

# IT314: Software Engineering

## Group 29

**Project Name :**  
**Your Personal Nutritionist**

### PROJECT DESCRIPTION

The project aims at being a tool which monitors your nutrient intake, requirements and diet plan. Personal Nutritionist as the name, the system can act as your personal nutritionist while this system can be used also by nutritionists gaining a lot of information and help in many ways. APIs help the system to get the information in many ways. The user can get details about a number of nutrients, vitamins etc of a fruit or vegetable. The user can add his recipes or get recipes using the API. The System basically helps the user in what to eat and which is good, what will help him and etc, the system will help him filter things easily. The System also allows the user to make a diet plan and remind him of his food timings.

**Target audience:**

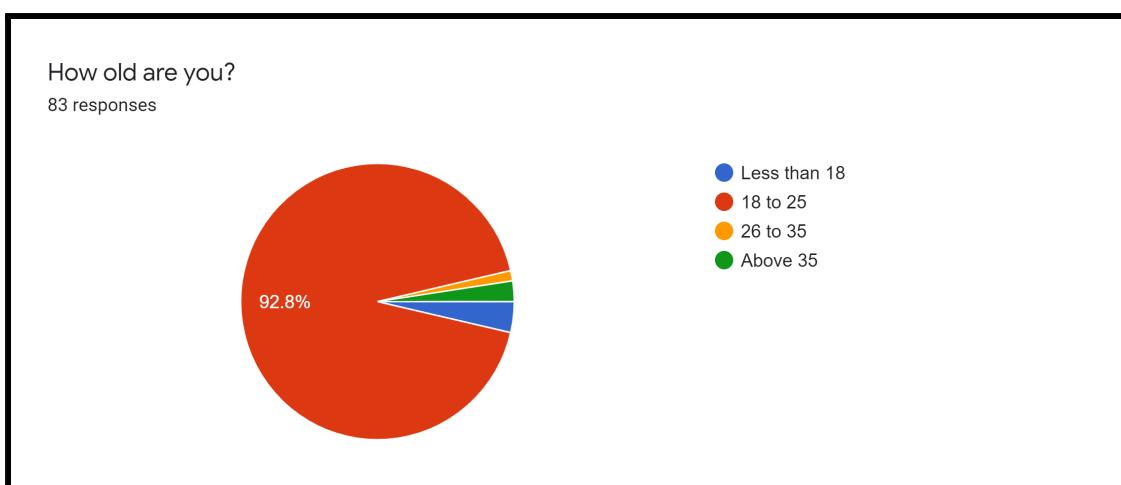
People who are interested in maintaining their health and want to monitor their diet plan regularly.

**User classes:**

- 1) Customers who want to monitor their health
- 2) Professional nutritionists / Health and fitness bloggers

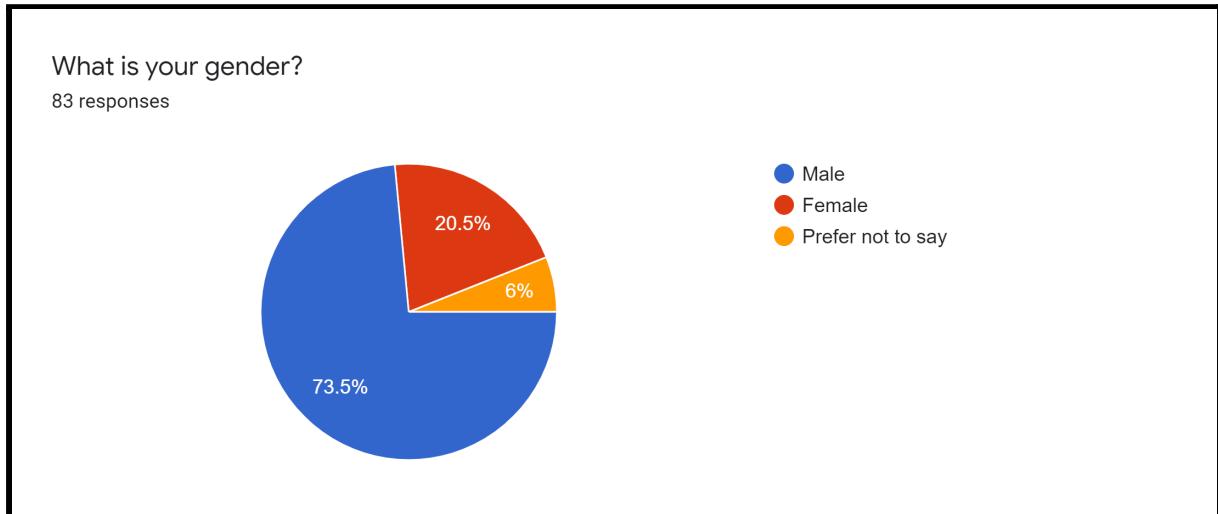
### INITIAL USER RESEARCH

Ques - 1) We asked how old the person who is filling the form was?

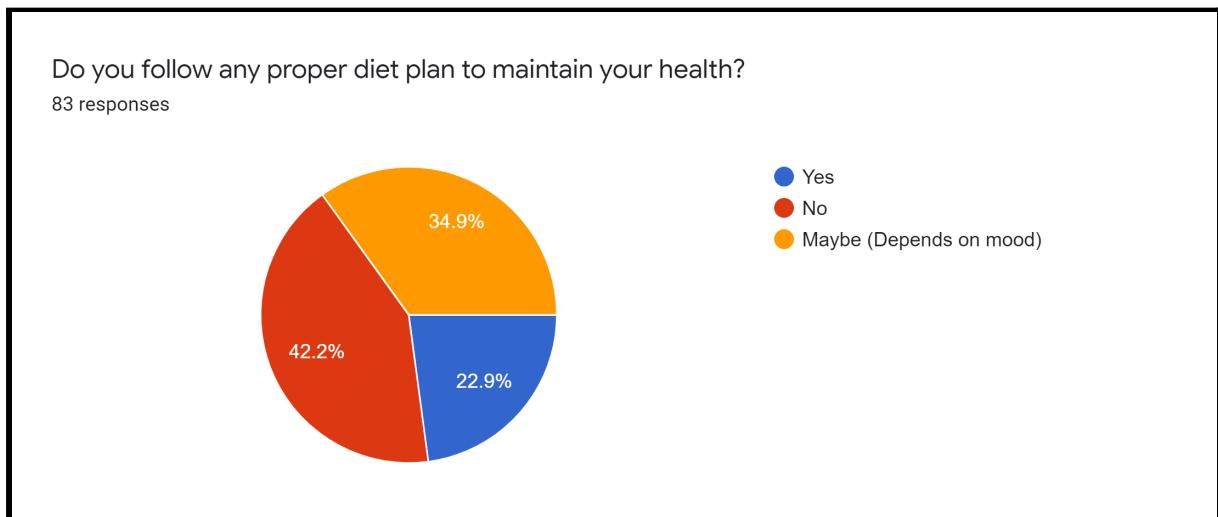


- We can see that from all of our users more than 90% will be of age 18 to 25 so at the time of testing our website our most focus will be on this age group so that we can get accurate feedback.

Ques - 2) What was their gender?

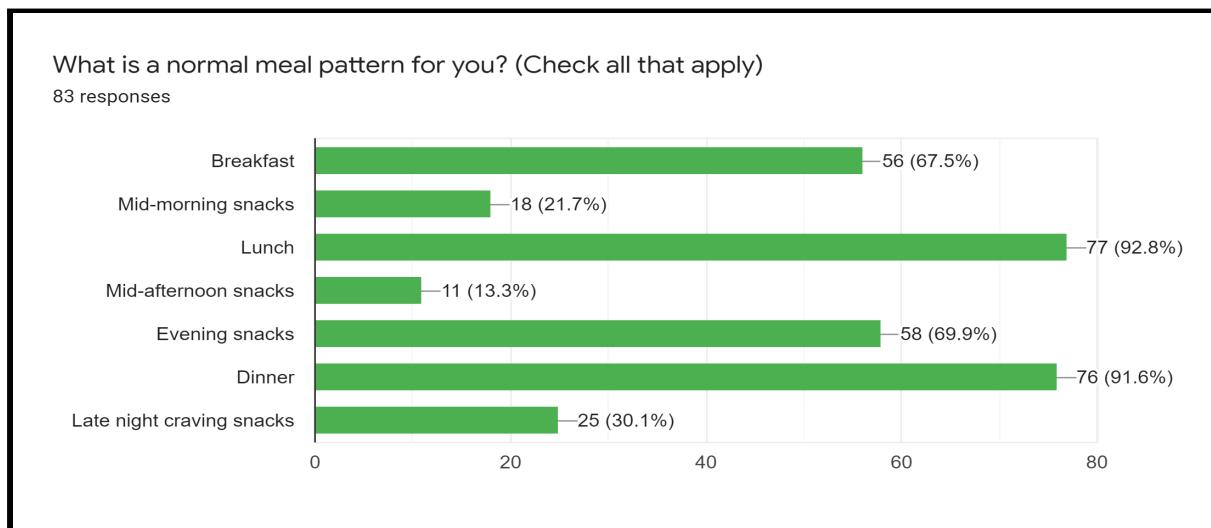


Ques - 3) Do they currently follow any proper diet to maintain one's health?



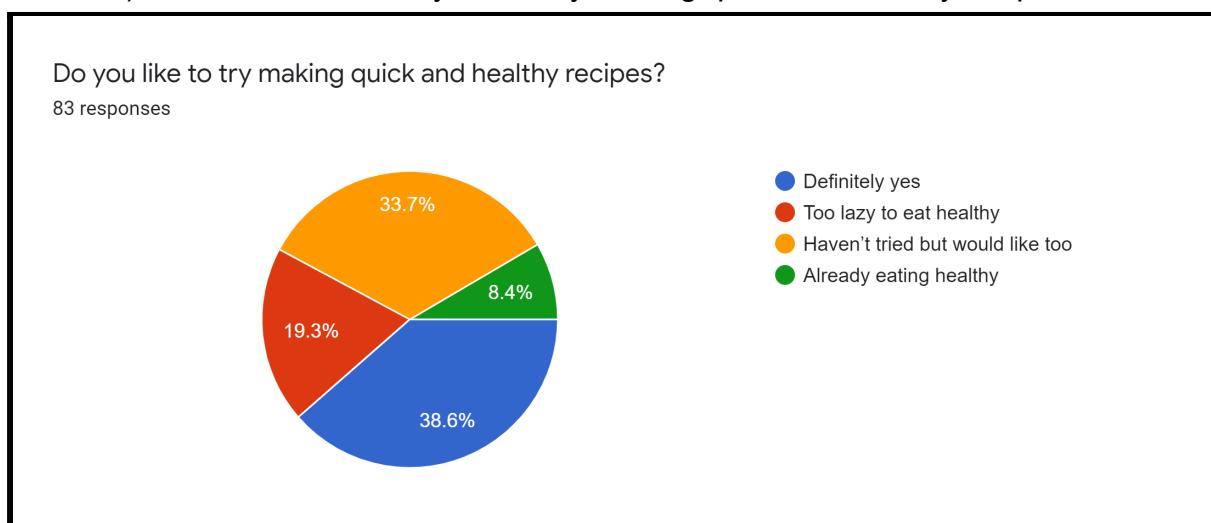
- From the chart we can see that around 65% people do not follow any diet plan to maintain their health, so we have a very huge number of target audiences for our website.

#### Ques - 4) Then we asked, what was their normal meal pattern?



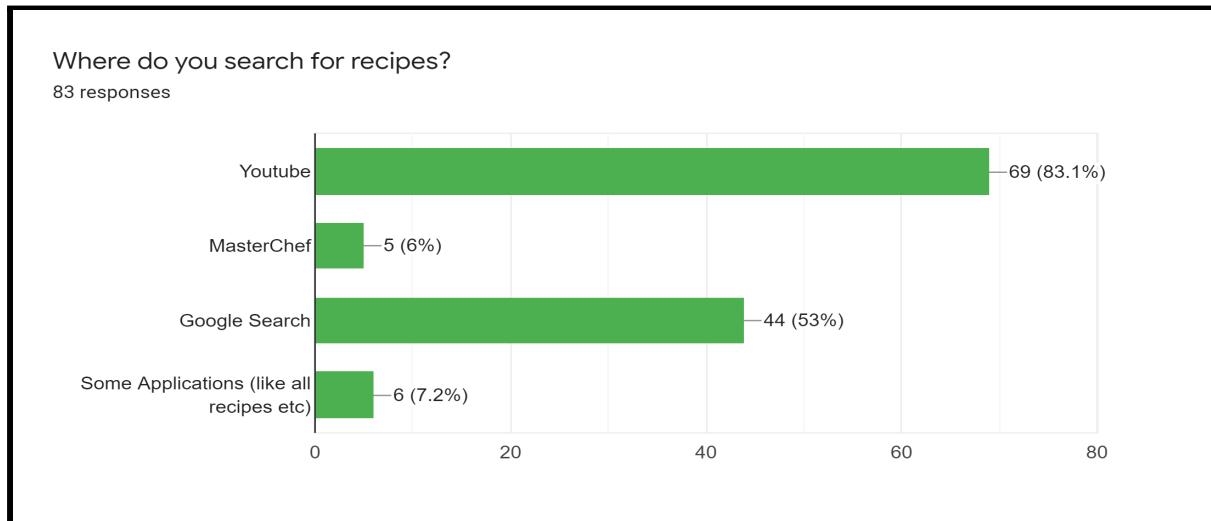
- We can see that most people follow 3 meals per day; breakfast, lunch and dinner, so our main focus for the recipes will be these three meals in the initial stages and we will add other meals in later versions of the website.

#### Ques - 5) We asked would they like to try making quick and healthy recipes?



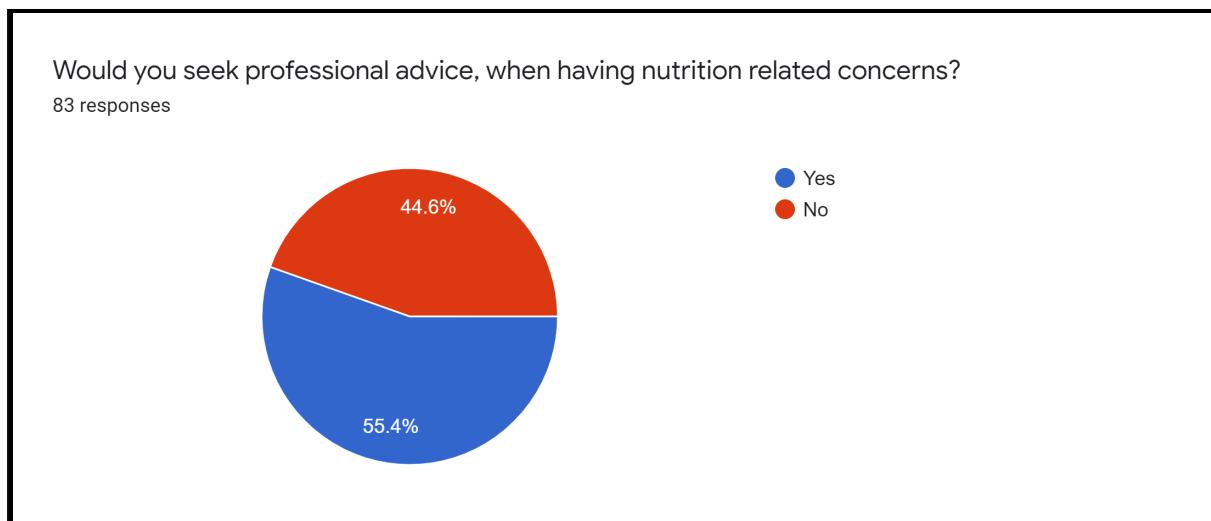
- Main motto of our app would be to convert people from eating unhealthy and junk food to eating healthy and organic food which will help their body to be healthy all time.
- We can see that around 50% of people do not eat healthy or they are not willing to eat healthy but they do not have proper diet plans. Our app will help them find healthy food.

### Ques - 6) Where do they often search for recipes?



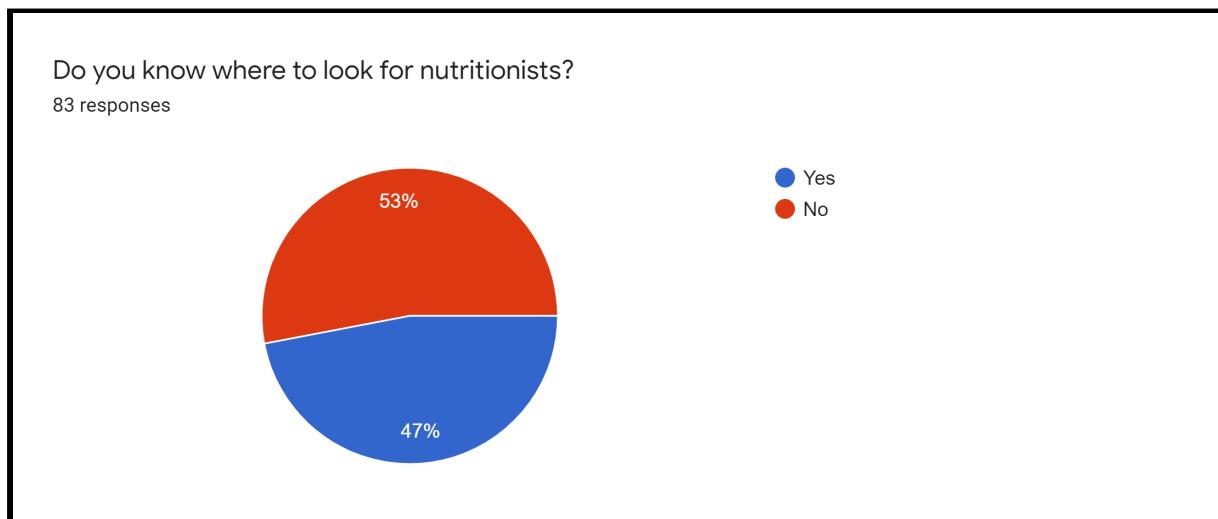
- We can see that youtube is the best choice for users at second place they directly search recipes in google.
- Most youtube videos don't provide nutrition facts and calories accurately. Our website will provide all the nutrition facts with accurate calories.

### Ques - 7) Would they seek professional advice, when they have nutrition related concerns?



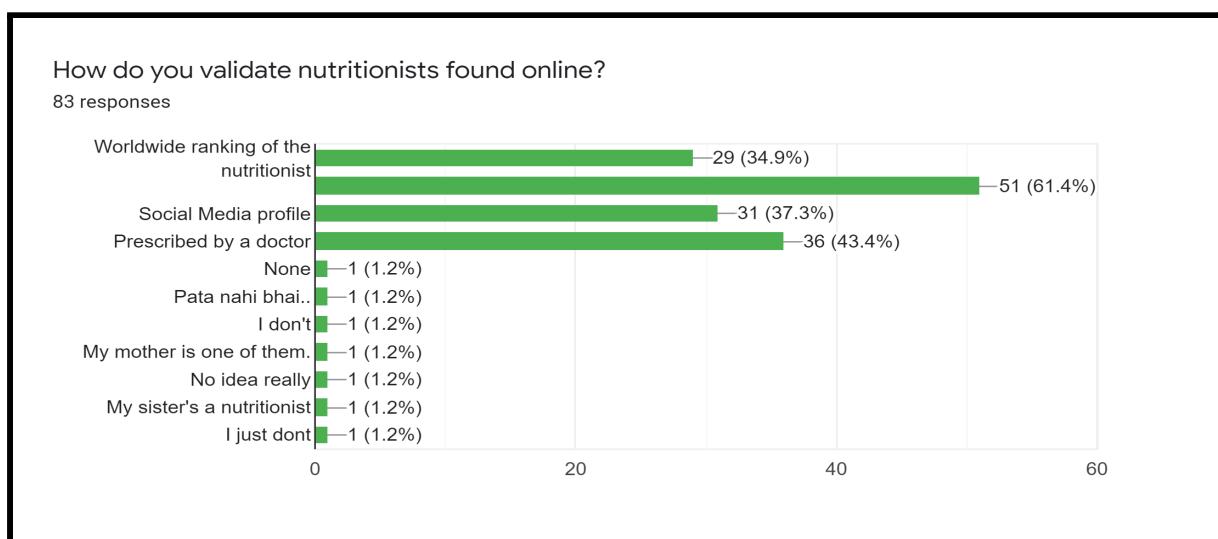
- We can see that around 55% people would seek professional help so we will add a feature of this type where our user will be able to contact a nutritionist.

### Ques - 8) Do they know where to look for nutritionists?



- Above 50% people don't even know where to find a nutritionist. Our website will provide them proper diet plans with recipes and nutrition facts and in addition to that a personal nutritionist if they want on their phone or pc so this will definitely help them to take care of their health.

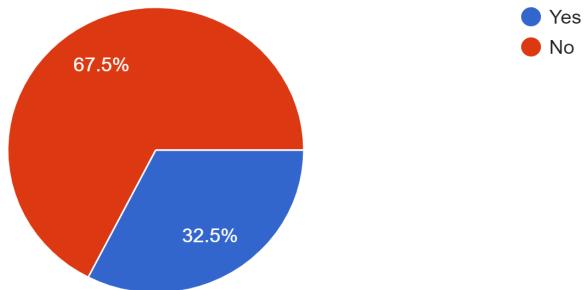
### Ques - 9) We asked their opinions on how they would validate nutritionists found online?



- We will provide the name of the nutritionists, social media profile, degree and experience so that people can easily validate our nutritionists.

**Ques - 10) Do they know any reliable internet source for nutrition related queries?**

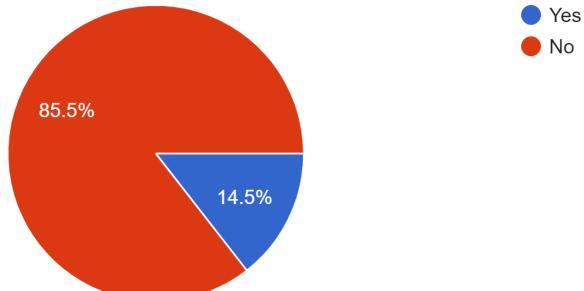
Do you know any reliable internet source for nutrition related inquiries?  
83 responses



- About 67% people don't know any reliable and trustworthy internet sources for the nutrition related queries, our website will provide them all the reliable and trustful features.

**Ques - 11) Do they use any kind of app/website to track one's diet?**

Do you use any app/website to keep track of your diet?  
83 responses



If they answered yes, we wanted to know more about their app/website they are using so we could implement those good features in ours.

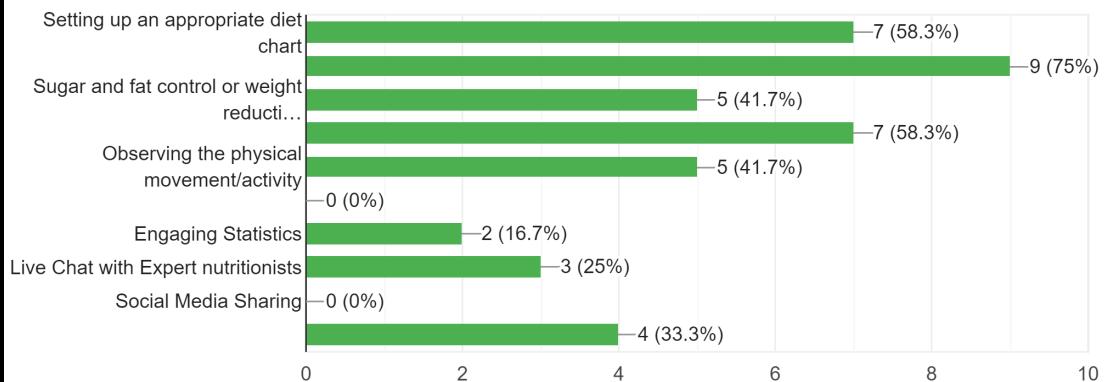
**Q1) Name of the app/website?**

MyFitnessPal, HealthifyMe, herballife.com, Food.co., Fitbit, FitnessPro

**Q2) Which feature of the app/website they used helped them the most to achieve their goals?**

Which features helped you the most to achieve your goal?

12 responses

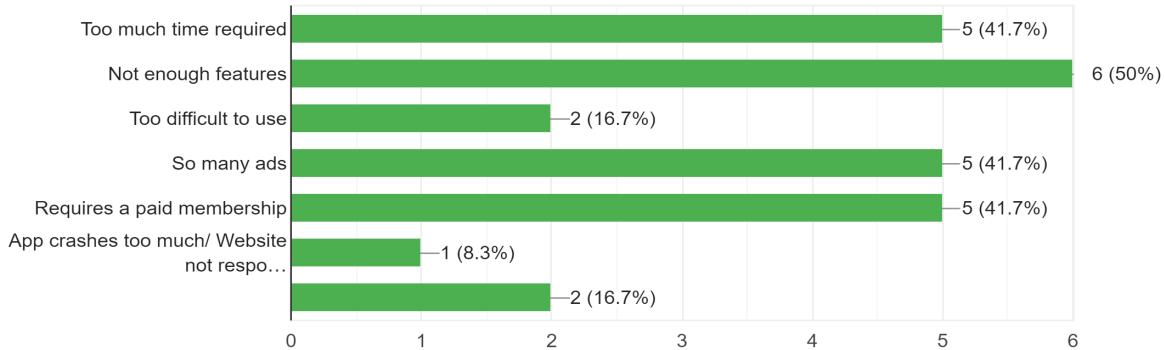


- ❖ We can see that the majority of the people do not use any app/website to track their diet. If they do use any app/website we have asked which app/website they use and which features help them to achieve their goals. We will try to use most of these features in our website.

Q3) Were there any drawbacks to use a nutritionist app?

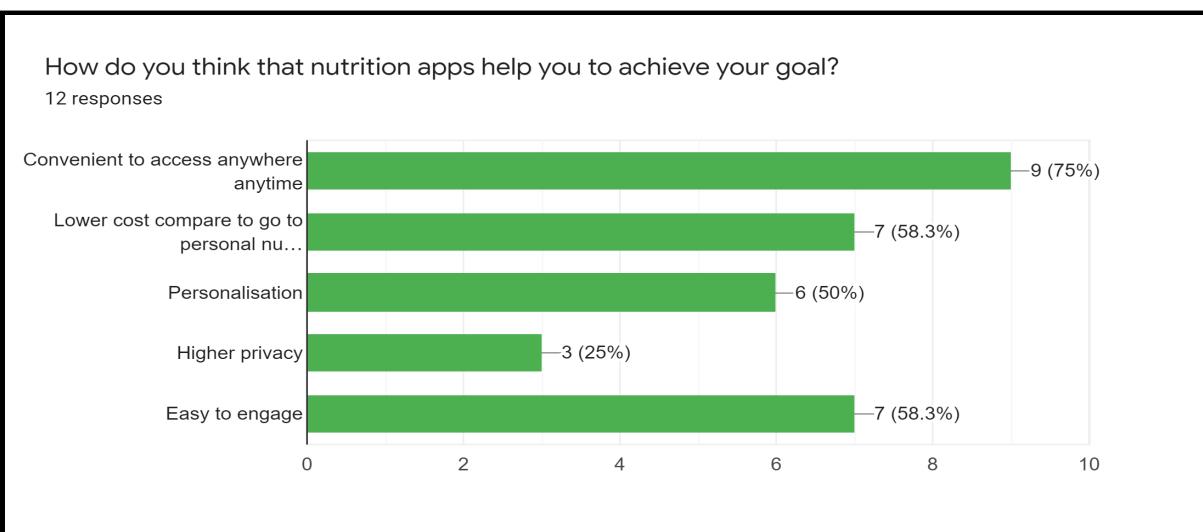
Are there any drawbacks to your use of a nutrition app?

12 responses



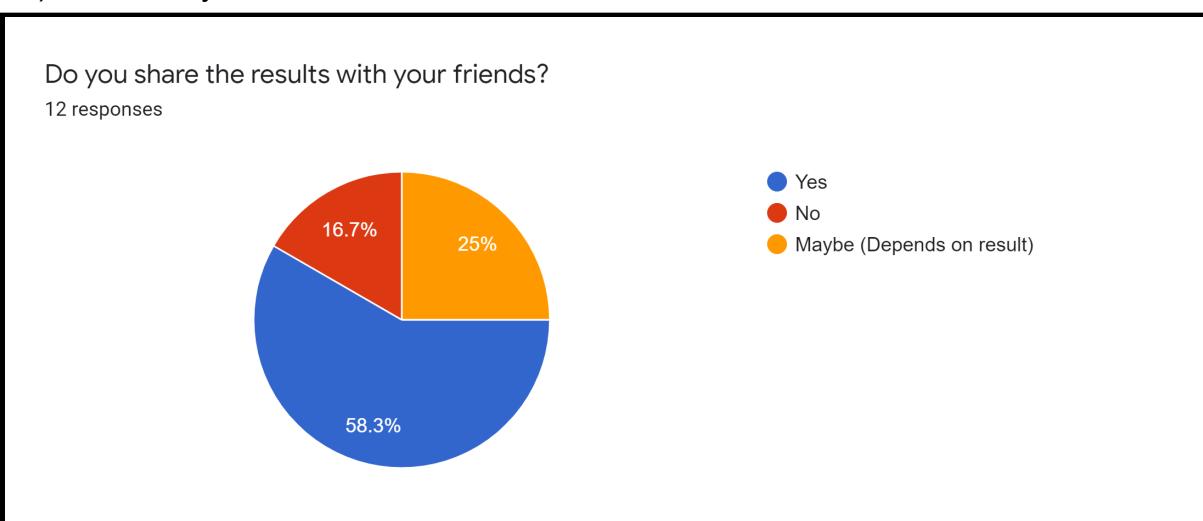
- ❖ We have asked for drawbacks to make sure we don't implement useless features. Like we will not be implementing any ads on our website.
- ❖ Many of them feel that their app doesn't have enough features and are difficult to use. We will be implementing enough features, which will be easy to use.

#### Q4) How would they think that their nutrition app helps them achieve their goals?



- ❖ We can see that 75% of the people want to access their app/website anywhere and anytime. Our website will be accessed through laptop and mobile phone anywhere and anytime they want.

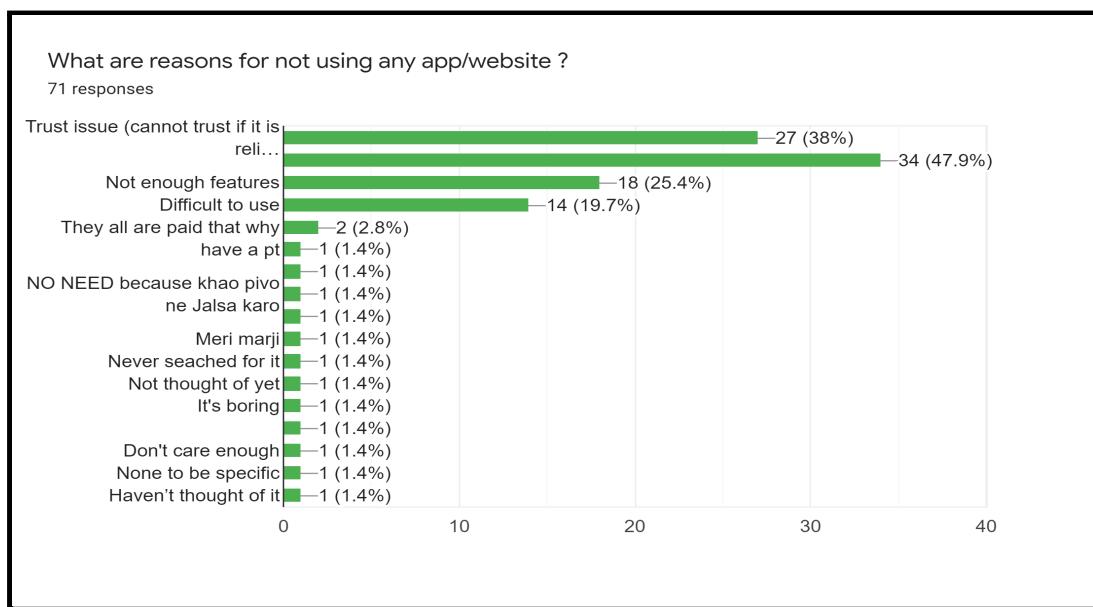
#### Q5) Would they share their fitness results with their friends?



Second element to this was if their answer was No, to the question “Do they use any kind of app/website to track one’s diet?”, we would like to dig in what could be the reason behind this. So we asked some more questions, if the users answer was No

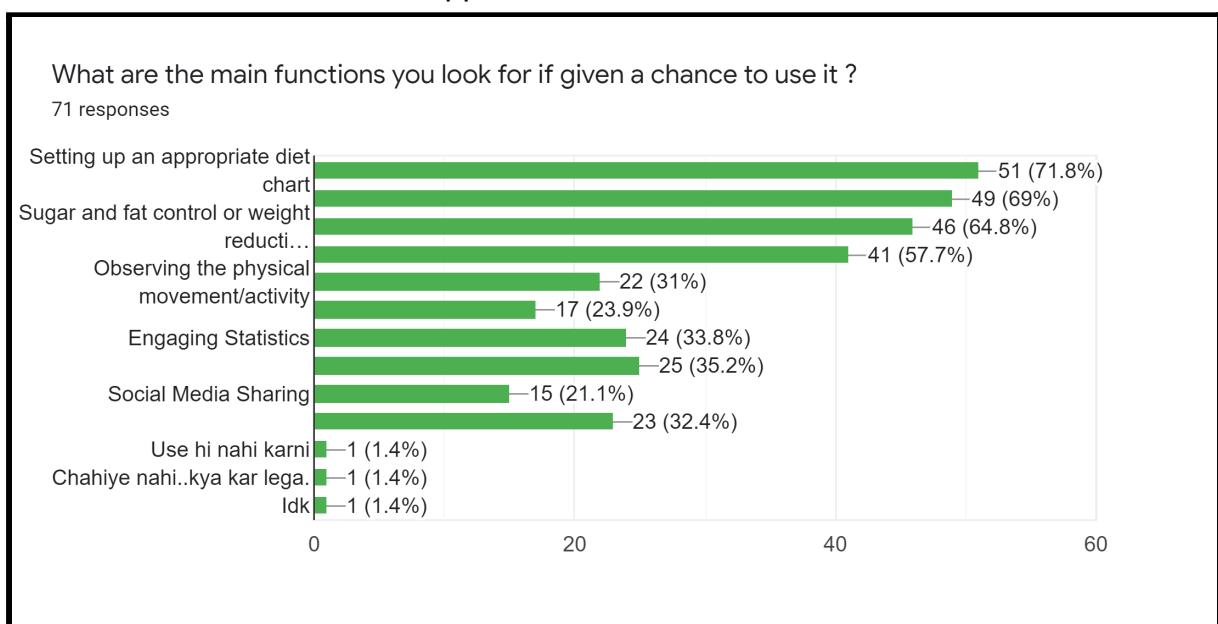
- We can see that 58.3% of people are willing to share their results to their friends. 25% people may share their result depending upon their result. We will be giving features of sharing their results.

## Q1) What were their reasons for not using any app/website?



- Majority of the people feel that the apps/website doesn't provide privacy to their information. We will make sure that their privacy is safe and will not be shared to anyone without their permission.
- 25% of people feel that the app/website doesn't provide enough features and 19% feel its difficult to use. We will provide enough features and an easy to use website.

## Q2) What were the main functions/features they looked for if they were given a chance to use one nutritionist app?



- We can see that 71.8% of people want the feature of setting up an appropriate diet chart. We will try to implement this feature in our website.

- 69% of people want the feature of sugar and fat control. We will also try to implement this feature in our website.

## **SOFTWARE REQUIREMENTS SPECIFICATION**

### **Functional requirements:**

- User basic details such as weight, height, activity level, goal have to be provided in order to calculate the indices like BMI and suggested calories intake per day.
- Users should be able to get details about a number of nutrients, vitamins etc of a fruit or vegetable.
- A 'Recipe' section which will categorize various food recipes based on calories, high protein, low carb, vegetarian etc to meet user needs.
- A 'Blog section' showing blogs from Nutritionists based on various topics such as recipe ideas, workout routines, diet plan ideas etc to help users improve their health in various ways.
- A section where users can note down their daily food intake.
- Users should get a diet plan recommendation according to their daily calorie goal and number of meal requirements.
- Users should be allowed to bookmark the recipes and blogs they like to refer to in future.
- Users should get the analysis of their daily eating habits to work on them accordingly and improve further.
- Contacts of different verified nutritionists to ask for advice and post blogs regarding different health and fitness topics..
- A user may choose to modify or change any diet plans suggested to him and the app should automatically set reminders for the same based on the active diet plan.
- An interactive section where users can add friends and can accept requests from other users where they can play challenges and can see their goals.

### **Non functional requirements:**

- Databases must be secure and must keep back-ups to avoid data-loss in any event.
- System must be able to accommodate a huge number of users and should be able to cater to a large number of requests at same time.
- System should be available to users all the time.
- System should provide appropriate and reliable information on the basis of user personal details (height, weight etc.)
- System should follow ACID properties (atomicity, consistency, isolation, and durability)

- A user should not be able to access records of his fellow users.
- A nutritionist ( unless subscribed for ) should not be able to modify any diet plans of any user.
- Easy to Use UI.

**Domain requirements:**

- Different recipes which are meant for different calorie requirements.
- Ingredients for these different recipes taken into account.
- Nutritional information of each food item.
- BMI and calorie intake calculator.

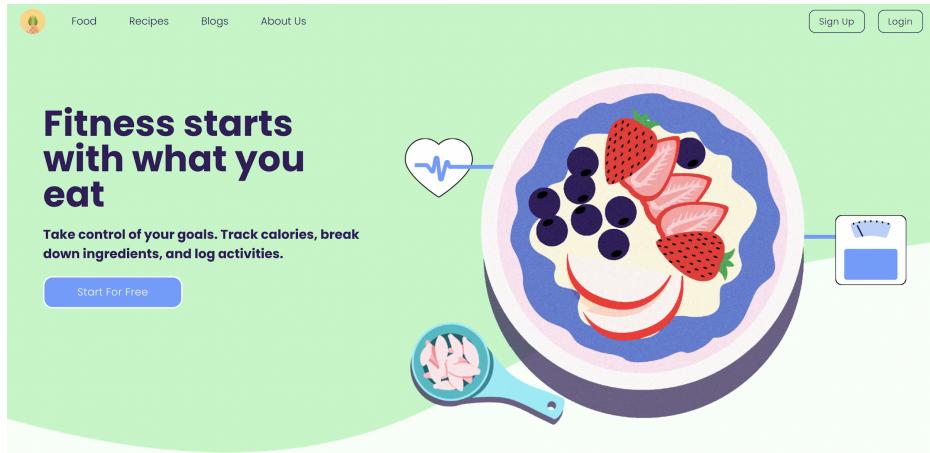
**System requirements:**

- Browsers should support the latest version of HTML, CSS and JavaScript.

## USER INTERFACES

**Common visitor :**

Users who intend to explore the functionality of the website and browse through the different recipes available fall in this particular category. This type of user may or may not choose to sign up with our website. He/She shall be able to work with “Find Nutrients in your Food” only and only the showcase blogs and recipes will be visible to them. A full access to the same cannot be procured until they sign up and login successfully. The landing page for this type of user will have seven buttons plus some additional information. The seven buttons will include **Food, Recipes, Blogs, About us, Login, Sign Up, Start for free**. Clicking on any of these buttons will redirect them to different pages featuring the related content with a unique restriction for every page. “Start for free” will kick in the free tier subscription and redirect it to the Sign up / Login page. Clicking on the Login / Sign Up button will redirect the user to a page which will ask it to either Login (If he already has an account) or Sign Up (If he is a first time user).



### **Sign up for Client :**

All the personal details like Name, email id etc shall be required as inputs from the user and information regarding goals that he wants to achieve throughout his course will be required.

### **Sign up for Nutritionist:**

Apart from all the personal details, the user shall be asked for his qualification and experience as a personal nutritionist. A letter of recommendation from one of his clients (optional) will help add to his profile and profile picture shall be required.

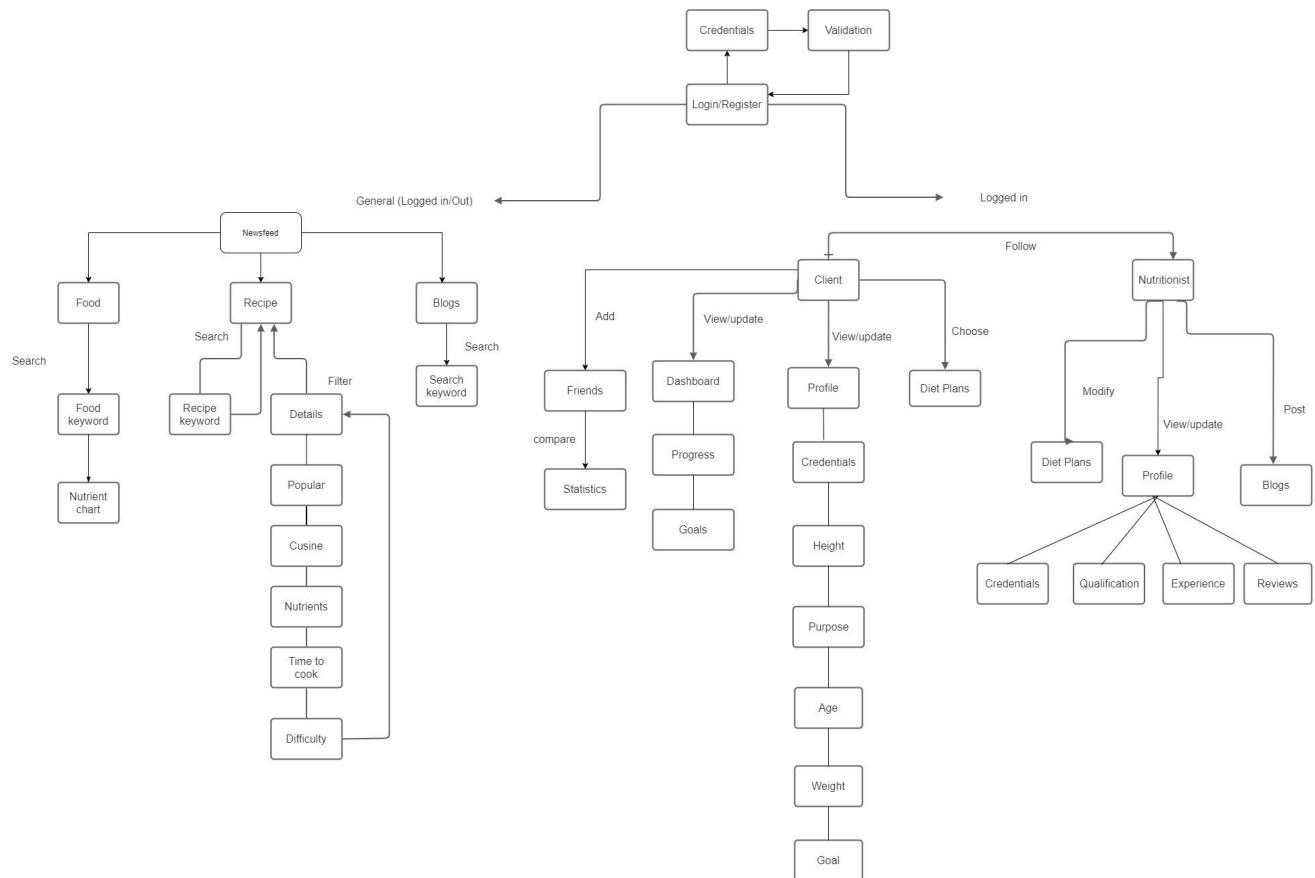
### **For a Client / Customer :**

Users who fall in this category will have all the same options as a common visitor plus some additional more. This role will entail a login and sign up functionality with a progress tracker of the goals set up by the user throughout the establishment of their profile. A user possessing this role shall be greeted with a dashboard as he logs in to the website where he/she will be able to view different nutritionists, all blogs, full recipes and statistical information of their friends. This category of user may choose to stick to a suggested diet plan or follow one that his nutritionist prescribes. He/She shall also be able to follow/ unfollow nutritionists of their choice.

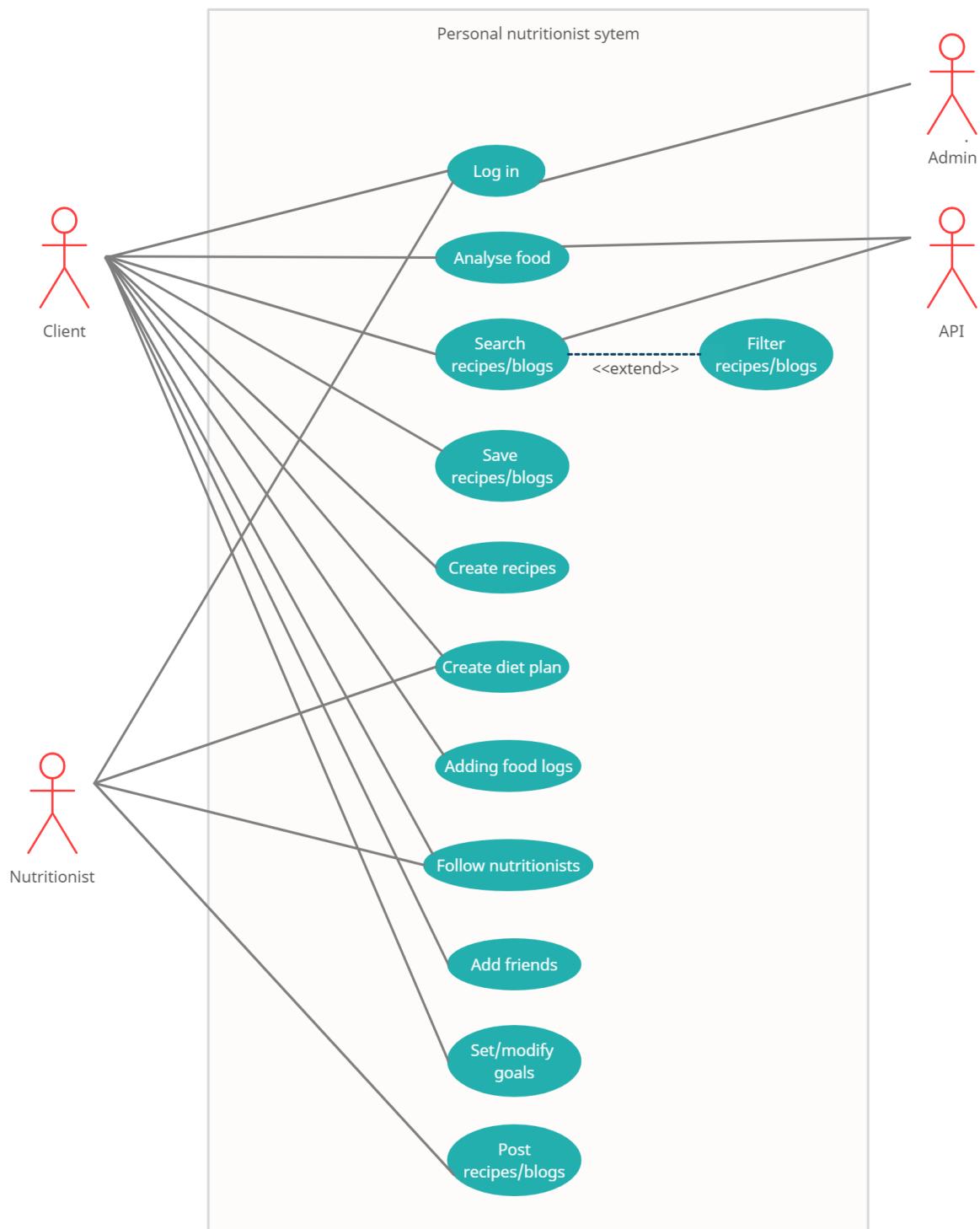
### **For a Nutritionist:**

All the users which fall in this category will have all the privileges of a common visitor and some additional ones. This type of user will be greeted with a different dashboard unlike the customer one which will have all of their subscribers and the allotted diet plans. A section named diet plan allocation will be visible to this category and clicking on it will take them to a list of every allotted diet plan. They can modify, delete and assign a new diet plan to any user by clicking on the corresponding buttons. Additionally, there will be a section where they can create recipes/blogs and also choose to publish them.

## CONCEPT MAP



## USE CASE DIAGRAM



## USE CASES

### **User 1 - Client/Customer:**

Customers who want to monitor their health

#### **Use cases:**

<b>Use case name</b>	Login/SignUp
<b>Description</b>	The client or nutritionist logs into the system when it creates a new account or logging with existing account using his email id and password
<b>Precondition</b>	Client / Nutritionist should login with appropriate id and password  While signing up, client's basic details to be provided in order to calculate the rest of the indices like BMI, BMR, suggested calories intake per day, etc.
<b>Post condition</b>	Client / Nutritionist is logged in. Client/Nutritionist can view its dashboard and are able to create /modify / filter recipes and blogs and can subscribe to nutritionists and track its progress.

<b>Use case name</b>	Analyse nutrients in a food item
<b>Description</b>	Clients can get information regarding nutrients, calories, carbohydrates, vitamins by searching a food item or by uploading its photograph.
<b>Precondition</b>	Clients have to go to the Food Analysis page and search for food items .
<b>Post condition</b>	Clients can get information about a food item. Clients can search recipes / blogs of the particular food item .

<b>Use case name</b>	Save recipes/blogs
<b>Description</b>	Clients can search for recipes or blogs from respective sections and save the items he/she likes.
<b>Precondition</b>	Client has to go to recipe or blog section to search for different items. To save any recipe/blog,, client has to log in or sign up.
<b>Post condition</b>	Client can see the saved items from the user dashboard

	anytime he/she wants.
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<b>Use case name</b>	Create recipe
<b>Description</b>	Clients can make their own recipes and refer to it anytime. Recipes will be saved in the user dashboard.
<b>Precondition</b>	Client has to sign up/log in. Then the client has to go to the user dashboard, and write appropriate recipe elements to create the recipe.
<b>Post condition</b>	Clients can refer to created recipes from the user dashboard anytime he/she wants.

<b>Use case name</b>	Search recipes/blogs
<b>Description</b>	Clients can search recipes of their choice or Client can search for blogs posted by nutritionists on various food items or diet plans.
<b>Precondition</b>	Client has to go to the recipes/blog section of the application and search for the recipe/blog by typing in the search keyword.
<b>Post condition</b>	Clients can view recipes/blogs of searched keywords.

<b>Use case name</b>	Filter recipes/blogs
<b>Description</b>	Clients can filter recipes on various parameters like most popular, time to cook, cuisine etc. Blogs can be filtered by topic or nutritionists.
<b>Precondition</b>	Client has to go to the Recipe/blogs section of the application and apply the appropriate filters.
<b>Post condition</b>	Clients can see related blogs/recipes after applying filters.

<b>Use case name</b>	Maintain food logs
<b>Description</b>	Clients can add their day to day food logs in each meal of the day, for eg.,breakfast, lunch ,dinner, etc. and maintain their calorie intake.
<b>Precondition</b>	Clients will have to create an account and go to the Dashboard to maintain their food log for the day.
<b>Post condition</b>	Clients can view all the updates for each meal of the day and their respective calorie intake. Also he/she can see the distribution of nutrients and macros for the added food log.

<b>Use case name</b>	Choose/Create Diet Plan
<b>Description</b>	Clients can choose among many diet plans by different nutritionists according to their fitness agenda. Also, he/she can create his own diet plan.
<b>Precondition</b>	Client will have to create account and go to the 'Diet Plans' section to see/choose/create their diet plan
<b>Post condition</b>	Client can view his/her created/chosen current diet plan for the day till the duration of the plan. Additionally, client may choose to modify or change any diet plans suggested to him and the app will automatically set reminders for the same based on the active diet plan.

<b>Use case name</b>	Follow nutritionists
<b>Description</b>	Clients can follow the nutritionists so that they can view all the updates given by the nutritionists
<b>Precondition</b>	Clients will have to create an account and search the nutritionists to follow them, or they can follow any nutritionists from blogs sections.
<b>Post condition</b>	Clients can view all the updates from nutritionists.

<b>Use case name</b>	Add friends
<b>Description</b>	Clients can follow their friend using this same system and then compare the statistics or progress with friends.
<b>Precondition</b>	Client has to create the account and add friends from 'Friends' section in the dashboard.
<b>Post condition</b>	Clients can see and compare his/her progress with friends.

<b>Use case name</b>	Analyse statistics
<b>Description</b>	Clients can see his/her statistics of calorie intake or other nutrients intake, weight graph and more.
<b>Precondition</b>	Client has to login/signup and add daily food logs to see the stats.
<b>Post condition</b>	Clients can see his/her own statistics and compare with his/her friends statistics.

<b>Use case name</b>	Set/modify Goals
<b>Description</b>	Clients can set his/her goals according to his/her requirements.
<b>Precondition</b>	Client has to sign up/log in, then the client has to go to the user dashboard, and then he can set/modify his goals.
<b>Post condition</b>	Clients can see and refer to his/her goals and he/she can also modify it.

### User 2 - Nutritionists:

Professional nutritionists / Health and fitness bloggers

#### Use cases:

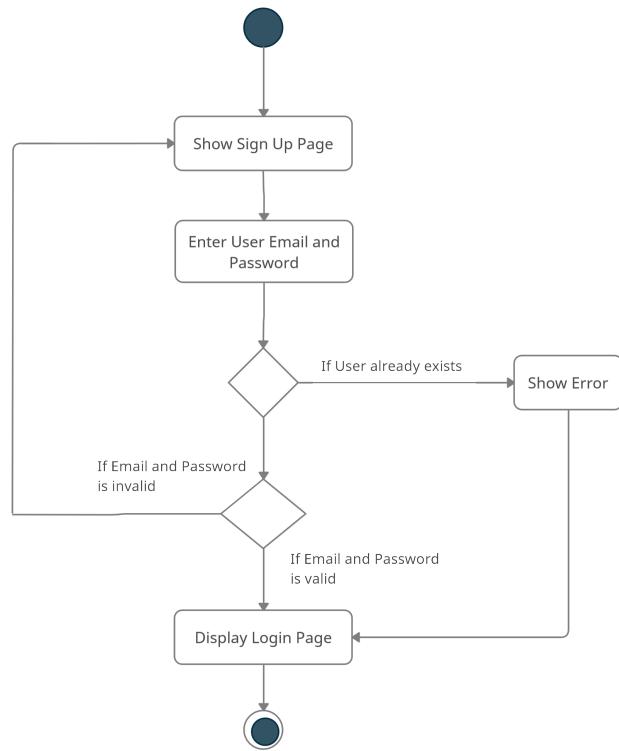
<b>Use case name</b>	Modify/Create diet plan
<b>Description</b>	Nutritionists can modify/create the diet plan of the client that has followed the nutritionist and has asked for help.
<b>Precondition</b>	Client has to sign up/log in, then the client has to follow the nutritionist to ask for help. Nutritionists also have to create the account.
<b>Post condition</b>	Nutritionist can modify/create the diet plan for the client and the client can follow it.

<b>Use case name</b>	Post a blog/recipe
<b>Description</b>	Nutritionists can post blogs about health/fitness or post healthy recipes.
<b>Precondition</b>	Nutritionist has to create an account and has to go to 'Recipe section' of the dashboard to create a recipe and 'blog section' to write a blog.
<b>Post condition</b>	Clients can see blogs/recipes from respective sections and get some inspiration.

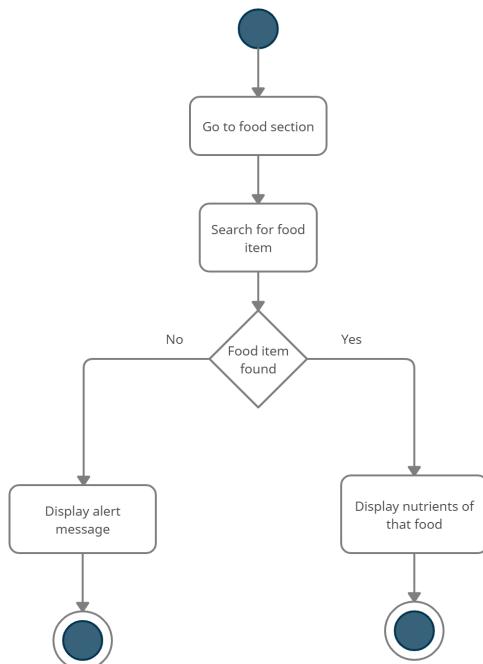
	Nutritionist can also modify his/her recipe or blog from the user dashboard.
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## ACTIVITY DIAGRAMS

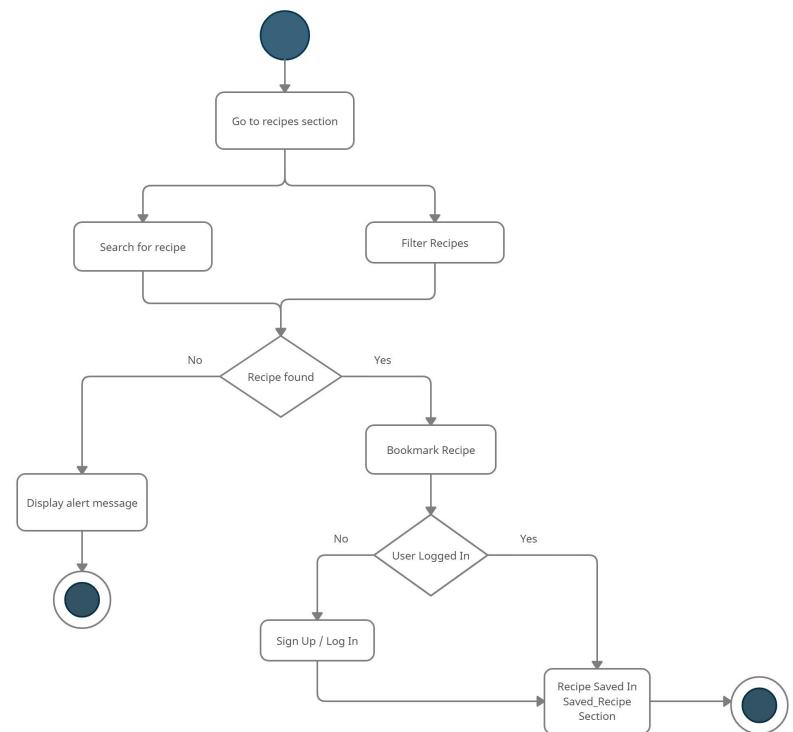
### **Signing up**



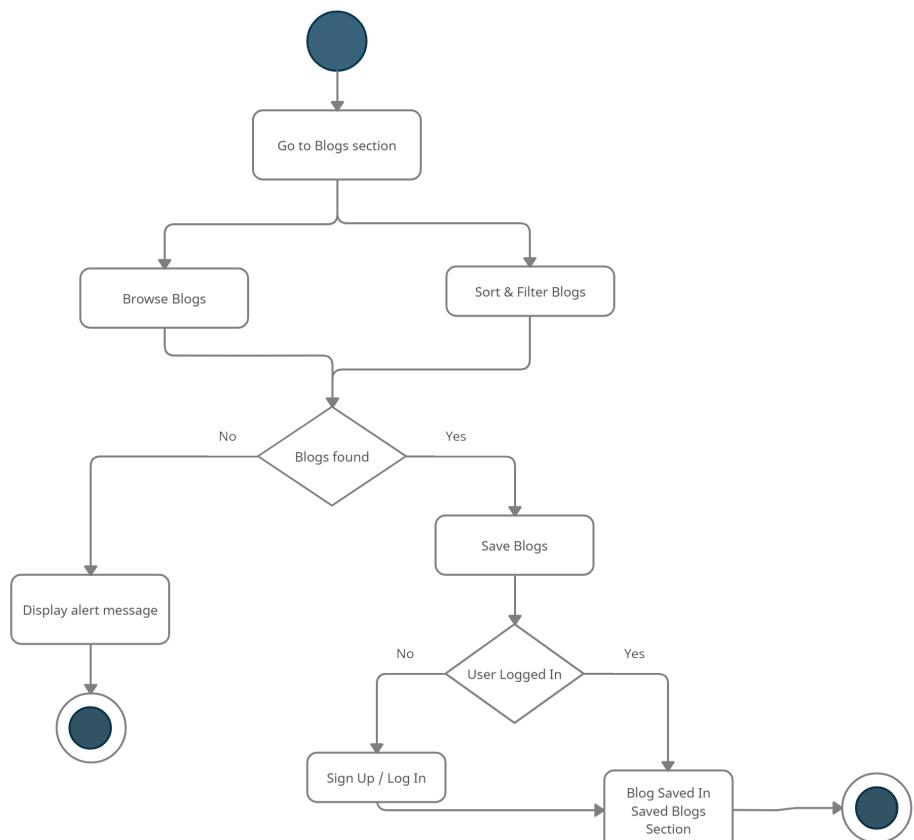
### **Analysing a food item -**



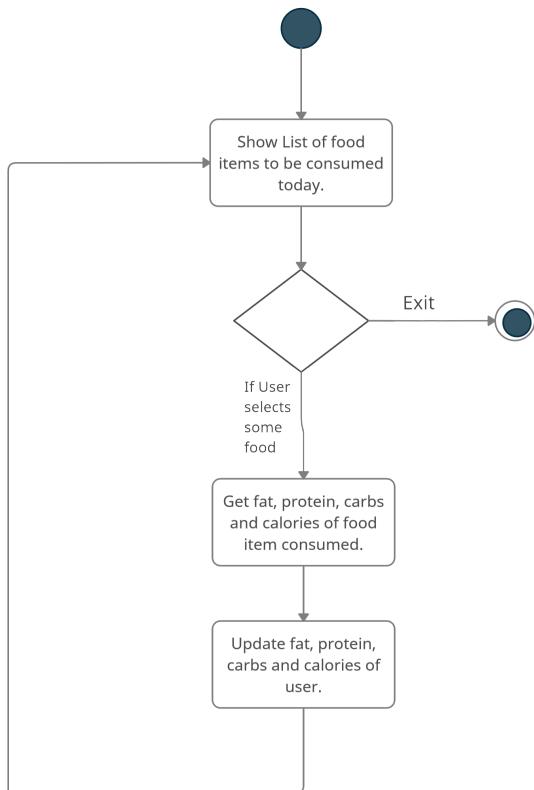
### Browsing recipes - search + filter + bookmark



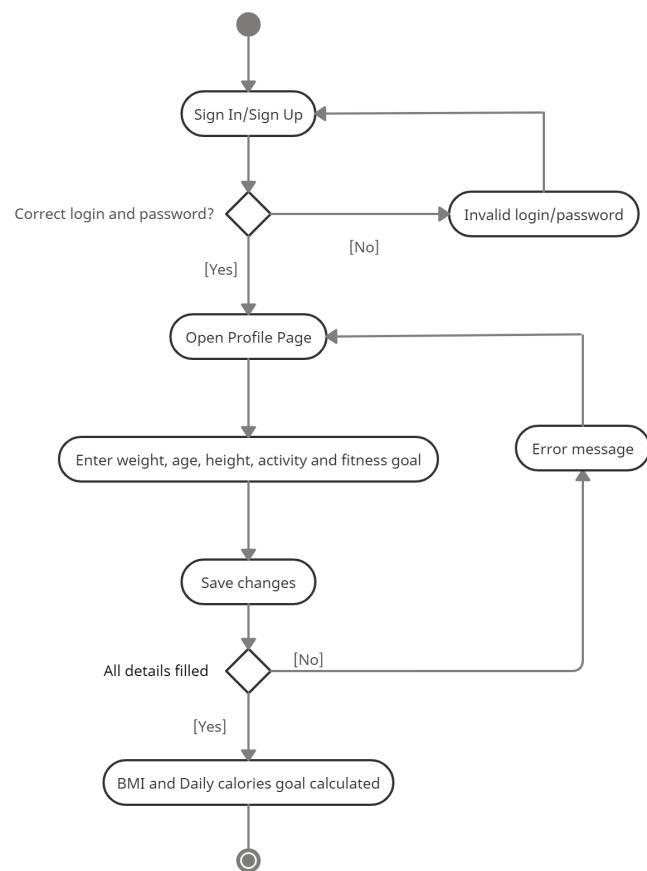
### Browsing blogs - search + filter + bookmark



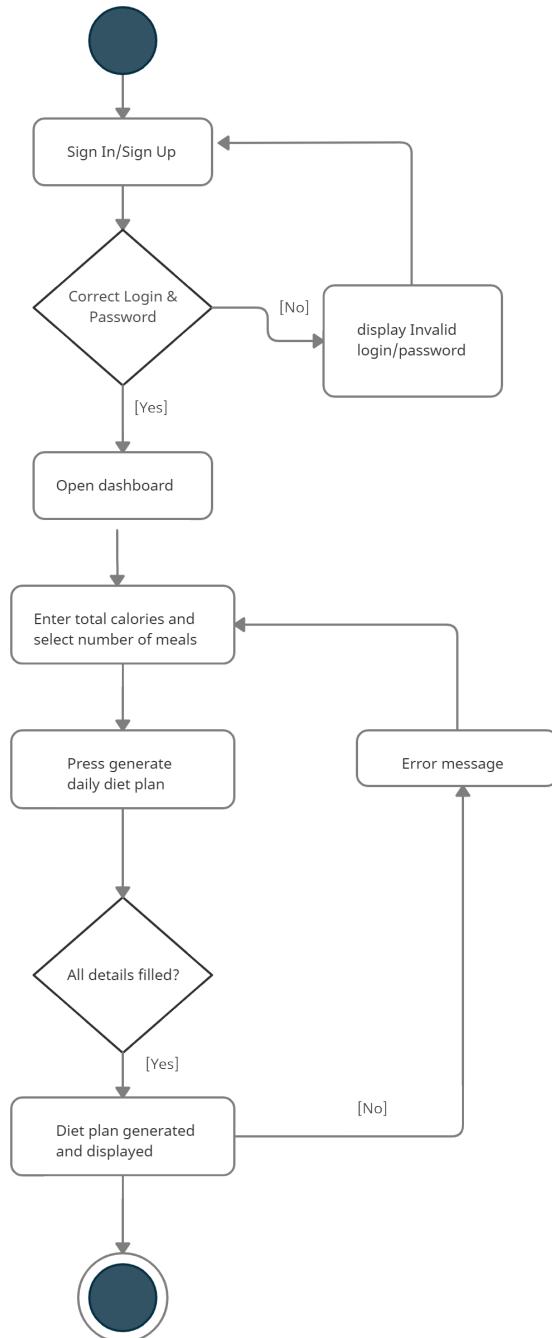
## Adding food logs



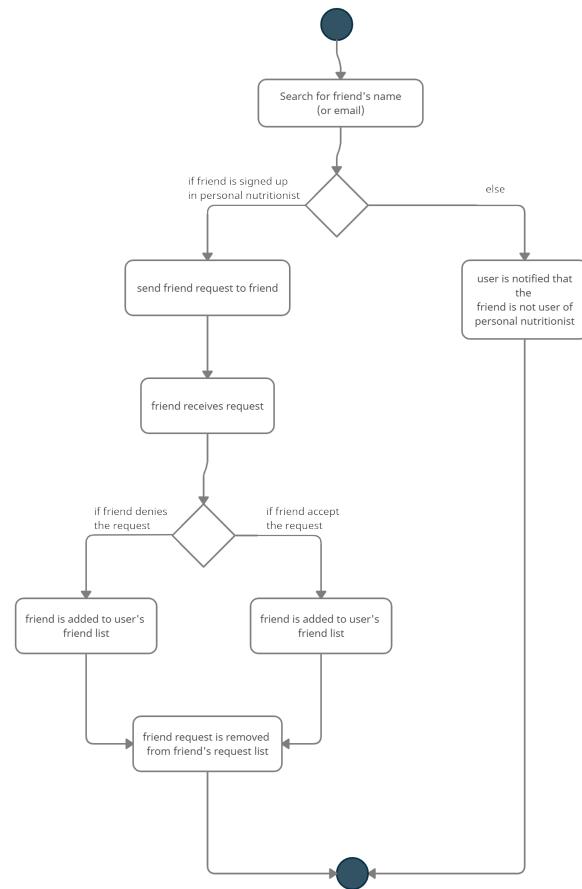
## Setting up daily calories goal



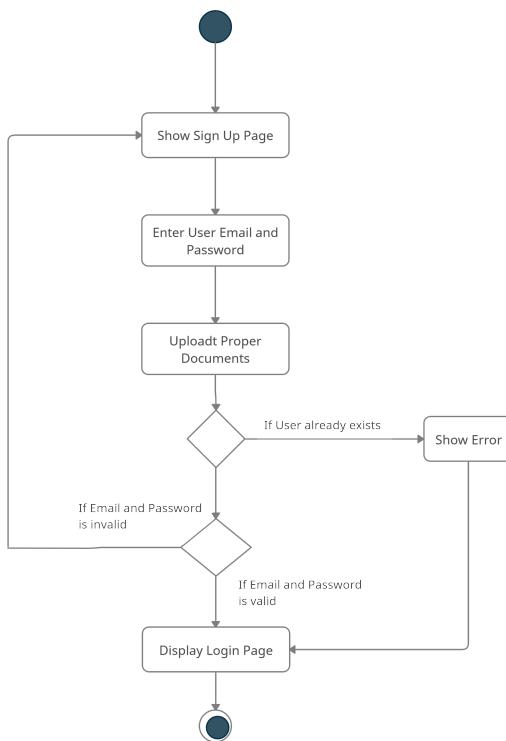
## Setting up daily diet plan



## Adding friends



## Signing up



## **OPEN ISSUES**

1. Verification of Nutritionists during their sign up on the platform.
2. Validation of data taken from API.
3. Verification of daily goals achieved by a client.

## **SUMMARY**

Our website offers credible information to help you make healthful eating choices. We are developing a goto website for people who are obsessing over fitness and count their calories and hesitate over mouth watering treats. Our aim is to make sure people know what they eat and how much they need for their day. This is a healthy place for people as they are surrounded by world class nutritionists giving them opinions and prescribing diet plans to work with their routine all packaged in one deal.

We aim to help users to find perfect recipes for themselves. Users can set goals and follow the best diet plans for overall health benefits. We use the best food databases across the internet to provide details about the number of nutrients, vitamins etc. of the food items.