

Persuading People to Eat Healthy

Shreya Gupta • 15633 0006

Guided By: Prof. Ravi Poovaiah

Introduction

The Issue

Non-communicable diseases would become the leading cause of death in the world by 2030.

Most of these diseases are caused due to:

- poor dietary habits,
 - addictions to tobacco and alcohol,
 - and a sedentary lifestyle.
-

Introduction

The Focus

- What people eat in their 20s determines the likelihood of them contracting lifestyle diseases in the subsequent decades.
- The idea is to persuade people to eat healthy.

Defining the Scope

Defining the Target User

- Young adults in their 20s
- The students living within the IIT campus have been targeted.

Defining the Context

- The IIT campus has an independent mess for every hostel, with two larger messes for hostels 15,16 and 12,13,14
- The hostels have canteens in the similar pattern.
- The campus also has eateries such as Gulmohar, Brews & Bites, etc.

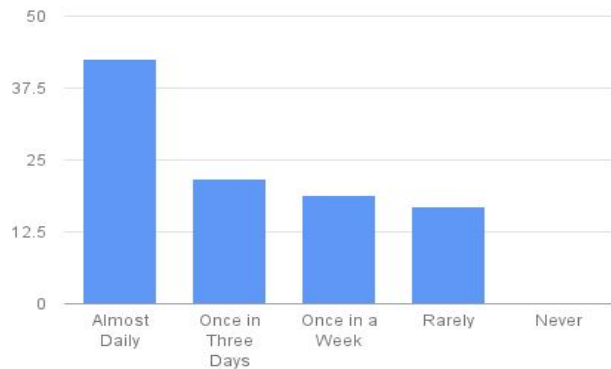
Primary Research

What & How People Eat in the Campus?

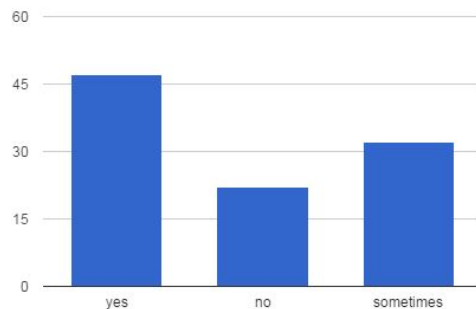
- A survey on 101 students of IIT Bombay was conducted over a weekend.
- Questions were based on their
 - perception of healthy food,
 - inclination towards apps,
 - idea of healthy food,
 - opinion on the availability of healthy food

Findings

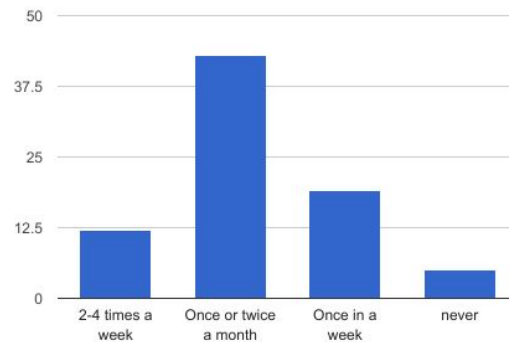
How often do you eat in canteens?



Do you think your mess provides enough healthy food?

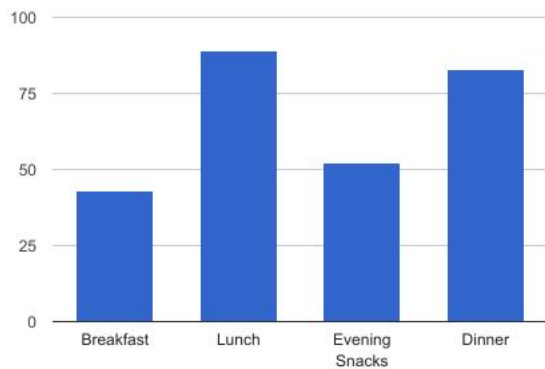


How often do you eat outside or order food from outside the campus?

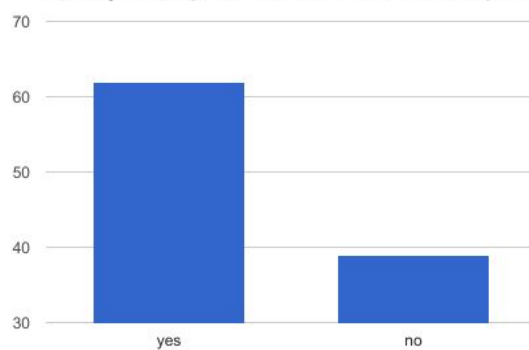


Findings

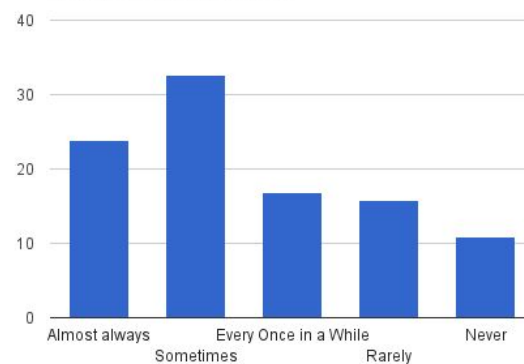
Which of the following meals do you take at least 4 times a week?



Count of Do you feel there is a scarcity of healthy food options in and around the campus?



How often do you make conscious decisions to purchase healthier foods?



Findings

- 46.5% of the people think that the mess provides enough healthy food. While only 22% think otherwise.
- Over 60% people feel that there is a scarcity of healthy food options in and around the campus.
- More than 40% agreed to depend upon their friends regarding what or where they ate.
- More than 56% people are fairly conscious of healthiness of an eatable while making purchase decisions.
- About 15% people have used fitness related apps in the past but have then, uninstalled them. 12% people do use fitness related apps that either track their activity pattern or count calories.
- More than 70% people would want to know what their mess is serving before a meal.

Insights

- Mess food is found to be healthy by a good number of people, and, as a matter of fact, it is healthy. Thus, **working on the visibility of healthy portions** of the mess menu has a scope.
- Where and what their friends are eating gives scope for community oriented design ideas where **people can take inspiration or compete with their friends** regarding healthier dietary habits.
- **The pilot could be tested during lunch and dinners** since these are the meals people are least likely to skip. Also, a major portion of people's calorie intake is through these two meals, thus, monitoring them might result in visible changes.

Literature Review

What directs or inspires people
to eat healthy?

- Calorie information
- Nutritional information
- Eating partners
- People start eating healthy when they contract a disease.

Literature Review

What directs people to eat unhealthy?

- **Present-biased preferences:** people tend to make choices based on their present conditions, instead of weighing the pros and cons of the future.
 - **Lack of time** often results in people consuming unhealthy food.
 - **Availability** of healthy food and
 - **Price** of healthy food
-

Literature Review

What is the way to counter such behaviour?

- **Asymmetrically Dominated Choice:** if a healthy food item is placed next to an unhealthy one, and the contrast is stark, it would coax people to choose the healthier option.
 - If people are **planning a diet when they are less hungry**, they tend to make healthier choices.
 - Making the **better options more visible**, one can manipulate choices.
 - “Putting the fruit at eye level counts as a nudge. Banning junk food does not.”
-NUDGE by Richard H Thaler
-

So the idea becomes..

Making Healthy Food More Visible

Design Idea 1

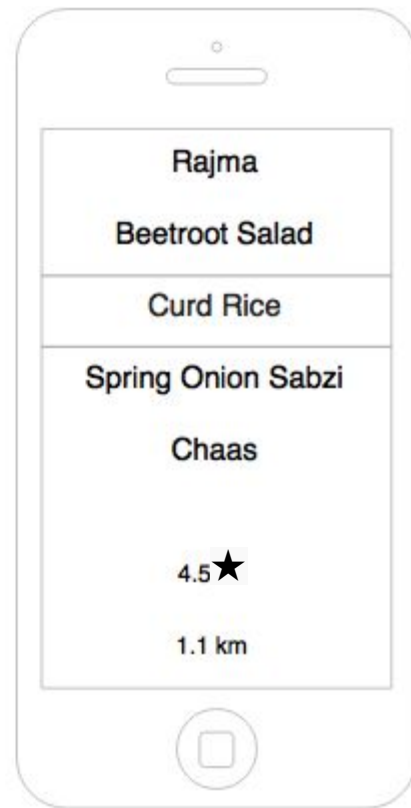
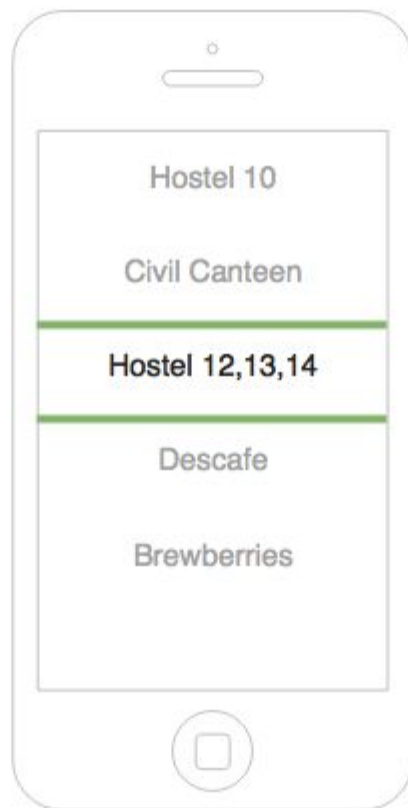
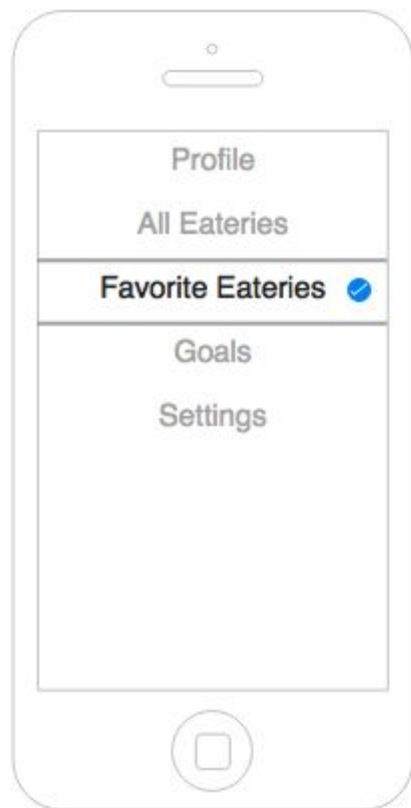
An Application that suggests healthy food options in your proximity

The app takes up your most preferred eating joints: the mess, canteens, etc.

It asks for your favorite food and comfort food.

It takes your BMI into consideration.

Based on the above it suggests you the healthiest possible option for your meals.



Design Idea 2

An Application that lists down your mess menu according to a “healthy merit list”

The app takes your BMI and health goals into consideration.

It lists down the menu according to the most relevant food items for the user; ie according to her health requirements.

It gives a notification around the mess timings.



Design Idea 3

A web extension that can filter out the healthiest food choices when you order food online

The Web Extension runs in the background.

If you are browsing through, say 3 different tabs, the extension would read your choices and suggest you the healthiest choice.

It works much like your e-shopping web extensions that suggest you the cheapest deals.

IIT Area, Mumbai, Maharashtra, I...

EDIT



SUPREME

Fiery Paneer Sandwich

Awesome combo of paneer & jalapenos

₹ 128

Opens at 11:00 AM



SUPREME

Paneer Tikka Sandwich

Juicy paneer cubes with tikka sauce

₹ 138

Opens at 11:00 AM



SUPREME

Veg Royal Feast Sandwich

Baby corn, mushroom, olives & jalapeno. Try it!

₹ 158

Opens at 11:00 AM



SUPREME
Paneer Tossed Salad

Paneer, olives, jalapenos, veggies in an Indian style dressing

₹ 178

Opens at 11:00 AM



CLASSIC
Farmer's Market Salad

Mushrooms, baby corn, olives, jalapenos with salad dressing

₹ 138

Opens at 11:00 AM



CLASSIC
Char-Grilled Chicken Salad

Tandoor grilled chicken & exotic veggies in a spiced char dressing

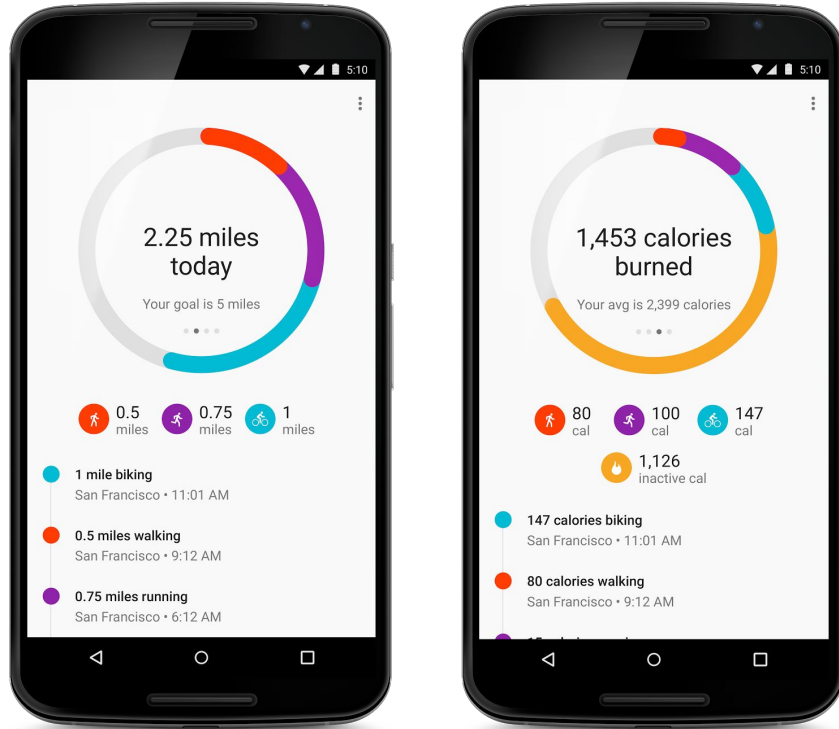
₹ 168

Opens at 11:00 AM

Secondary Research

There are a wide variety of apps that govern the health sector. These apps offer a variety of functions such as:

- connecting people to doctors and dieticians (the likes of practo)
 - tracking activity like Google Fit and Move.
 - food tracking apps like MyFitnessPal and MyPlate that have an immense database of food items from throughout the world.
-



Google Fit

- The Google Fit app helps in tracking physical activities like running, cycling, jogging and walking.
- It can be integrated with calorie counter apps that keep diet logs so that the net calorie gain can be achieved.

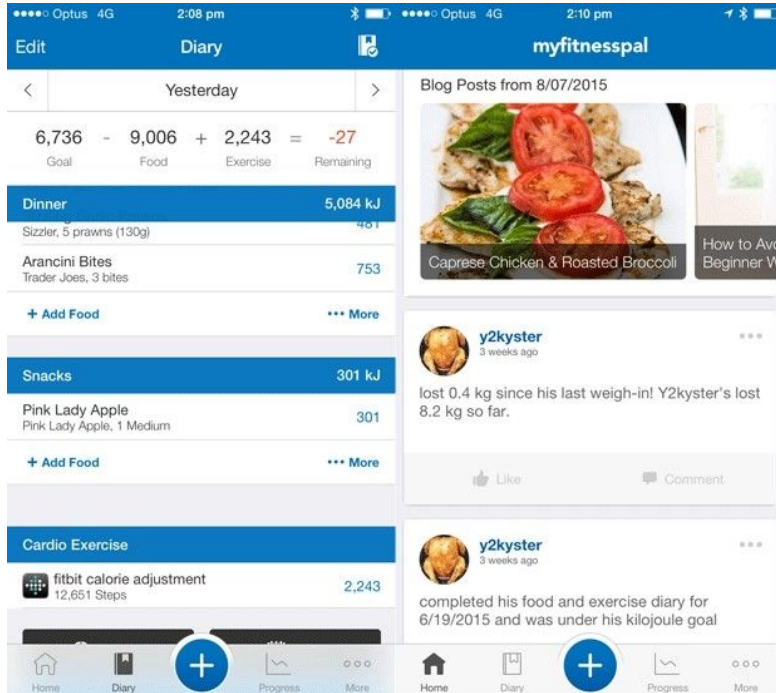
Google Fit

The setbacks with the app are as follows:

- It counts the number of steps but does not inform what that number means, as in, is the pattern active or sedentary, etc.
- It takes autorickshaw rides as cycle rides.

The plus points of the app are as follows:

- It gives a holistic evaluation of the recorded activity, in terms of calories burnt, time spent being active, etc.
- The web app lets you know your relative activity pattern with respect to the rest of the users in the city.
- It can be easily integrated with food log apps so that the net calorie count for the day can be achieved.



MyFitnessPal

- MyFitnessPal is a food tracking app that helps you log your food through its enormous database of food items from throughout the world.
- It also gives the nutritional breakdown of your consumption and helps set goals and targets.
- It also helps you share your progress with friends.

MyFitnessPal

The setbacks with the app are as follows:

- It gives the nutritional breakdown but does not give the idea of what to make of that information.
- It is difficult sometimes to track the amount of food one consumed from the given set of options from the database.
- The detailed version needs to be paid for.

The plus points of the app are as follows:

- It gives a holistic evaluation of what one eats, in terms of calories, nutritional data, etc.
- It lets the user connect with friends so that competition or inspiration could work as incentives to eat better.
- It can scan barcodes to give nutrition facts.

Insights

- In most cases people do not want to enter data unless they are deeply invested in the idea of keeping a diet log.

Hence, it becomes vital to avoid data entry as much as possible.

- The information which most apps provide is not consumable. What does 75% carb intake mean? What does 7500 steps a day mean?

Unless this information is not cracked it is difficult for the user to become aware of and act on their behaviour.

The 20
something
student

Understanding the User

```
graph TD; A[The 20 something student] --> B[Want to be Health Conscious];
```

The 20
something
student

Want to be
Health
Conscious

Understanding the User

The 20
something
student

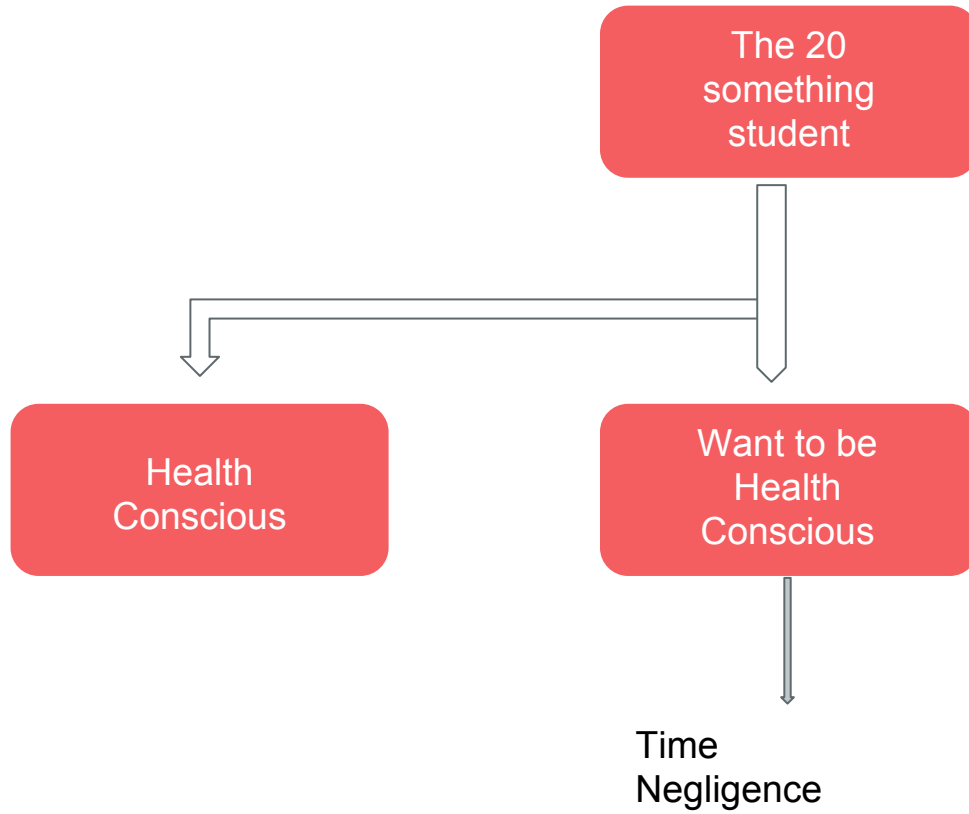


Want to be
Health
Conscious

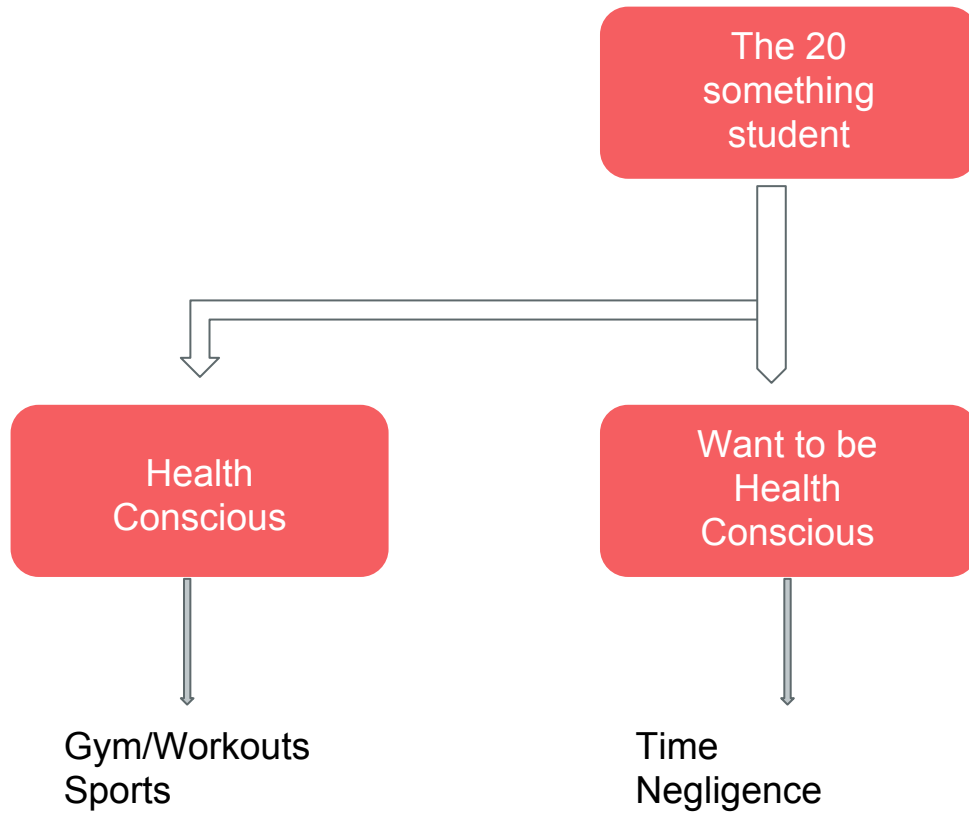


Time
Negligence

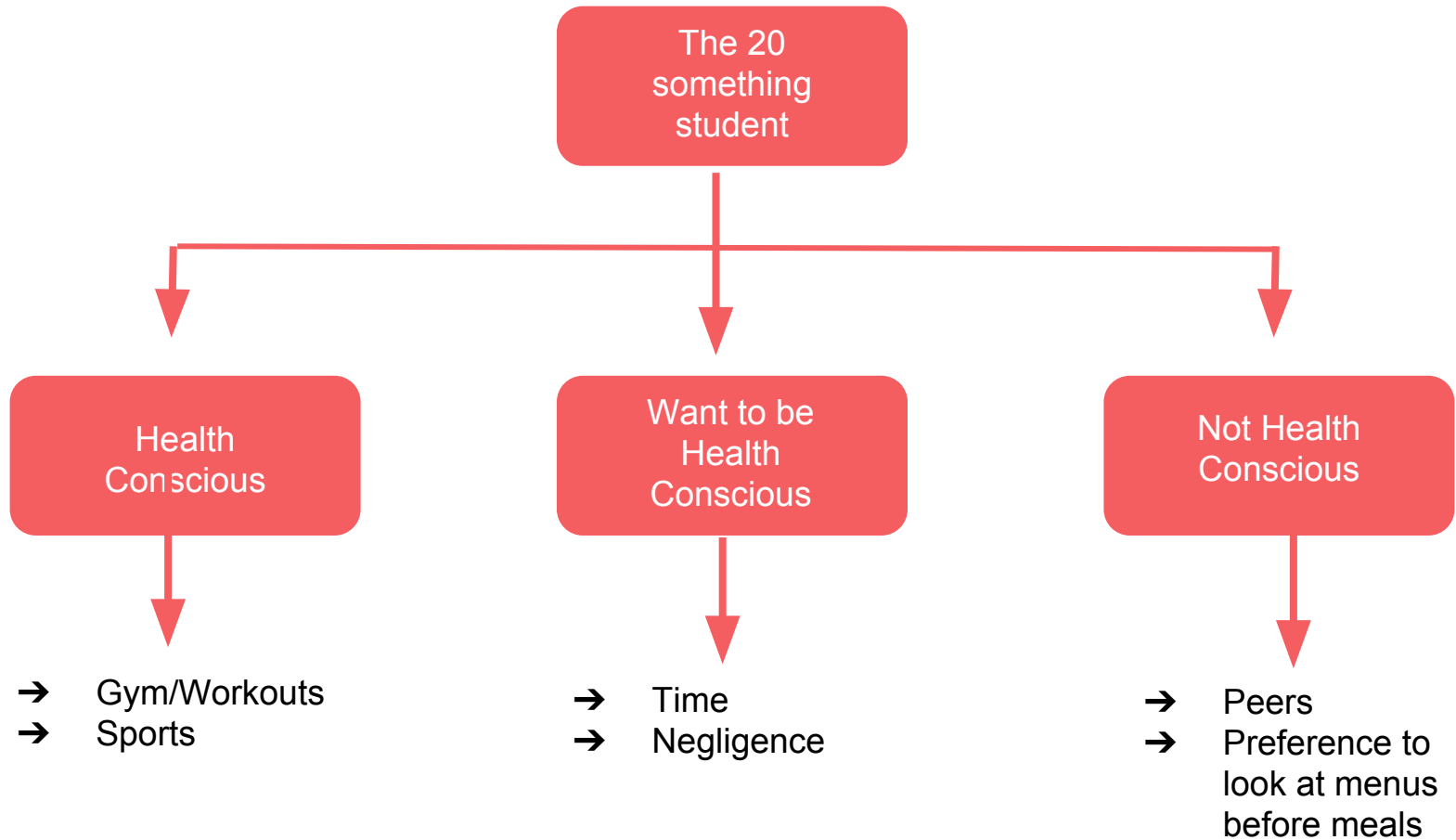
Understanding the User



Understanding the User



Understanding the User



Understanding the User

The IIT Bombay
Campus

Understanding the Context

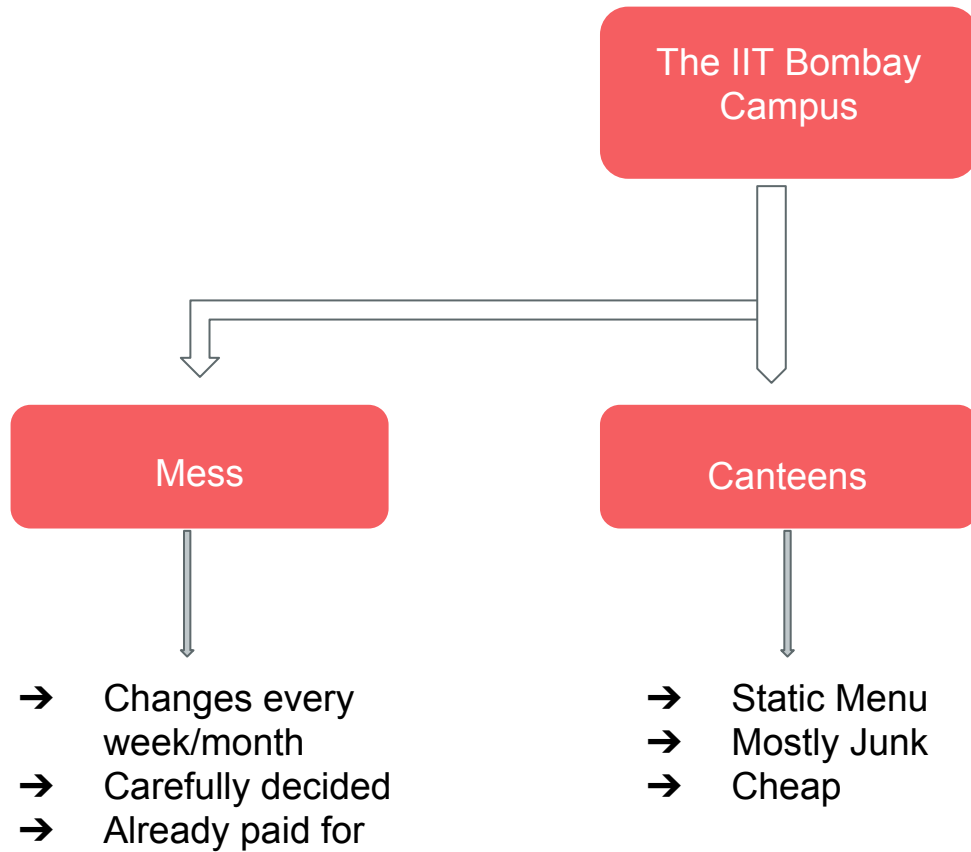
The IIT Bombay
Campus

```
graph TD; A[The IIT Bombay Campus] --> B[Canteens]; B --> C[→ Static Menu<br/>→ Mostly Junk<br/>→ Cheap];
```

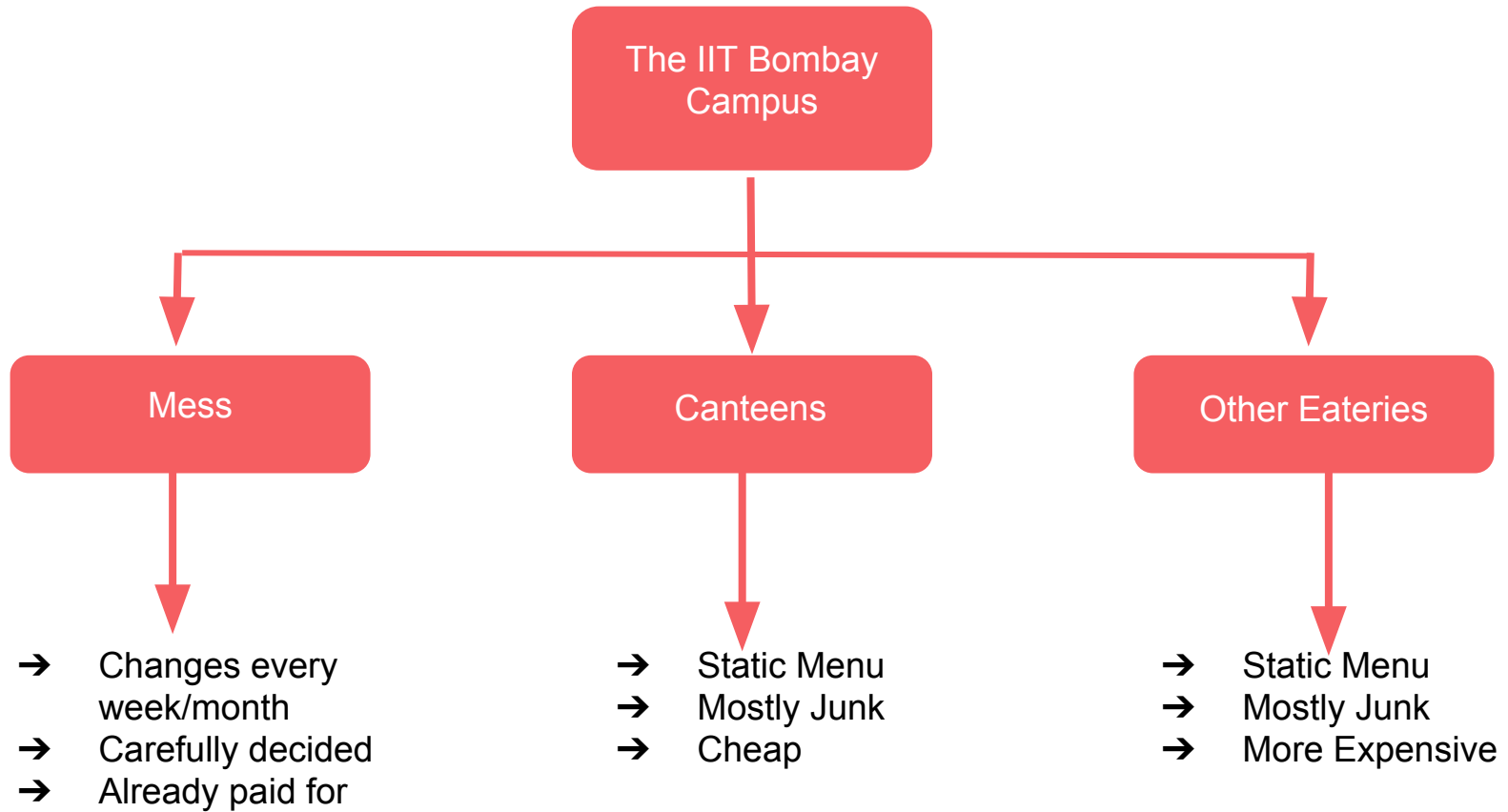
Canteens

- Static Menu
- Mostly Junk
- Cheap

Understanding the Context



Understanding the Context



Understanding the Context

Defining the Parameters

Height

Weight

Sex

To calculate the
appropriate BMI

Veg/Nonveg

Hostel

Lifestyle

To Refine the Search

Blood Pressure

Haemoglobin

Blood Sugar

To Refine Food
Suggestions

Defining Healthiness

	Carbohydrates	Fats	Proteins
Healthy	Should be less than 65%	Should be less than 15%	Should be more than 15%
Unhealthy	Should be more than 65%	Should be more than 26%	Should be less than 8%

Concept Map

Health Finder

Concept Map

Health Finder

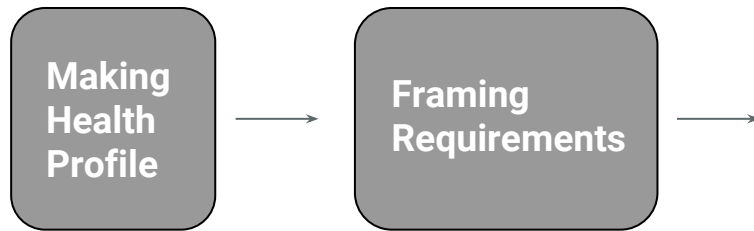


Making
Health
Profile



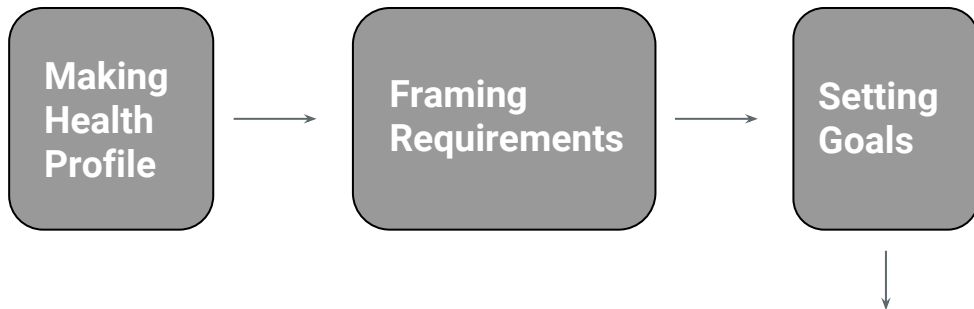
Concept Map

Health Finder



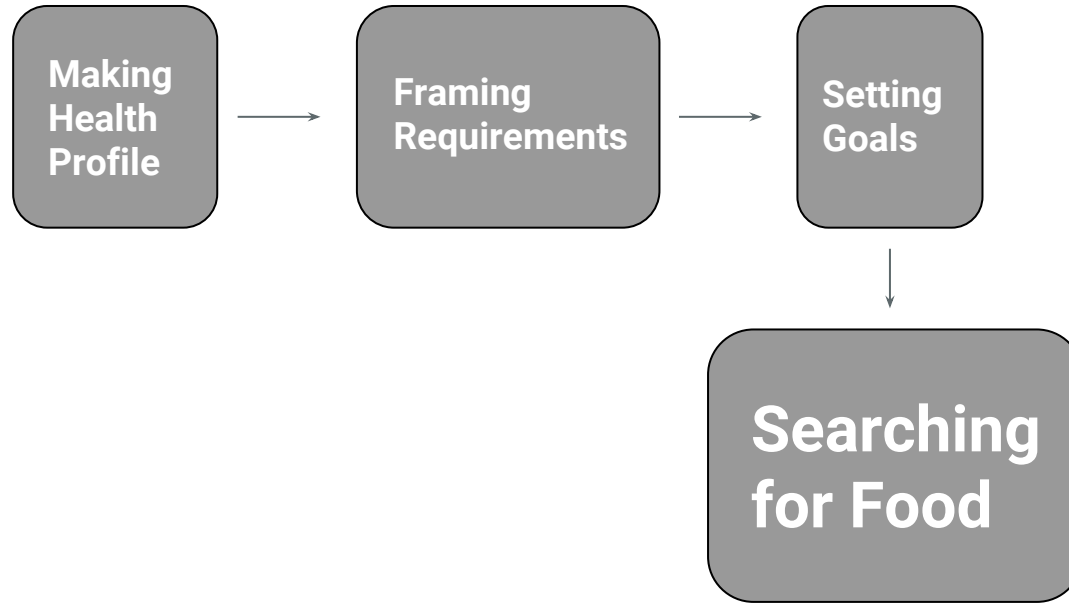
Concept Map

Health Finder



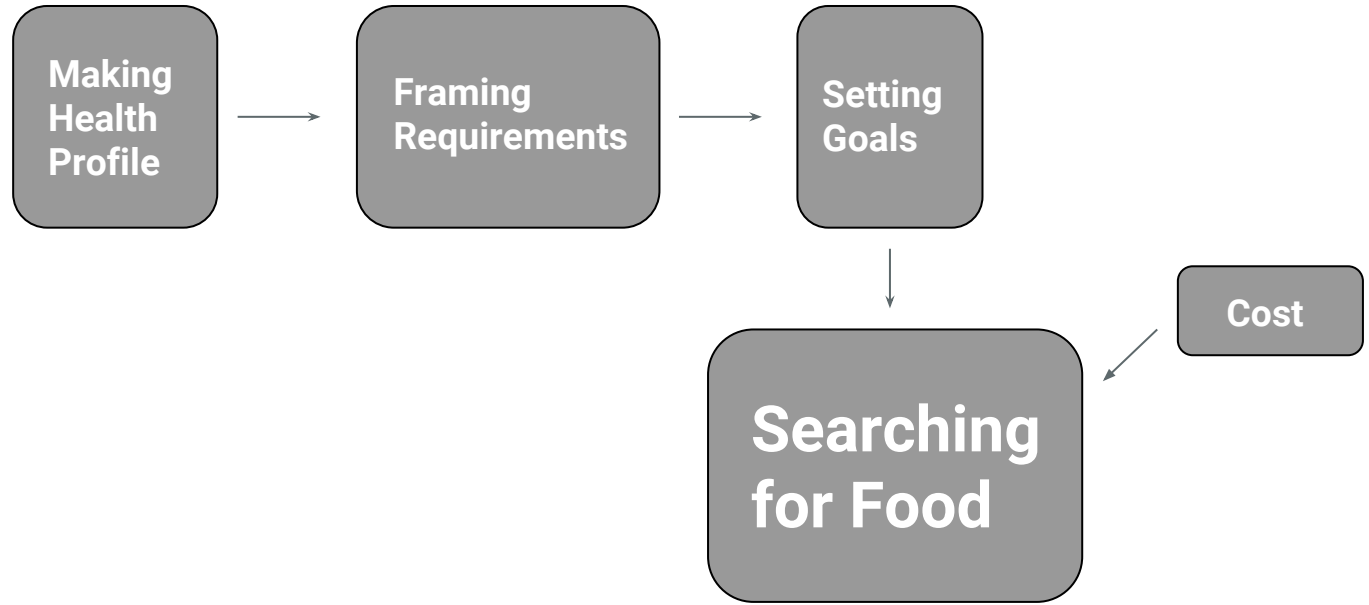
Concept Map

Health Finder



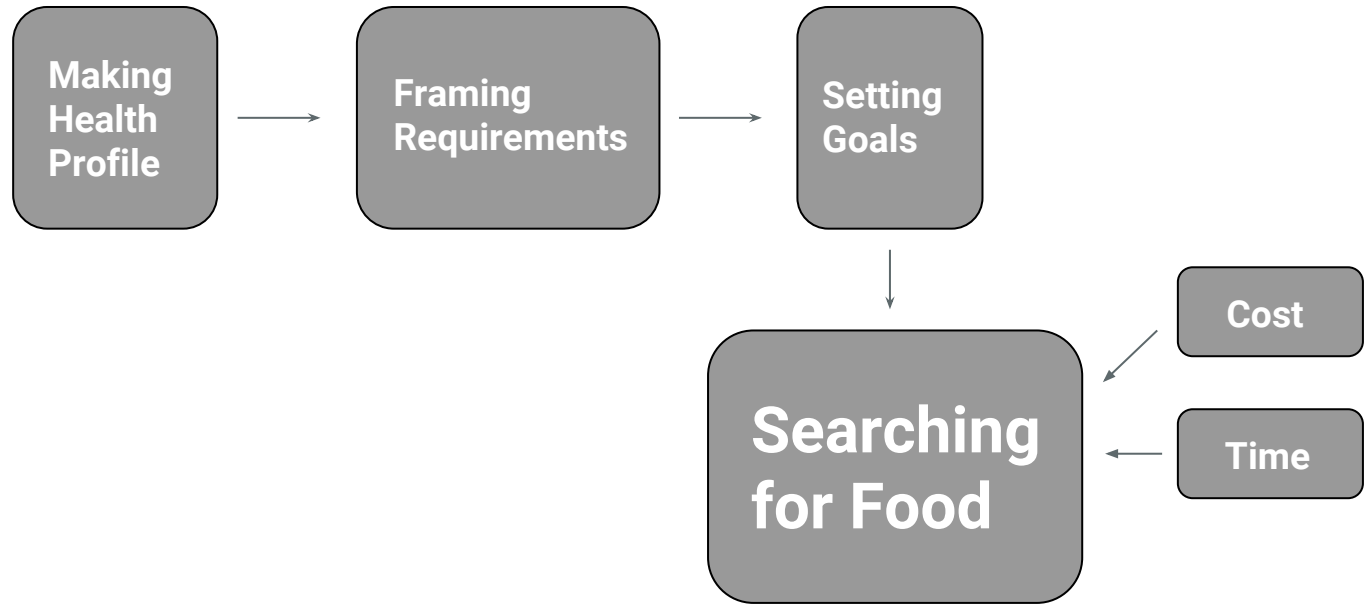
Concept Map

Health Finder



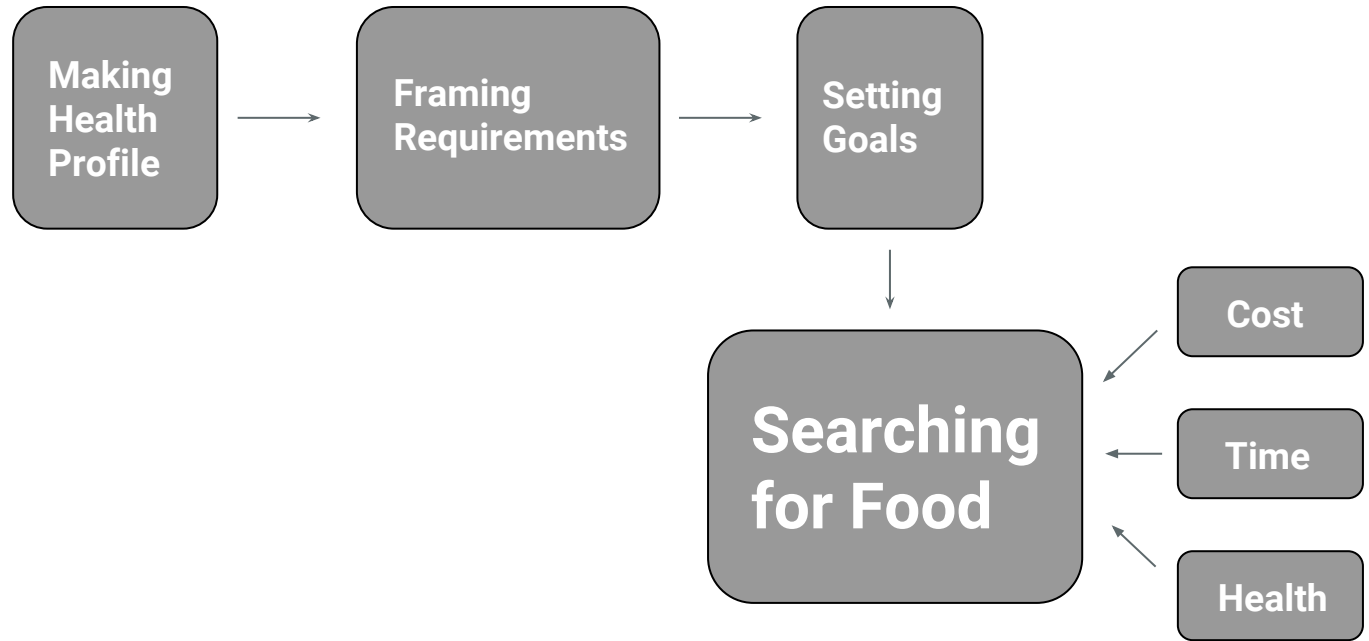
Concept Map

Health Finder



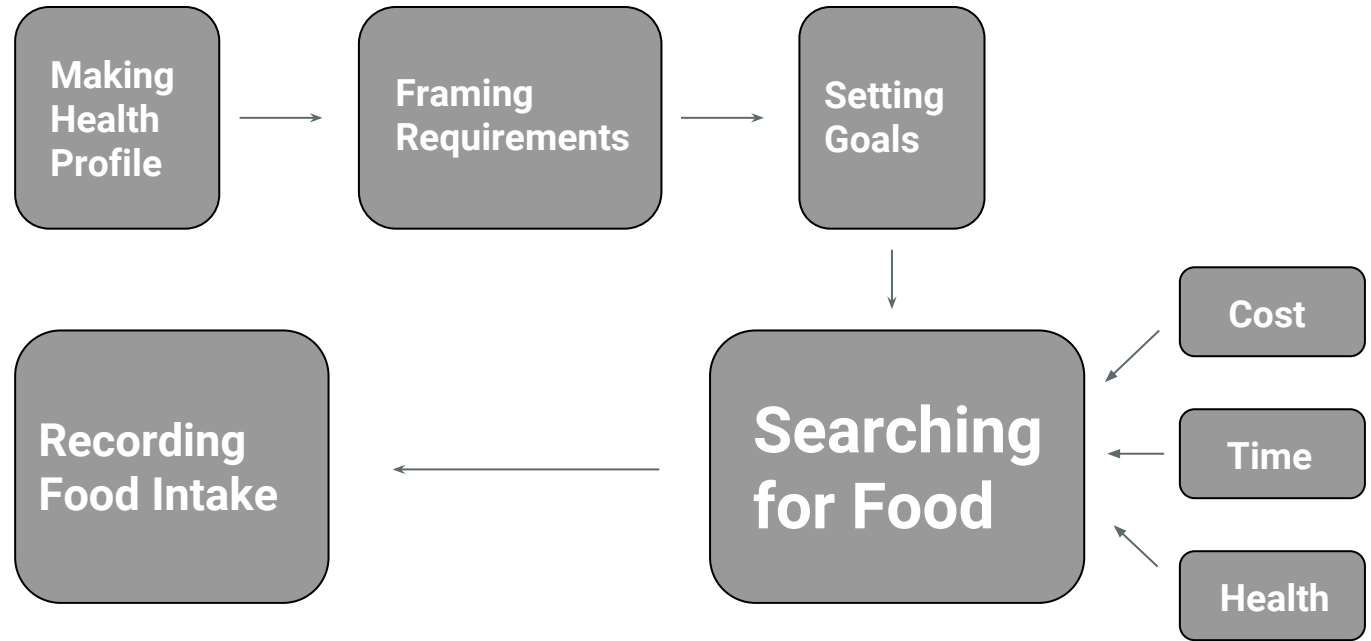
Concept Map

Health Finder



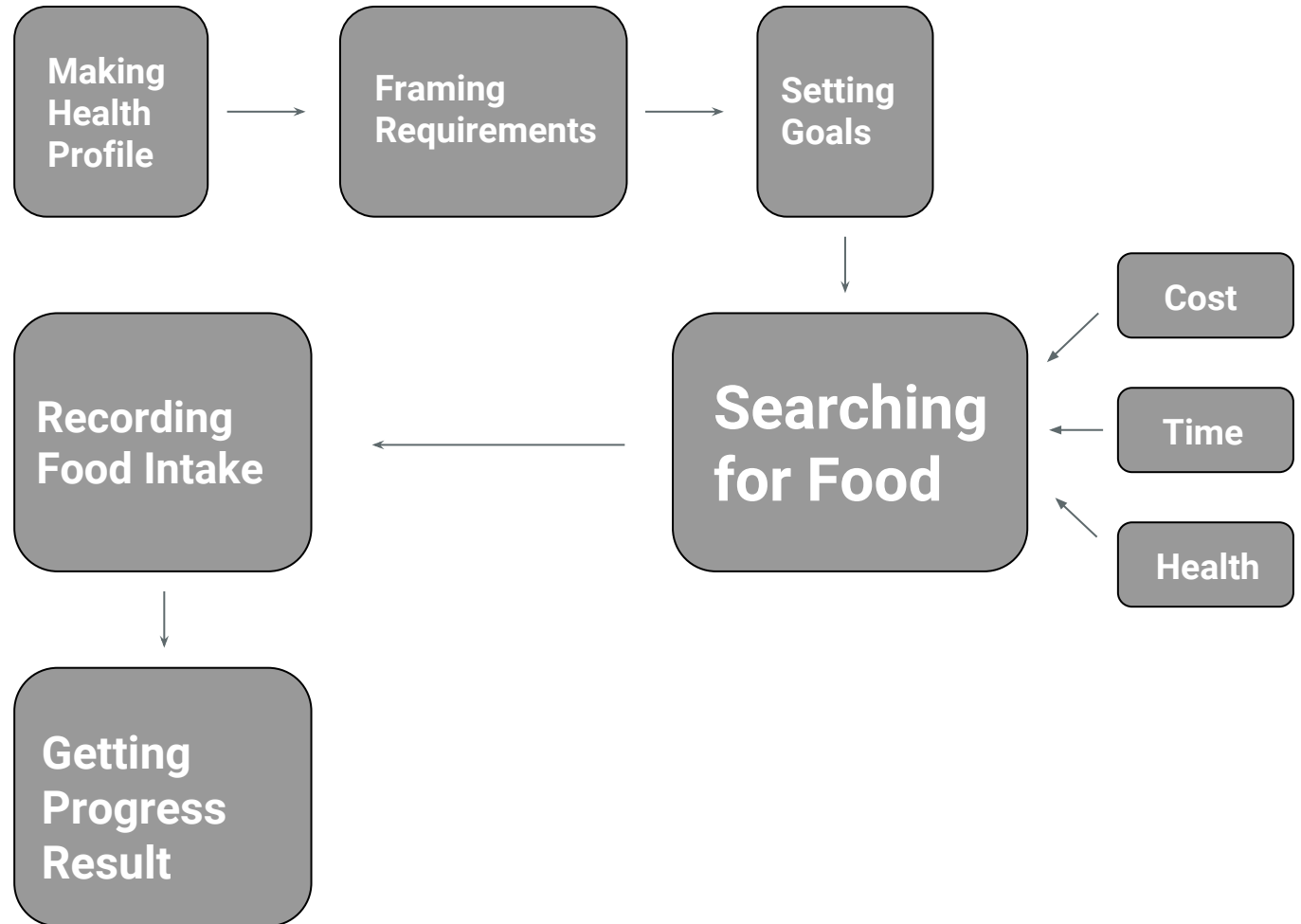
Concept Map

Health Finder



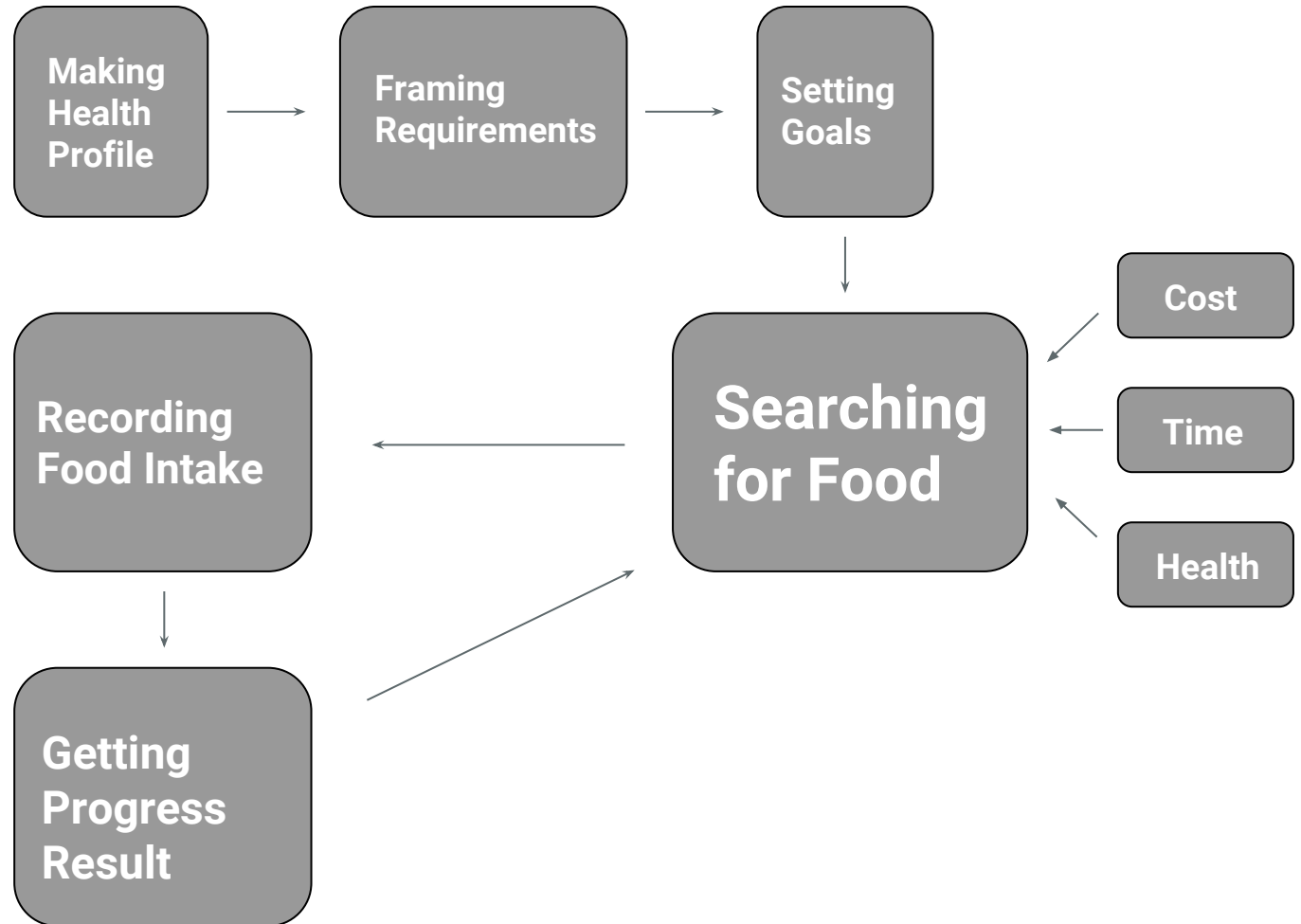
Concept Map

Health Finder



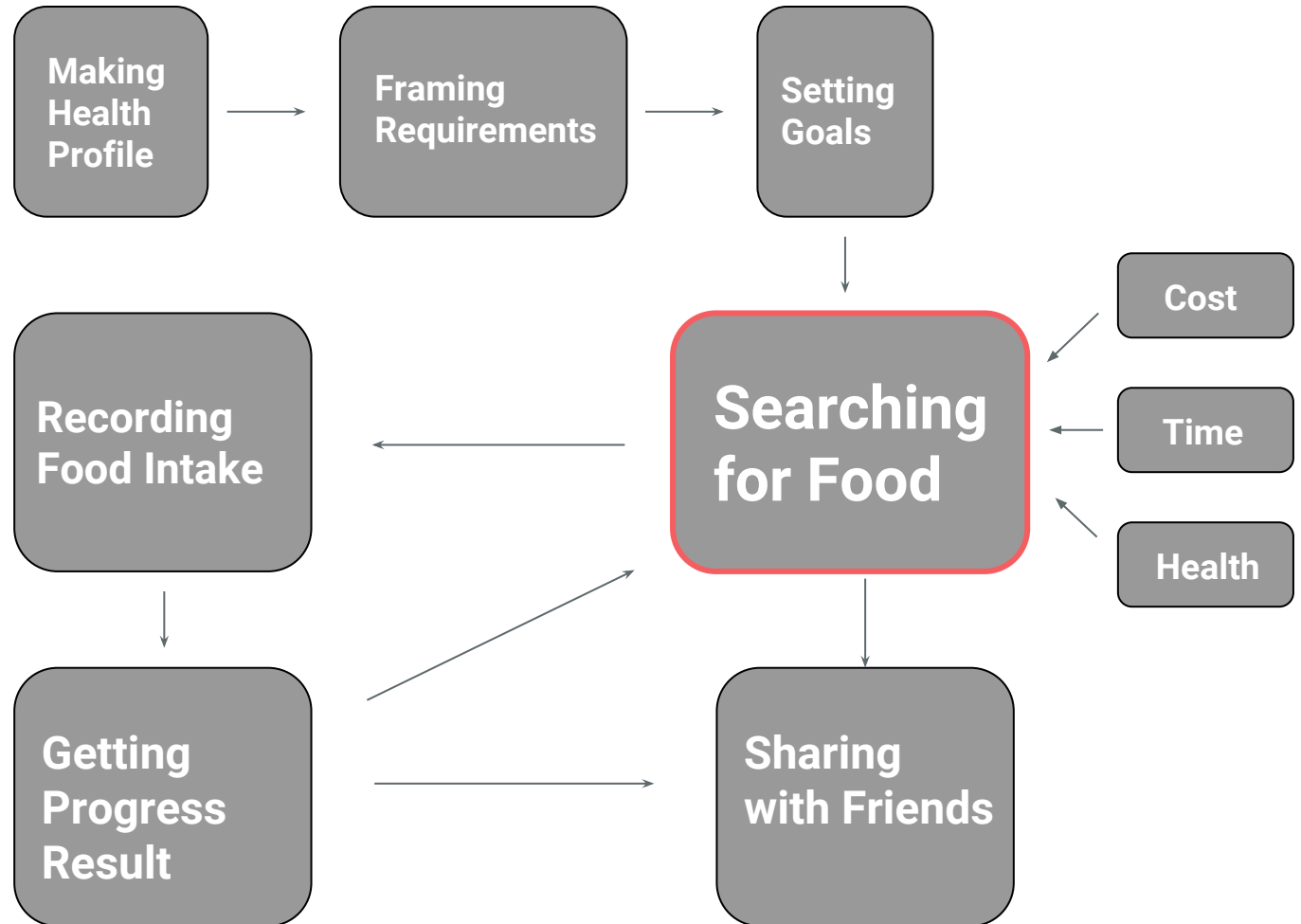
Concept Map

Health Finder

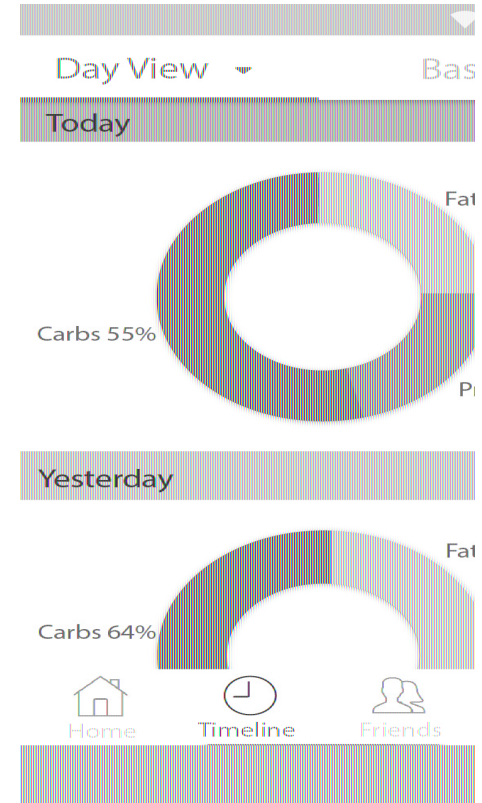
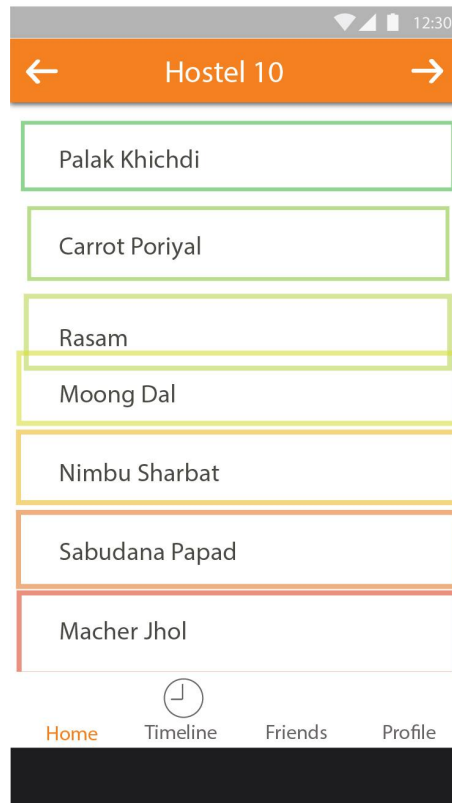
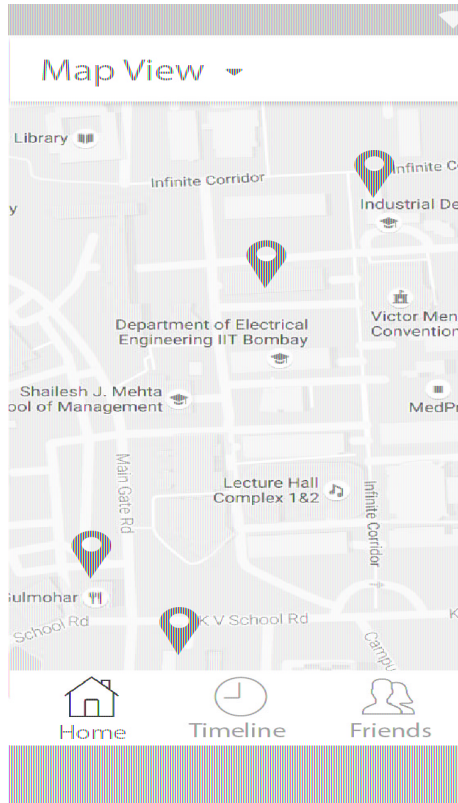


Concept Map

Health Finder



First Iteration



Issues

- The major issue was that people could not make sense of pie charts.
- The visual design did not let people realise if they had a healthy day or not.
- The social aspects of the app are not detailed so people could not make any sense of it, even though people did have an inclination towards exploring the option and ask questions regarding the same.



Health Finder

[health finder prototype](#)

healthfinder menu head

Evaluation

The design was tested for its relevance of menus.

- Four students were taken as the experimental group and three students as the control group.
 - The experiment group was sent the image of the designed menu during lunch for 3 days with each member getting a customized menu on the basis of their BMI.
 - The control group was sent the regularly listed menu image.
-

MEAL 1

Chana Dal

Rasam

Kadhi

Bhindi Fry

Buttermilk

Kadhai Paneer

Masala Rice

MEAL 2

Arhar Dal

Methi Matar Masala

Sambhar

Aaloo Gobhi

Curd

Lemon Rice

Mushroom Chilly

MEAL 3

Dal Fry

Gobhi Matar

Curd

Chole Masala

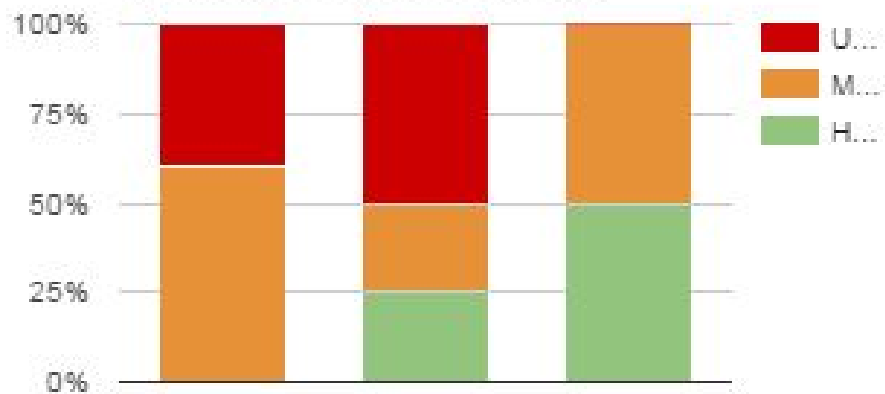
Mango Rasna

Veg Pulav

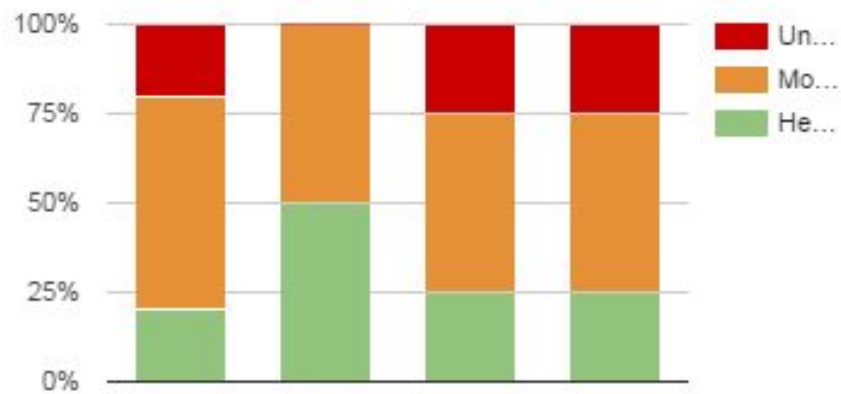
Puri

Mess Menus According to Healthiness

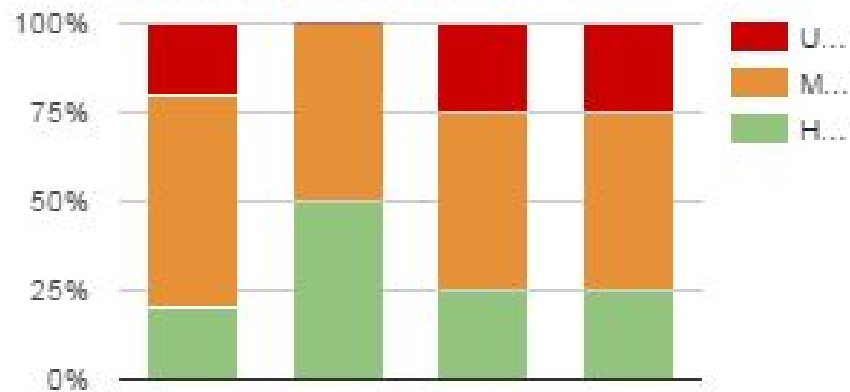
Meal 1, Control Group



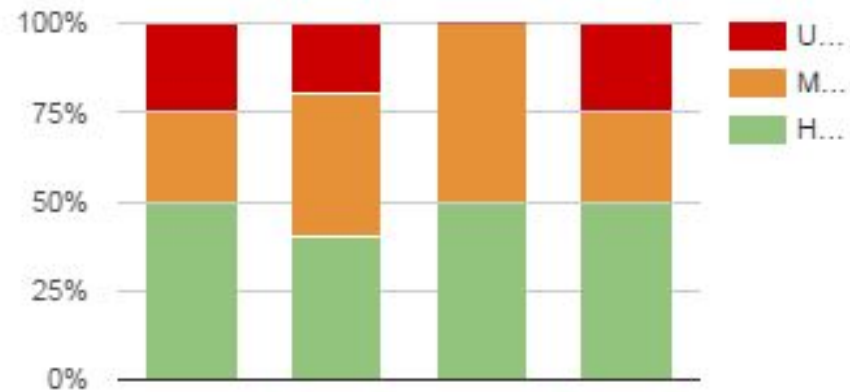
Meal 1, Experiment Group



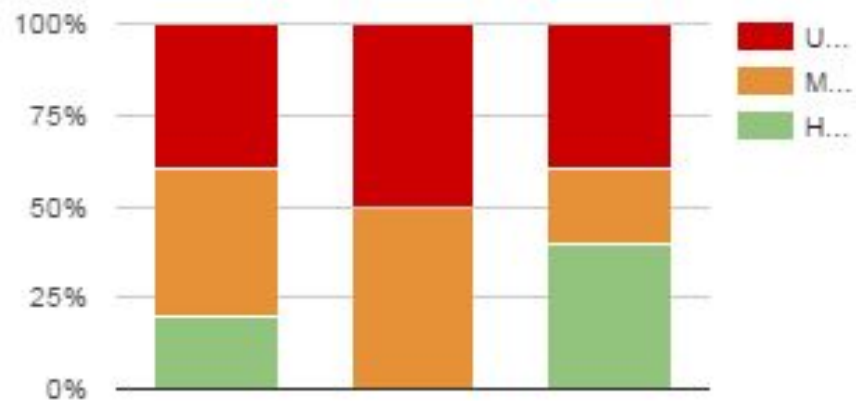
Meal 2, Control Group



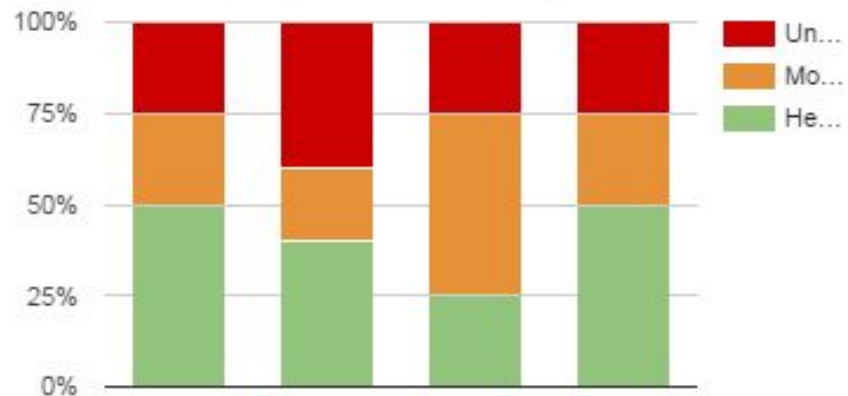
Meal 2, Experiment Group



Meal 3, Control Group



Meal 3, Experiment Group



Results & Insights

A Comparative Study of the two groups reveal positive results for the designed menu

- The Control Group has made erratic choices with no clear pattern in terms of choice of food.
 - The Experiment Group showed a clear inclination towards the “Orange Category” of food which is the moderate healthy group.
 - The *dals* , on featuring in the “Green Category” have been markedly consumed by the experiment group.
-

On being asked if the food suggestion affect the choice for the experiment group, all of the group members said that it did.

Experimentees said that they tried avoiding the food from the “red category”.

There was no pro active effort to eat from “green category” by half the experimentees.

What worked

- The clear division between “must have” & “don’t have” was found to be very useful in making healthier choices.
- The idea of looking at all menus without having to go to different hostel websites was found to be a good incentive.
- The option of sharing something interesting from the menu was received well.

What did not work

- The floating action button is on top: the intention a to make it look like a chat head; the heuristic evaluation revealed otherwise.
- The lack of quantifying the intake is affecting the accuracy.

My Learnings from the Project

How to Design an App

My first experience at designing an application from scratch: immense amount of learning, which still continues.

How not to do really bad visual design

I started off as a terrible visual designer. Hopefully I'm not bad at it anymore, if not good.

What is healthy?

I have turned more critical of food in the last semester. Hope the knowledge helps me get healthier, not just in terms of body weight, but also in terms of healthy physiology.