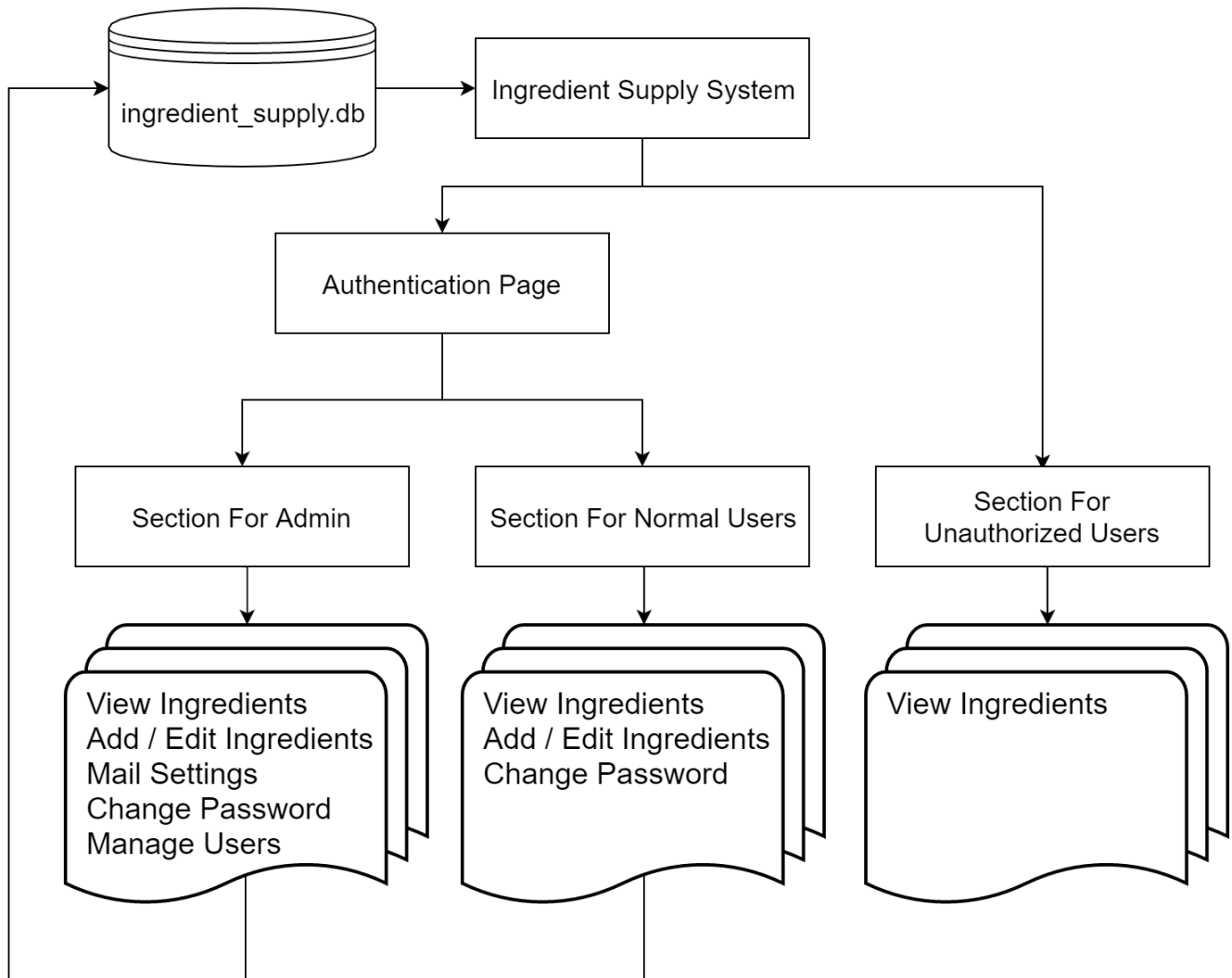# Criterion B: Design

Basic Data Structure of the Product

Overall Website Design

Note: *"Balsamiq Mockups 3" software is used to create the design templates.*

Home Page Layout

This layout is going to be used on the home page of the website. Users will use this page to navigate to other sections. This page is accessible for everybody without any authentication. So, anyone can view the ingredient list. However, registered users need to authenticate themselves by logging into the system.

Login button allows users and admins to log in to the system to use the further functionality of the system.

Hello!

Welcome to Gastronomy Club's Inventory System

Name ⬍	Brand	Remaining Amount	Expiration Date ⬍	Notes
Butter	Sütaş	300 g	24/04/2017	
White Sugar	Eker	1200 g	17/09/2019	
Sour Cream	Eker	450 g	13/01/2017	broken
Vanilla Extract	Dr. Otker	2 Packs	01/01/2020	
Flour	Söke Un	2 kg	08/08/2020	
Baking Powder	Dr. Otker	3 Packs	08/08/2020	
Salt	Kipa	500 g	02/05/2016	
Blueberries	Real	1 kg	15/01/2016	
Tomato	Kipa	4 Pieces	15/01/2016	
Onion	Kipa	5 Pieces	15/01/2016	
Whole Chicken	Kipa			

The list of ingredients present in the inventory system will dynamically change

Hello!
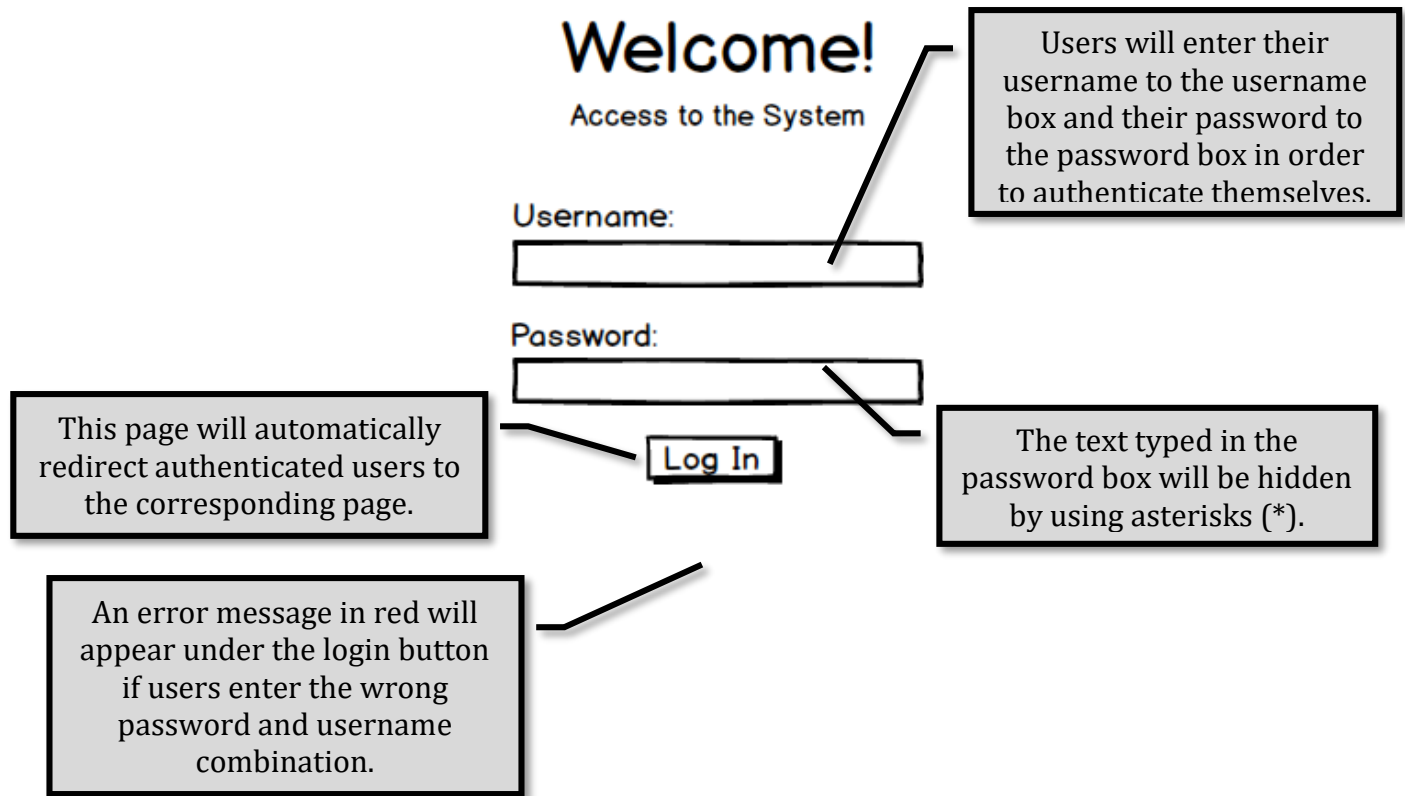
Welcome to Gastronomy Club's Inventory System

Hello!

Welcome to Gastronomy Club's Inventory System

User Panel

Admin Panel

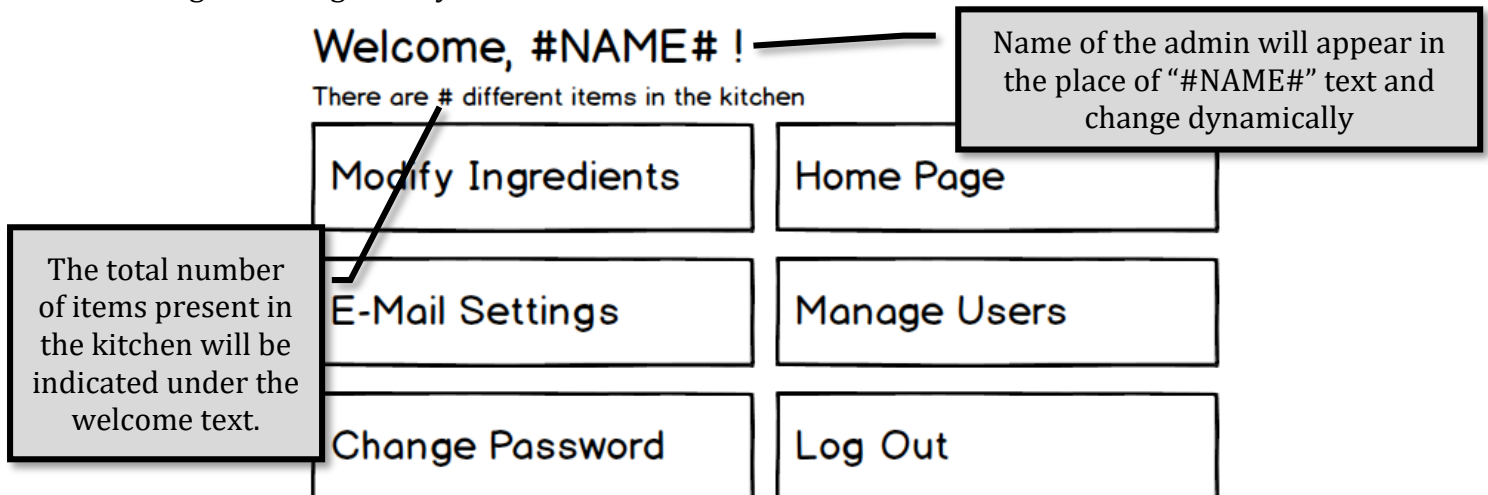Login button's text turn into "Admin Panel" or "User Panel" according to type of the authenticated user

Log In

Log In Page Layout
This layout is going to be used in the log in page of the website. Users will use this page to log in to the system.

Welcome!

Access to the System

Username:

Users will enter their username to the username box and their password to the password box in order to authenticate themselves.

Password:

This page will automatically redirect authenticated users to the corresponding page.

Log In

The text typed in the password box will be hidden by using asterisks (*).

An error message in red will appear under the login button if users enter the wrong password and username combination.

Admin Panel Page Layout
This layout is going to be used in the admin panel page of the website. Admins will use this page to navigate through the system.

Welcome, #NAME# !

There are # different items in the kitchen

Name of the admin will appear in the place of "#NAME#" text and change dynamically

Modify Ingredients

Home Page

The total number of items present in the kitchen will be indicated under the welcome text.

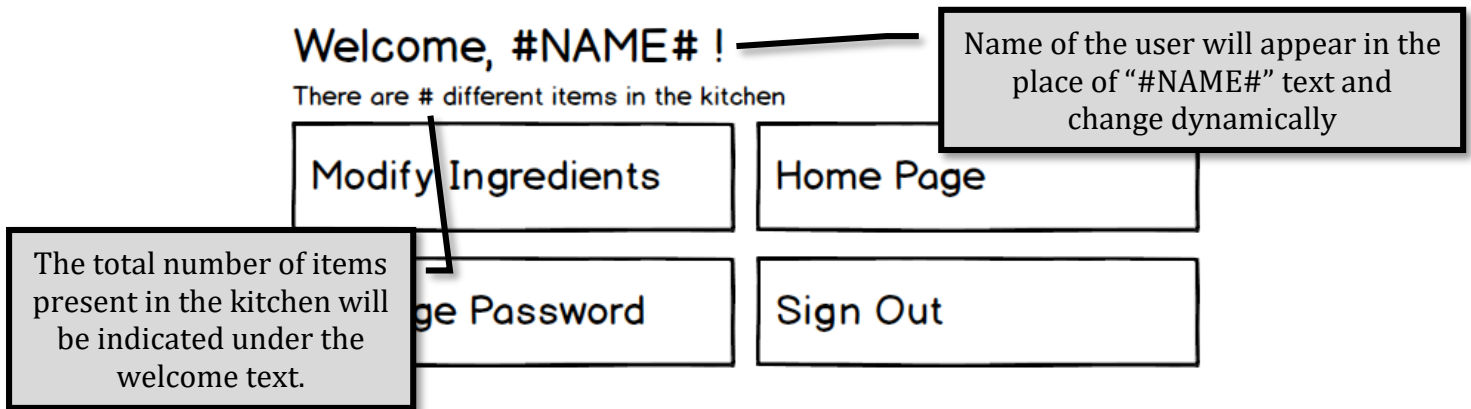E-Mail Settings

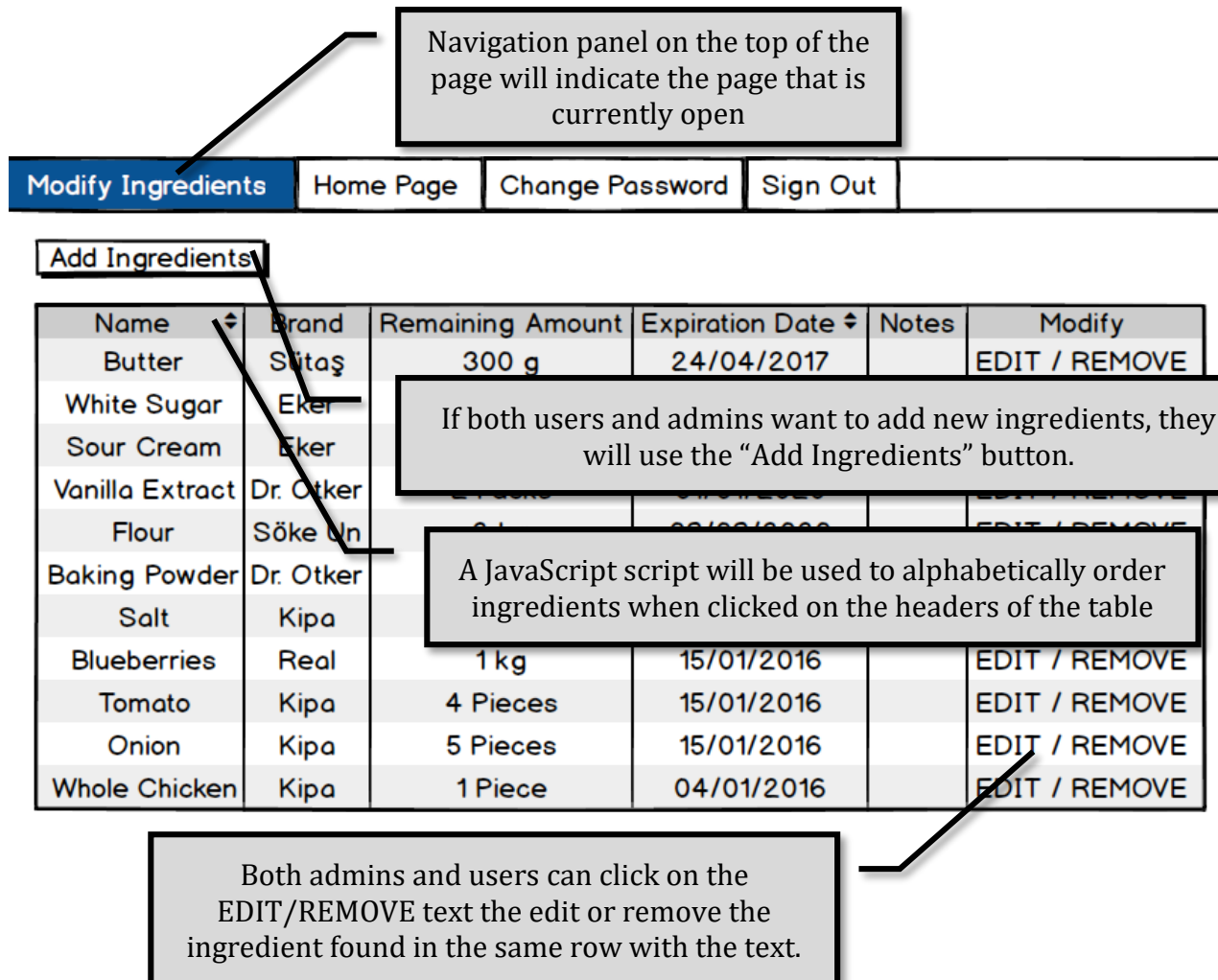Manage Users

Change Password

Log Out

User Panel Page Layout

This layout is going to be used in the admin panel page of the website. Users will use this page to navigate through the system. User panel will have permission to access fewer features compared to the admin panel.

Welcome, #NAME# !

There are # different items in the kitchen

Modify Ingredients

Home Page

ge Password

Sign Out

Name of the user will appear in the place of "#NAME#" text and change dynamically

The total number of items present in the kitchen will be indicated under the welcome text.

Modify Ingredients Page Layout

This layout is going to be used in the modify ingredients page of the website. Both normal users and admins will use this page to modify the list of ingredients registered in the system.

Navigation panel on the top of the page will indicate the page that is currently open

| Modify Ingredients | Home Page | Change Password | Sign Out | |

Add Ingredients

Name	Brand	Remaining Amount	Expiration Date	Notes	Modify
Butter	Sütaş	300 g	24/04/2017		EDIT / REMOVE
White Sugar	Eker				
Sour Cream	Eker				
Vanilla Extract	Dr. Otker				
Flour	Söke Un				
Baking Powder	Dr. Otker				
Salt	Kipa				
Blueberries	Real	1 kg	15/01/2016		EDIT / REMOVE
Tomato	Kipa	4 Pieces	15/01/2016		EDIT / REMOVE
Onion	Kipa	5 Pieces	15/01/2016		EDIT / REMOVE
Whole Chicken	Kipa	1 Piece	04/01/2016		EDIT / REMOVE

If both users and admins want to add new ingredients, they will use the "Add Ingredients" button.

A JavaScript script will be used to alphabetically order ingredients when clicked on the headers of the table

Both admins and users can click on the EDIT/REMOVE text the edit or remove the ingredient found in the same row with the text.

- An alert box will appear on the screen if the user tries to remove an ingredient. The user needs to approve the alert box to remove ingredients from the system. By that way, accidental removals are avoided:

Modify Ingredients	Home Page	Change Password	Sign Out

Add Ingredients

Name ⬍	Brand	Remaining Amount	Expiration Date ⬍	Notes	Modify
Butter	Sütaş	300 g	24/04/2017		EDIT / REMOVE
White Sugar	Eker	1200 g	17/09/2019		EDIT / REMOVE
Sour Cream	Eker	450 g	13/01/2017	broken	EDIT / REMOVE
Vanilla Extract	Dr. Otker	2 P	020		EDIT / REMOVE
Flour	Söke Un	2	020		EDIT / REMOVE
Baking Powder	Dr. Otker	3	020		EDIT / REMOVE
Salt	Kipa	5	016		EDIT / REMOVE
Blueberries	Real	1 kg	15/01/2016		EDIT / REMOVE
Tomato	Kipa	4 Pieces	15/01/2016		EDIT / REMOVE
Onion	Kipa	5 Pieces	15/01/2016		EDIT / REMOVE
Whole Chicken	Kipa	1 Piece	04/01/2016		EDIT / REMOVE

Alert!
Please confirm removal
No   Yes

Alert box

Add / Edit Ingredients Page Layout
This layout is going to be used in the add and edit ingredients pages of the website. Both normal users and admins will use this pages add and edit the list of ingredients registered in the system.

Modify Ingredients	Home Page	Change Password	Sign Out

Same navigation panel above the page content will be available on those pages, too.

Add Ingredients

Name of the Ingredient:

Brand:

Measurement Unit:
Kg

Remaining Amount:

Expiration Date:
24/04/2017

JQuery date picker will be used for easier input from the user

Notes:

[Save]   [Save & Add another ingredient]

● Add and edit pages will almost have the same design. However, edit page will have an extra drop down menu to select ingredients to edit.

Modify Ingredients	Home Page	Change Password	Sign Out

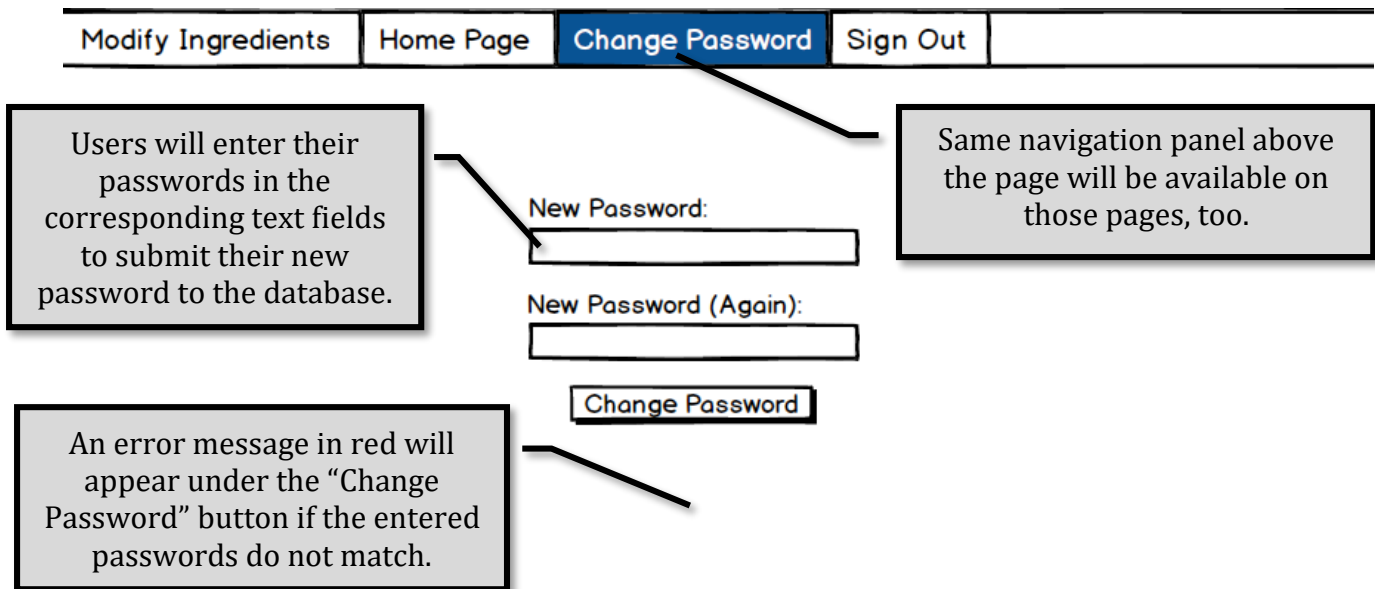## Edit Ingredients

Select an ingredient to edit:
1 ▼ [Select]

Name of the Ingredient:

Brand:

The remaining text fields will be automatically filled when the user or admin click on the select button.
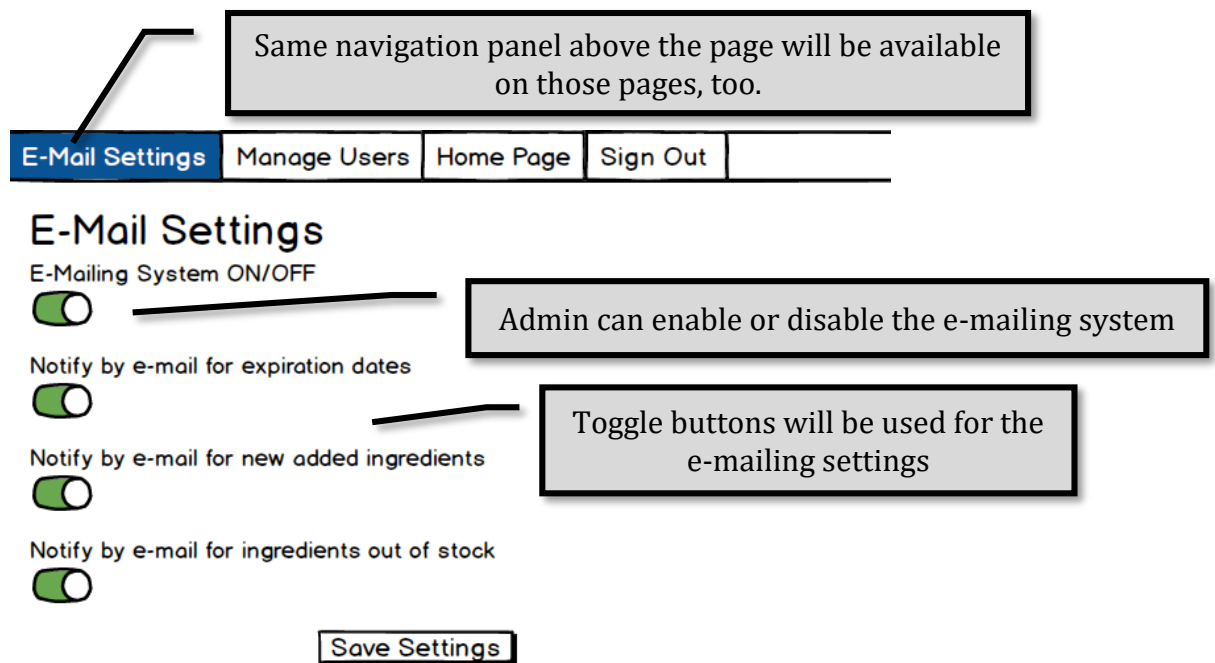
Measurement Unit:
Kg

Change Password Page Layout

This layout is going to be used in the change password page of the website. Both normal users and admins will use this page to change their registered password in the system.

| Modify Ingredients | Home Page | **Change Password** | Sign Out | |

Users will enter their passwords in the corresponding text fields to submit their new password to the database.

New Password:

New Password (Again):

Change Password

Same navigation panel above the page will be available on those pages, too.

An error message in red will appear under the "Change Password" button if the entered passwords do not match.

E-Mail Settings Page Layout

This layout is going to be used in the e-mail settings page of the website. Admins will use this page to change e-mail settings in the system. Only admins will have permission to access this page.

Same navigation panel above the page will be available on those pages, too.

| **E-Mail Settings** | Manage Users | Home Page | Sign Out | |

E-Mail Settings

E-Mailing System ON/OFF

Admin can enable or disable the e-mailing system

Notify by e-mail for expiration dates

Toggle buttons will be used for the e-mailing settings

Notify by e-mail for new added ingredients

Notify by e-mail for ingredients out of stock

Save Settings

Manage Users Page Layout

This layout is going to be used in the manage users pages of the website. Admins will use this page to manage users in the system. Only admins will have permission to access to this page.

Navigation panel on the top of the page will highlight the page that is currently open

E-Mail Settings | Manage Users | Home Page | Sign Out

Manage Users

Add Users

If admins want to add new users, they will use the "Add Users" button

Name ⇕	Surname	Username	E-Mail Adress	User Type	Modify
Barkın	Şimşek	bsimsek	bsimsek@tevitol.k12.tr	Admin	EDIT / REMOVE
Ekin	Balcı	ebalci	ebalci@tevitol.k12.tr	Admin	EDIT / REMOVE
Kendal	Varol	kvarolgunes	kv		
Baran	İşcanlı	biscanli	b		
Mustafa	Dursun	mudursun	d		
Zuhal	Yorgancıoğlu	zyorgan	dzyorgancioglu@gmail.com	Normal	EDIT / REMOVE
Ulaş	Acarlı	ulasa	uacarlı@tevitol.k12.tr	Normal	EDIT / REMOVE

A JavaScript script will be used to alphabetically order users when clicked on the headers of the table

Admins can click on the EDIT/REMOVE text the edit or remove the user found in the same row with the text

- An alert box will appear on the screen if the admin tries to remove a user. The admin needs to approve the alert box to remove users from the system. By that way, accidental removals are avoided:

E-Mail Settings | Manage Users | Home Page | Sign Out

Manage Users

Add Users

Name ⇕	Surname	Username	E-Mail Adress	User Type	Modify
Barkın	Şimşek	bsimsek	bsimsek@tevitol.k12.tr	Admin	EDIT / REMOVE
Ekin	Balcı	ebalci	ebalci@tevitol.k12.tr	Admin	EDIT / REMOVE
Kendal	Varol	kvarolgunes	Alert!	Normal	EDIT / REMOVE
Baran	İşcanlı	biscanli	Please confirm removal	Normal	EDIT / REMOVE
Mustafa	Dursun	mudursun	No Yes	Normal	EDIT / REMOVE
Zuhal	Yorgancıoğlu	zyorgan	dzyorgancıoglu@gmail.com	Normal	EDIT / REMOVE
Ulaş	Acarlı	ulasa	uacarlı@tevitol.k12.tr	Normal	EDIT / REMOVE

Alert box

Add / Edit Users Page Layout

This layout is going to be used in the add and edit users' pages of the website. Admins will use these pages to add and edit the list of ingredients registered in the system. Only admins will have permission to access to these pages.

Same navigation panel above the page will be available on those pages, too.

E-Mail Settings | Manage Users | Home Page | Sign Out

Add Users

Name:

Surname:

Username:

E-Mail Adress:

E-mail address will have data verification for e-mail addresses

User Type:
Normal ▼

Save | Save & Add another user

- Add and edit pages will almost have the same design. However, edit page will have an extra drop down menu to select users to edit. The remaining text fields will be automatically filled when the admin click on the select button.

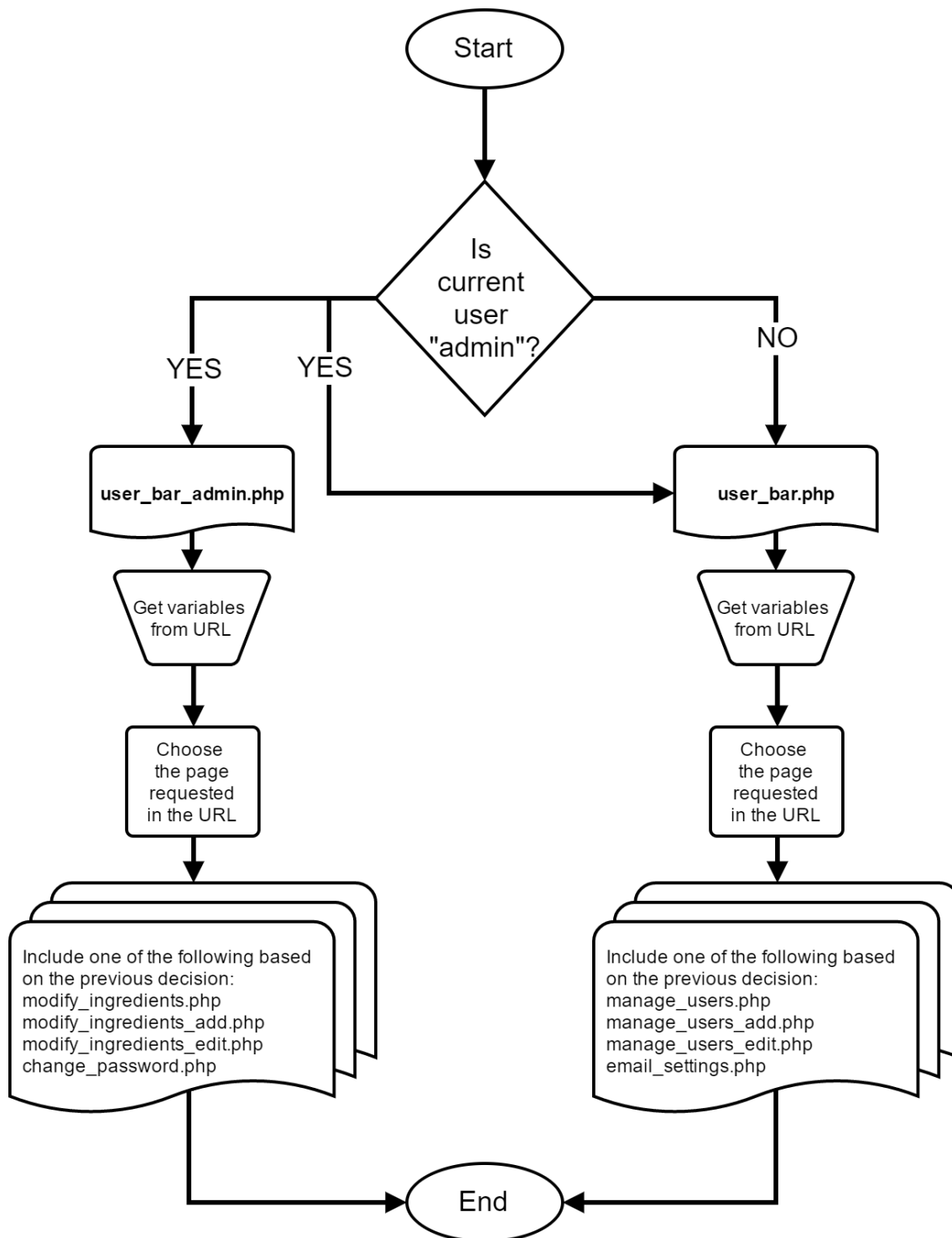E-Mail Settings | Manage Users | Home Page | Sign Out

Edit Users

Select an user to edit:
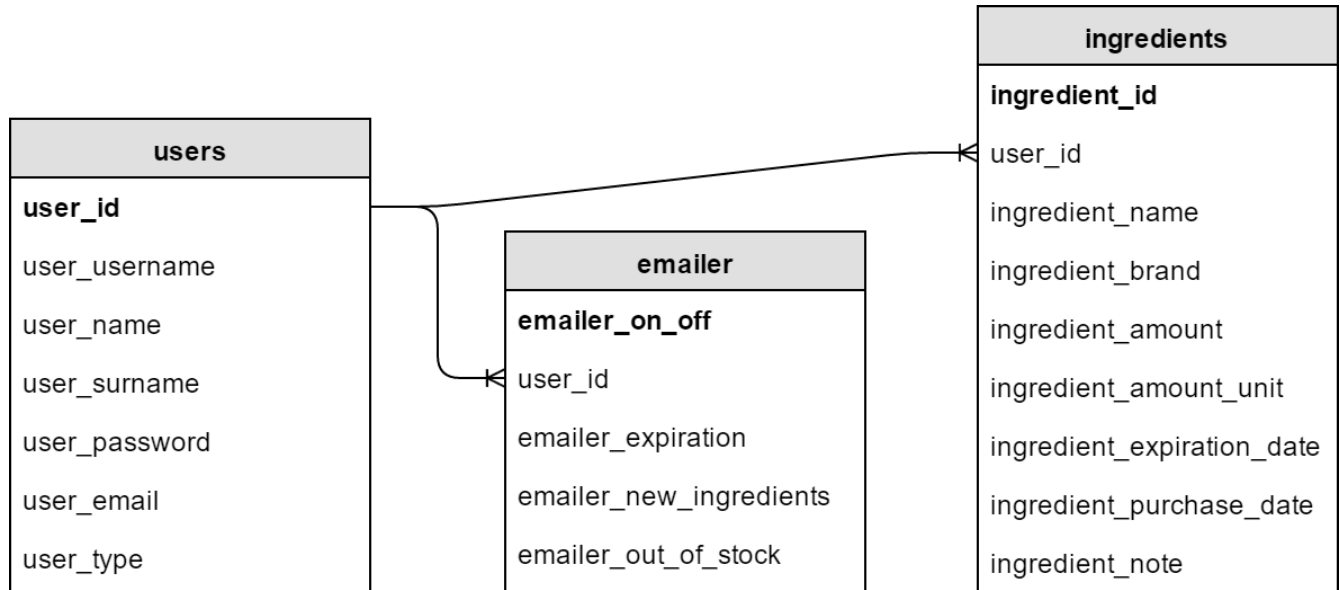bsimsek ▼ Select

Name:

The remaining text fields will be automatically filled when the user or admin click on the select button.

Surname:

Username:

Algorithm Design

Navigation of the website will be managed through variables found in the URL of the website. Thus, pages will communicate over the parameters transferred with the URLs. There will be two navigation bars that load the body of the requested pages. First one is going to be the "user_bar.php". It will be available for both normal users and admins. The second one is going to be "user_bar.php" which will be only available to admins. Those two pages will use the $_GET["name"] function of PHP to obtain parameters from URL and process parameters using PHP.

```
                              ┌─────────┐
                              │  Start  │
                              └─────────┘
                                   │
                                   ▼
                              ╱─────────╲
                             ╱     Is    ╲
                            ╱   current   ╲
          YES    YES       ╱     user      ╲     NO
                           ╲   "admin"?    ╱
                            ╲             ╱
                             ╲───────────╱
           │         │                        │
           ▼         │                        ▼
   ┌──────────────┐  │              ┌──────────────┐
   │user_bar_admin│  └─────────────▶│ user_bar.php │
   │    .php      │                 │              │
   └──────────────┘                 └──────────────┘
           │                                │
           ▼                                ▼
     ╱────────────╲                   ╱────────────╲
     │Get variables│                  │Get variables│
     │  from URL   │                  │  from URL   │
     ╲────────────╱                   ╲────────────╱
           │                                │
           ▼                                ▼
     ┌──────────┐                     ┌──────────┐
     │ Choose   │                     │ Choose   │
     │ the page │                     │ the page │
     │requested │                     │requested │
     │in the URL│                     │in the URL│
     └──────────┘                     └──────────┘
           │                                │
           ▼                                ▼
```

Include one of the following based on the previous decision:
modify_ingredients.php
modify_ingredients_add.php
modify_ingredients_edit.php
change_password.php

Include one of the following based on the previous decision:
manage_users.php
manage_users_add.php
manage_users_edit.php
email_settings.php

```
                              ┌─────────┐
                              │   End   │
                              └─────────┘
```

Entity Relationship Diagram

Relations
- One user_id goes to many user_id's in the emailer table
- One user_id goes to many user_id's in the ingredients table

Tables Showing Fields & Data Types

Table Name: users

FIELD NAME	DATA TYPE	DESCRIPTION	ADDITIONAL INFO
user_id	number (Auto Increment)	An auto incremented unique number to identify each user	Primary Key
user_username	varchar	Username of the users	
user_name	varchar	Name of the users	
user_surname	varchar	Surname of the users	
user_password	varchar	Password of the users	
user_email	varchar	E-mail of the users to send e-mail notifications	
user_type	varchar	Type (admin or normal) of the user to increase security	

Table Name: ingredients

FIELD NAME	DATA TYPE	DESCRIPTION	ADDITIONAL INFO
ingredient_id	number (Auto Increment)	An auto incremented unique number to identify each ingredient	Primary Key
user_id	number	User ID of the user added or changed the row at latest	Foreign Key
ingredient_name	varchar	Name of the ingredients	
ingredient_brand	varchar	Brand of the ingredients	
ingredient_amount	varchar	Amount of the ingredients	
ingredient_amount_unit	varchar	Unit of the ingredients	
ingredient_expiration_date	date	Best before date of the ingredients	
ingredient_purchase_date	date	Purchase date of the ingredients	
ingredient_note	varchar	Note about the ingredients from other club members	

Table Name: emailer

FIELD NAME	DATA TYPE	DESCRIPTION	ADDITIONAL INFO
email_on_off	boolean	Boolean field to store the latest state of the emailing functionality	Primary Key
user_id	number	User ID of the users are added or changed to keep record of the latest user that changed settings	Foreign Key
emailer_expiration	boolean	Boolean field to store the latest state of the emailing functionality for the expiring ingredients	
emailer_new_ingredients	boolean	Boolean field to store the latest state of the emailing functionality for the new ingredients	
emailer_out_of_stock	boolean	Boolean field to store the latest state of the emailing functionality for the ingredients which are out of stock	

Overall Website Flowchart
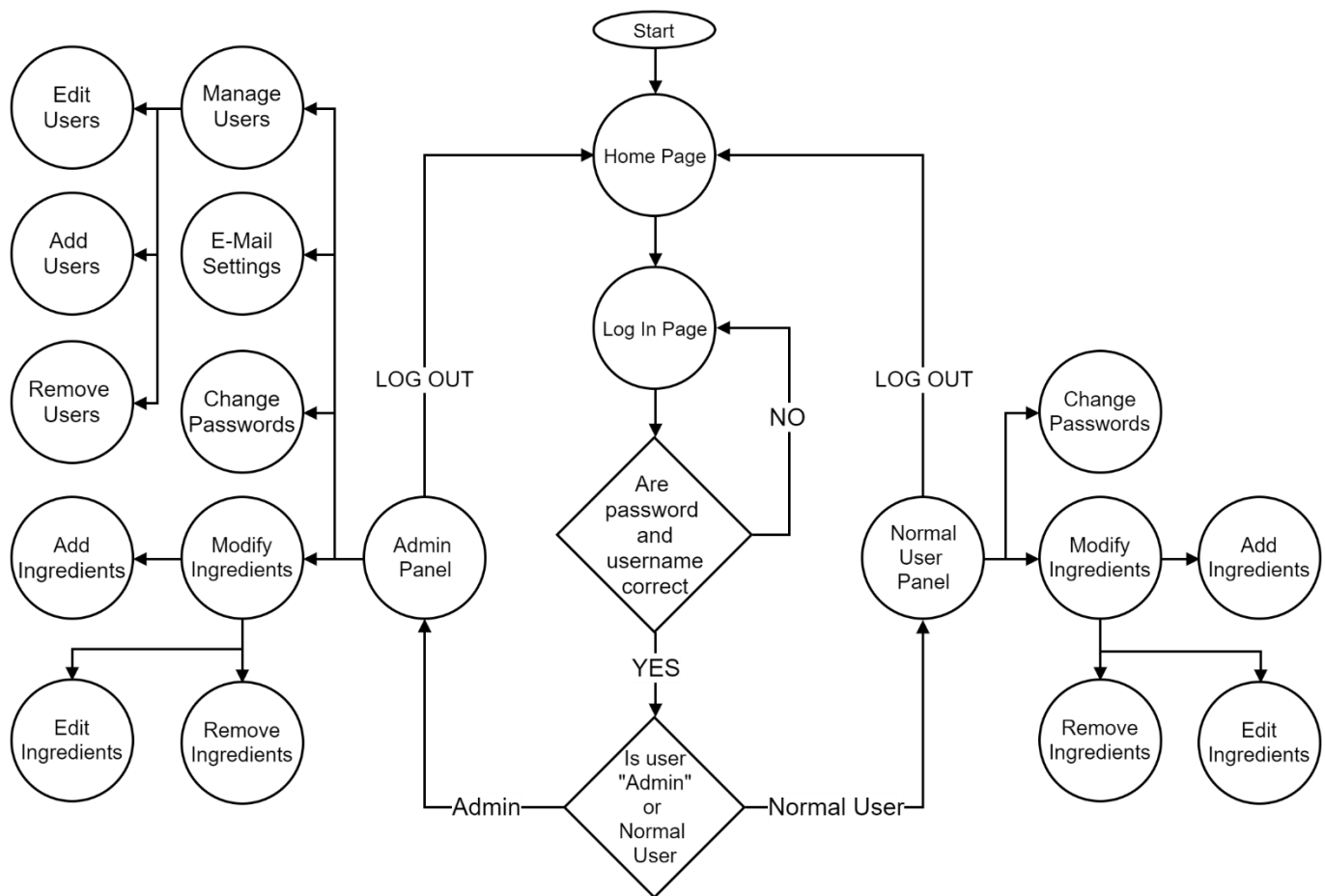
Tests Required

TEST TYPE	NATURE OF TEST	EXAMPLE
Development of a user-friendly interface	Using website on both mobile devices and a desktop computer	• Buttons are big enough to both click on smartphones by using fingers and on computers by using mouse • Texts are big enough to be easily read by users
Development of a consistent and responsive layout for the website	Using website and observing the behavior of the layout through the pages	• Users can use the system on different browser, different operating systems, and different devices with different screen resolution
Development of a database to store the site content	Using phpMyAdmin interface to check the created database	• MySQL database can be altered easily by the system

Development of an emailing functionality	Trying to adding new ingredients to the system and waiting for their expiration dates	● System automatically emails when the expiration dates of the ingredients approach and expire ● System automatically emails when kitchen is about to run out of an ingredient
Managing ingredient supply list	Logging into the system and trying to make changes on the ingredients list	● System show the remaining amounts of ingredients accurately on the homepage ● System makes required changes on the database when the users add/edit ingredients in the system
Logging in with using a username and password	Using "Log In" page to authenticate users	● Users can easily log into the system, and they can easily change their password when needed ● Password is hashed/encrypted with md5 before storing in the database to avoid any security leaks
Different authorization levels for different users	Using both user and admin accounts to access to pages related to each other	● Master users (admins) can make changes to the system such as adding/editing ingredients to the list, changing mailing settings, changing their password when needed, and managing users registered on the system ● Users without registration can only view the content on the homepage
Development of dynamic sections that allows user interaction	Using and entering data into the forms on the page for changing the password, page for adding/editing items, page for mail settings, and page for managing users.	● All forms and buttons work as intended.