CtIp

SOURCE CODE:

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

import requests, json, os
import ibm_db
import re
import os
import pathlib
from dotenv import load_dotenv
from sendgrid import SendGridAPIClient
from sendgrid.helpers.mail import Mail

app = Flask(__name__)

app.secret_key = 'a'

conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=b0aebb68-94fa-46ec-a1fc-
1c999edb6187.c3n41cmd0nqnrk39u98g.databases.appdomain.cloud;PORT=31249;SECURITY=
SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;PROTOCOL=TCPIP;UID=spw66260;PWD=;",",
")
print(conn)
print("connection successfull")

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

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

    if request.method =='POST':
        username = request.form['username']
        password =request.form['password']
        sql ="SELECT * FROM users 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['loggedin']=True
            session['id'] = account ['USERNAME']
            userid = account['USERNAME']
            session['username'] = account['USERNAME']
            msg = 'logged in successfully !'

            return render_template('submission.html',msg = msg)

        else:
            msg ='Incorrect username / password !'
    return render_template('login.html',msg=msg)
def execute_sql(statement, **params):
    global conn
    stmt = db.prepare(conn, statement)

    param_id = 1
    for key, val in params.items():
        db.bind_param(stmt, param_id, val)
        param_id += 1

    result = ''
    try:
        db.execute(stmt)
        result = db.fetch_assoc(stmt)
```

```
    except:
        pass

    return result
def send_confirmation_mail(user, email):
    message = Mail(
        from_email="",
        to_emails="",
        subject="YAYY!! Your Account was created successfully!",
        html_content= "<strong>Account Created with username {0}</strong>".format(user)
    )

    try:
        sg = SendGridAPIClient(os.environ.get('SENDGRID_API_KEY'))
        response = sg.send(message)
        print(response.status_code)
        print(response.body)
        print(response.headers)
    except Exception as e:
        print(e)

@app.route('/register', methods=['GET', 'POST'])
def register():
    msg = ''
    if request.method == 'POST':
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE username = ?"
        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:
            msg ='Account already exists !'
        elif not re.match(r'[^@]+@[^@]+\.[^@]+',email):
            msg ='Invaild email address !'
        elif not re.match(r'[A-Za-z0-9]+',username):
            msg = 'Name must contain only characters and numbers!'
        else:
```

```
            insert_sql = "INSERT INTO users VALUES (?,?,?)"
            prep_stmt= ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1 , username)
            ibm_db.bind_param(prep_stmt, 2, email)
            ibm_db.bind_param(prep_stmt, 3, password)
            ibm_db.execute(prep_stmt)
            msg = ' you have successfully registered !'
    elif request.method == 'POST':
        # Form is empty... (no POST data)
        msg = 'Please fill out the form!'
    # Show registration form with message (if any)
    return render_template('register.html', msg=msg)

@app.route('/forgot', methods=['GET', 'POST'])
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/2807982c-986a-4def-9e3a-153a3066af7a.jpeg"
getRandomRecipe="/random"
@app.route('/result',methods=['GET','POST'])
def per_info():
    msg=''
    if request.method =='POST':
        Name=request.form['Name']
        gender=request.form['gender']
        tar_weight=request.form['Target Weight']
        Age=request.form['Age']
        Height=request.form['Height']
        Weight=request.form['Weight']
        email=request.form['email']
        location=request.form['location']
        phoneno=request.form['phoneno']
        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 USER values(?,?,?,?,?,?,?)'
            prep_stmt=ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt,1,Name)
            ibm_db.bind_param(prep_stmt,2,gender)
            ibm_db.bind_param(prep_stmt,3,Age)
            ibm_db.bind_param(prep_stmt,4,Height)
            ibm_db.bind_param(prep_stmt,5,Weight)
            ibm_db.bind_param(prep_stmt,7,location)
            ibm_db.execute(prep_stmt)
            msg="Your details are successfully stored"
            return render_template('viewprofile.html',msg=msg)
    elif request.method=="POST":
        msg="Please fill out the form"
    return render_template('result.html',msg=msg)

def forgot():
    if not session.get('user'):
        return redirect(LOG_IN_PAGE_URL)

    msg = ''
    user = ''
    email = ''
    if request.method == 'POST':
        user = session.get('user')
        oldpass = request.form['oldpass']
        newpass = request.form['newpass']

        sqlst = 'SELECT password from user where username = ?'
        dbpass = execute_sql(statement = sqlst , username = user)['PASSWORD']
        sqlst = 'SELECT email from user where username = ?'
        email = execute_sql(statement = sqlst ,username = user)['EMAIL']

        if dbpass == oldpass:
            sqlst = 'UPDATE user SET password = ? where username = ?'
            execute_sql(statement = sqlst , password = newpass , username = user)
            msg = 'Updated Successfully!'
        else:
```

```
            msg = 'Old Password Incorrect!'

        return render_template('login.html', user=user, email=email, msg=msg)

    return render_template('forgot.html')

@app.route('/home')
def submission():
    return render_template('home')


if __name__=='__main__':
    app.run()
```