Project report

IBM NutritionAssistant

[Modern Web Application]

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1.Introduction

1.1 Overview

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

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

1.2 Purpose

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

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

2.LITRATURE SURVEY

2.1Existing problem

In this busy world people can't track the food they consume and it is difficult to find the nutrients of all the food they consume. Over consumption or under nutrition can lead to serious health issues. These may be calcium/ iron/vitamin deficiencies or the over consumption of carbohydrates and sugar that causes obesity and diabetes. Which may

further lead to serious health issues. There is urgent action required to maintain a balanced diet in order to have a good immunity.

2.2 Proposed solution

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

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

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

2.3 Problem Statement

Customer Problem Statement Template:

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

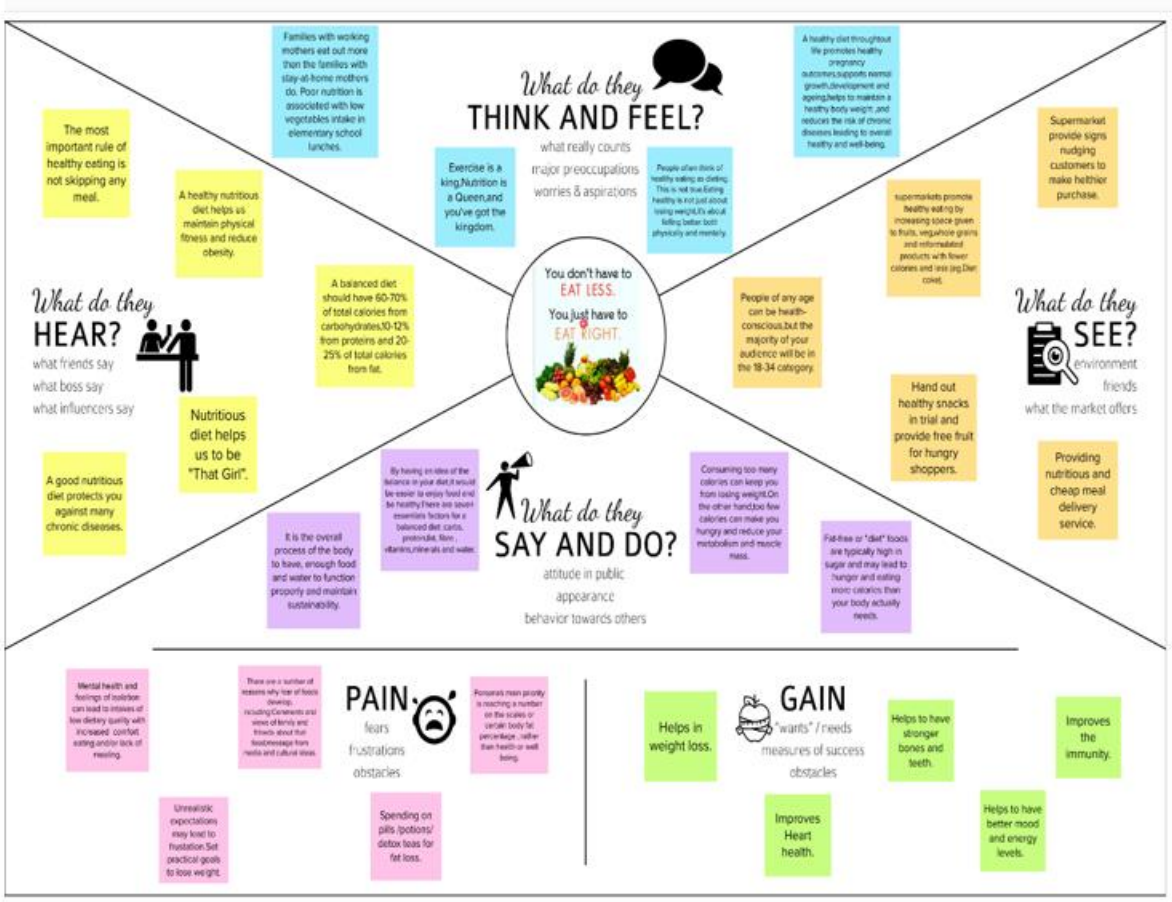
A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

I am	Describe customer with 3-4 key characteristics - *who are they?*	Describe the customer and their attributes here
I'm trying to	*List their outcome or "job" the care about - what are they trying to achieve?*	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way – *what bothers them most?*	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists – *what needs to be solved?*	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view – *how does it impact them emotionally?*	Describe the emotions the result from experiencing the problems or barriers

Reference: https://miro.com/templates/customer-problem-statement/

3.IDEATION & PROPOSED SOLUTION

3.1Empathy Map Canvas



3.2 Ideation And Brain Storming

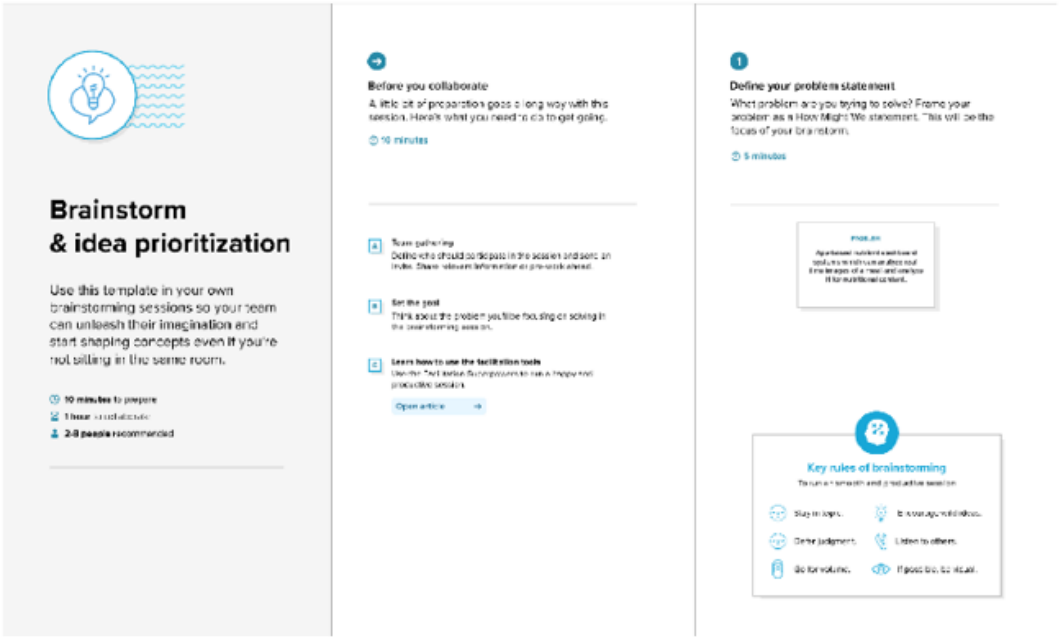
Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

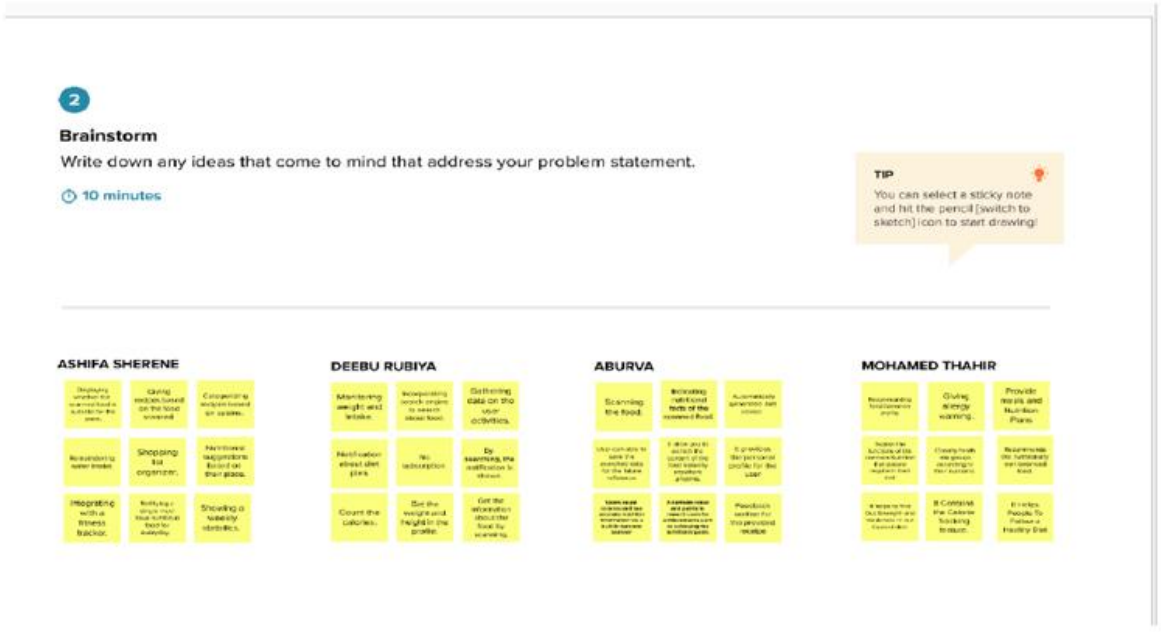
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

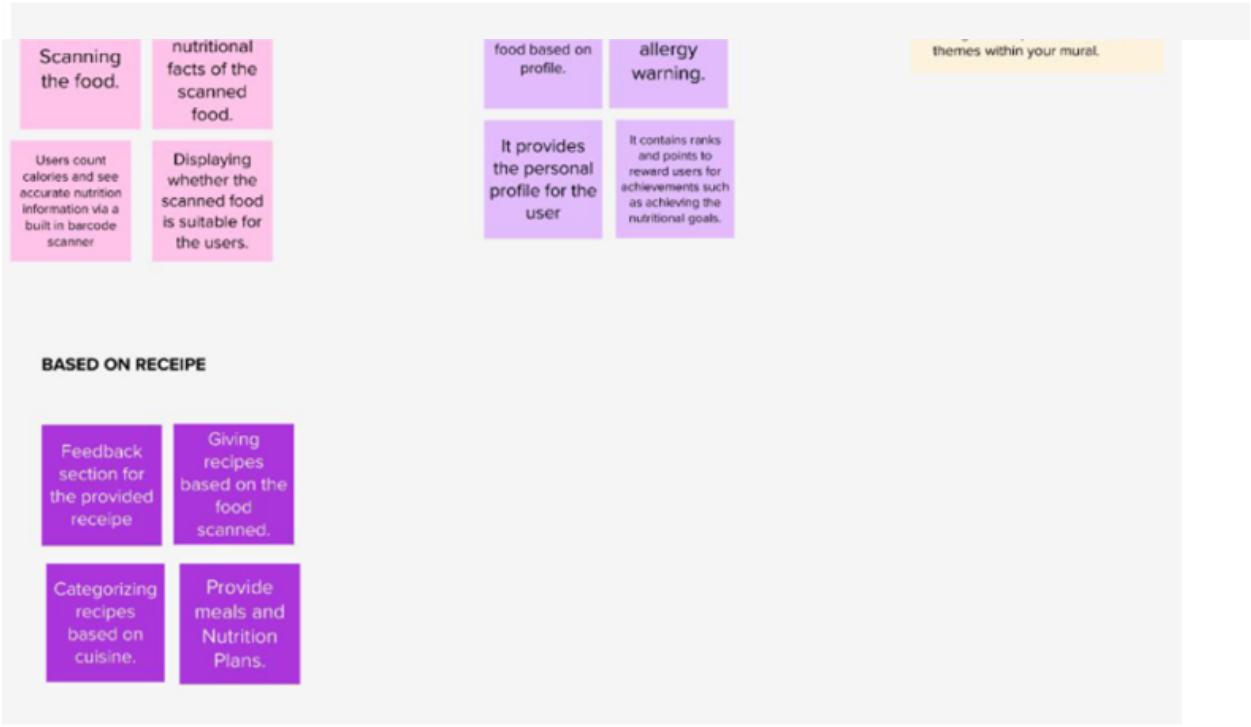
Reference: https://www.mural.co/templates/empathy-map-canvas

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



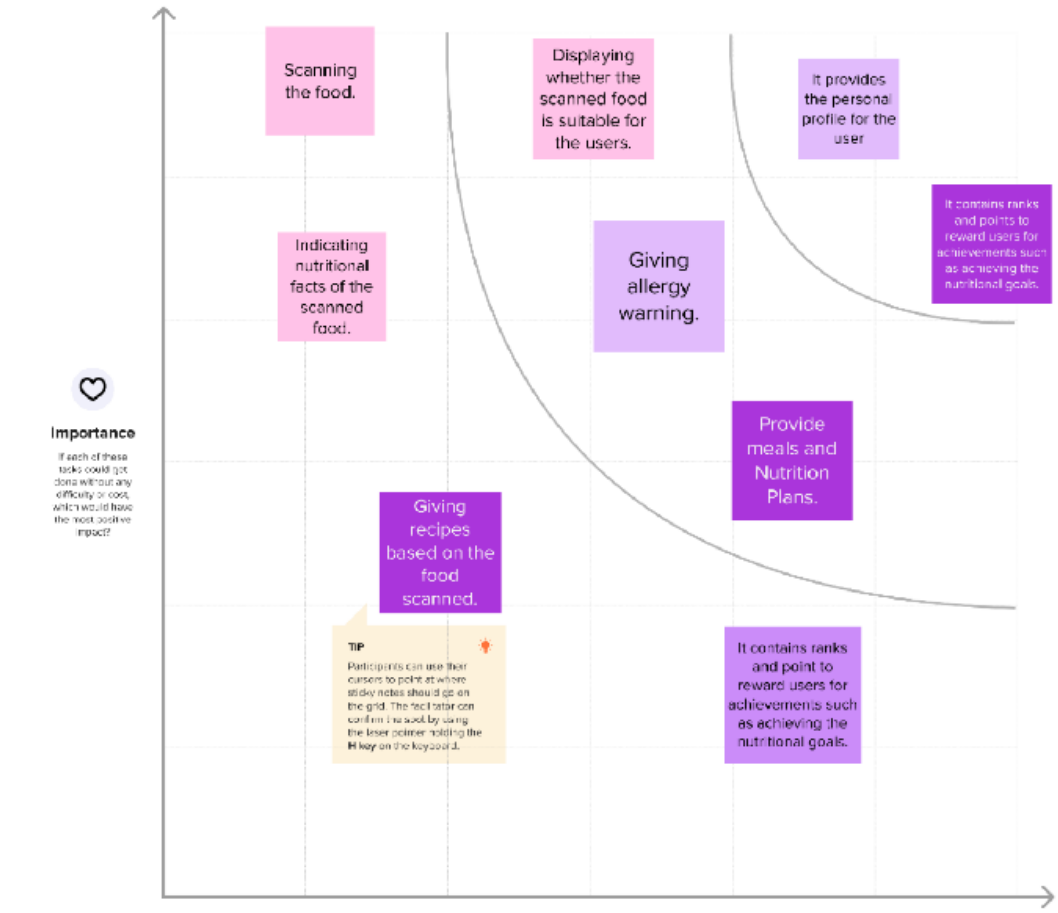


4

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

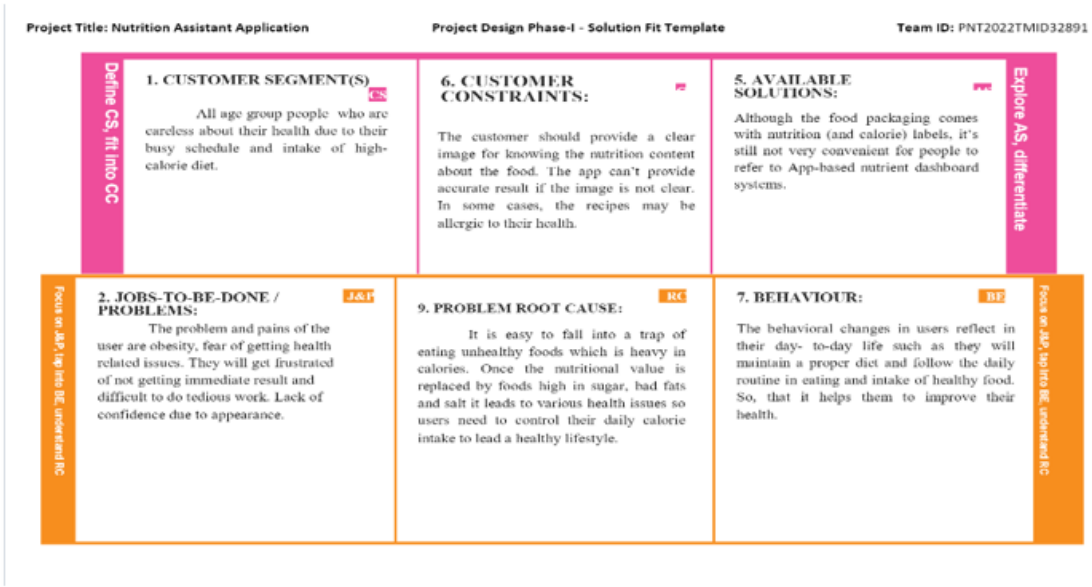


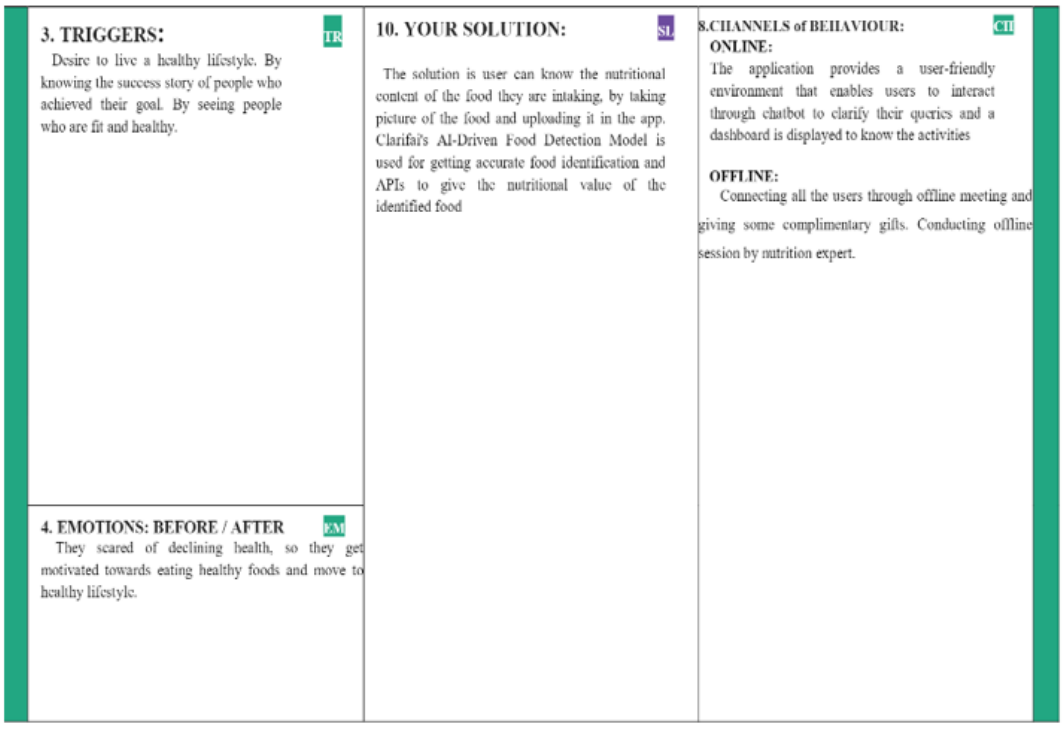
3.3 Proposed Solution:

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	App-based nutrient dashboard systems which can analyze real-time images of a meal and analyze it for nutritional content.
2.	Idea / Solution description	The solution can be brought by using Clarifai's AI-Driven food detection model to obtain precise food identification and food APIs to give the nutritional value of the identified food.
3.	Novelty / Uniqueness	Providing a user-friendly environment to access the nutritional information about the food by 1. Capturing the food 2. Uploading image from the gallery 3. Feed-in manually 4. Choosing from the provided list
4.	Social Impact / Customer Satisfaction	By providing custom diet and meal plans to the user, getting user feedbacks for the product enhancement and longevity.
5.	Business Model (Revenue Model)	By introducing not Paid membership plans and Ad's related to the food products and supplements.
6.	Scalability of the Solution	1. Providing regular updates 2. Making the application user friendly 3. Ease of access

3.4 Problem Solution





4.REQUIREMENT ANALYSIS

4.1 Functional requirement

Following are the functional requirements of the proposed solution.

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

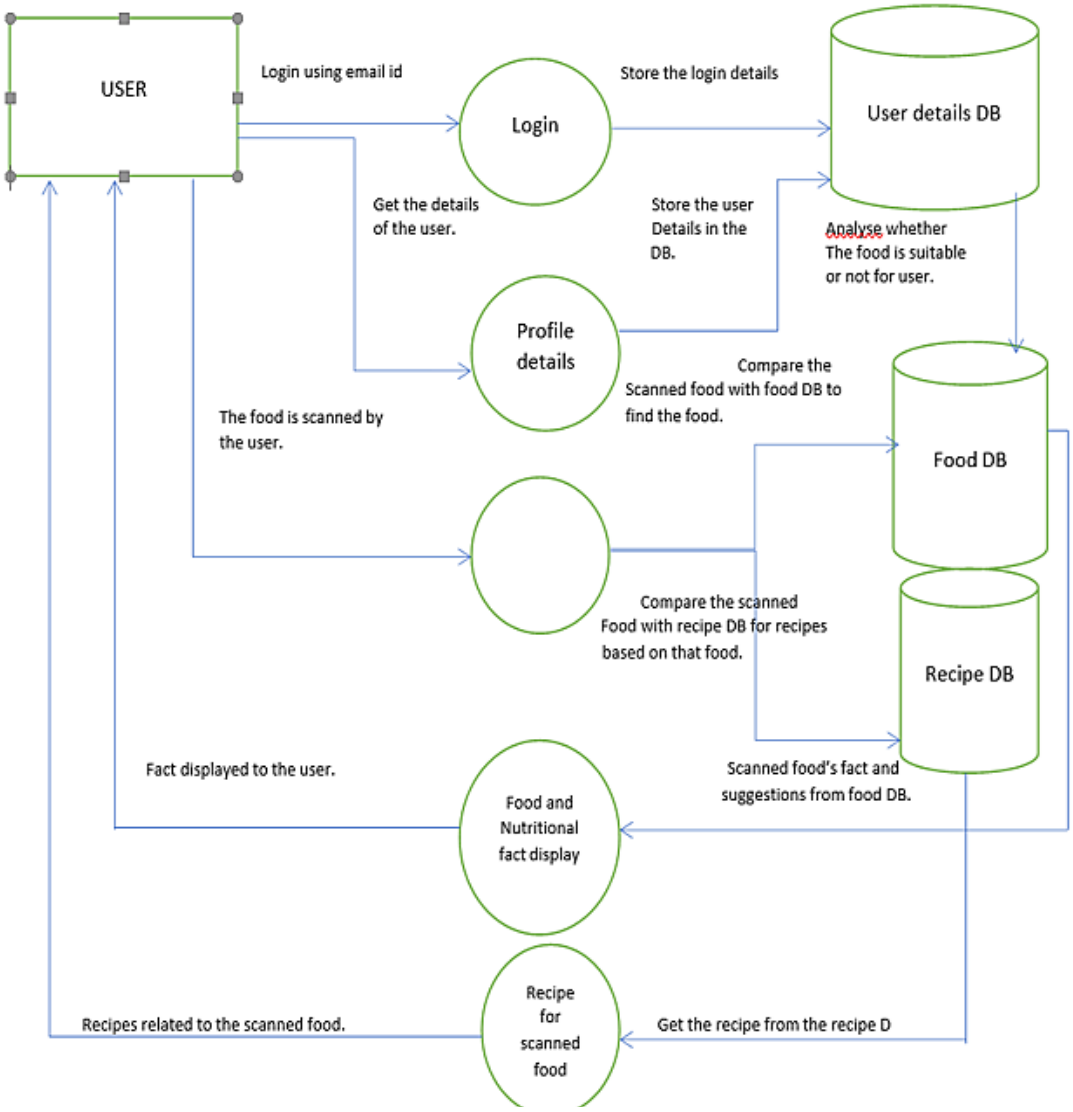
4.2 Non-Functional requirement

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

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

5 PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution &Technical Architecture

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, Javascript, Flask, Python
2.	Application Logic-1 – Creating an account	User registers their personal details such as name, age, current weight etc. These details are stored in the IBM cloud DB2.	Flask App running using Kubernetes Cluster, IBM DB2
3.	Application Logic-2 – Logging in	Verify credentials and land the user to their home page. Perform OTP authentication if needed.	Flask App running using Kubernetes Cluster, IBM DB2
4.	Application Logic 3 – Creating a custom meal	User enters details/ingredients and amount required to make a certain meal. The total calorie count is shown once the user clicks 'finish meal'.	Flask App running using Kubernetes Cluster, IBM DB2
5.	Application Logic 4 – Purchasing Premium Subscription	User is redirected to payment portal to complete the purchase.	Flask App running using Kubernetes Cluster, IBM DB2
6.	Application Logic 5 – Image recognition	User can take or upload a picture to automatically detect a food item which is already available in the database.	Flask App running using Kubernetes Cluster, IBM DB2
7.	Application Logic 6 – Viewing Dashboard	User can track their past records and visualise their calorie consumption and analyse their trends.	Flask App running using Kubernetes Cluster, IBM DB2
8.	Application Logic 7 – Daily Reminders	Notification is sent to the User on a daily basis to remind them to add their daily consumption of food and track calories.	Flask App running using Kubernetes Cluster, IBM DB2
9.	Application Logic 8 – In-App Social Network	Users can add friends and set goals together. User can also post their progress and view others progress.	Flask App running using Kubernetes Cluster, IBM DB2
10.	Application Logic 9 – Blogs and Articles of Nutrition Experts	Articles and blogs by Nutrition experts are added periodically to the app for users to view.	Flask App running using Kubernetes Cluster, IBM DB2
11.	Application Logic 10- Setting a daily calorie limit	User is alerted if they under or over consume calories.	Flask App running using Kubernetes Cluster, IBM DB2
12.	Database	Data Type, Configurations etc.	MySQL
13.	Cloud Database	Database Service on Cloud	IBM DB2.
14.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
15.	External API-1- SendGrid	The SendGrid service will be used to alert users of various notifications etc as defined by the user.	SendGrid
16.	External API-2- NutritionAPI	The service will be used for image recognition.	NutritionAPI
17.	Machine Learning Model	Pre trained model available through the API to recognise food items.	Object Recognition Model.
18.	Deployment	Application Deployment on Local System / Cloud Local Server Configuration: The application will run on the local server/client side to allow user to interact with Web UI. Cloud Server Configuration: The application will be hosted on the cloud for the user to user. This is done through containerization of the application using Docker, stored in the container registry, and will be run by Kubernetes.	IBM Cloud Registry, IBM Cloud Object Storage, IBM DB2, Docker, Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Backend Framework built on python.
2.	Security Implementations	TLS- Transport Layer Security	All external communications is encrypted and user data is protected.
3.	Scalable Architecture	The containerised app can be scaled easily to a large user base.	IBM DB2, IBM Cloud Object Storage, Kubernetes
4.	Availability	IBM Cloud guarantees availability with very minimal downtime. The app loses minimal functionality if the external APIs are not available	IBM Cloud Object Storage, Kubernetes, Docker Images, IBM DB2, SendGrid
5.	Performance	Performance depends on the availability of compute power in the cloud.	IBM Cloud Object Storage, Kubernetes, Docker Images, IBM DB2, SendGrid

5.3 User Stories

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
	Login	USN-3	As a user, I can log into the application by entering email & password	I can access the Dashboard and the application.	High	Sprint-1
Customer (Web user)	Upload Photo	USN-4	As a user , I can upload the food photo.	I can get the nutrition details.	High	Sprint-1
Administrator	User details	USN-5	As a user , I can fill the Details.	I can get whether the scanned food is suitable or not.	High	Sprint-2
	Push notification	USN-6	As a user, I will search the food items.	I can get the notification, related to my search.	High	Sprint-3
	Shown the nutrition details	USN-7	As a user, I can scan the food.	I can get the nutrition details of the scanned food.	High	Sprint-4
	Receipe shown	USN-8	As a user,I want to get the receipe for the scanned food.	I can get the receipe about the food.	Low	Sprint-4

Use the below template to list all the user stories for the product.

6.PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

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	J. Aburva S. Ashifa Sherene E. Deebu Rubiya S. Mohamed Thahir
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	J. Aburva S. Ashifa Sherene E. Deebu Rubiya S. Mohamed Thahir
Sprint-1	Login	USN-3	As a user, I can log into the application by entering email & password	1	High	J. Aburva S. Ashifa Sherene E. Deebu Rubiya S. Mohamed Thahir
Sprint-2	User details	USN-4	As a user , I can fill the Details.	2	High	J. Aburva S. Ashifa Sherene E. Deebu Rubiya S. Mohamed Thahir
Sprint-3	Push notification	USN-5	As a user, I will search the food items.	2	Medium	J. Aburva S. Ashifa Sherene E. Deebu Rubiya S.Mohamed Thahir
Sprint-4	Shown the nutrition details and Recipe for	USN-6	As a user, I can scan the food an get the nutrition details and recipe for related scanned	1	High	J. Aburva S. Ashifa Sherene

6.2 Sprint Delivery Schedule

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

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

Velocity:

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

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

7 CODING & SOLUTIONING

LOGIN

```html
<html>
    <head>
        <link rel="stylesheet" href="stylee.css">
    </head>
<body>
    <div class="container">
    <div class="card">
    <div class="inner-box" id="card">
    <div class="card-front">
        <h2>LOGIN</h2>
    <form>
        <input type="email" class="input-box" placeholder="your Email Id " required>
        <input type="password" class="input-box" placeholder="password" required>
        <button type="submit" class="submit-btn">submit</button>
        <input type="checkbox"><span>Remember Me</span>
    </form>
    <button type="button" class="btn" onclick="openSignup()">I'm New Here</button>
    <a href="">Forget Password</a>
        </div>
        <div class="card-back">
             <h2>SIGNUP</h2>
    <form>
        <input type="text" class="input-box" placeholder="Your Name" required>
        <input type="email" class="input-box" placeholder="your Email Id " required>
        <input type="password" class="input-box" placeholder="password" required>
        <button type="submit" class="submit-btn">submit</button>
        <input type="checkbox"><span>Remember Me</span>
    </form>
    <button type="button" class="btn" onclick="openLogin()">I've an account</button>
    <a href="">Forget Password</a>

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

    <script>
        var card = document.getElementById("card");
        function openSignup(){
            card.style.transform = "rotateY(-180deg)";
        }
            function openLogin(){
            card.style.transform = "rotateY(0deg)";
        }
    </script>
    </body>
</html>
```

STYLE.CSS

```css
*{
    margin: 0;
    padding: 0;

}
.container{
    width: 100%;
    height: 100vh;
    font-family: sans-serif;
    background: rgba(187,187,245);
    color: #fff;
    display: flex;
    align-items: center;
    justify-content: center;
}
.card{
    width: 350px;
    height: 500px;
    box-shadow: 0 0 40px 20px rgba(0,0,0,0.26);
    perspective: 1000px;
}
.inner-box{
    position: relative;
    width: 100%;
    height: 100%;
    transform-style: preserve-3d;
    transition: transform 1s;

}
.card-front,.card-back{
    position: absolute;
    width: 100%;
    height: 100%;
    background-position: center;
    background-size: cover;
    background-image: linear-gradient(rgba(0,0,100,0.8),rgba(0,0,100,0.8)),url(background.png);
    padding: 55px;
    box-sizing: border-box;
    backface-visibility: hidden;
}
.card-back{
    transform: rotateY(180deg);
}
.card h2{
    font-weight: normal;
    font-size: 24px;
    text-align: center;
    margin-bottom: 20px;
```

```
}
.input-box{
    width: 100%;
    background: transparent;
    border: 1px solid #fff;
    margin: 6px 0;
    height: 32px;
    border-radius: 20px;
    padding: 0 10px;
    box-sizing: border-box;
    outline: none;
    text-align: center;
    color:  #fff;
}
::placeholder{
    color: #fff;
    font-size: 12px;
}
button{
    width: 100%;
    background: transparent;
    border: 1px solid #fff;
    margin: 35px 0 10px;
    height: 32px;
    font-size: 12px;
    border-radius: 20px;
    padding: 0 10px;
    box-sizing: border-box;
    outline: none;
    color: #fff;
    cursor: pointer;
}
.submit-btn{
    position: relative;
}
.submit-btn::after{
    content: '\27a4';
    color: #333;
    line-height: 32px;
    font-size: 17px;
    height: 32px;
    width: 32px;
    border-radius: 50%;
    background: #fff;
    position: absolute;
    right: -1px;
    top: -1px;
}
span{
    font-size: 13px;
```

```
span{
    font-size: 13px;
    margin-left: 10px;
}
.card ,btn{
    margin-top: 70px;
}
.card a{
    color: #fff;
    text-decoration: none;
    display: block;
    text-align: center;
    font-size: 13px;
    margin-top: 8px;
}
```

HOME.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Nutrition Assistant Application</title>
<meta content="PlateJoy is your personal meal planning assistant, providing custom meal plans and recipes. Start your free trial to enjoy recipes tailored to your preferences
<meta charset="utf-8">
<link href="/favicon.png" rel="shortcut icon" type="image/png">
<link href="/apple-touch-icon.png" rel="apple-touch-icon">
<link href="/apple-touch-icon.png" rel="shortcut-icon">
<meta name="csrf-param" content="authenticity_token" />
<meta name="csrf-token" content="MXoBupivoEIcosJZYNT7pwHzK9Qbcw0oENsZ8UjFIchb9XsuxVHqlSqrwOqmsadk_PCfrEpHxv3v9epPZ9K5EQ" />
<meta content="4.76.00" name="app-version">
<meta content="width=device-width, initial-scale=1, maximum-scale=5, minimum-scale=1, user-scalable=yes" name="viewport">
    <style type='text/css'>.preampjs [data-preamp], .fusejs [data-fuse] {opacity: 0 !important}</style>
<script>
  !function(co,h,e,s,i,o,n){var d='documentElement';var a='className';h[d][a]+=' preampjs fusejs';
  n.k=e;co._Cohesion=n;co._Preamp={k:s,start:new Date};co._Fuse={k:i};co._Tagular={k:o};
  [e,s,i,o].map(function(x){co[x]=co[x]||function(){(co[x].q=co[x].q||[]).push([].slice.call(arguments))}});
  h.addEventListener('DOMContentLoaded',function(){co.setTimeout(function(){
  var u=h[d][a];h[d][a]=u.replace(/ ?preampjs| ?fusejs/g,'')},3e3);
  co._Preamp.docReady=co._Fuse.docReady=!0});var z=h.createElement('script');
  z.async=1;z.src='https://cdn.cohesionapps.com/cohesion/cohesion-health.min.js';h.head.appendChild(z);}
  (window,document,'cohesion','preamp','fuse','tagular',{
    tagular:{writeKey:"wk_1wdlMB01954X8sRkq2Hb9UwTNRV",sourceKey:"src_1wdlM7mTsZtqLAea5Lkl1m2xeM1", authCookie: 'tglr_auth_id'},
    preamp:{siteId:"3HJazcKhTFrRMXQ0iSjG2G", endpoint:"https://api.hc.preamp.io/api/v1"},
    consent:{required:false}
  })
</script>
```

```
<script src="https://browser.sentry-cdn.com/6.10.0/bundle.min.js" integrity="sha384-nsIkfmMh0uiqg+AwegHcT1SMiPNWnhZmjFDwTshLTxur6ZPNaGT8vwT+vHwI5Jag" crossorigin="anon

<script>
  Sentry.init({
    dsn: 'https://908471f316134004bcec6690f8c80e0e@sentry.io/273538',
    environment: 'production',
    release: '5.24.00',
    ignoreUrls: [/cdn\.mxpnl\.com/, /cdn\.segment\.com/],
    ignoreErrors: [
      /^twttr is not defined$/,
      /^\$ is not defined$/,
      /^JQuery is not defined$/,
      /^Can't find variable: \$$/,
      /^ResizeObserver loop limit exceeded$/,
      /^null is not an object \(evaluating 'document\.body\.childNodes'\)$/,

      // begin: user does early page cancel
      // see https://stackoverflow.com/questions/55738408/javascript-typeerror-cancelled-error-when-calling-fetch-on-ios
      /^TypeError: NetworkError when attempting to fetch resource$/, // firefox
      /^TypeError: Failed to fetch$/, // chrome
      /^TypeError: cancelled$/, // safari
      // end: user does early page cancel
    ],
    tracesSampleRate: 1.0,
  });
</script>

<noscript>
  <style>
    .yesscript {
      display: none !important;
    }
  </style>
</noscript>


<link rel="stylesheet" media="all" href="https://static.platejoy.com/assets/v4_landing_pages/application-2e424c82369d08364b98218321c17b56dad5257a95c5a5fda0b4c77530036cb8
<script src="https://www.googleoptimize.com/optimize.js?id=OPT-WPTFGRZ"></script>
</head>
<body class="static pages home pages-home not-mobile-app">
<header class="non-printer-only">
<a aria-label="Skip to Main Content" class="sr-only" href="#main">&amp;nbsp;</a>

<div class="logo-wrap">
<h3 align="left">Nutrition Assistant</h3>
<i aria-label="PlateJoy Health"></i>
</div>
```

```
<h3 align="left">Nutrition Assistant</h3>
<i aria-label="PlateJoy Health"></i>
</div>
<nav aria-label="Secondary" class="secondary">
<ul>
<li class="tablet-plus-only">
<a class="home" href="/">Home</a>
</li>
</ul>
</nav>
</header>

<main id="main">
<section class="hero swoosh-hero-image">
<div class="image"></div>
<div class="swoosh"></div>
<div class="content">
<h1>Healthy Eating <br class="tablet-plus-only">for Busy People</h1>
<div class="subtext">Food Scanner, <br class="sub-tablet-only">personalized recipes and <br class="sub-tablet-only">grocery <br class="tablet-plus-only">lists to help you save
<a class="btn btn-cta start-free-trial-cta" href="/login">log in</a>
</div>
</section>

<section class="steps">
<div class="content">
<div class="ul"><div class="li"><div class="image utensils"></div>
<h2 class="h3">Recipes<br class="non-mobile-only"></h2>
<div>We suggest you the tasty and healthy recipe.</div></div><div class="li"><div class="image list"></div>
<h2 class="h3">Scanning the <br class="non-mobile-only">Food</h2>
<div>You can find the nutritional fact by Scanning the food easily.</div></div><div class="li"><div class="image delivery-truck"></div>
<h2 class="h3">Smart grocery <br class="non-mobile-only">list</h2>
<div>Our digital pantry takes into account what you have in your kitchen to reduce food waste and save money.</div></div></div>
</div>
</section>

<section class="as-seen-in">
<div class="swoosh top"></div>
<div class="swoosh bottom"></div>
<div class="content">
<h2>Join Thousands of <br>People Eating Better</h2>
<ul class="testimonials">
<li>
</main>
```

UPLOAD PAGE:

75 lines (74 sloc) | 2.7 KB

Raw | Blame

```
<!DOCTYPE html>
<!-- Created By CodingNepal -->
<html lang="en" dir="ltr">
   <head>
      <meta charset="utf-8">
      <title>Preview Image Before Upload | CodingNepal</title>
      <link rel="stylesheet" href="style.css">
      <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.3/css/all.min.css"/>
   </head>
   <body>
       <div class="wrapper-name">
           <div class="input-data">
               <input type="text">
               <label>ENTER THE INGREDIENTS</label>
           </div>
       </div>
      <div class="container">
         <div class="wrapper">
            <div class="image">
               <img src="" alt="">
            </div>
            <div class="content">
               <div class="icon">
                  <i class="fas fa-cloud-upload-alt"></i>
               </div>
               <div class="text">
                  No file chosen, yet!
               </div>
            </div>
            <div id="cancel-btn">
               <i class="fas fa-times"></i>
            </div>
            <div class="file-name">
               File name here
            </div>
         </div>
         <button onclick="defaultBtnActive()" id="custom-btn">Choose a file</button>
         <input id="default-btn" type="file" hidden>
          <button id="custom-btn" align="center">SUBMIT</button>

      </div>
```

```
        <script>
          const wrapper = document.querySelector(".wrapper");
          const fileName = document.querySelector(".file-name");
          const defaultBtn = document.querySelector("#default-btn");
          const customBtn = document.querySelector("#custom-btn");
          const cancelBtn = document.querySelector("#cancel-btn i");
          const img = document.querySelector("img");
          let regExp = /[0-9a-zA-Z\^\&\'\@\{\}\[\]\,\$\=\!\-\#\(\)\.\%\+\~\_ ]+$/;
          function defaultBtnActive(){
            defaultBtn.click();
          }
          defaultBtn.addEventListener("change", function(){
            const file = this.files[0];
            if(file){
              const reader = new FileReader();
              reader.onload = function(){
                const result = reader.result;
                img.src = result;
                wrapper.classList.add("active");
              }
              cancelBtn.addEventListener("click", function(){
                img.src = "";
                wrapper.classList.remove("active");
              })
              reader.readAsDataURL(file);
            }
            if(this.value){
              let valueStore = this.value.match(regExp);
              fileName.textContent = valueStore;
            }
          });
        </script>
    </body>
</html>
```

REGISTRATION :

```
<!DOCTYPE html>
<html>
<head>
<title>User Details</title>
<link rel="stylesheet" href="profilestyle.css">
</head>
<body>
  <div class="container" style="color:black">
<div class="card">
    <h1><center>PROFILE</center></h1>
<label for="Username"><b>Username:</b></label>
    <input type="text" class="input-box" placeholder="Please enter your name" name="username" id="username" required>
<br>
    <label for="height"><b>Height:</b></label>
    <input type="number"  class="input-box"  placeholder="Please enter your Height in cm" name="height" id="height" required>
<br>

    <label for="weight"><b>Weight:</b></label>
    <input type="number"  class="input-box" placeholder="Please enter your Weight in kg" name="weight" id="weight" required>
    <br>
  <label for="Age"><b>Age:</b></label>
    <input type="number"  class="input-box" placeholder="Please enter your Age" name="weight" id="weight" required>
    <br>
 <label for="illness"><b>Illness:</b></label>
    <input type="text"  class="input-box" placeholder="Please enter your body illness" name="illness" id="illness" required>
<br>
   <label for="gender"><b>Gender:</b></label><br>
<input type="radio" class="choice-box" id="male" name="gender" value="Male">
<label for="male">Male</label><br>
<input type="radio"  class="choice-box" id="female" name="gender" value="Female">
<label for="female">Female</label><br>
<input type="radio"  class="choice-box" id="others" name="gender" value="Others">
<label for="others">Others</label>
<br>

<label for="allergy"><b>Allergies(in case):</b></label>
    <input type="text"  class="input-box" placeholder="Please enter your  allergy " name="allergy" id="allergy" required>
<br>

    <center><button type="submit" class="submitbtn">Submit</button></center>
  </div>
  </div>
</body>
</html>
```

APP.PY

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

app = Flask(__name__)

app.secret_key = 'a'

conn = ibm_db.connect('DATABASE=bludb;HOSTNAME=ba99a9e6-d59e-4883-8fc0-d6a8c9f7a08f.c1ogj3sd0tgtu01qde00.databases.appdomain.cloud;PORT=31321;SECURITY=SSL;SSLServerCertificate

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


@app.route('/signup', methods =['GET', 'POST'])
def signup():
    msg = ''
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
        sql = "SELECT * FROM signup 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 = 'Invalid 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 signup 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)
```

command 'pyright.createtypestub' already exists

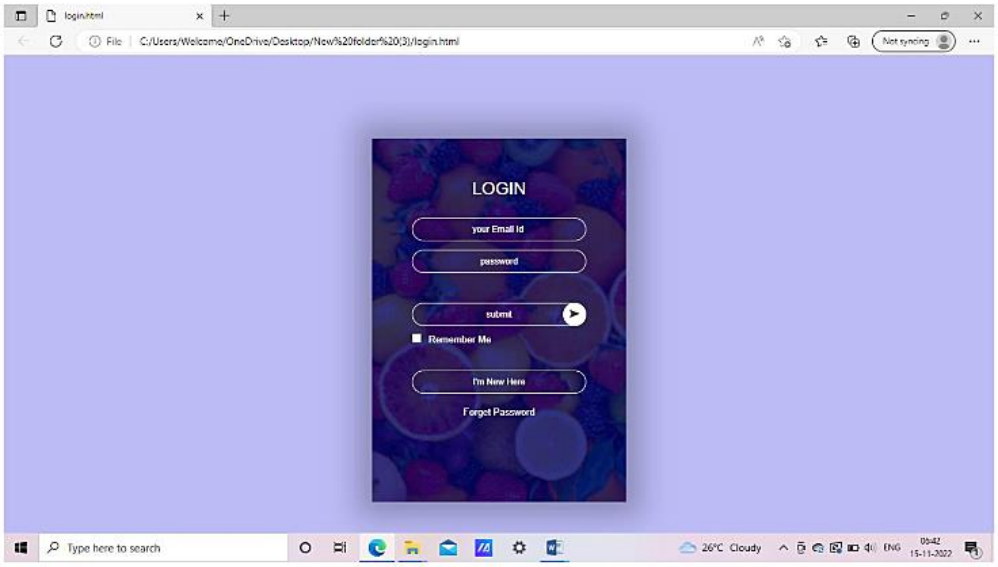
```python
                ibm_db.bind_param(prep_stmt, 1, username)
                ibm_db.bind_param(prep_stmt, 2, email)
                ibm_db.bind_param(prep_stmt, 3, password)
                ibm_db.execute(prep_stmt)
                msg = 'You have successfully signedup!'
                return render_template('register.html',msg=msg)
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
    return render_template('signup.html', msg=msg)


@app.route('/login',methods =['GET', 'POST'])
def login():
    global userid
    msg = ''
    if request.method == 'POST' :
        email = request.form['eamil']
        password = request.form['password']
        sql = "SELECT * FROM signup WHERE email =? AND password=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt,1,email)
        ibm_db.bind_param(stmt,2,password)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print (account)
        if not(account):
            session['loggedin'] = True
            session['id'] = account['EMAIL']
            userid=  account['EMAIL']
            session['email'] = account['EMAIL']
            msg = 'Logged in successfully !'
            return render_template('home.html', msg = msg)
        else:
            msg = 'Incorrect username / password !'
    return render_template('login.html', msg = msg)
```

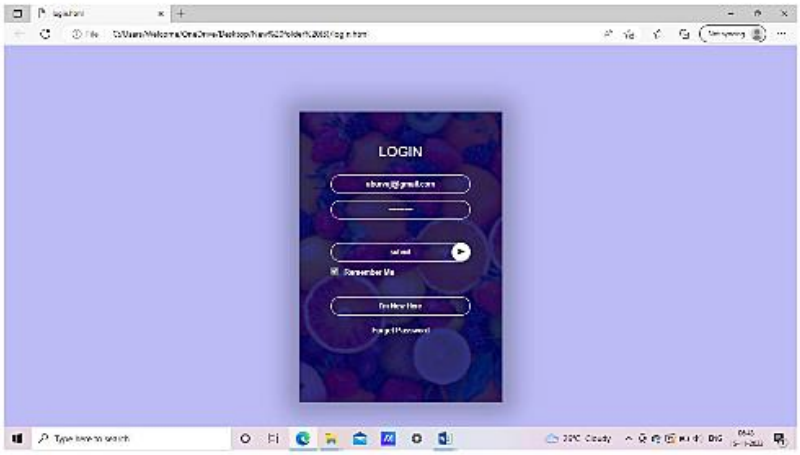
```python
@app.route('/register', methods =['GET', 'POST'])
def register():
    msg = ''
    if request.method == 'POST':
        username = request.form['username']
        height = request.form['height']
        weight = request.form['weight']
        age = request.form['age']
        illness = request.form['illness']
        gender = request.form['gender']
        allergies = request.form['allergy']
        sql = "SELECT * FROM profile 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 not(account):
            insert_sql = "INSERT INTO  profile VALUES (?, ?, ?, ?, ?, ?, ?)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, username)
            ibm_db.bind_param(prep_stmt, 2, height)
            ibm_db.bind_param(prep_stmt, 3, weight)
            ibm_db.bind_param(prep_stmt, 4, age)
            ibm_db.bind_param(prep_stmt, 5, illness)
            ibm_db.bind_param(prep_stmt, 6, gender)
            ibm_db.bind_param(prep_stmt, 7, allergies)
            ibm_db.execute(prep_stmt)
            msg = 'You have successfully registered !'
            return render_template('main.html', msg = msg)
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
    return render_template('register.html', msg = msg)
```

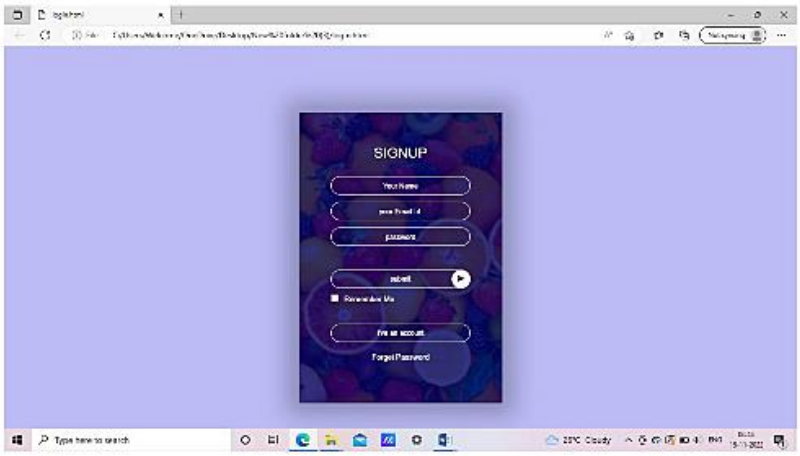
```python
@app.route('/upload')
def upload():
    return render_template('upload.html')

@app.route('/card')
def card():
    sql = "SELECT * FROM ingrediant WHERE almonds =?"
    stmt = ibm_db.exec_immediate(conn, sql)
    tuple = ibm_db.fetch_tuple(stmt)
    while tuple != False:
        print (" Measure: ", tuple[0])
        print (" Grams: ", tuple[1])
        print (" Calories: ", tuple[2])
        print (" Protien: ", tuple[3])
        print (" Fat: ", tuple[4])
        print (" Sat.Fat: ", tuple[5])
        print (" Fiber: ", tuple[6])
        print (" Carbs: ", tuple[7])
        print (" Category: ", tuple[8])
        tuple = ibm_db.fetch_tuple(stmt)
    return render_template('card.html')

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

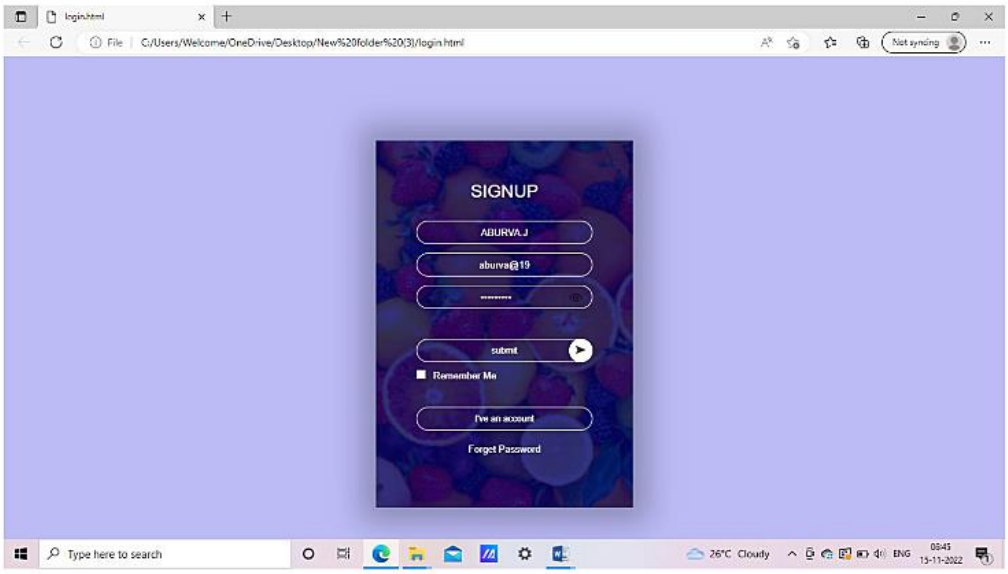
9.TESTING

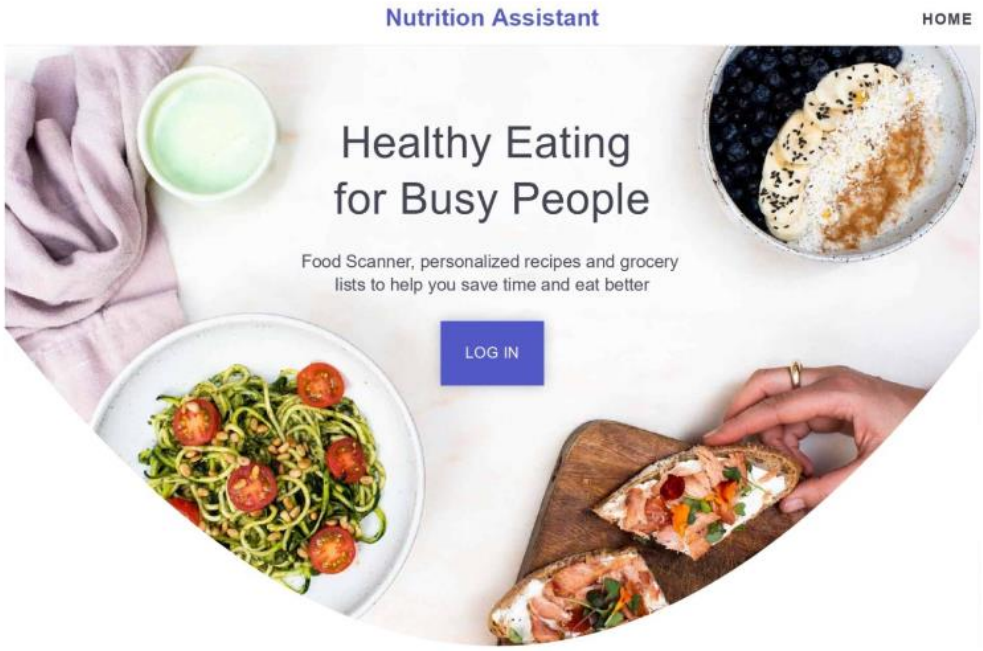
Login and Sign-up page:




LOGIN
Remember Me


SIGNUP
Remember Me
Forget Password


login.html
File | C:/Users/Welcome/OneDrive/Desktop/New%20folder%20(3)/login.html
Not syncing
SIGNUP
ABURVA.J
aburva@19
submit
Remember Me
I've an account
Forget Password
Type here to search
26°C Cloudy
ENG
08:45
15-11-2022


Nutrition Assistant
HOME
Healthy Eating
for Busy People
Food Scanner, personalized recipes and grocery
lists to help you save time and eat better
LOG IN

Nutrition Assistant

HOME

Recipes

We suggest you the tasty and healthy recipe.

Scanning the food

You can find the nutritional fact by Scanning the food easily.

Smart grocery list

Our digital pantry takes into account what you have in your kitchen to reduce food waste and save money.

Join Thousands of People Eating Better

PROFILE

Username:
abc

Height:
158

Weight:
150

Age:
20

Illness:
nil

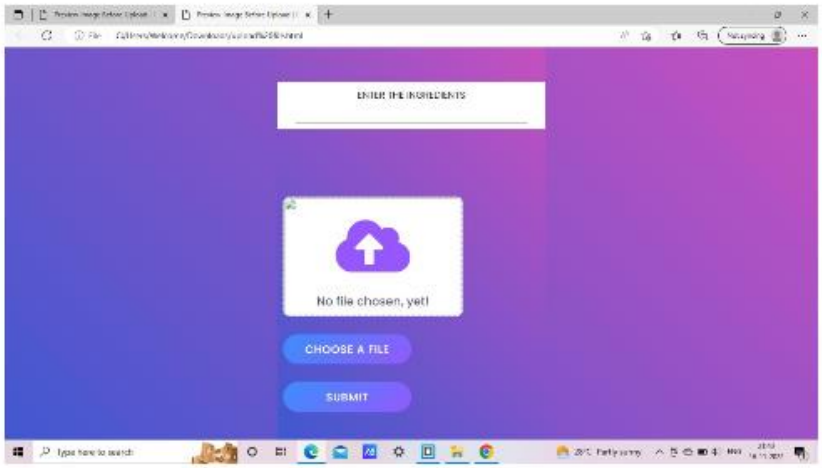
Gender:
- (•) Male
- ( ) Female
- ( ) Others

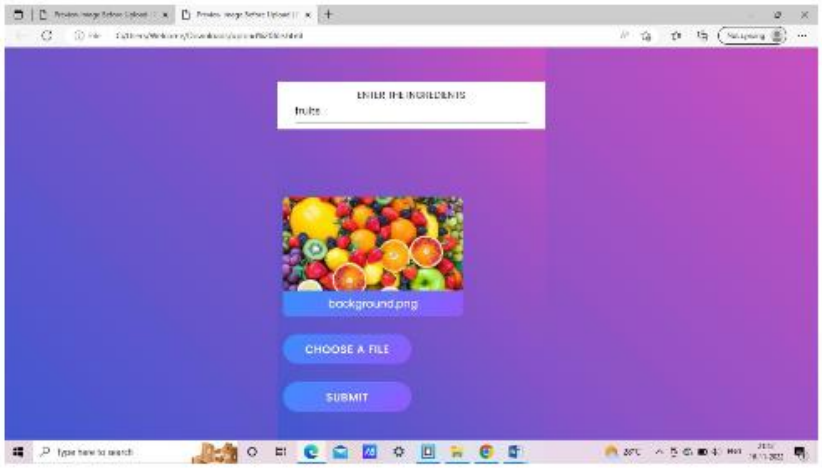
Allergies(in case):
nil

Submit

SPRINT-3

Upload photo:





RESULT

This web app provides the food details if the food image/ URL/ Name isentered. It provides the nutrients involvedin it and also the nutrient value.

fig : web page to select the serviceimage URL/ food image /food name.

fig : Showing the output of the food entered

Our anotherservice provides the input of aggregate valuesof the nutrientconsumed, as per the user requirements

10 ADVANTAGES AND DISADVANTAGES

10.1Advantage

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

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

10.2 Disadvantages

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

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

11 CONCLUSION

As there is improvement in people's standards of living, there is neglectin the proper balanced diet and this is reflective of the risks to people's health. People need to controltheir daily calorieintake by eatinghealthier foods.

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

12 FUTURE SCOPE

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

the goal.

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

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

APPLICATIONS

This application has the following applications.

1. The uploaded food image is processedand then its the nutrientvalue isdisplayed.
2. The URL/The food name can also be given as food input.
3. The user can track the daily intake of food
4. User can track the nutrientvalues of the food that He consume.
5. User can store the data in his table in the database.
6. He can access the data whenever he wishes.
7. Users can watch their aggregate nutrientsconsumed and also receivedthe mail of the aggregatereport.
8. This application can be recommended by the doctor/hospitals whowishesto track the food/nutrient consumption of the patient.

13.APPENDIX

9. I have used IBM Watson Visual recognition v3 API for Food Model for food recognition. Where it take the food image/URL as input andgive the food name as output.

USDA API uses the food name given and then processes it to the nutrientlist.