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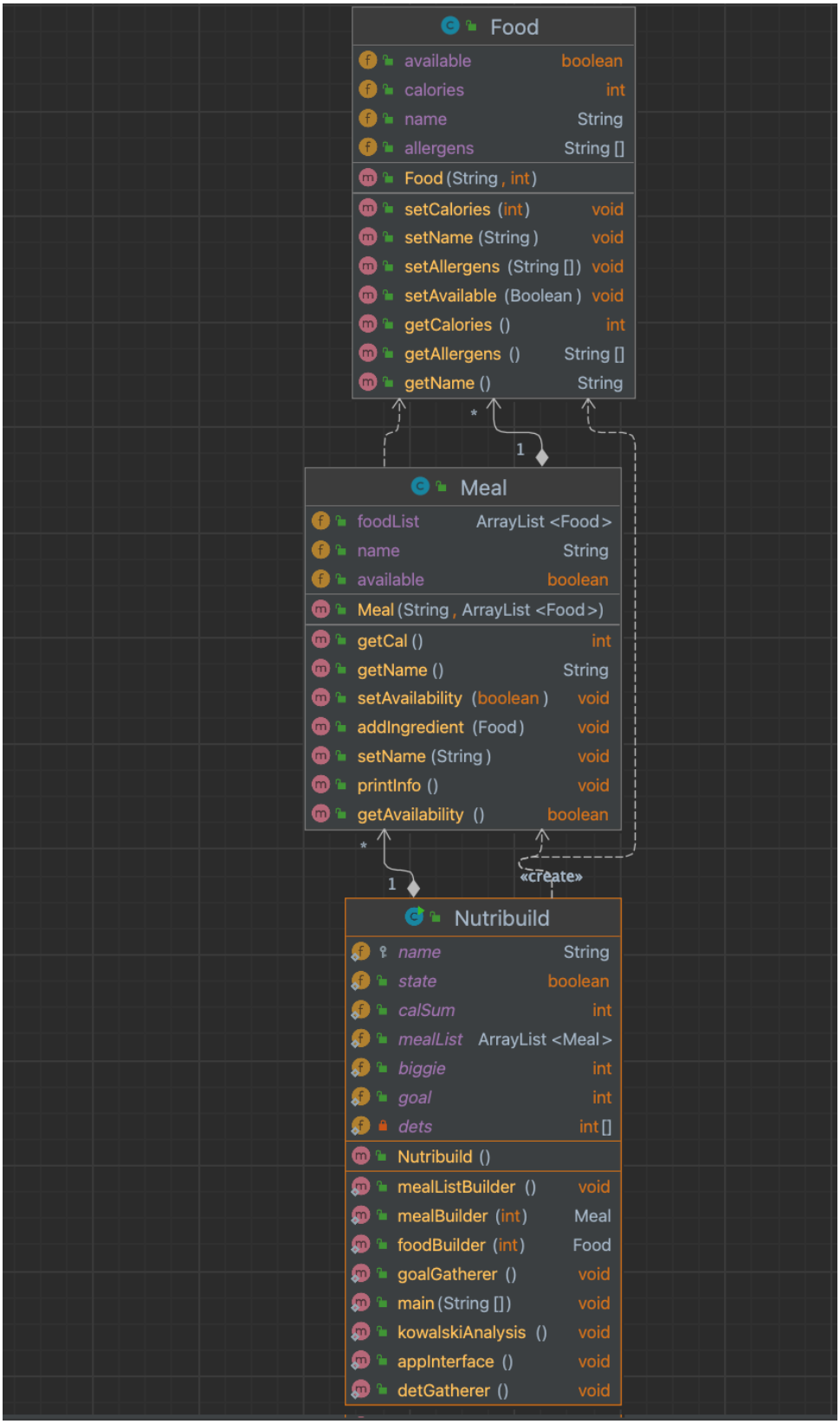
Nutribuild v1.0 Documentation

Release notes

Nutribuild is a daily calorie tracker that is set to revolutionize the fitness app industry. It allows users to log their daily meals and get insight on their calorie consumption. The first version of the Nutribuild features a text-based input-output which is known to require very little energy and compute power compared to alternatives. The package consists of three classes. The first, called Nutribuild.java, is the core class of the tracker and contains the code used to interact with users, serving as the working mechanism of the app. The other two classes are called Meal and Food and contain constructors which allow for an object-oriented approach.
When using the program, users first enter their name, age, and weight. They are then prompted to select a fitness goal of either gaining, losing or maintaining weight. Following this, users can then log all the food they consumed or plan to consume that day, along with their calorie content. The program encapsulates each food into a food item and collections of food into meal objects, making it convenient to process them. Once the food is logged, a statistic is shown with the total calorie count of the day as well as the heaviest meal of the day and its contents.

For future Nutribuild iterations, user data regarding their age, weight and fitness goals can be encapsulated into their own objects by making a separate class for a user. Then, depending on their fitness goal, a recommended daily nutrition plan and calorie target can be generated. Moreover, useful tools such as BMI calculator and weekly weight loss projection tools can be implemented. The program could also be made to utilize databases with existing food items, common meals as well as their nutritional information, so that users don't need to manually enter them all every time they make logs. A graphical user interface such as swing can be implemented to make the program more aesthetically pleasing to the users. More tools such as macro nutritional information can be made available as premium features so that interested users can subscribe to the service for small monetary fees.

UML diagram


Food
available boolean
calories int
name String
allergens String []
Food (String , int)
setCalories (int) void
setName (String) void
setAllergens (String []) void
setAvailable (Boolean) void
getCalories () int
getAllergens () String []
getName () String
*
1
Meal
foodList ArrayList <Food>
name String
available boolean
Meal (String , ArrayList <Food>)
getCal () int
getName () String
setAvailability (boolean) void
addIngredient (Food) void
setName (String) void
printInfo () void
getAvailability () boolean
*
1
«create»
Nutribuild
name String
state boolean
calSum int
mealList ArrayList <Meal>
biggie int
goal int
dets int []
Nutribuild ()
mealListBuilder () void
mealBuilder (int) Meal
foodBuilder (int) Food
goalGatherer () void
main (String []) void
kowalskiAnalysis () void
appInterface () void
detGatherer () void

Unnamed Package

Classes

Class	Description
Food	A class that contains information of an individual food item for the nutrition builder application.
Meal	A class that contains information about a meal to be tracked.
Nutribuild	A simple program to track of total calories eaten in a day.

Class Food

java.lang.Object
    Food

```
public class Food
extends Object
```

A class that contains information of an individual food item for the nutrition builder application.

Author:

saksham shrestha

Field Summary

Fields

Modifier and Type	Field	Description
`String []`	`allergens`	instance string array variable for list of allergens.
`boolean`	`available`	instance boolean variable for availability of food item.
`int`	`calories`	instance integer variable for calories of food item.
`String`	`name`	instance string variable for name of food item.

Constructor Summary

Constructors

Constructor	Description
`Food(String n, int cal)`	Constructor for a food item.

Method Summary

All Methods Instance Methods Concrete Methods

Modifier and Type	Method	Description
String []	getAllergens()	Getter method for food item's allergen list.
int	getCalories()	Getter method for food item's calories.
String	getName()	Getter method for food item's name.
void	setAllergens(String [] s)	The setter method for allergen list of food item.
void	setAvailable(Boolean b)	The setter method for availability of food item.
void	setCalories(int c)	The setter method for calories of food item.
void	setName(String n)	Setter method for food item's name.

Methods inherited from class java.lang.Object

equals , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

Field Details

calories

```
public int calories
```

instance integer variable for calories of food item.

name

```
public String  name
```

instance string variable for name of food item.

allergens

```
public String [] allergens
```

instance string array variable for list of allergens.

available

```
public boolean available
```

instance boolean variable for availability of food item.

Constructor Details

Food

```
public Food(String  n,
            int cal)
```

Constructor for a food item.

Parameters:

`n` - the name of the food item.

`cal` - the calorie content of the food item.

Method Details

getName

```
public String  getName()
```

Getter method for food item's name.

Returns:

the String name of the food item.

setName

```
public void setName(String  n)
```

Setter method for food item's name.

Parameters:

`n` - the string to be set as food name.

getCalories

```
public int getCalories()
```

Getter method for food item's calories.

Returns:

the integer calorie count of the food item.

setCalories

```
public void setCalories(int c)
```

The setter method for calories of food item.

Parameters:

`c` - the food item's calorie count.

setAllergens

```
public void setAllergens(String [] s)
```

The setter method for allergen list of food item.

Parameters:

`s` - the string array of allergens.

getAllergens

```
public String [] getAllergens()
```

Getter method for food item's allergen list.

Returns:

the string array of allergens.

setAvailable

```
public void setAvailable(Boolean  b)
```

The setter method for availability of food item.

Parameters:

`b` - the boolean for the item's availability.

Class Meal

java.lang.Object
    Meal

```
public class Meal
extends Object
```

A class that contains information about a meal to be tracked.

Author:

saksham shrestha

Field Summary

Fields

Modifier and Type	Field	Description
`boolean`	**`available`**	Instance boolean variable for availability of meal.
`ArrayList` `<`**`Food`**`>`	**`foodList`**	Instance array list of Food for list of food items in the meal.
`String`	**`name`**	Instance string variable for name of meal.

Constructor Summary

Constructors

Constructor	Description
`Meal``(`**`String`** `name, `**`ArrayList`** `<`**`Food`**`> food)`	Constructor method for a Meal.

Method Summary

All Methods Instance Methods Concrete Methods

Modifier and Type	Method	Description
`void`	**`addIngredient`**`(`**`Food`** `i)`	Method to add a food item to a meal

void	**addIngredient**(Food f)	Method to add a food item to a meal.
boolean	**getAvailability**()	Method that returns availability of meal.
int	**getCal**()	Method returns total calories of the meal.
String	**getName**()	Getter method to get name of Meal.
void	**printInfo**()	Method that prints all the information of the meal.
void	**setAvailability**(boolean b)	Method to set the availability of meal.
void	**setName**(**String** s)	Method to set name of the meal.

Methods inherited from class java.lang.Object

equals , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

Field Details

name

```
public String name
```

Instance string variable for name of meal.

available

```
public boolean available
```

Instance boolean variable for availability of meal.

foodList

```
public ArrayList <Food> foodList
```

Instance array list of Food for list of food items in the meal.

Constructor Details

Meal

```
public Meal(String  name,
            ArrayList <Food> food)
```

Constructor method for a Meal.

Parameters:

`name` - The name of the meal.

`food` - The list of food items.

Method Details

getCal

```
public int getCal()
```

Method returns total calories of the meal.

Returns:

the meal's calorie count as an integer.

addIngredient

```
public void addIngredient(Food i)
```

Method to add a food item to a meal.

Parameters:

`i` - the food item to add.

printInfo

```
public void printInfo()
```

Method that prints all the information of the meal. The name is printed first, followed by it's availability followed by the ingredients.

getName

```
public String  getName()
```

Getter method to get name of Meal.

Returns:

the String containing the name of the meal;

setName

```
public void setName(String  s)
```

Method to set name of the meal.

Parameters:

`s` - the string to be set as meal's name.

getAvailability

```
public boolean getAvailability()
```

Method that returns availability of meal.

Returns:

the availability of the meal as a boolean.

setAvailability

```
public void setAvailability(boolean b)
```

Method to set the availability of meal.

Parameters:

`b` - the availability.

Class Nutribuild

java.lang.Object
    Nutribuild

```
public class Nutribuild
extends Object
```

A simple program to track of total calories eaten in a day.

Author:

saksham shresths

Field Summary

Fields

Modifier and Type	Field	Description
static int	**biggie**	Instance variable for index of mealList that contains the highest calorie meal.
static int	**calSum**	Instance variable for total calories consumed in the day, stored as an integer.
static int	**goal**	Instance variable for user's fitness goal as an integer.
static ArrayList <Meal>	**mealList**	Instance variable for array list of Meal objects for the day.
static boolean	**state**	Instance variable for boolean of app's state.

Constructor Summary

Constructors

Constructor	Description
Nutribuild()	

Method Summary

All Methods | Static Methods | Concrete Methods

Modifier and Type	Method	Description
static void	appInterface()	Method calculates and show information about the day's calorie consumption.
static void	detGatherer()	Method collects user's name age and weight.
static Food	foodBuilder(int a)	A helper method that collects information and returns a food object using it.
static void	goalGatherer()	Method collects user's fitness goal.
static void	kowalskiAnalysis()	Helper method to process calorie information.
static void	main(String [] args)	
static Meal	mealBuilder(int a)	Helper method that collects information and returns a Meal object using it.
static void	mealListBuilder()	Method collects information about the day's meals and stores them in mealList.

Methods inherited from class java.lang.Object

equals , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

Field Details

mealList

```
public static ArrayList <Meal> mealList
```

Instance variable for array list of Meal objects for the day.

goal

```
public static int goal
```

Instance variable for user's fitness goal as an integer. Key: 1: Gain Weight 2: Lose Weight 3: Maintain Weight

state

```
public static boolean state
```

Instance variable for boolean of app's state. Main method is looped as long as state is true.

calSum

```
public static int calSum
```

Instance variable for total calories consumed in the day, stored as an integer.

biggie

```
public static int biggie
```

Instance variable for index of mealList that contains the highest calorie meal.

Constructor Details

Nutribuild

```
public Nutribuild()
```

Method Details

main

```
public static void main(String [] args)
```

detGatherer

```
public static void detGatherer()
```

Method collects user's name age and weight.

goalGatherer

```
public static void goalGatherer()
```

Method collects user's fitness goal.

mealListBuilder

```
public static void mealListBuilder()
```

Method collects information about the day's meals and stores them in mealList.

mealBuilder

```
public static Meal mealBuilder(int a)
```

Helper method that collects information and returns a Meal object using it.

Parameters:

`a` - the nth number of meal for the day.

Returns:

a Meal object

foodBuilder

```
public static Food foodBuilder(int a)
```

A helper method that collects information and returns a food object using it.

Parameters:

`a` - the nth number of food in the meal.

Returns:

a Food Object.

appInterface

```
public static void appInterface()
```

Method calculates and show information about the day's calorie consumption.

kowalskiAnalysis

```
public static void kowalskiAnalysis()
```

Helper method to process calorie information. Method sets instance variables caclSum and biggie.