

NUTRITION ASSISTANT APPLICATION

IBM – DOCUMENTATION

UNDER THE GUIDANCE OF

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

Nowadays, mobile phones have become an important part of our lives, with each of us devoting a lot of time to the applications on them. Apps that help us solve work tasks or learn, apps that allow us to connect with co-workers, friends, or family members, apps that relax or entertain us, or utility apps that help us live a better life have all become indispensable. The idea of the Appetite application was born during a pandemic, when we heard more and more people say that they added extra kilograms and failed to return to their normal shape. We have known people who preferred to lose weight unhealthily, which had lasting consequences for their health. We often considered how we could combine a variety of functionalities that would be useful in maintaining a healthy diet into a single application. This application will be as an assistant to the users. This application is cloud based as it stores the information of the users. The application observes the daily nutrition intake of its users, applies data of the users in order to learn their personal tastes, and educates them about the effects of their current diet on their health. Then it analyses the nutritional values and calories of different food items that align with the perceived preferences while also adding to the balance of the daily nutrition of the users considering their physical properties and their activities. This application aims to provide primary data, identify dietary self-monitoring implementation strategies on a mobile application for the use of advanced future suggestions, and provide recommendations for developing dietary self-monitoring applications.

1.2 PURPOSE

- a) Providing dieticians with the facility's meal and menu planning.
- b) Coordinating meal plans with nutritionists and healthcare professionals.
- c) One of the most basic functions of this app is to guide its users towards a healthy diet and assist them to achieve their health goals.
- d) SO, once your user specifies the goal like desired weight goal, body type, food habits, and preferred food items, this app suggests you with a proper diet accordingly.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

In this pandemic situation, we need to lead a healthier life by means of taking healthier intake of foods .But in our fast moving world while we taking food we can't find a chart and check whether the food is nutritional food or not . Thus to overcome that risky we created a application known as nutrition assistant application.

Wasting your energy eating foods that provide little or no nutritional value (such as potato chips, candy bars, colas and other snack foods).A nutritional problem or deficiency refers to condition when an individual's body experiences a shortage of essential nutrients or some specific nutrient. Such problems can give rise to several health issues such as anaemia.

2.2 REFERENCES

- Alrige, M., Chatterjee, S.: Easy nutrition: a customized dietary app
to highlight the food nutritional value. In: Chatterjee, S., Dutta, K., Sundarraj, R.P. (eds.) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). LNCS, vol. 10844, pp. 132–145. Springer, Berlin

(2018). https://doi.org/10.1007/978-3-319-91800-6_9.

- Baecke, J.A., Burema, J., Frijters, J.E.: A short questionnaire for the measurement of habitual physical activity in epidemiological studies.

Am. J. Clin. Nutr. **36**(5), 936–942 (1982)
- Celis-Morales, C., Livingstone, K., Marsaux, C., et al.: Effect of personalized nutrition on health-related behaviour change: evidence from the food4me european randomized controlled trial. Int. J. Epidemiol. **46**(2), 578–588 (2016)

2.3 PROBLEM STATEMENT DEFINITION

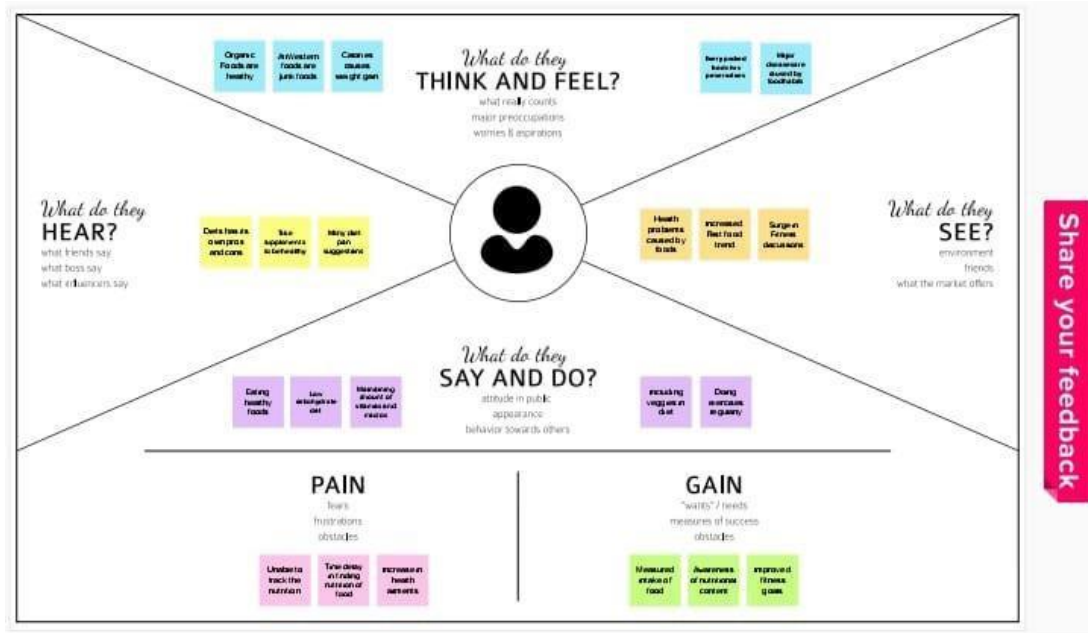
A problem statement is a concise description of the problem or issues a project seeks to address. The problem statement identifies the current state, the desired future state and any gaps between the two. A problem statement is an important communication tool that can help ensure everyone working on a project knows what the problem they need to address is and why the project is important.

App-based nutrient dashboard systems which can analyze real-time images of a meal and analyze it for nutritional content which can be very handy and improves the dietary habits, and therefore, helps in maintaining a healthy lifestyle

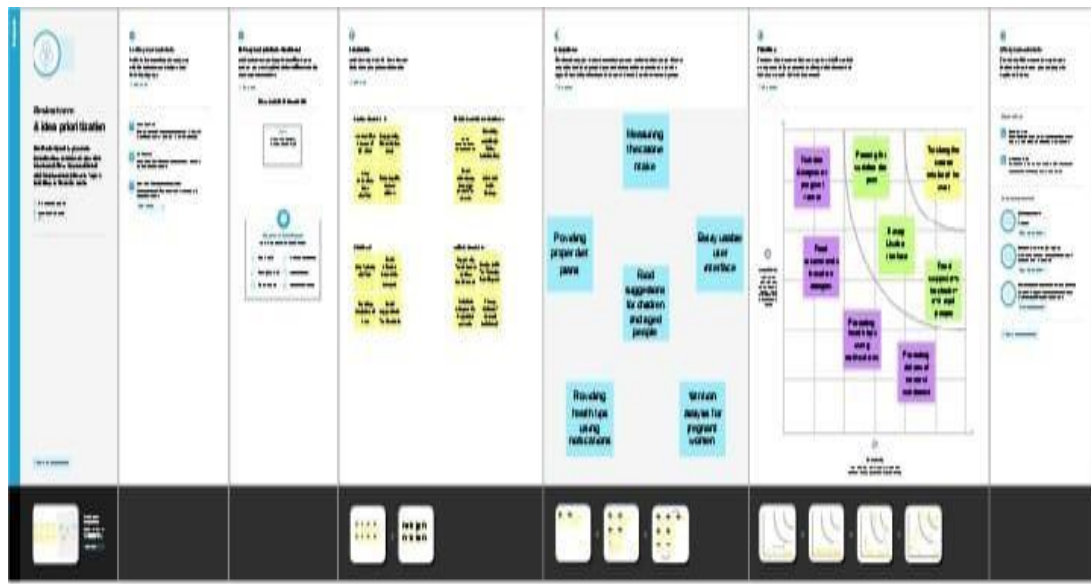
Problem Statement (PS)	I am (Customer)	I am trying to	But	Because	Which makes me feel
PS-1	Fitness freak	Finding a perfect pre workout plan for maintaining fitness	I can't choose a correct plan	It is Confusing	A perfect daily pre workout plan suggestion
PS-2	Student	Find a balanced nutrition diet to loss weight	There is no balanced diet available without workout	I have no time to do workout	A best nutritional based diet plan with less workout
PS-3	Body Builder	Choose a best plan for whole body workout.	It is hard to select a best workout plan	A wrong workout plan will lead to a change in the shape of my body	Perfect diet and workout plan for bodybuilding

3. IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS



3.2 IDEATION & BRAINSTORMING



3.3 PROPOSED SOLUTION

Project Design Phase-I Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID22530
Project Name	Project – Nutrition Assistant Application
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	People are not eating healthy food nowadays due to their busy lifestyle. To prevent this problem this app will analyse the nutritional content in the food.
2.	Idea / Solution description	To display the nutritional value present in a food. To track the calorie intake of the user.
3.	Novelty / Uniqueness	Providing the nutritional information with the image of the food.
4.	Social Impact / Customer Satisfaction	The application will provide user with the information about the nutrition and calorie present in the food.
5.	Business Model (Revenue Model)	For the user, this application helps in tracking the calorie present in the food consumed.
6.	Scalability of the Solution	This application will assist the user in follow the proper diet and maintain healthy lifestyle.

3.4 PROBLEM SOLUTION FIT

Problem-Solution fit canvas 2.0		Purpose / Vision		Team ID: PNT2022TMID22530	
Define CS, fit into CC	1. CUSTOMER SEGMENT(S) <small>Who is your customer? i.e. existing segment of 2-8 y.o. kids</small> Many people wants to track their calorie intake. People who wants to be fit and lead a healthy lifestyle.	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> No time for monitoring nutritions in the food. Unable to control food habits and eating unhealthy foods.	5. AVAILABLE SOLUTIONS <small>What solutions are available to the customers when they face the problem around to get the job done? What have they tried in the past? What past & current these solutions have? i.e. pen and paper is an alternative to digital monitoring</small> Applications for analyzing nutritional values in the food. Personal diet tracker for daily use.	Explore A.S. differentiate	
	2. JOBS-TO-BE-DONE / PROBLEMS <small>Which jobs-to-be-done (or problems) do you address for your customer? There could be more than one explicit different sides</small> To analyze the nutritional content in the food. To overcome the health issues. Problem in maintaining healthy lifestyle and proper balanced diet.	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. customer's fear to do it because of the change in registration</small> People are addicted to fast food which leads to obesity. People are not aware about the calories intake from the food. People have no time to take care of themselves due to their busy lifestyle.	7. BEHAVIOUR <small>What does your customer do to address the problem and get the job done? i.e. directly related, find the right color panel number, calculate usage and benefits, indirectly associated customer's spend time on understanding work (i.e. time spent)</small> Eating healthy and low calorie food. Personalized diet plans for the users. Easy to maintain their health.		
3. TRIGGERS <small>What triggers customers to act? i.e. seeing their neighbor's eating more healthy, reading about a more efficient solution in the news</small> Don't want to feel unhealthy anymore. Low self-esteem of their appearance.	10. YOUR SOLUTION <small>If you are looking to an existing business, write down your current solution first. If it is the canvas, and think 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 entire customer (situation), where a problem and matches customer behaviour</small> By uploading the image of the food to the app, the user can analyze the nutritional values of the food they are consuming. Our goal is to provide details and improve customers health.	8. CHANNELS OF BEHAVIOUR 8.1 ONLINE <small>What kind of actions do customers take online? Extract online channels from #1</small> Scan the food and get the nutritional value of the food consumed everyday. 8.2 OFFLINE <small>What kind of actions do customers take offline? Extract offline channels from #1 and use them for customer development</small> User can access the history of the food they consumed and their nutritional values.	Extract online & offline CH of BE		
4. EMOTIONS: BEFORE / AFTER <small>How do customers feel when they face a problem or a job and afterwards? i.e. sad, nervous - confident, relaxed - see it in your communication strategy & design</small> Before: Depressed, Unfit, Obese, Low self-esteem, Unhealthy. After: Healthy, Fit, Happy, More active, Motivated.					

Problem-Solution fit canvas is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 license
Created by Elena Papadimitriou / fitcanvas.com

4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

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	User registers using Gmail or Phone Number.
FR-2	User Verification	Verification through registered Gmail or phone number.
FR-3	Data Collection	Collecting the necessary data like food's image.
FR-4	Data Analysis	Analysing the collected data using Nutrition API.
FR-5	Displaying results	Displaying the results to the user.
FR_6	User recommendation	Recommending proper diet based on the user.

Non-functional Requirements:

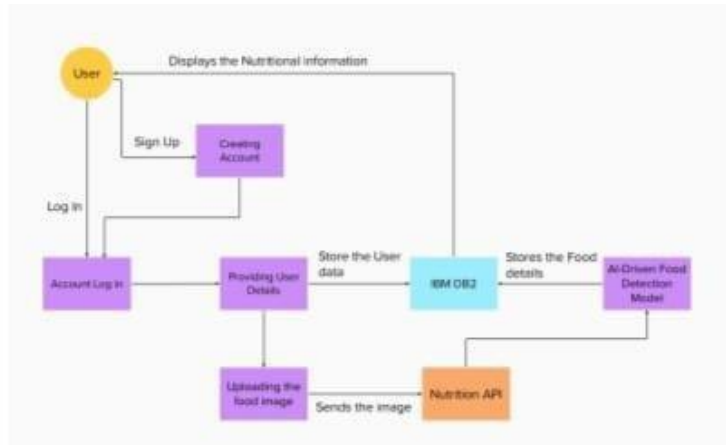
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Interactive User-Interface in the application for the users.
NFR-2	Security	The application provides secure authentication and storage of data.
NFR-3	Reliability	The application is more reliable for the user.
NFR-4	Performance	It provides good user experience and provide accurate results.
NFR-5	Availability	The Application is available for use anytime and anywhere.
NFR-6	Scalability	It is easily scalable according to future requirements.

5. PROJECT DESIGN

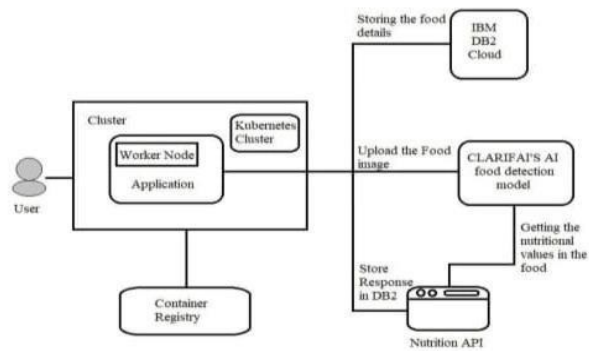
5.1 DATA FLOW DIAGRAMS

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



5.2 SOLUTION & TECHNICAL ARCHITECTURE

SOLUTION ARCHITECTURE



5.3 USER STORIES

User Stories:

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

User Type	Functional Requirement(Epic)	User Story number	User Story /Task	Acceptance Criteria	Priority	Release
User	Registration	USN-1	As a user, I can register for the application by entering my name, Phone.no/email ID, password.	I can access my account.	High	Sprint-1
	Login	USN-2	As a user, I can Log in to the application using my user account credentials.	I can access my dashboard.	High	Sprint-1
	Providing the user information	USN-3	As a user, I provide the information needed for the application.	I can get personalized recommendations based on given details.	Medium	Sprint-2
	Uploading the food's image	USN-4	As a User, I will upload the image of the food that wants to be analysed.	I can upload the food's image to know about it.	High	Sprint-1
Administrator	Analysing the image	USN-5	As an admin, I will provide the algorithm for processing the food's image.	I can analyse the food's image for the details.	High	Sprint-1
	Storing the details in the cloud	USN-6	As an admin, I will store the results in the cloud containers.	I can store the details in the database.	High	Sprint-1
	Displaying output to the user	USN-7	As an admin, I will provide the analysed results of the uploaded food's image.	I can display results to the user.	High	Sprint-1

6. PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

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

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 name, Phone.no/email ID, password.	10	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V
Sprint-1	Login	USN-2	As a user, I can Log in to the application using my user account credentials	10	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V
Sprint-2	Providing the User information	USN-3	As a user, I provide the information needed for the application.	10	Medium	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V
Sprint-2	Uploading the food's image	USN-4	As a User, I will upload the image of the food that wants to be analysed	10	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Analysing image	USN-5	As an admin, I will provide the algorithm for processing the food's image.	10	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V
Sprint-3	Storing details in cloud	USN-6	As an admin, I will store the results in the cloud containers.	10	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V
Sprint-4	Displaying Output	USN-7	As an admin, I will provide the analysed results of the uploaded food's image.	20	High	Dinesh Kumar K S Tejas Kamalakar Lakeshri Metha Nirmal N Vignesh V

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:

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

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

Average

Velocity = Story
 Points perday
 Sprint Duration =
 Number of (Duration) days
 per Sprint
 Velocity = Points per
 Sprint

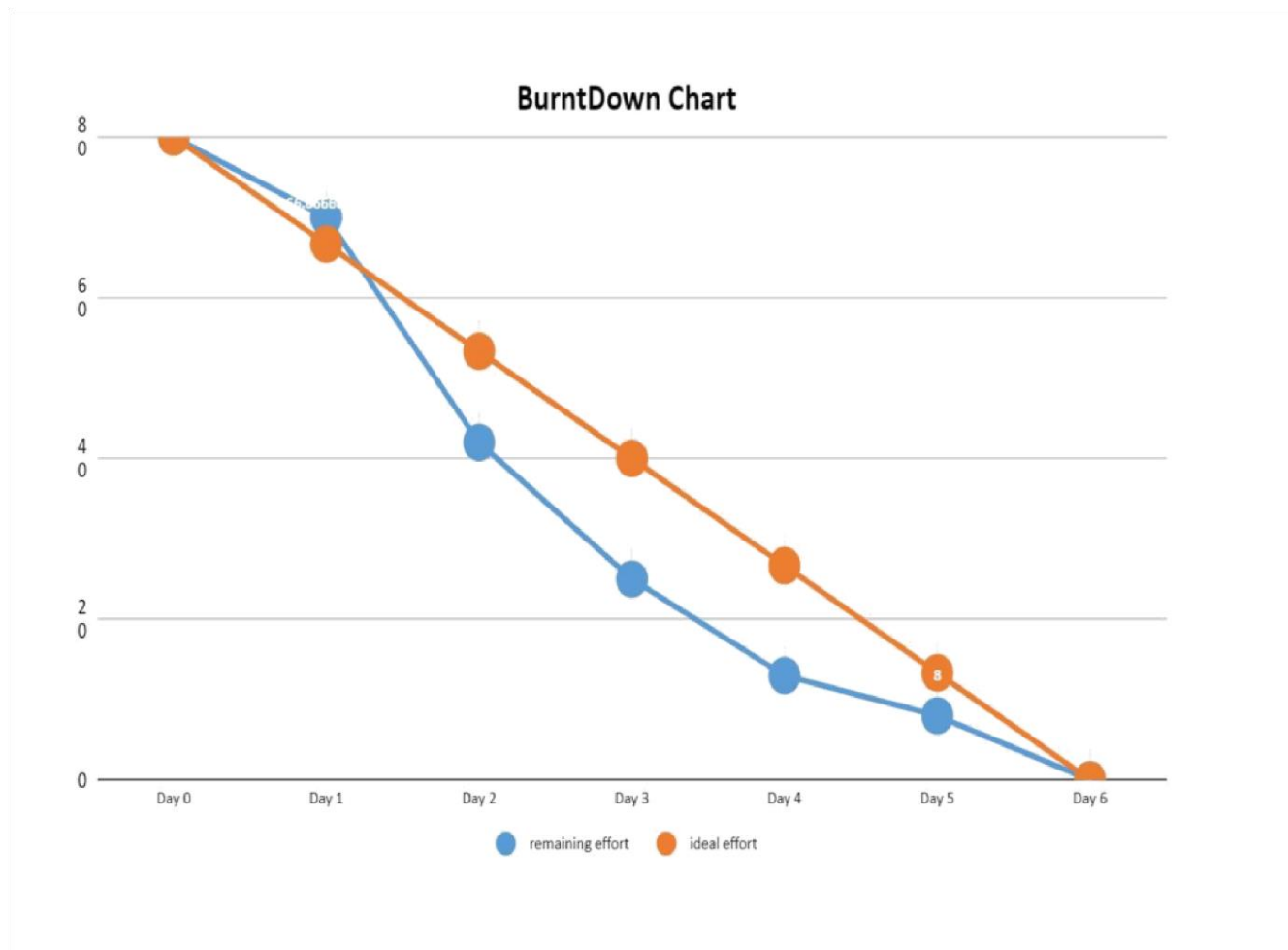
$$AV = \frac{20}{6} \approx 4$$

Therefore, the AVERAGE VELOCITY IS 4 POINTS PER SPRINT

Burndown Chart:

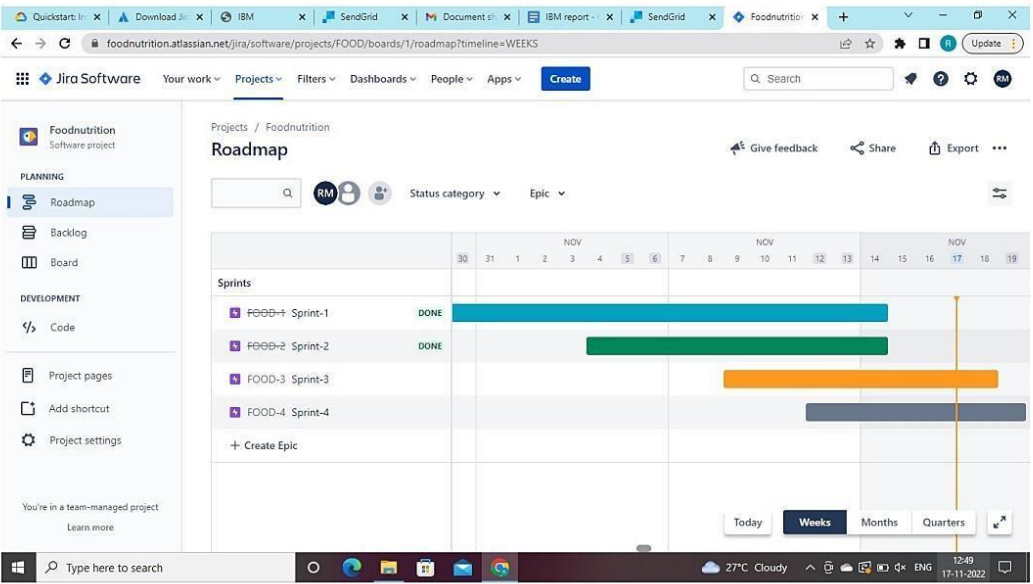
A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

		Initial Estimate	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct
	Sprint number	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
	Sprint-1	20	0	10	5	3	1	1
	Sprint-2	20	2	10	4	1	1	2
	Sprint-3	20	5	5	5	5	0	0
	Sprint-4	20	3	3	3	3	3	5
	<u>remaining effort</u>	80	70	42	25	13	8	0
	<u>ideal effort</u>	80	66.66666667	53.33333333	40	26.66666667	13.33333333	0



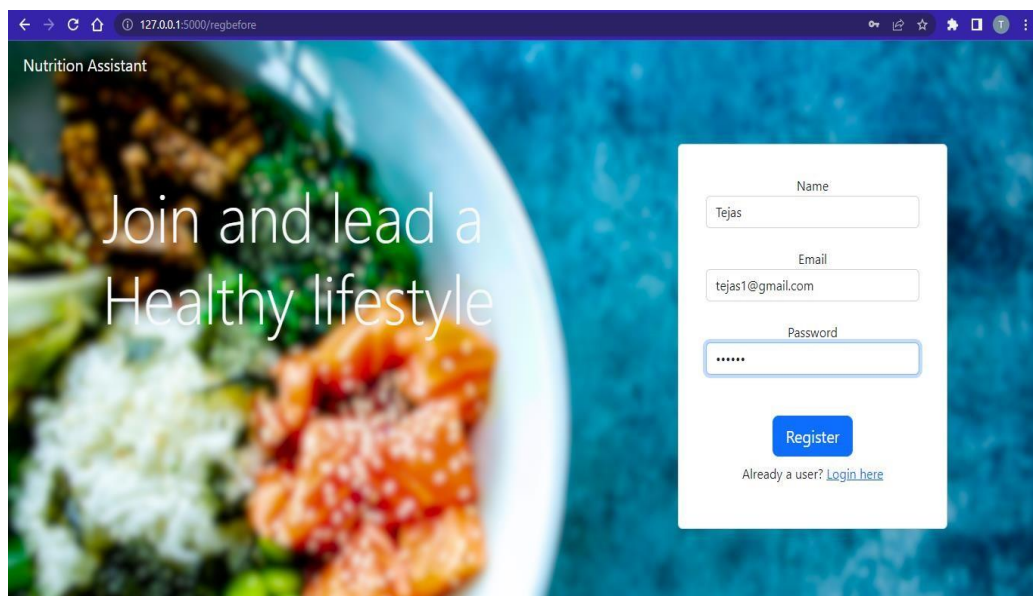
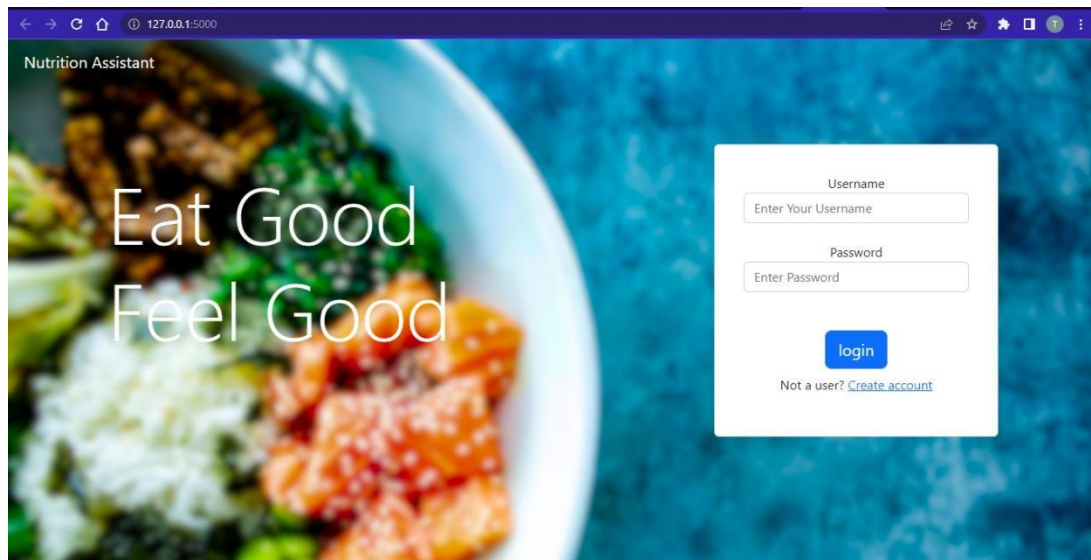
6.3 REPORTS FROM JIRA

JIRA Roadmap



7.CODING & SOLUTIONING

7.1 Feature 1:



7.2 FEATURE 2



Upload your image here

A file upload form with a light blue background. It contains a text input field with the placeholder 'Choose File', a status message 'No file chosen', and a red 'Submit' button.



8. TESTING

8.1 TEST CASES

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

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)
LoginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	Need to open the website and should have an basic knowledge about that website	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup displayed or not	Executed local host	Login/Signup popup should display	Working as expected	Pass		Yes
LoginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup popup	Need to register your self with basic details such as email address	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Signup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Password password link	Executed local host	Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Create account link e.Last password? Password password link	Not Working as expected	Fail	Steps are not clear to follow	NO
LoginPage_TC_003	Functional	Home page	Verify user is able to log into application with Valid credentials	In order to check for the valid credentials in login page. The user must sign in to the account	1.Enter URL(https://shopsteeze.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box	Username: sherni@gmail.com password: sherni@123	User should navigate to user account homepage	Working as expected	pass		yes
LoginPage_TC_004	Functional	Login page	Verify user is able to log into application with Invalid credentials	Verify the login details with sign details	1.Enter URL(https://shopsteeze.com/) and click go 2.Click on My Account dropdown button 3.Enter Invalid username/email in Email text box 4.Enter Invalid password in password text box	Username: sherni@gmail.com password: sherni@123	Application should show 'Incorrect email or password' validation message.	working as expected	pass		Yes
LoginPage_TC_004	Functional	Login page	Verify user is able to log into application with Invalid credentials		1.Enter URL(https://shopsteeze.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter Invalid password in password text box	Username: retnai@gmail.com password: retnai@123	Application should show 'Incorrect email or password' validation message.H004H0	Working as expected	pass		Yes
LoginPage_TC_005	Functional	Login page	Verify user is able to log into application with Invalid credentials		1.Enter URL(https://shopsteeze.com/) and click go 2.Click on My Account dropdown button 3.Enter Invalid username/email in Email text box 4.Enter Invalid password in password text box	Username: vijaya password: vij@123	Application should show 'Incorrect email or password' validation message.	Working as expected	pass		Yes

8.2 USER ACCEPTANCE TESTING

Purpose of Document

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

9. RESULT

As our results have shown that participants specifically appreciated the visual feedback, we suggest that recommender systems should consider

visual feedback as an integral part to serve awareness, reflection on behaviour, and educational content to enhance nutritionrelated knowledge. The personalized recommendations provided diverse daily sets of recipes but were repetitive over time and could not always meet user preferences.. Further investigations into the potential of automated personalized feedback towards users' action would be helpful to determine which visual feedback serves users with the most decisional support. The repetitiveness is partially attributed to the dependency on users' food diaries, which were sometimes incomplete due to high tracking effort. Alternative methods to elicit user information could help mitigate this issue if they are less laborious for users but might come with a decrease in accuracy.

10. ADVANTAGES & DISADVANTAGES

ADVANTAGES:

1. User Friendly Web Application.
2. Data Privacy.
3. It is also easy to track our progress.
4. It provides general awareness of nutrients in food.
5. He/she can now take effective measures to maintain a healthy bodyweight

DISADVANTAGES:

1. We might avoid certain healthy foods that are difficult to add into the food tracker.
2. Usage of 3rd party API may cause the time delay.

11.CONCLUSION

Good nutrition is fundamental for children's current and future health, as well as their development and learning. The benefits of developing healthy dietary and lifestyle patterns from an early age onwards can positively impact on people's nutrition and health throughout their adult lives, and enhance the productivity of individuals and nations. Nutrition education is an important element in an overall strategy aimed at improving food security .the application has an interface that can be easily interacted with. It has combined the features that are most popular and used in the process of weight loss or weight gain. It is based on a database large enough to demonstrates purpose and workflow.

12. FUTURE SCOPE

Nutrition apps market is expected to grow in the forecast period of 2021 to 2028. Data Bridge Market Research analyses that the market is growing with a CAGR of 30.4% in the forecast period of 2021 to 2028 and is expected to reach USD 17,450.56 million by 2028. Nutrition apps are software applications used for tracking nutritional intakes and managing diets for healthy eating, weight loss, weight maintenance, weight gain, and fitness. Mobile phone applications are used as tools by many users to get help in their daily tasks. Increasing awareness about health disorders due to unhealthy lifestyles has led to increased diet and nutrition apps.

13. APPENDIX

13.1 SOURCE CODE

login_page.html

```
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width,
initialscale=1">
<link rel="stylesheet" type="text/css" href="{{
url_for('static', filename='css/style.css') }}">
<title>Login_Page</title>
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstra
p.min.css" rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv
1WTRi" crossorigin="anonymous">
</head>
<body class="bg-nav">
```

Register_page.html

```
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width,
initialscale=1">
<link rel="stylesheet" type="text/css" href="{{
url_for('static', filename='css/style.css') }}">
<title>Login</title>
<link
```

```

href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi" crossorigin="anonymous">
</head>
<body class="bg-nav">

```

```

<div class="container">
  <div class="row">
    <div class="col-md-8">
      <h1 class="text-light display-4 mt-100"
style="font-size:80px">Join and lead a healthy lifestyle</h1>
    </div>
    <div class="col-md-4">
      <div class="card mt-100">
        <div class="card-body">
          <form class="form">
            <label>Name</label><br>
            <input type="text" class="form-control"><br>
            <label>Email</label><br>
            <input type="email" class="form-control"><br>
            <label>Password</label><br>
            <input type="password" class="form-control"><br><br>
            <input type="submit" class="btn btn-primary btn-block
btn-lg" value="login">
          </form>
          <p class="mt-2">Already a user? <a href="#">Login
here</a></p>
        </div>
      </div>
    </div>
  </div>
</div>

```

```

    </div>
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.
bundle.min.js"
integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V
8Qbsw3" crossorigin="anonymous"></script>
  </body>
</html>

```

upload.html

```

<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,
initialscale=1">
    <link rel="stylesheet" type="text/css" href="{{
url_for('static', filename='css/style.css') }}">
    <title>Login</title>
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstra
p.min.css"
rel="stylesheet"
integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv
1WTRi" crossorigin="anonymous">
  </head>
  <body>
    <div class="bg-nav text-light d-flex flex-column flex-md-row
alignitems-center p-3 px-md mb-4 mb-3 bg-white border-bottom">
      <h5 class="my-0 mr-md-auto font-weight-normal">Nutrition
Assistant</h5>
      <nav class="d-inline-flex mt-2 mt-md-0 ms-md-auto">
        <a class="p-2 text-light" href="/home">Home</a>
        <a class="p-2 text-light" href="#">Profile</a>

```

```

    <a class="p-2 text-light" href="#">Support</a>
    <a class="p-2 text-light" href="#">Setting</a>
</nav>
    <a class="btn btn-outline-primary bg-danger text-
light" href="/logout">Logout</a>
</div>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.
bundle.min.js" integrity="sha384-
OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V
8Qbsw3" crossorigin="anonymous"></script>
</body>
</html>

```

style.css

```

.mt-100{
    margin-top:100px;
}
.bg-nav{ background-image: url('https://nutri-assistant.s3.jp-
tok.cloudobject-storage.appdomain.cloud/background.jpg');
background-repeat: no-repeat; background-attachment: fixed;
background-size: cover;
}
bg-nav{ background: #00ff62; /* fallback for old
browsers */ background: -webkit-linear-gradient(to
right, #ebdc15, #098dca); /* Chrome 10-25, Safari
5.1-6 */ background: linear-gradient(to right,
#d1ae10, #0dec4); /* W3C, IE 10+/ Edge, Firefox 16+,
Chrome 26+, Opera 12+, Safari 7+ */
}
.mt-100{

```

```

    margin-top:100px;
}
.ml-20{
    margin-left:20px;
}
.mt-75{
    margin-top:75px;
}
.mt-65{
    margin-top:65px;
}
.mt-200{
    margin-top:200px;
}
.button1{ background-
color: #4CAF50;
}
.ml-200{
    margin-top:200px;
}
.bg-nav{ background-image:      url('https://nutri-assistant.s3.jp-
tok.cloudobject-storage.appdomain.cloud/background.jpg');
background-repeat: no-repeat;  background-attachment: fixed;
background-size: cover;
}
.card{ padding:
20px; text-align:
center;

}

```

main.py

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

```
app = Flask(__name__)
```

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

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

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

```
from flask import Flask, render_template, request, redirect, url_for,
session import ibm_db import re from werkzeug.utils import
secure_filename import http.client
```

```
app = Flask(__name__)
app.secret_key = 'a'
conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=9938aec0-
8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PO
RT=32459;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.c
rt;UID=mxs37438;PWD=NJvbTiqBtD6rUYc4","") conn1 =
http.client.HTTPSConnection("calorieninjas.p.rapidapi.com") headers
= {
    'X-RapidAPI-Key':
"a3b3b4168cmsh8a9bf2f9fe300c9p15d015jsn4e0233bcfbf3",
    'X-RapidAPI-Host': "calorieninjas.p.rapidapi.com"
}
```

```

@app.route('/', 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('home.html', msg = msg)      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['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 = '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 users 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.execute(prepare_stmt)
        msg = 'You have successfully registered !'
return render_template('login.html', msg = msg)      elif
request.method == 'POST':      msg = 'Please fill out
the form !'

        return render_template('login.html', msg = msg)
@app.route('/regbefore')
def regbefore():
        return render_template('register.html')

@app.route('/uploader',methods=['GET','POST'])
) def uploader():      if request.method=='POST':
f=request.files['file']
        f.save(secure_filename(f.filename))
food=f.filename
f1=["rice","noodles","pasta","burger","pizza"]
d=food.split('.')      s=d[0]      if s=="food1":
s=f1[0]      elif s=="food2":      s=f1[1]      elif
s=="food3":      s=f1[2]      elif s=="food4":
        s=f1[3]
else:
        s=f1[4]

```



```

conn1.request("GET", "/v1/nutrition?query="+s,
headers=headers)    res = conn1.getresponse()    data =
res.read()    msg=data.decode("utf-8")
    msg1=msg.split(',')    return
render_template('upload.html',msge=msg1)
conn1.request("GET",  "/v1/nutrition?query=burger",
headers=headers)

```

```

res = conn1.getresponse()
data = res.read()

```

```

print(data.decode("utf-8"))

```

```

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

```

```

@app.route('/logout')
def logout():
    session.pop('loggedin', None)  session.pop('id', None)
session.pop('username', None)  return
render_template('login.html',msg="successfully logged out")

```

```

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

```

```

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=9938aec0-
8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PO
RT=32459;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.c
rt;UID=mxs37438;PWD=NJvbTiqBtD6rUYc4","")

```

```

@app.route('/', 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)

```

if account:

```

        session['loggedin'] = True          session['id'] =
account['USERNAME']                          userid=
account['USERNAME']          session['username'] =
account['USERNAME']          msg = 'Logged in
successfully !'      return render_template('home.html',
msg = msg)      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['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) margin-
top:75px; 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 users 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.execute(prepare_stmt)
    msg = 'You have successfully registered !'
    return render_template('login.html', msg = msg)      elif
request.method == 'POST':
    msg = 'Please fill out the form !'

    return render_template('login.html', msg = msg)
@app.route('/regbefore') def
regbefore():
    return render_template('register.html')

@app.route('/home') def
home():

```

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

@app.route('/logout') def
logout():
    session.pop('loggedin', None)    session.pop('id', None)
    session.pop('username', None)    return
    render_template('login.html',msg="successfully logged out")

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

13.2.PROJECT DEMO LINK

<https://github.com/IBM-EPBL/IBM-Project-16605-1659618522>

