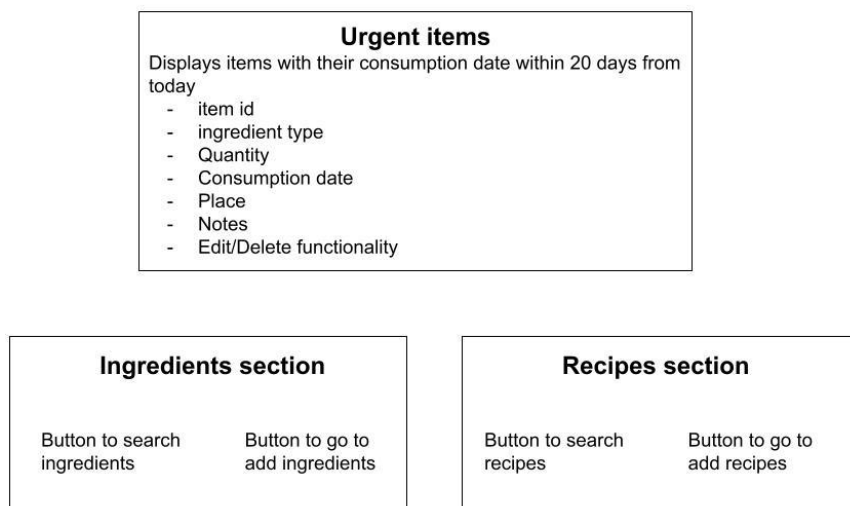# Criterion B: Design

The general idea for this web page is to have a central menu from where to access the ingredients with near consumption date, go to add new items, add recipes, add ingredients to recipes, and search items and recipes using some filters. Also, we would like to be able to substract or modify items.

Each one of these functions will be addressed in a specific form, where the forms will be grouped selon if they concern the ingredients addition, the recipes addition, the ingredients search and the recipes search, and when showing some ingredients or recipes then it will be offered the possibility to update (which will be performed in a specific page) or delete them, so that the user would be able to perform CRUD basic operations without confusions. From each one of the subpages we will be able to return to the central page, and whenever finishing an operation the user will be given feedback on its result, either in the form of an alert or error message or in the form of a success message. The visual overview of these pages and the relationship between data employed will be showed along this document.

Web pages' overview

Visual overview

Overview of the general page: Provides a general menu for all the functionality. It will act as a menu from where to access all functionalities

Urgent items
Displays items with their consumption date within 20 days from today
- item id
- ingredient type
- Quantity
- Consumption date
- Place
- Notes
- Edit/Delete functionality

Ingredients section

Button to search ingredients   Button to go to add ingredients

Recipes section

Button to search recipes   Button to go to add recipes

Ingredients search page: page where you can search ingredients by their location or ingredient type

INGREDIENTS SEARCH

SEARCH BY PLACE

Checkbox
- Door
- Drawers
- Shelves

Submit button

SEARCH BY INGREDIENT TYPE

Ingr type - string - has to match an existing ingredient type

Submit button

DISPLAY SEARCH RESULTS
- Item id
- Ingredient type
- Quantity
- Consumption date
- Notes
- Place
- Edit or delete options

Ingredients addition page: Page where to either add a new type of ingredient or add an ingredient whose type is already defined
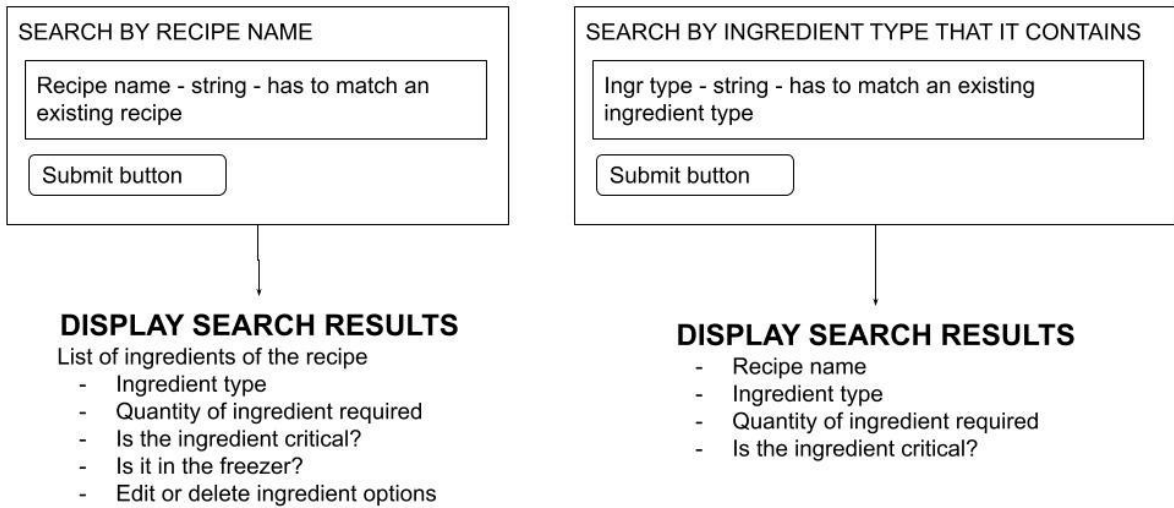
INGREDIENTS ADDITION

ADD INGREDIENT TYPE

New ingredient type - string

Submit button

ADD ITEM TO THE FREEZER

Ingredient type - string - has to match an existing type

Quantity - string

Consumption date - date

Notes - string

Place - string - has to be either "Door" or "Drawers" or "Shelves"

Submit button

Recipes search page: Page where to search a recipe by its name or ingredients that are already in the freezer

RECIPES SEARCH

SEARCH BY RECIPE NAME

Recipe name - string - has to match an existing recipe

Submit button

SEARCH BY INGREDIENT TYPE THAT IT CONTAINS

Ingr type - string - has to match an existing ingredient type

Submit button

DISPLAY SEARCH RESULTS
List of ingredients of the recipe
- Ingredient type
- Quantity of ingredient required
- Is the ingredient critical?
- Is it in the freezer?
- Edit or delete ingredient options

DISPLAY SEARCH RESULTS
- Recipe name
- Ingredient type
- Quantity of ingredient required
- Is the ingredient critical?

Recipes addition page: Page where to add recipes or add their ingredients

RECIPES ADDITION

ADD RECIPE

New recipe - string

Submit button

ADD INGREDIENT TO AN EXISTING RECIPE

Recipe - string - has to match an existing recipe

Ingredient type - string - has to match an existing type

Quantity - string

Is it critical? - string - has to be either "Yes" or "No"

Submit button

Update of ingredients form: When clicking to update an element, you should be redirected to a form of this format:

FORM TO MODIFY ITEM
(All fields initially filled with the precedent data)

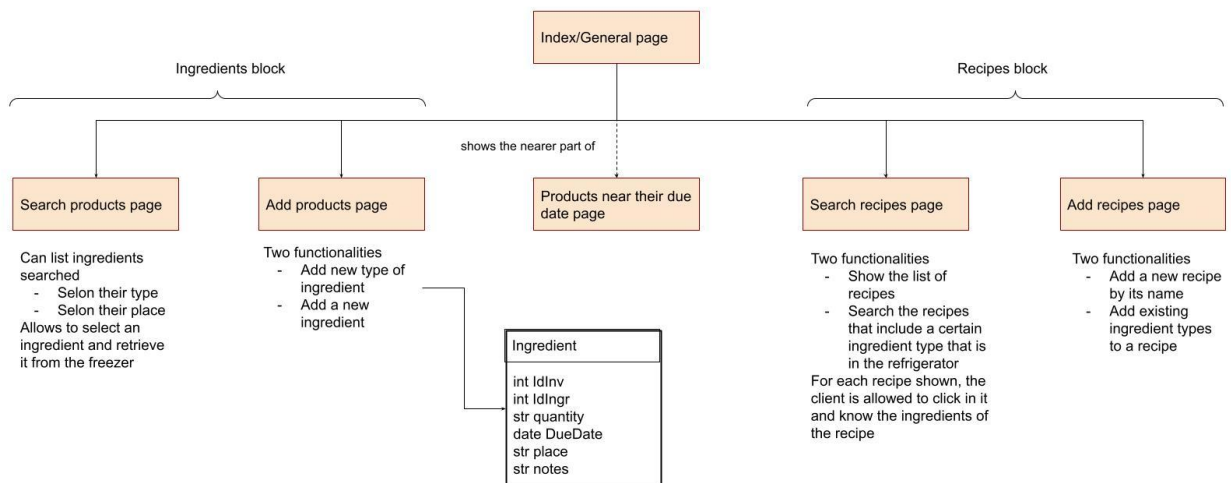Ingredient type - string - has to match a valid type

Quantity - string

Consumption date - date

Notes - string

Place - string - has to be either "Door" or "Shelves" or "Drawers"

Update button

Pages' relationship overview

Index/General page

Ingredients block

Recipes block

shows the nearer part of

Search products page

Add products page

Products near their due date page

Search recipes page

Add recipes page

Can list ingredients searched
- Selon their type
- Selon their place
Allows to select an ingredient and retrieve it from the freezer

Two functionalities
- Add new type of ingredient
- Add a new ingredient

Two functionalities
- Show the list of recipes
- Search the recipes that include a certain ingredient type that is in the refrigerator
For each recipe shown, the client is allowed to click in it and know the ingredients of the recipe

Two functionalities
- Add a new recipe by its name
- Add existing ingredient types to a recipe

Ingredient

int IdInv
int IdIngr
str quantity
date DueDate
str place
str notes

Tables for data types and proposed forms

Inventory table

This database will store everything that is inside the refrigerator, the

Field Name	Data type	Description

IdInv	Integer	Id for each product added
IdIngr	Integer	Relates to the type of ingredient that we are storing
Quantity	String	Given that the quantity can be in grammes or in rations/pieces or mL, we will let the user input this with her own measurement method
Due date	Date	Date before which the product should be consommed
Place	String	It helps to facilitate the task of finding each thing by telling if it is in the door, the drawers or the shelves of the refrigerator
Notes	String	Any other information that the user wants to record as a note

Ingredients table

This table will keep a register of the ingredient types that are allowed, in order to facilitate to create the recipes-ingredients relationship and to make the ingredients easier to track by giving them an identifier selon their type, only allowing to select the ingredient type to avoid problems because of slightly different ingredient names.

Field Name	Data Type	Description
IdIngr	Integer	Id for the ingredient type
Description	String	Name of the ingredient. When the client enters an ingredient and she has to select an ingredient type, she will choice the ingredient description, but for the database this product will be assigned the ingredient Id.

Recipes table

This table will keep a register of the different recipes that the client can do and their name, assigning them an Id for easier management of the recipes.

Field Name	Data Type	Description
IdRec	Integer	Id for the recipe
Descriptio	String	Name of the

n		recipe

Recipes-Ingredients table

This table will relate the ingredients to the recipes. In other words, it will be used to record which ingredients (through their ingredients identificator) are needed for which recipe, and if these ingredients are critical (strictly necessary) or not.
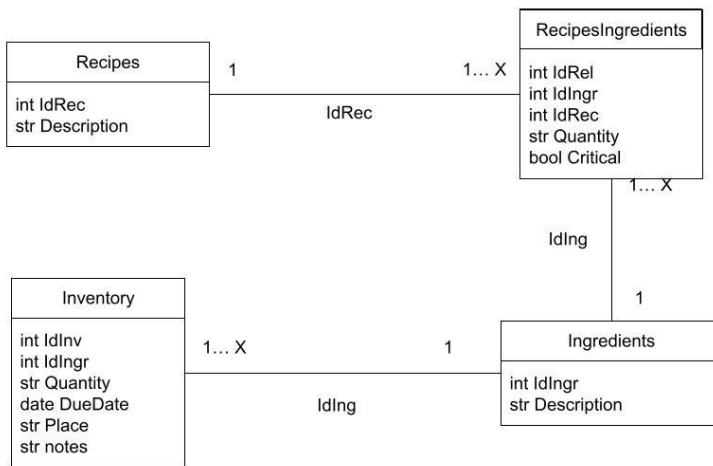
Field Name	Data Type	Description
IdRel	Integer	Identificator of the recipe-ingredient relationship
IdRec	Integer	Identificator of the recipe that we will be referring to.
IdIngr	Integer	Identificator of the ingredient that is used for this recipe.
Quantity	String	Quantity of the ingredient used.
Critical	Boolean	If the integer is strictly necessary or it can be omitted.

Tables relationship in the database

The database consists on four tables, organized as shown in the following figure. The ingredients table (with the ingredients types) is related to the inventory table (with the items in the freezer) through the ingredient Id, IdIngr, so that there is a different Id for each ingredient but this Id can be repeated in the items in the inventory, since there can be multiple items of the same ingredient type.

The ingredients table is also related to the IngredientsRecipes table through the ingredient Id, in a 1…X relationship since multiple recipes can use the same ingredient, so that the IdIngr can appear multiple times in the RecipesIngredients table.

Finally, the Recipes table is related to the RecipesIngredients table through the recipe Id in a 1…x relationship, since each recipe Id appears only once in the recipes table but it can appear multiple times in the RecipesIngredients table because the recipes can have more than one ingredient.

Testing plan

Success criteria addressed	Nature of the test	Input	Expected output
Data entry forms allow the client to record the ingredients added to the refrigerator, a description (quantity and notes), the place (Drawers, shelves or door) where they were put and the date of freezing.	Input an ingredient	Any ingredient	If entering the inventory database in phpMyAdmin, we should see the new item. Success message expected.

Data entry forms allow the client to record new recipes and the ingredients needed to make them.	Create a new recipe	Put a name in the recipes addition form	Success message expected. Verify the addition by entering in the phpMyAdmin table.
Data entry forms allow the client to record new recipes and the ingredients needed to make them.	Create a new ingredient type	Put a name in the ingredients addition form	Success message expected. Verify the addition by entering the phpMyAdmin table.
The client is able to search for products of a certain type	Search an item by its type	Add an ingredient of type X. Add an ingredient of type Y. Then search an ingredient of type X	At the end of the page, ingredient of type X added previously should appear. Note that ingredient of type Y should not appear.
The client is able to search for products in a certain place, and in more than one place at a time	Search items in one concrete place	Add an ingredient and put "Door " as place. Add another ingredient (different) and put "Shelves" as place. Add anther ingredient (different also) and put "Drawers" as place. Tick only in the Door checkbox when coming to search by place.	The ingredient added to the door should appear, and it should be the only one.

The client is able to search for products in a certain place, and in more than one place at a time	Search items in two places	Add an ingredient and put "Door " as place. Add another ingredient (different) and put "Shelves" as place. Add anther ingredient (different also) and put "Drawers" as place. Tick in the Door and Shelves checkboxes when coming to search by place.	The ingredients added to the door and shelves should appear, but not the ingredient added to the drawers.
The client is able to search for products in a certain place, and in more than one place at a time	Search items in all places	Add an ingredient and put "Door " as place. Add another ingredient (different) and put "Shelves" as place. Add anther ingredient (different also) and put "Drawers" as place. Tick all the checkboxes when coming to search by place.	All the added ingredients should appear.
The client is able to search for products in a certain place, and in more than one place at a time	Search items in no place	Add an ingredient and put "Door " as place. Add another ingredient (different) and put "Shelves" as place. Add anther ingredient (different also) and put "Drawers" as place. Tick no checkboxes when coming to search by place.	No ingredients should appear. The web site should display a message saying that there are no ingredients found.

The client is able to search for products in a certain place, and in more than one place at a time	Search items in a place where there are no items	Add an ingredient and put "Door " as place. Add another ingredient (different) and put "Shelves" as place. Tick the "Drawers" checkbox when coming to search by place.	No ingredients should appear. The web site should display a message saying that there are no ingredients found.
The client can search the ingredients that form a recipe, and know if they are in the freezer	Search a recipe with ingredients assigned	Input a recipe, and two ingredients. Then add an item to the freezer of one of the ingredients. Then search for this recipe selon recipes name.	A table should display both ingredients added, specifying that one is in the freezer and the other one not.
The client can search the ingredients that form a recipe, and know if they are in the freezer	Search a recipe with no ingredients	Input a recipe. Then search for the recipe with a concrete name.	No ingredients should be displayed. A message indicating that there are no such ingredients should be shown.
The client can search the recipes that contain an ingredient	Search for recipes that contain an ingredient when no recipes contain it.	Directly search for recipes containing X ingredient without having added recipes.	No recipes should be shown. A message indicating that there are no such recipes should be displayed.
The client can search the recipes that contain an ingredient	Search for recipes that contain an ingredient when some recipes use	Add a recipe. Add ingredient X to the recipe. Add another recipe. Add ingredient Y to that recipe. Search for	The first recipe should be displayed. The second recipe should not be

	it and others no.	recipes that contain X.	displayed.
The client is warned whenever any product approaches its consumption date	There are no ingredients with near consumption date.	Enter the menu page.	No urgent ingredients should be displayed
The client is warned whenever any product approaches its consumption date	There are items with near consumption date.	Add an item X with consumption date in five days. Add an item Y with consumption date within one year	Item X should be displayed in the urgent ingredients part.
The client is warned whenever any product approaches its consumption date	An item passes to have a near consumption date	Add an item X with consumption date in 21 days.	The same day, no item should be displayed. The next day, item X should be displayed in the urgent ingredients zone.
The client is able to retrieve ingredients and remove them from the database	Remove an ingredient from the urgent page.	Click to remove an ingredient from the urgent page.	Success message. The ingredient should not be shown in the urgent page nor searching its ingredient type.
The client is able to retrieve ingredients and remove them	Remove an ingredient found when searching by place	Search ingredients by place. Click to remove one of them.	Success message. The ingredient should not be shown anymore.

from the database			
The client is able to retrieve ingredients and remove them from the database	Remove an item found when searching by type	Search items by type. Click to remove one of them.	Success message. The ingredient should not be shown anymore.
The client is able to modify ingredients from the inventory	Modify an ingredient from the urgent page so that it now does not appear as urgent.	Click to modify an ingredient from the urgent page. Change the consumption date to be one year from now.	Success message. The ingredient should not be shown in the urgent page but yes searching its ingredient type.
The client is able to modify ingredients from the inventory	Modify an ingredient found when searching by place so that it is now urgent.	Search ingredients by place. Click to modify one of them. Change its date to be tomorrow.	Success message. The ingredient should be shown with the change in date when searching its ingredient type, and it should now appear in the urgent page.
The client is able to modify ingredients from the inventory	Modify an item found when searching by type and change its type.	Search items by type. Modify one of them to be of a different type	Success message. The ingredient should now be shown when searching its new type

The client is able to modify ingredients from the inventory	Modify an urgent item and change its quantity.	Look at the urgent items. Modify one of them to be of a different quantity	Success message. The ingredient should now be shown with the new quantity.
The client is able to modify ingredients from the inventory	Modify an item to change its place.	Look at the urgent items. Modify one of them to be in a different place	Success message. The ingredient should now be shown with the new place. When searching the old place the ingredient should not appear anymore. When searching the new place the ingredient should appear.
The client is able to modify ingredients from the inventory	Modify an item to change its notes	Look at the urgent items. Modify one of them to have a different "notes" value	Success message. The ingredient should now be shown with the new notes.
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid ingredient type when modifying	Look at the urgent items. Try to modify one of them and put a nonexisting ingredient type.	Error message displayed

Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid place when modifying	Look at the urgent items. Try to modify one of them and put a nonexisting place.	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid place when adding a new item.	Add a new item. Try to put a nonexisting place (i.e. "locker") as place.	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid ingredient type when adding a new item.	Add a new item. Try to assign a nonexisting ingredient type	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid ingredient type when adding a new ingredient to a recipe	Add an ingredient for a recipe. Try to assign a nonexisting ingredient type	Error message displayed

Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid recipe when adding a new ingredient to a recipe	Add an ingredient for a recipe. Try to assign a nonexisting recipe to the ingredient.	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid value for critical when adding a new ingredient to a recipe	Add an ingredient for a recipe. Try to assign the value "YES" to critical	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid value for ingredient when searching items by ingredient type.	Search by ingredient type and put a nonexisting type	Error message displayed
Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid value for ingredient when searching recipes by ingredient type.	Search a recipe by ingredient type contained and put a nonexisting type	Error message displayed

Data is verified - the client can commit errors registering new data, but this will be notified and will not be used	Try to introduce invalid value for recipe when searching recipes by name.	Search a recipe by name and put a nonexisting name	Error message displayed