



# Calorie Analysis

## According to WHO

- Worldwide obesity has nearly tripled since 1975.
- In 2016, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 650 million were obese.
- 39% of adults aged 18 years and over were overweight in 2016, and 13% were obese.
- Most of the world's population live in countries where overweight and obesity kills more people than underweight.
- 39 million children under the age of 5 were overweight or obese in 2020.
- Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016.
- Obesity is preventable.


# Common health consequences of overweight and obesity

- Raised BMI is a major risk factor for noncommunicable diseases such as:
- cardiovascular diseases (mainly heart disease and stroke), which were the leading cause of death in 2012;
- diabetes;
- musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints);
- some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon).
- The risk for these noncommunicable diseases increases, with increases in BMI.
- Childhood obesity is associated with a higher chance of obesity, premature death and disability in adulthood. But in addition to increased future risks, obese children experience breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance and psychological effects


# How can overweight and obesity be reduced?

At the individual level, people can:

- limit energy intake from total fats and sugars;
- increase consumption of fruit and vegetables, as well as legumes, whole grains and nuts; and
- engage in regular physical activity (60 minutes a day for children and 150 minutes spread through the week for adults).



That's Where Calorie  
Counting app helps



Our **Calorie Analysis** is an Android app which  
can assist a person to calculate his/her daily  
calorie Consumption  
and  
achieve healthy weight

# Implemented Features

- **Calculate** daily consumed calories, user can also see his previous any other days consumed foods here
- **Google Sign in** to save users progress, user will not lose his data if he sign in
- Calculate recommended **daily calorie goal** by analysing gender, weight, lifestyle and purpose like weight maintain/loss/gain of the user
- know users **BMI** and what is standard bmi
- Know how much weight is **\*normal/overweight/underweight** for users height
- Know user **body fat percentage** which is based on users gender, height, age, weight
- Watch **weight history** and know is user progressing or not to users weight loss/gain goal
- Get **recent eaten foods** in **history** while adding food to **diary**
- Add users preferred **custom food** by setting their name , calories per servings.
- Four different categories for food-- **Main foods, Snacks, Desserts, Drinks**
- **Search** food items if the food list long. user don't need to scroll everything
- **Delete** or **update** weight, food or consumed food , if you think user has entered them by mistake.
- Watch other **users from around the world** about their progress, users list is sorted according to their weight lost value
- User can also use the app as **guest** if user wants to check the features without signing in

# Not Implemented Features

Food macros like how much carbs,protein, fat in each food item

Grabing Exercise data from other fitness apps like **Google fit** to match daily calorie goal



## Used Technologies

- **Android Studio** as **IDE** for developing android app
- **Java** as a Backend coding language
- **XML** to design user interface
- **Firebase** as database to contain users related data
- **Shared Preference** as simple storing functionality to store little data like storing users **user id** etc
- **Picasso** library dependency to get **Google account** user image

# Used Android Functionalities

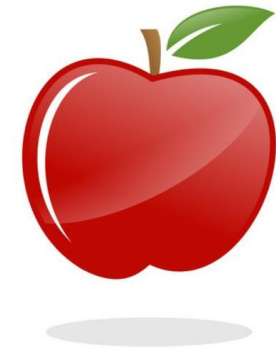
- **Fragments**, to contain user information or data in sub screen
- **FragmentManager**, to contain fragments
- **FragmentPagerAdapter**, to give multiple fragments access functionalities through **ViewPager** in single **Activity** or any other **Fragment** as **Child Fragment**.
- **Floating Action Button** , to give much smooth experience to user when clicking some main functionality from homescreen
- **Navigation Drawer**, to show different options to user by swiping from left to right in the home screen
- **Bottom NavigationView** , to provide click functionalities to move to other **Fragments** as well as to contain **Floating Action Button** which user can click to add weight or meal
- **LinearLayout, RelativeLayout, Coordinator Layout**, to hold other views
- **Button, TextView, ImageView** , to show texts , buttons, images
- **Listview**, to show list items provided by **ArrayList**
- **ViewPager, TabLayout** , to give swipe functionalities for moving from one **Fragment** to another and showing **Tabs**
- **BaseAdapter**, to smoothly handle list items to show, it uses small number of views to show any number of items in the list. Its optimization gives much free memory to user.
- **OnClickListener interface** to listen to click events of views
- **SearchView**, to provide **search** functionality in **Listview** , search results are based on users **typed** characters in the **search box**
- **Menu**, to provide some functionality in the **Action Bar**

# Screenshots of "Calorie Analysis" app

# Opening Screen

Here, bottom green progress lasts for approximately 1.3 seconds. It starts from left side and ends in right side.

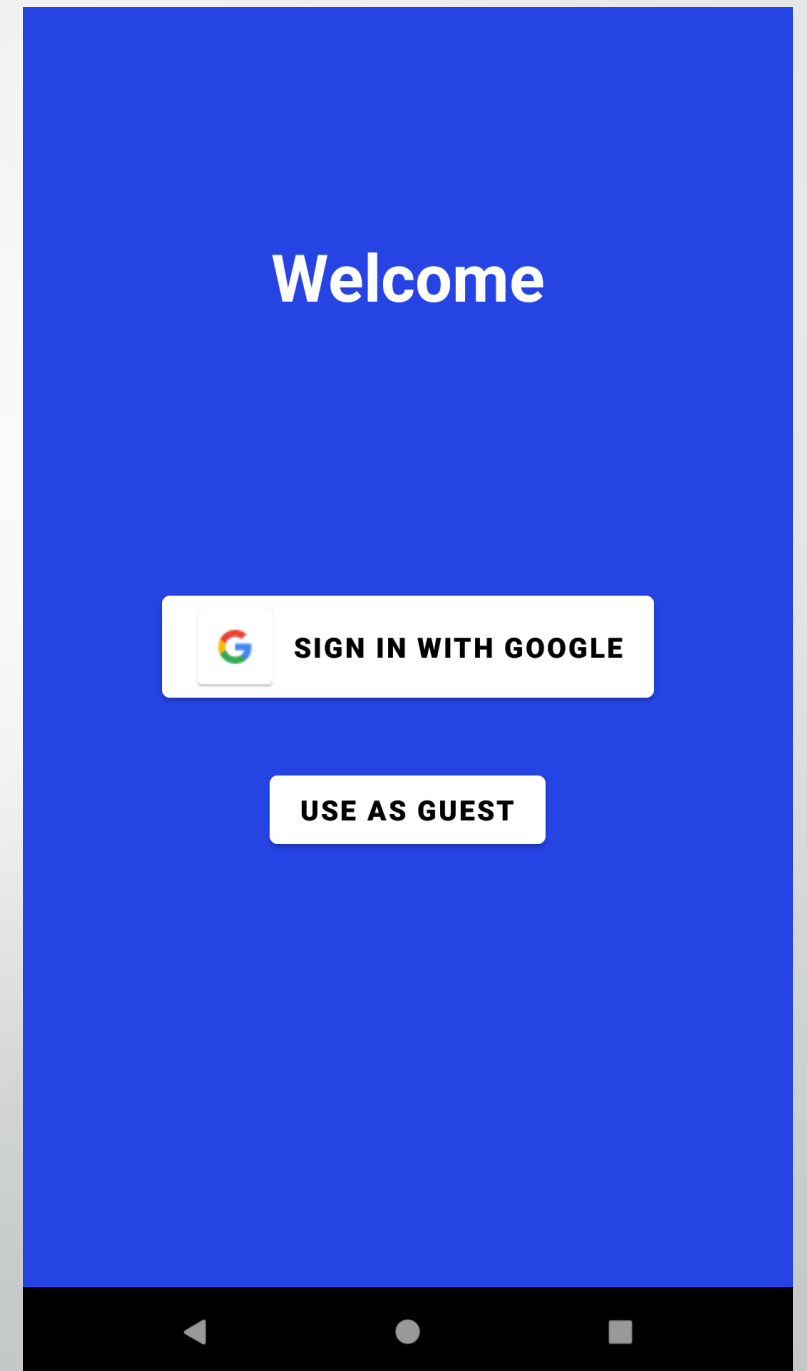
## Calorie Analysis



# Sign in Screen

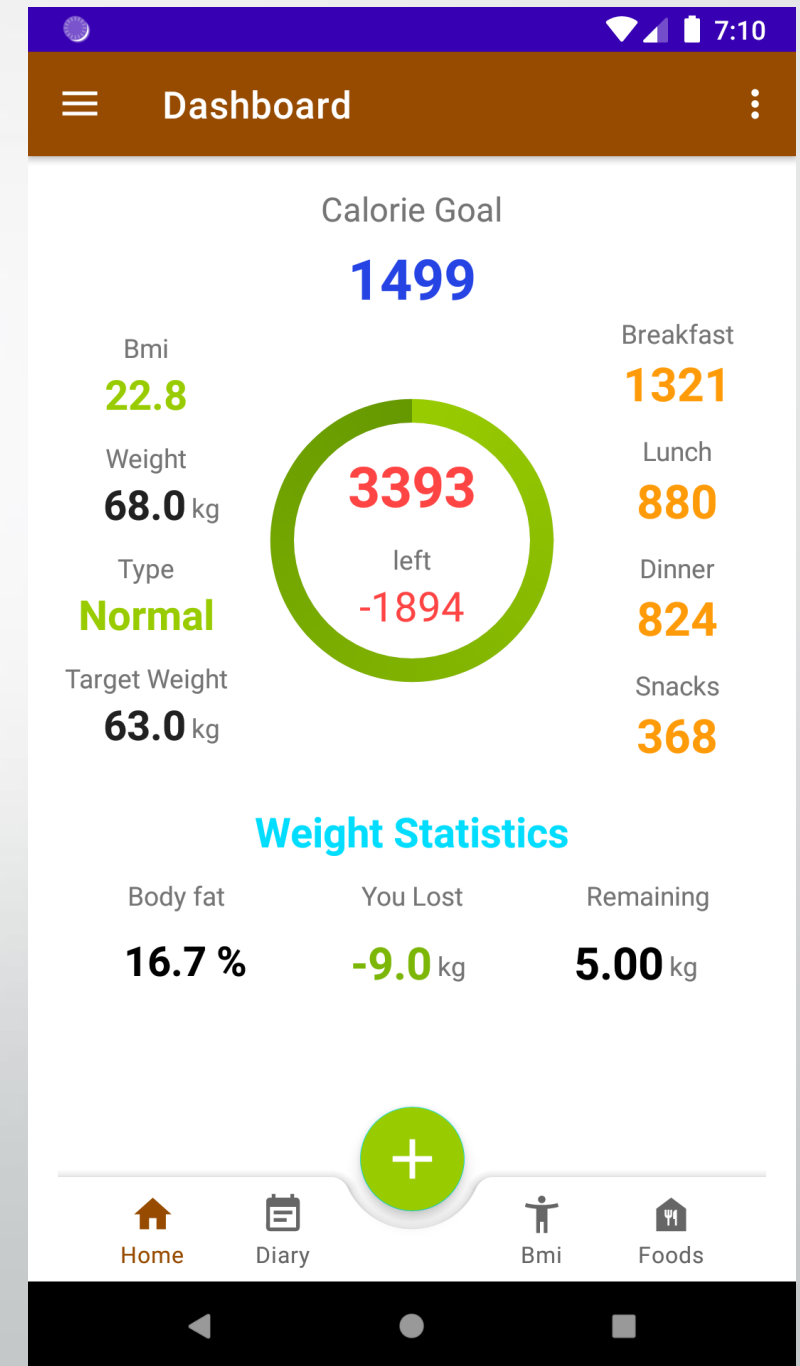
User can sign in with **Google** or use the app as guest.

Google sign in will keep users data saved in online , so user will not loss his progress if device lost or app get uninstalled



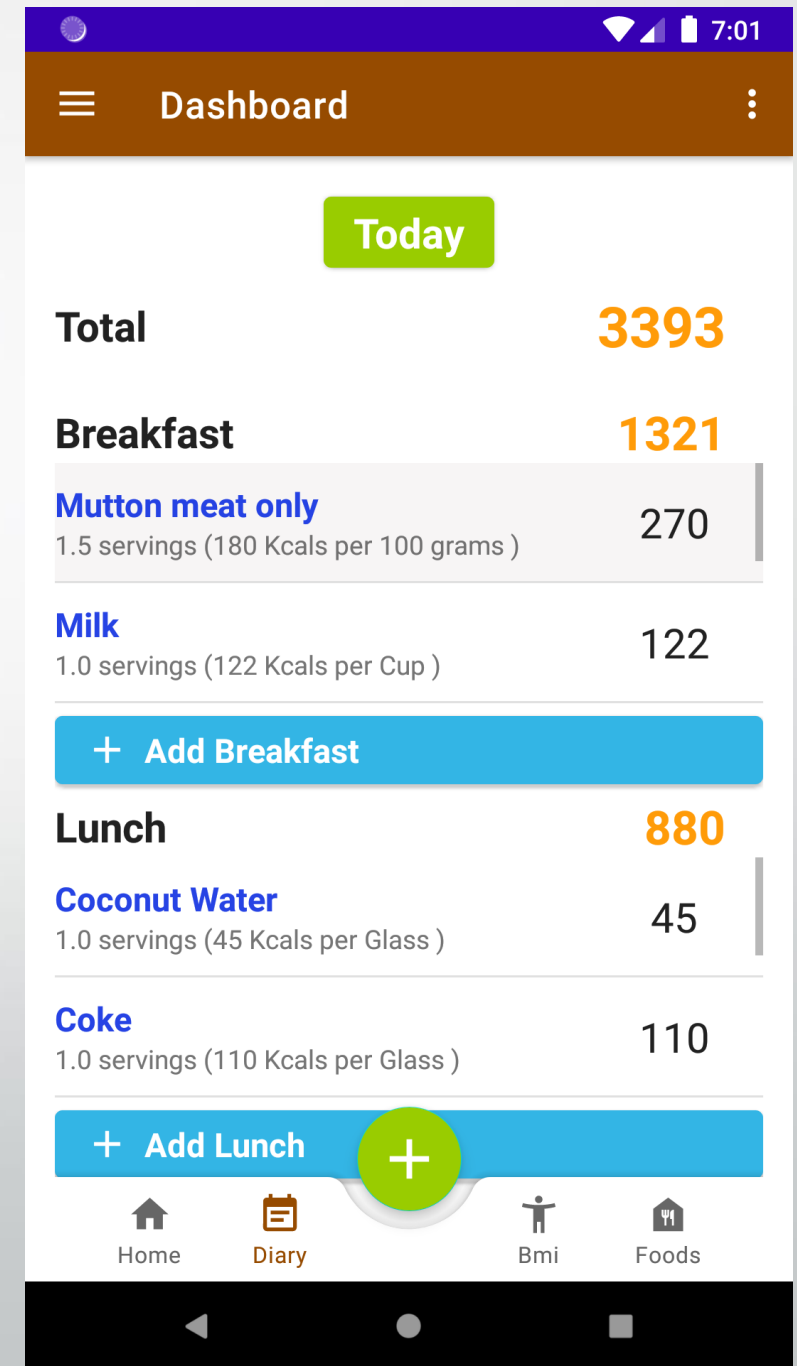
# Dashboard Home

This shows summary of other informations like total consumed calorie, daily calorie goal, bmi, body type, body fat percentage etc



# Dashboard Diary

This is diary of consumed food by user of a specific day, user can delete any food entry here or edit that also.

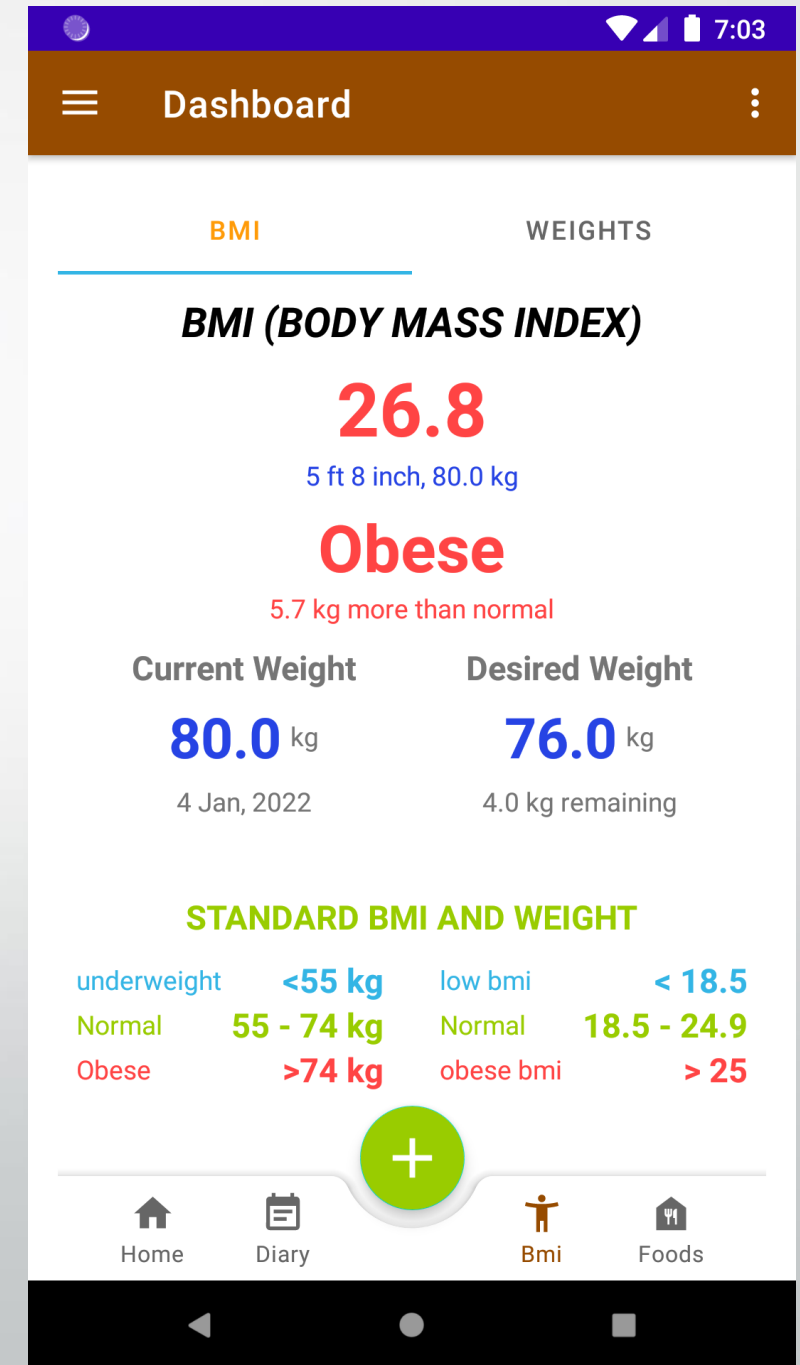


# Dashboard

## Bmi

This screen shows users bmi in detail.

It shows how much weight is normal/underweight/overweight for his height. It also shows how much weight is more or less than normal

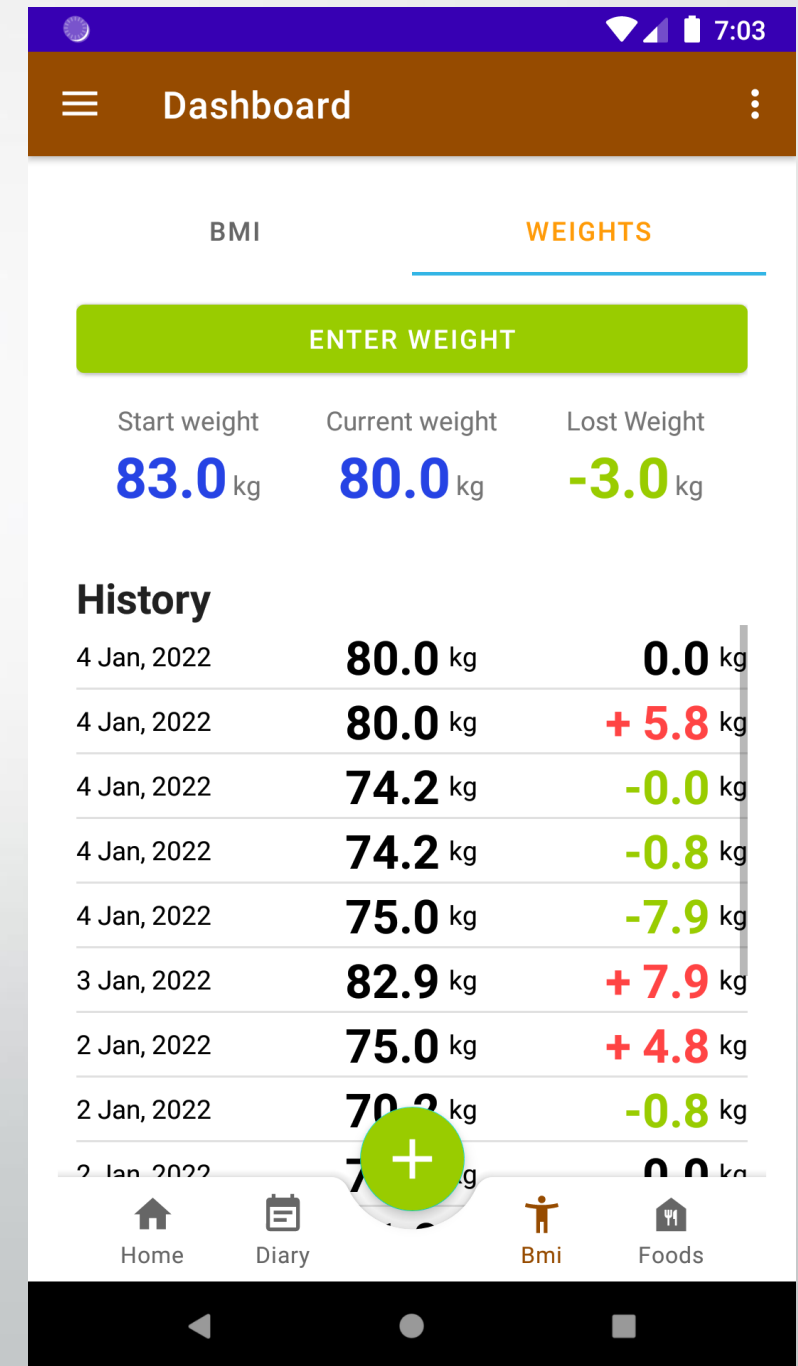




# Dashboard

## Weights

This screen shows previously entered weight by user. Any entry can be edited or deleted. If a weight is more than previous weight, then it highlights the **difference** with red color, or if less than previous weight, it highlights with green color. And if same, it highlights with black color

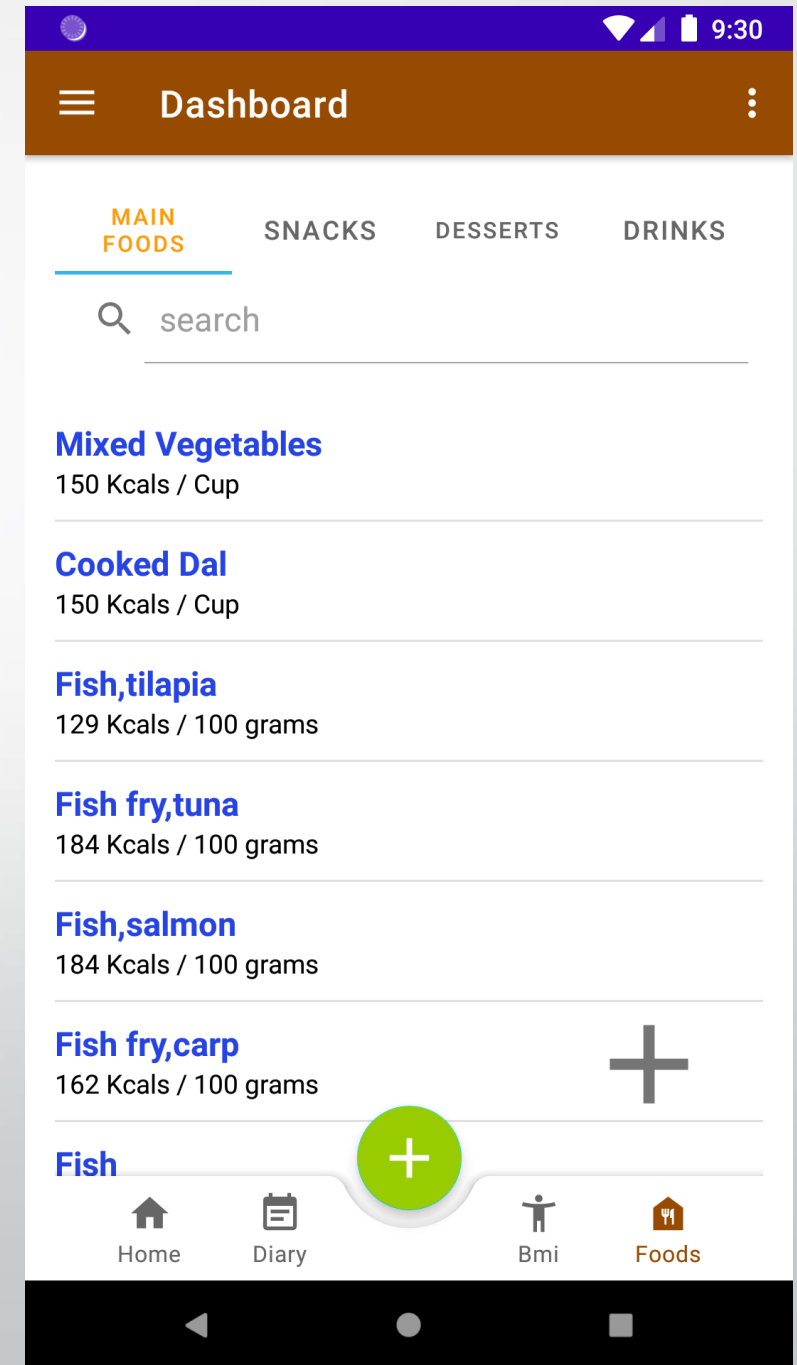


# Dashboard

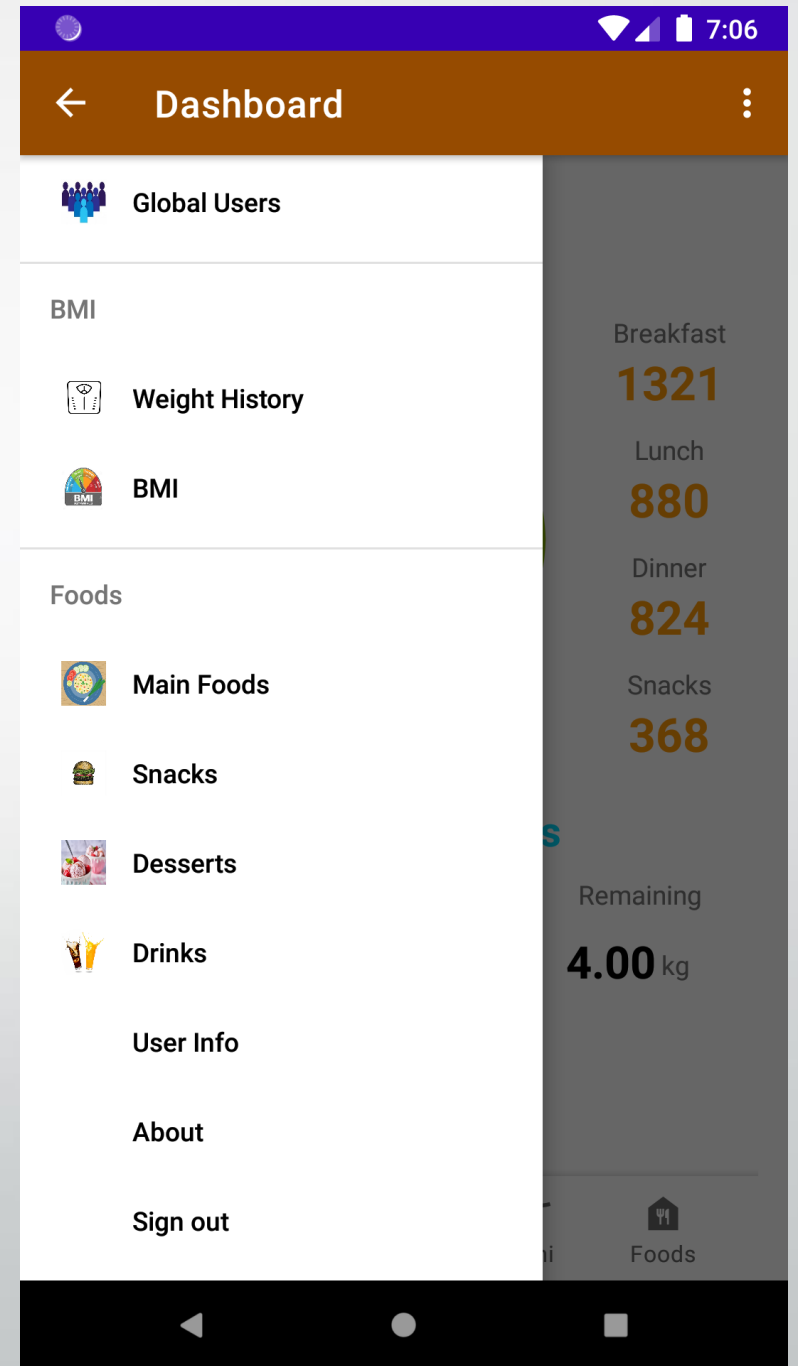
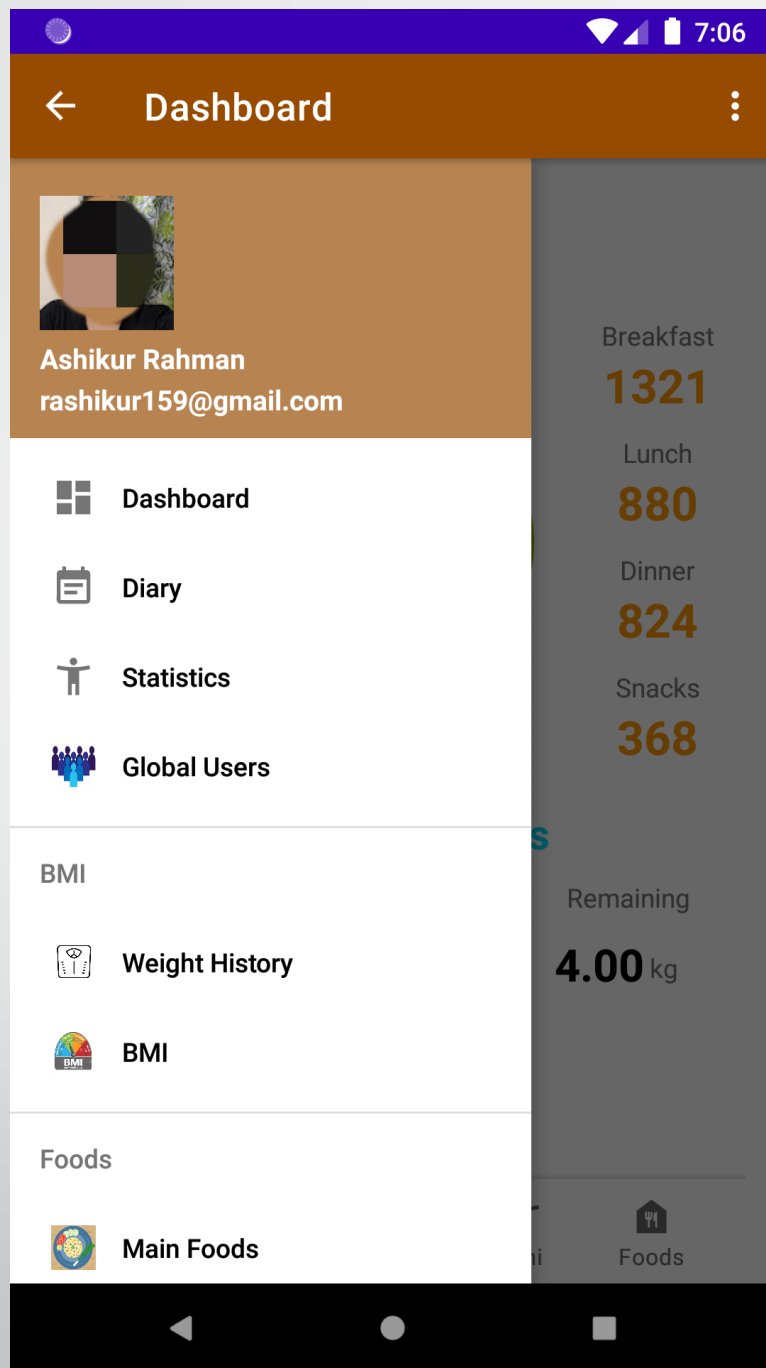
## Foods of four categories

Any food items can be deleted or edited.

User can also add his own food by pressing plus button situated in the right bottom screen



# Navigation Drawer

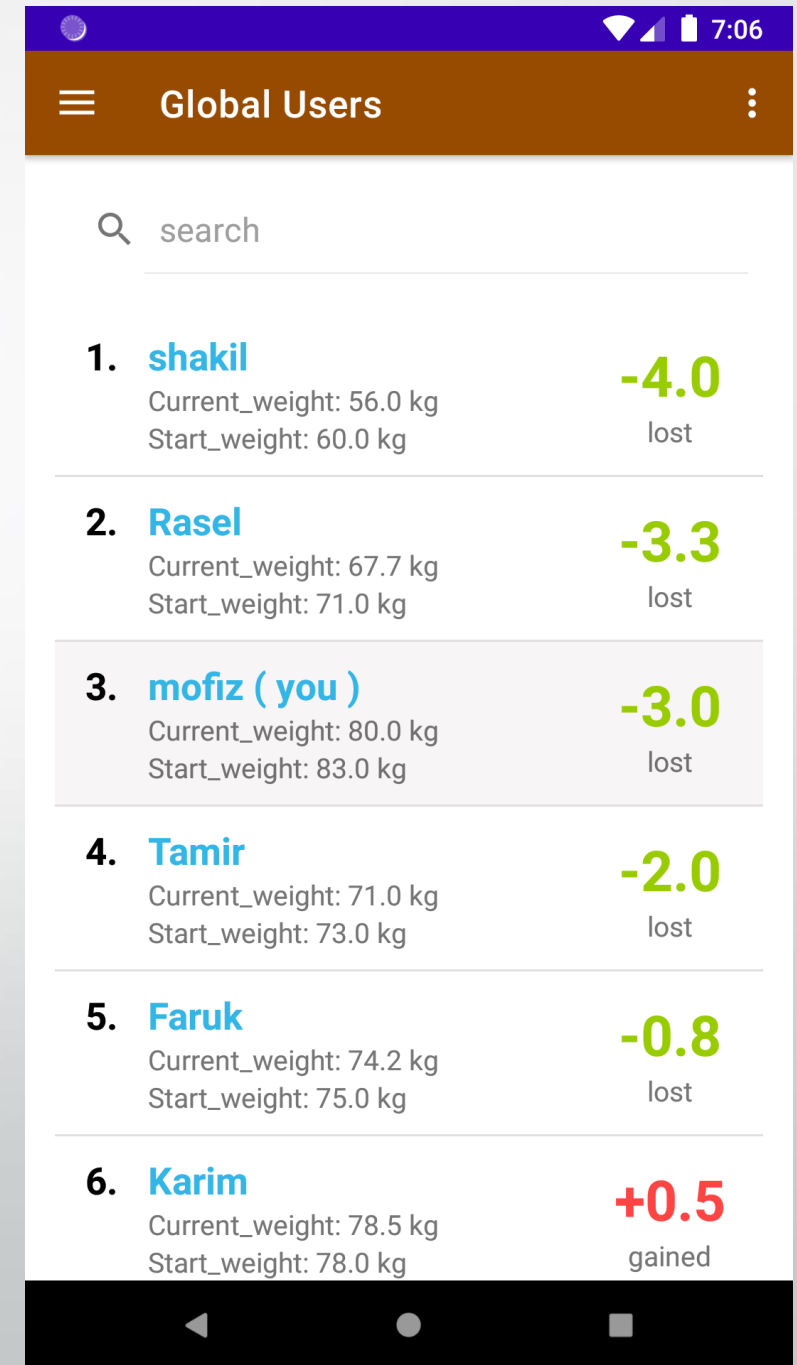


# Global Users

Here, all users general informations like current weight, lost weight will appear.

Users will be sorted by their lost weight.

That means, the user which lost more weight will come first.

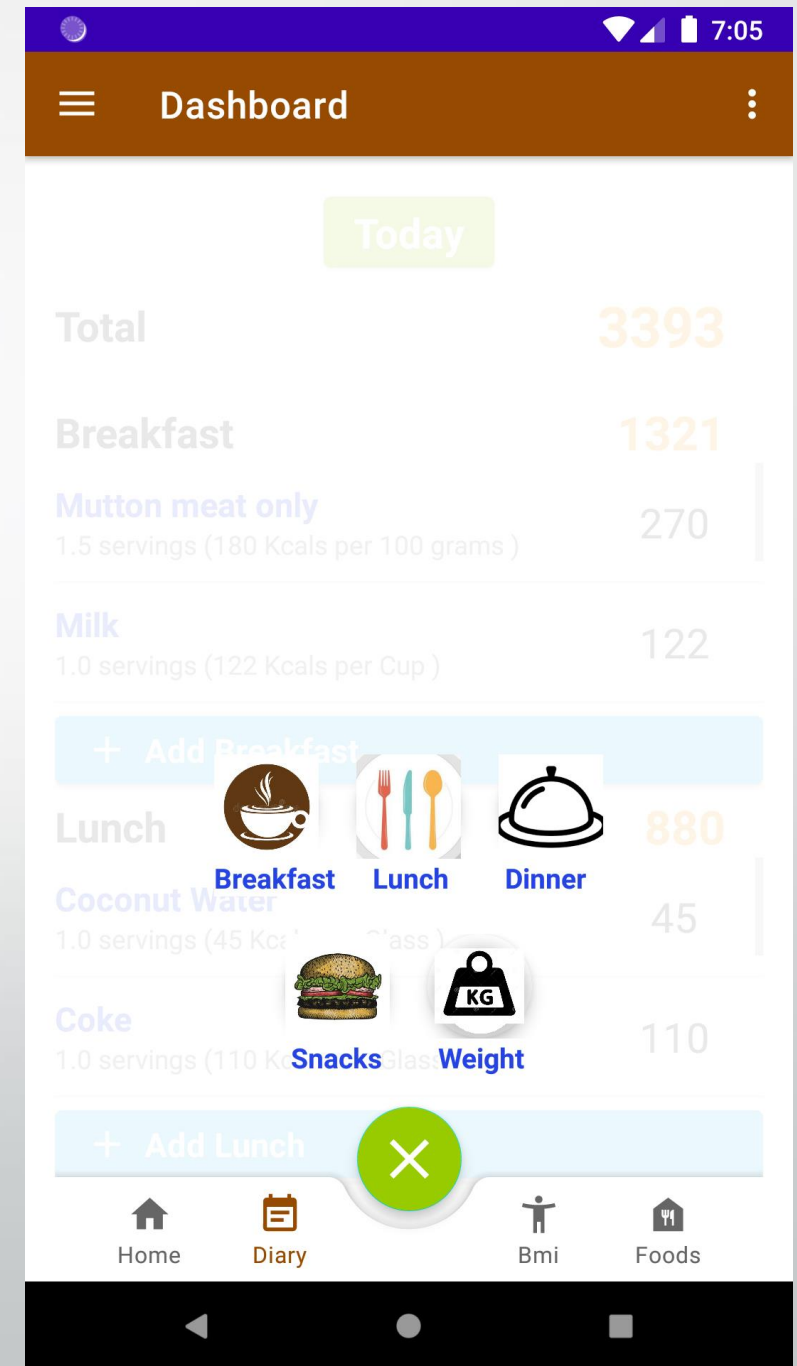


The image shows a mobile application interface for 'Global Users'. At the top, there is a blue header bar with a hamburger menu icon on the left, the title 'Global Users' in the center, and a three-dot menu icon on the right. Below the header is a white search bar with a magnifying glass icon and the placeholder text 'search'. The main content area displays a list of six users, each with a rank number, a name, current and start weights, and a weight change value. The users are sorted by the amount of weight lost, with the most weight lost at the top. The third user, 'mofiz ( you )', is highlighted with a light gray background. The bottom of the screen features a black navigation bar with standard Android icons: a back arrow, a home circle, and a recent apps square.

	search	
1.	<b>shakil</b> Current_weight: 56.0 kg Start_weight: 60.0 kg	<b>-4.0</b> lost
2.	<b>Rasel</b> Current_weight: 67.7 kg Start_weight: 71.0 kg	<b>-3.3</b> lost
3.	<b>mofiz ( you )</b> Current_weight: 80.0 kg Start_weight: 83.0 kg	<b>-3.0</b> lost
4.	<b>Tamir</b> Current_weight: 71.0 kg Start_weight: 73.0 kg	<b>-2.0</b> lost
5.	<b>Faruk</b> Current_weight: 74.2 kg Start_weight: 75.0 kg	<b>-0.8</b> lost
6.	<b>Karim</b> Current_weight: 78.5 kg Start_weight: 78.0 kg	<b>+0.5</b> gained

Add meal or weight by  
plus button in  
dashboard

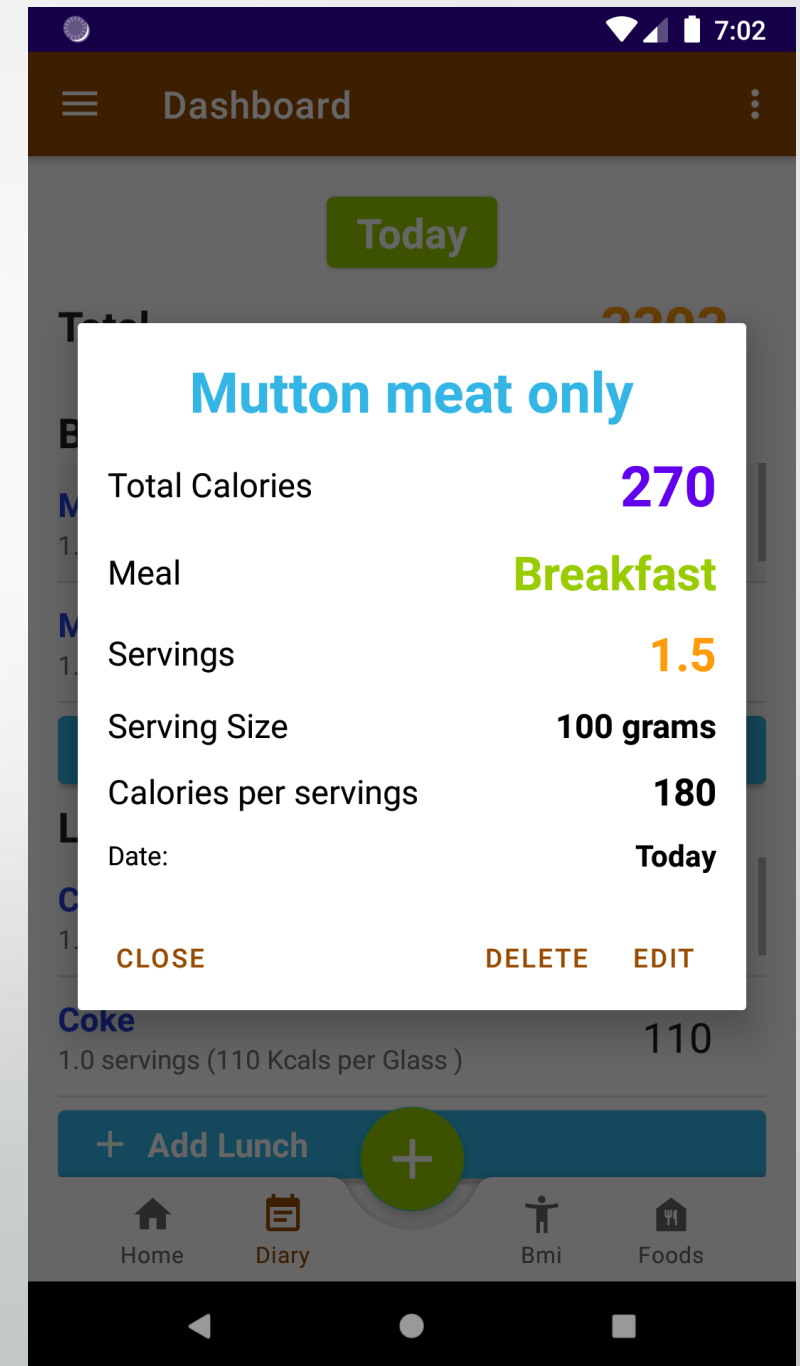
Pressing the **plus button** will make  
screen little unclear and show the  
options.



# Consumed food info After click in diary

Users can edit or delete any entry here.

He can change food quantity, meal type and date.



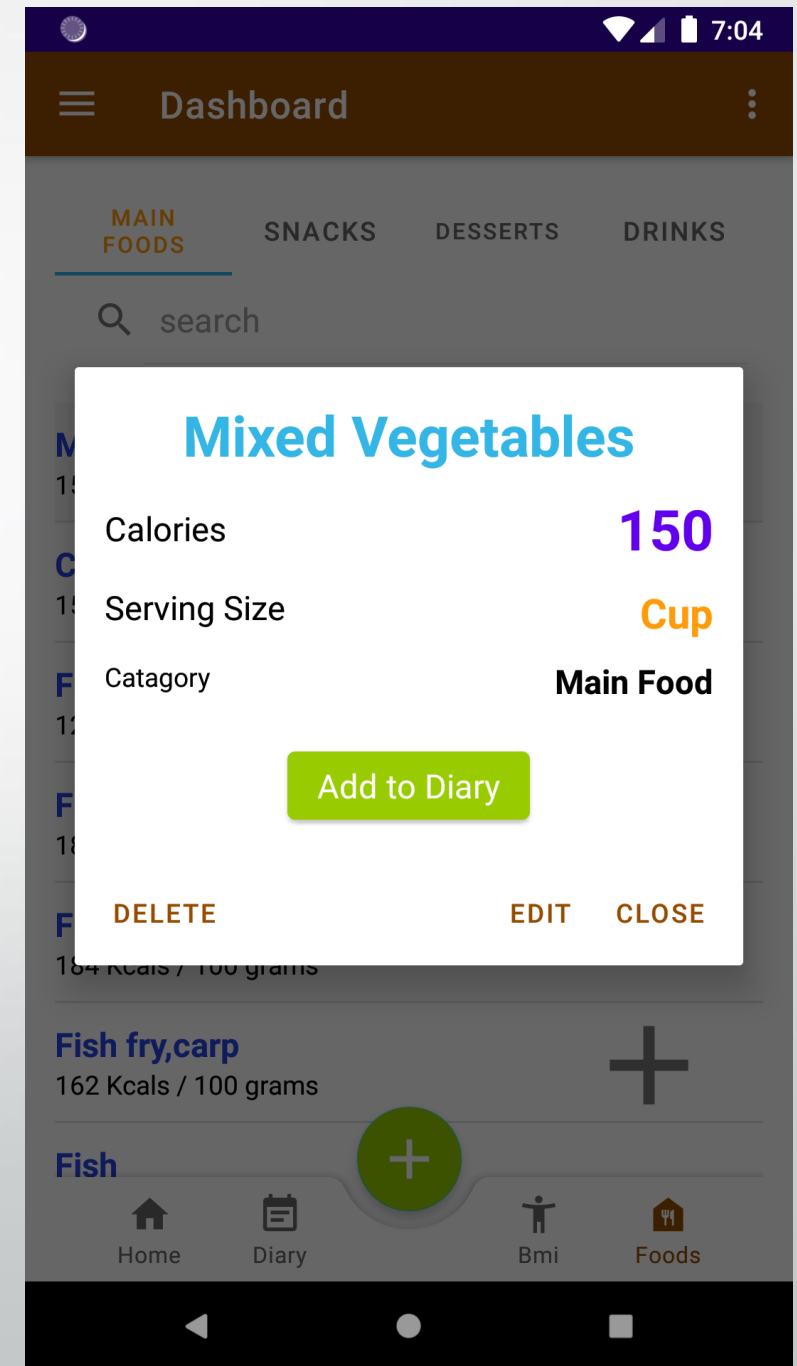
# Food info

## After click in foods

Users can edit food or delete it.

He can change unit type and calories per servings here.

He can also add it to diary .



Add new food

Dashboard

MAIN FOODS SNACKS DESSERTS DRINKS

search

Mixed Vegetables

Name  
**Tehari**

calories  
195

per Cup

CANCEL ADD

Fish,salmon  
184 Kcals / 100 grams

Fish fry,carp  
162 Kcals / 100 grams

Fish

Home Diary Bmi Foods

Dashboard

MAIN FOODS SNACKS DESSERTS DRINKS

search

Mixed Vegetables

Name  
**Tehari**

calories  
195

per Cup

100 grams

1 grams

Piece

Slice

Glass

CANCEL ADD

Fish,salmon  
184 Kcals / 100 grams

Fish fry,carp  
162 Kcals / 100 grams

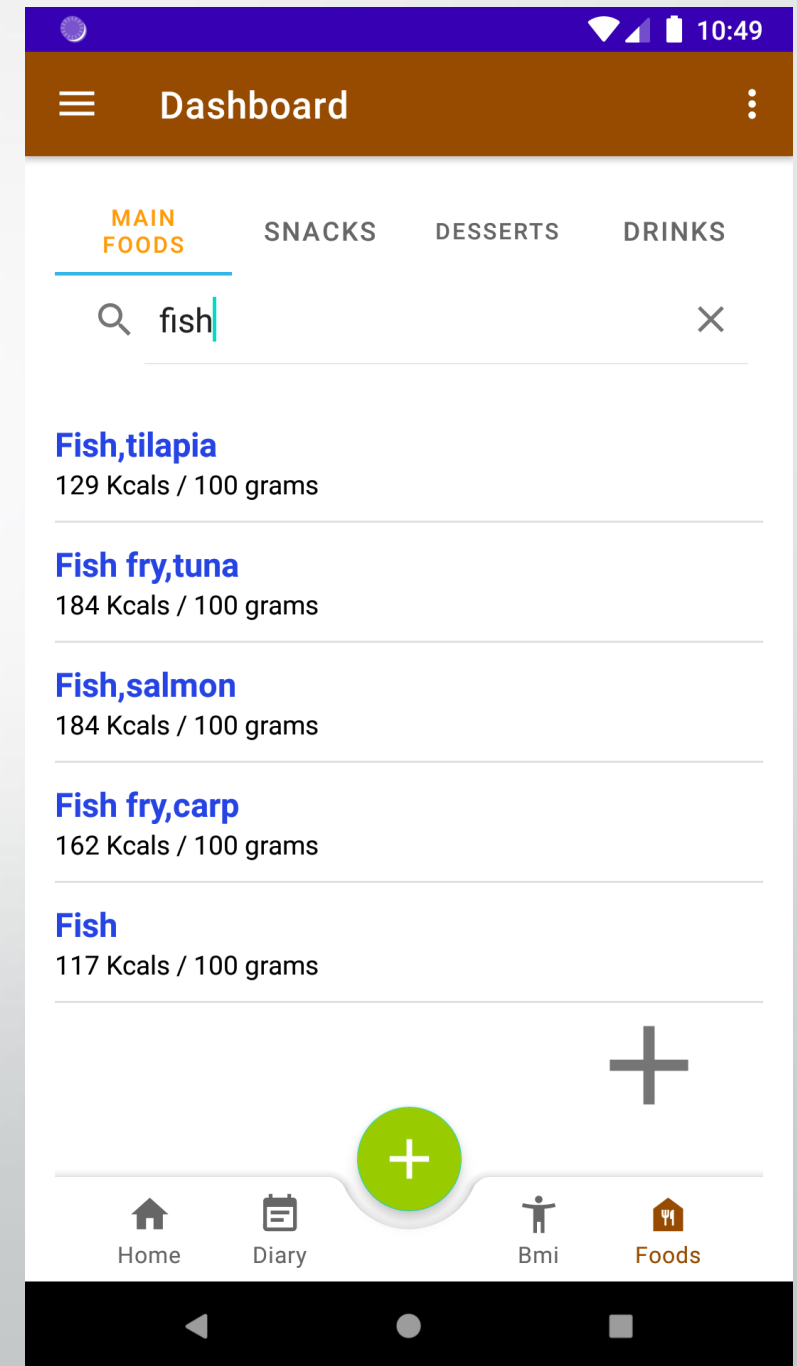
Fish

Home Diary Bmi Foods



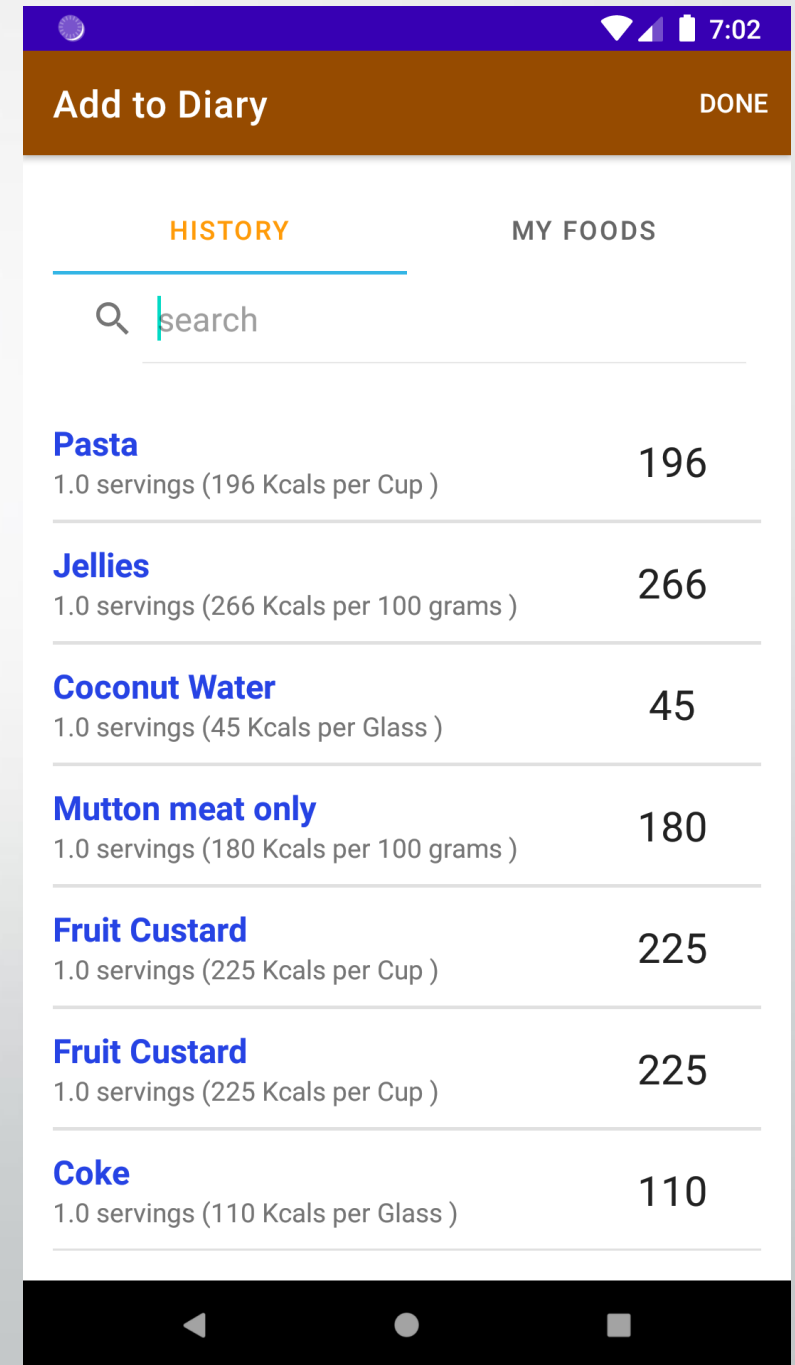
# Search Foods

Users can search for food which has been saved here.



# Recent eaten Foods

While adding food to diary, this screen appears. It shows previously eaten foods. It also shows the four food catagories . Users can find it by swiping



# Edit User Informations

Users can edit informations of his body here.

enter your name  
mofiz

Gender **Male** Female

Height  
5 ft 8 inch

Start Weight 83.0 kg

Current Weight 80.0 kg

Desired Weight 76.0 kg

Date Of Birth 1 Jan, 1998

Daily Calorie Goal  
calories 1499 **Recommend**

Get Recommended daily calorie goal based on gender, weight, lifestyle and weight loss/gain/maintain purpose

Average person needs 2000 Calories per day to maintain weight.

Date Of Birth

Gender ☒ MALE ☐ FEMALE

**Life Style**

☒ Sedentary ☐ Lightly Active

Little or no Exercise light exercise or sports 1-3 days/week

☐ Moderately Active ☐ Very Active

moderate exercise/sports 3-5 days/week hard exercise/sports 6-7 days a week

**You want to**

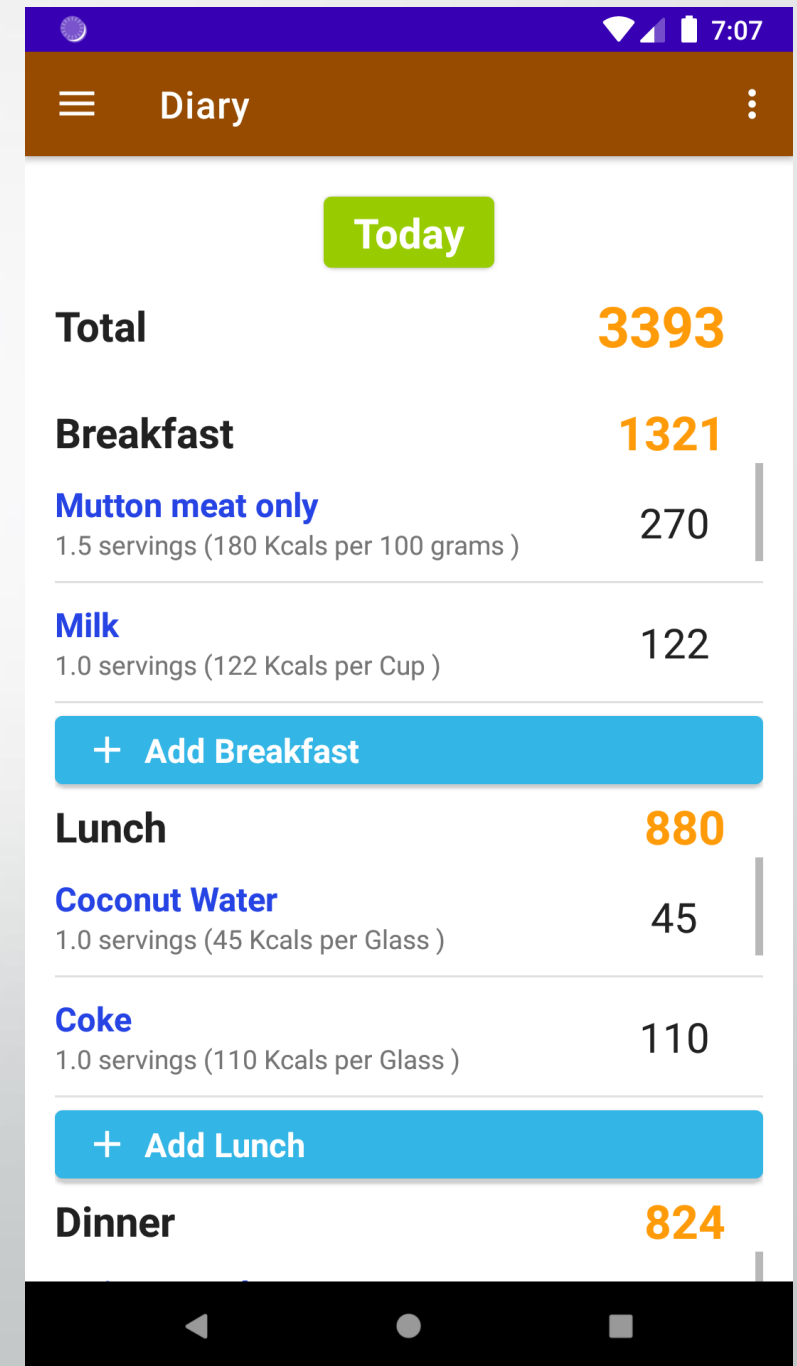
☒ Maintain Weight ☐ Loss Weight ☐ Gain Weight

☐ Half kg/week ☐ 1 kg/week

CANCEL RECOMMEND

Watch any screen in **bigger** view by selecting it from navigation drawer

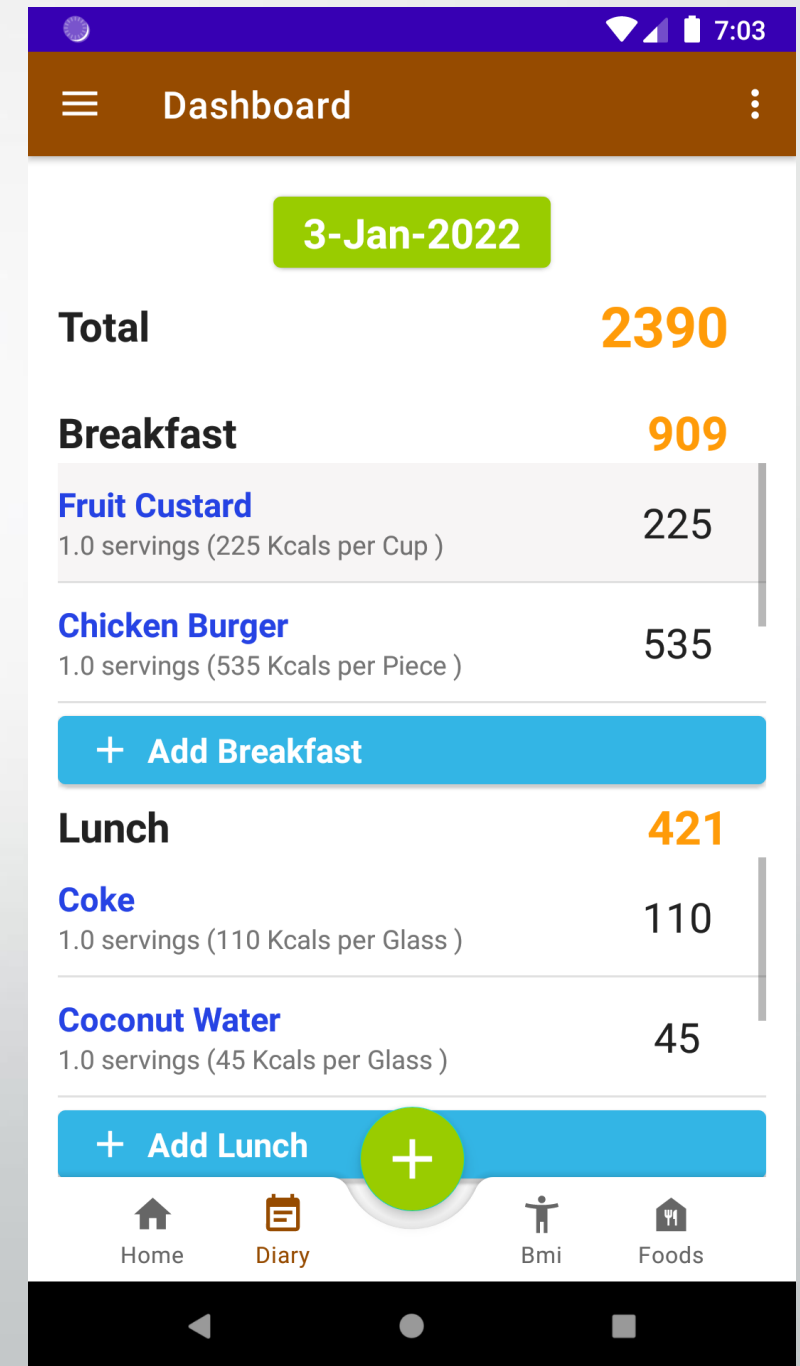
Usually dashboard doesn't show in bigger screen, because **the bottom navigation** view takes some space in the bottom.



Today	
Total	3393
Breakfast	1321
Mutton meat only 1.5 servings (180 Kcal per 100 grams )	270
Milk 1.0 servings (122 Kcal per Cup )	122
+ Add Breakfast	
Lunch	880
Coconut Water 1.0 servings (45 Kcal per Glass )	45
Coke 1.0 servings (110 Kcal per Glass )	110
+ Add Lunch	
Dinner	824

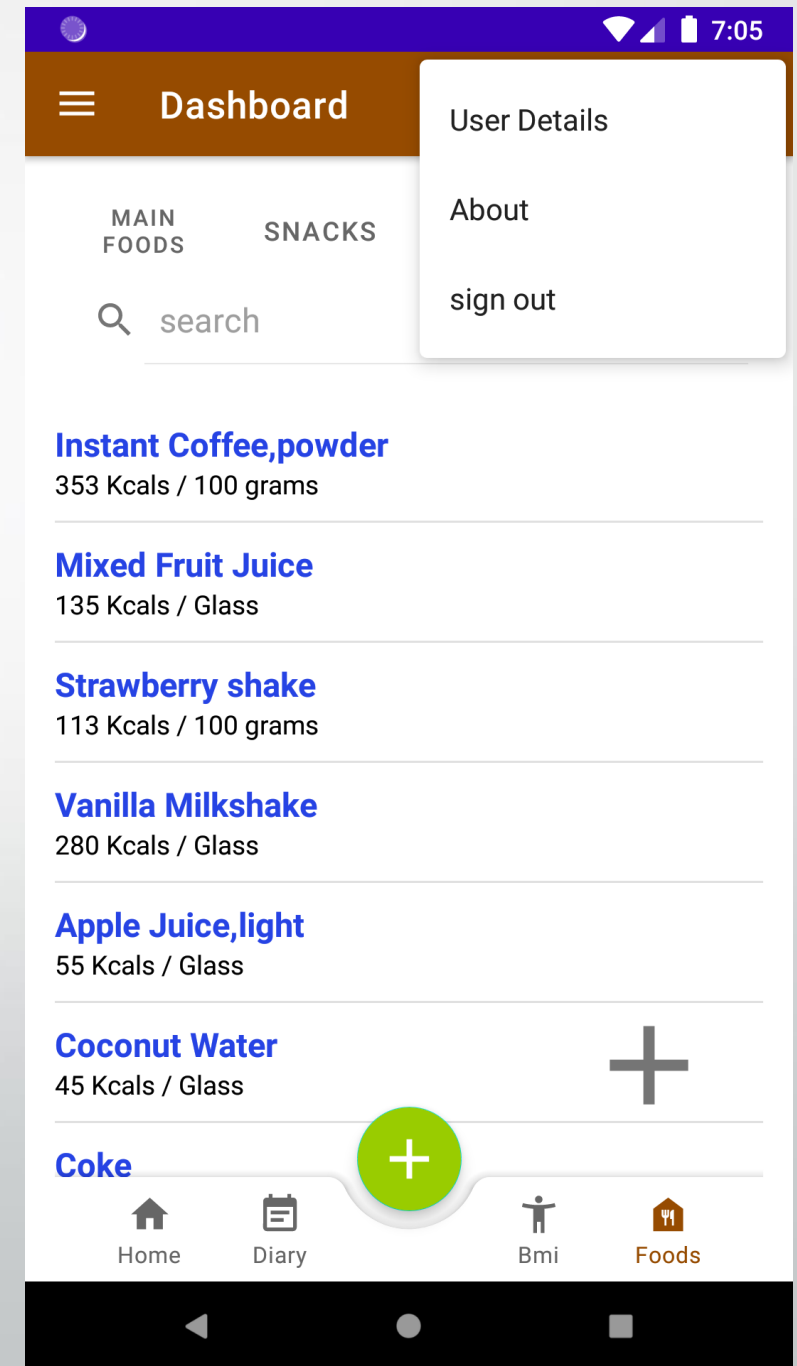
Watch previous any other days  
history of eaten foods in diary


User can click on date button and select  
the date.



# Action bar Menu

User can access it by clicking the **three dot** button in the right top side in the action bar.





**Google Sign in** makes it sure user will not  
loss its progress if app uninstalled or  
phone lost



### **Ashikur Rahman ( Group member 1 )**

- All Backend Coding in java
- Initial setup when developing started
- Most of the user Interface designing through XML
- Pushing and Committing android project to github

### **Md.Shakil ( Group member 2 )**

- Some user interface design through XML
- Resource gathering like tutorials for learning, images, library needed to run
- details of food items
- Formula needed to calculate some features like daily calorie goal , bmi, body fat percentage

Group : 26

**Contribution**