|  |  |
| --- | --- |
| **IT Graad 11 PAT 2024 : Healthy Living** | |
| **Naam en Van:** | **Gustav Jones** |
| **Projek Naam:** | **Boereraad** |

# **Task 1A : Define the task**

## Topic:

A library for home use medical remedies. This application will contain many different medical remedies that the average human user can access from the application to apply in their daily lives. It will enable the user to submit and find new solutions to their medical problems while being administrated to ensure correct information.

## Purpose of program:

To create a bridge between users and local knowledge passed on through generations and tested by medical administrators. It will house all the medical knowledge any user will need for home medical needs all in one place. It will also enable the user to keep track and review remedies they have used in the past.

## Possible solution:

A pending changes system. A system where the user has the freedom to add and edit information about home remedies with ease, while an administrator reviews the pending changes. The application will have 2 sides, user and administrator. The user will be able to view and edit remedies as well as create reviews for remedies and submit pending changes stored in text files. The administrator will be able to approve or deny changes as well as freely edit the database itself.

## Scope:

This program will not be a social media. It will not contain user interaction, but strictly factual medical information. It will also not be a way to interact with home doctors, but instead serve as a simple way to enhance your health by using everyday household items.

# **Task 1B : User Stories**

| **WHO** | **WHAT** | **WHY** |
| --- | --- | --- |
| User (Average Human) | Access a list of household remedies. | To treat minor symptoms with easy to find household items. |
| User | Edit remedies information. | To update or correct medical information about a remedy. |
| User | Add a new remedy to the collection | To increase the size of the medical information library of the application |
| User | Create a review of the remedy after use to treat symptoms | To create a history of remedies that can be rated on their effectiveness for future use. |
| Administrator (Medical Professional) | Review newly added remedies by the user. | To add pending additions to the application database if the information is factual. |
| Administrator | Review edited remedies information by the user. | To check for any errors made by the user when editing a remedy's information before updating the database. |
| Administrator | View and edit all user's information from an admin page. | To update user information and to list user attached reviews for remedies |
| Administrator | Freely view and edit remedies directly to the database. | To update the information of any selected remedy without the use of users and pending changes. |

# **Task 1B : User Stories - Acceptance Test**

* The user can view a list of remedies in the application database.
* The user can add a new remedy to the pending changes of the database.
* The user can edit an existing remedy to the pending changes of the database.
* The administrator can review additions and changes to new or existing remedies
* The administrator can view and edit any user account in the database and the attached remedy reviews.

# **Task 2 : Data Dictionary**

# **Data structures**

## Text files:

|  |  |
| --- | --- |
| **Name of text file** | RemedyName.txt |
| **Purpose** | To store pending changes or additions made by the user in the application before being saved to the database. A new text file will be created with the remedy name that was edited and written to with the information when the user makes a change to a new/existing remedy. When the administrator reviews the changes, the data will be read from the text file and then stored in the database. |
| **Format** | {  Price;  IsNatural;  List of symptoms to use for;  Description of the remedy;  } |
| **Extract of data** | {  0.17;  True;  Sore throat, Cough;  Mix 1 tablespoon of honey with the juice of half a lemon in warm water. Drink to soothe a sore throat.;  } |

## Arrays:

|  |  |
| --- | --- |
| **Declaration** |  |
| **Populate arrays** |  |
| **Processing** |  |

## User defined methods

|  |  |
| --- | --- |
| **Signature** | **Explanation** |
|  |  |

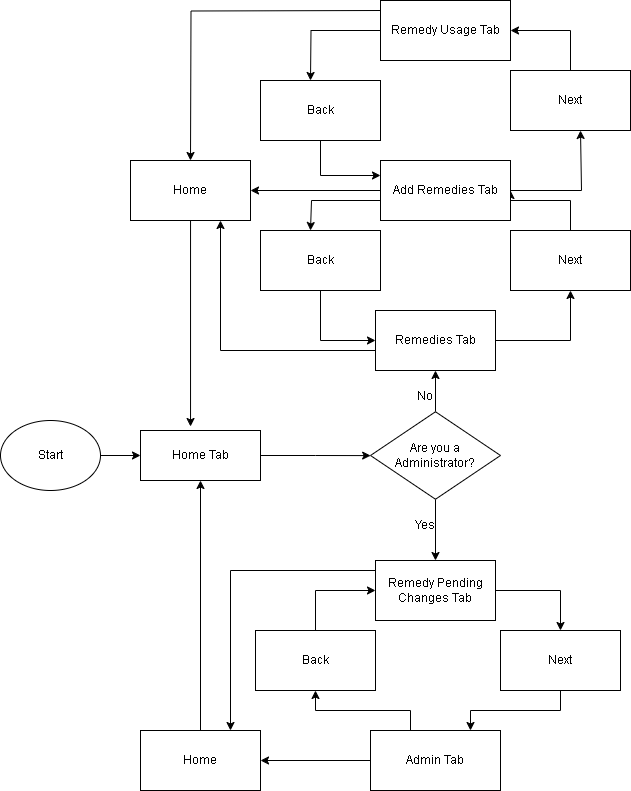
# **Task 3: Database**

## Role of Database: (List of FIVE functions)

## Database design

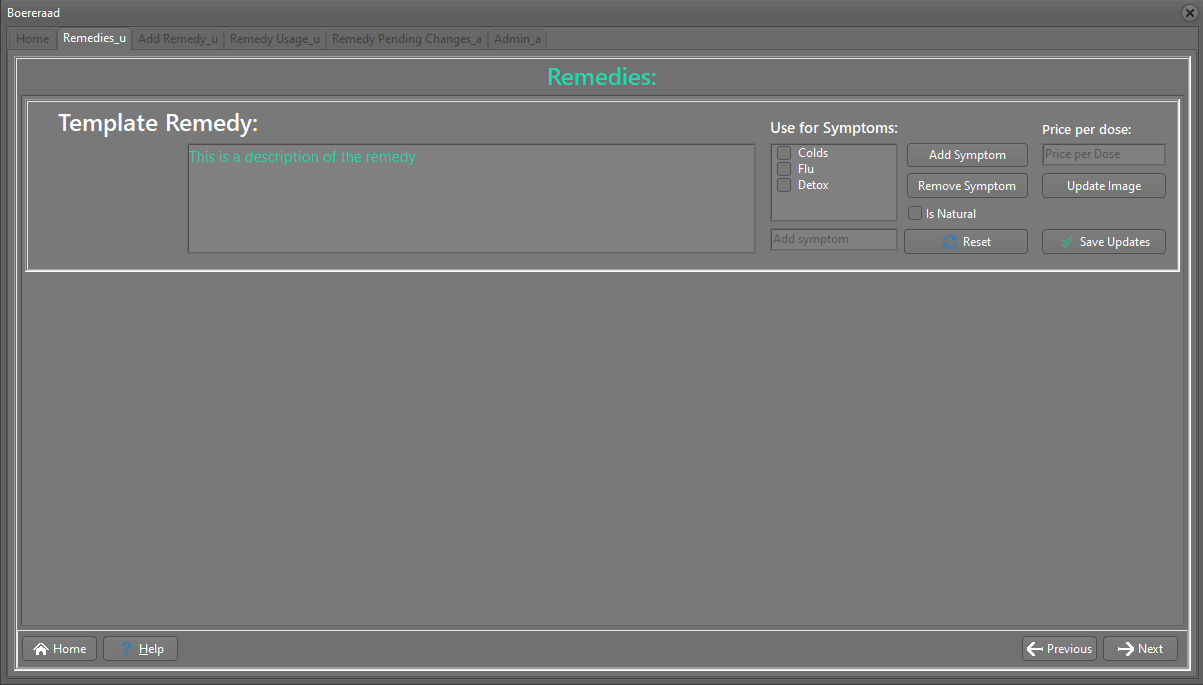
# **Task 4 : Navigation & GUI Design**

# **Navigation**

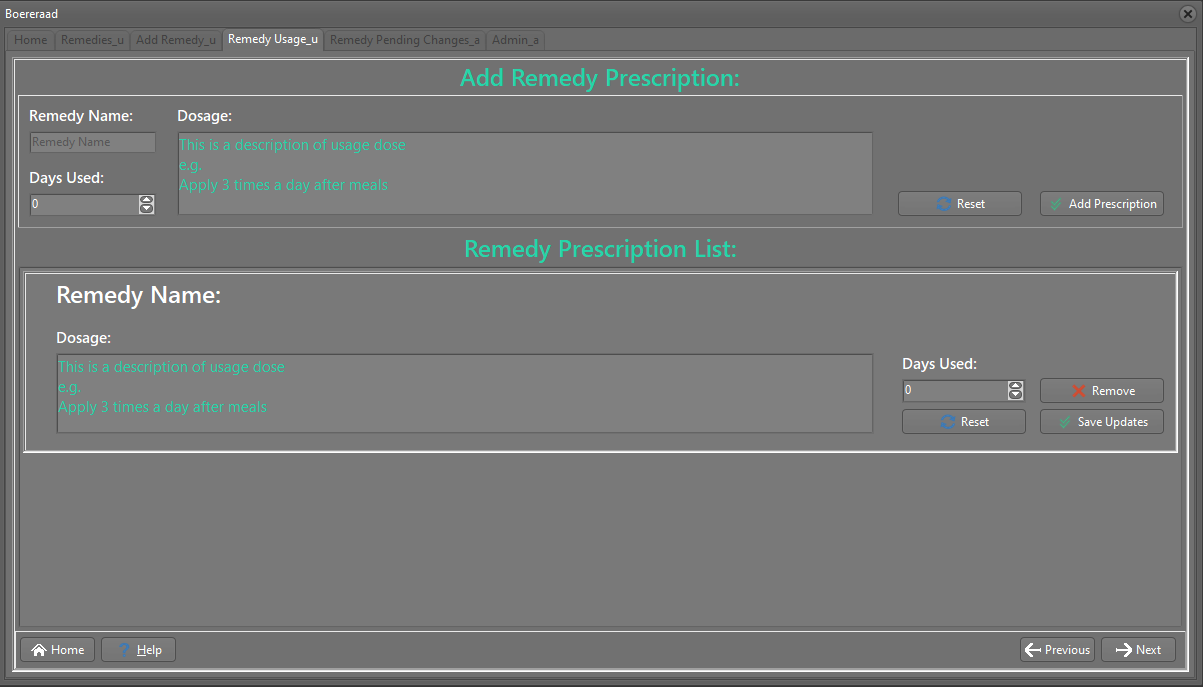


# **GUI Design**

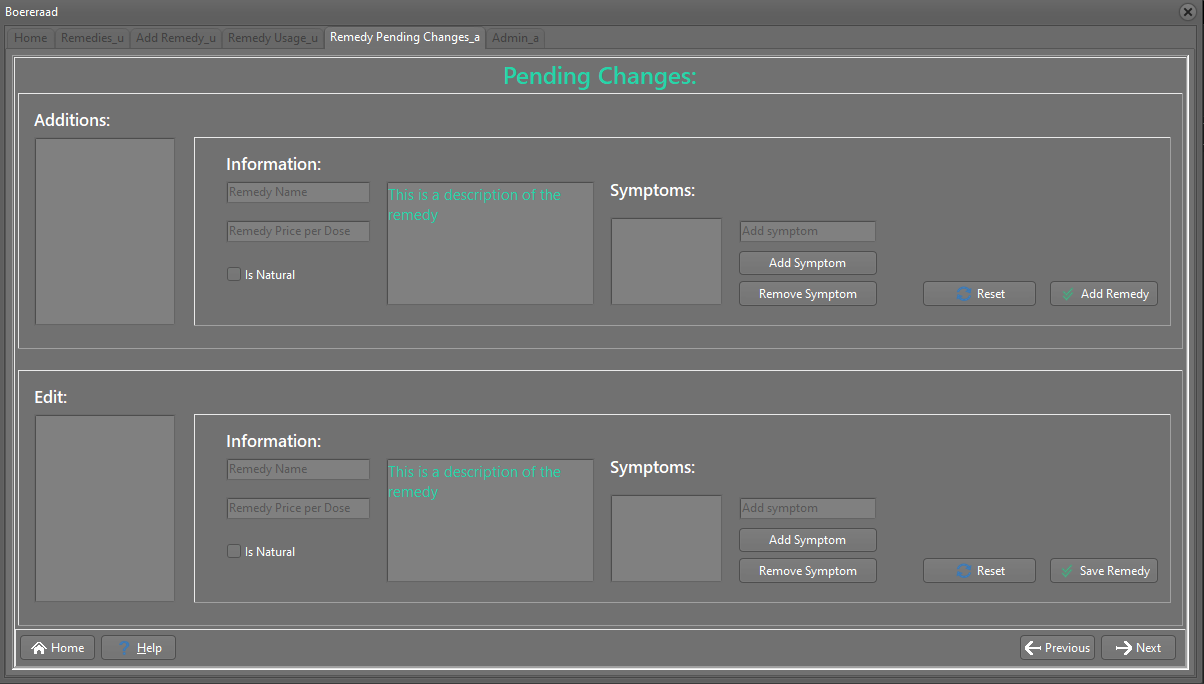
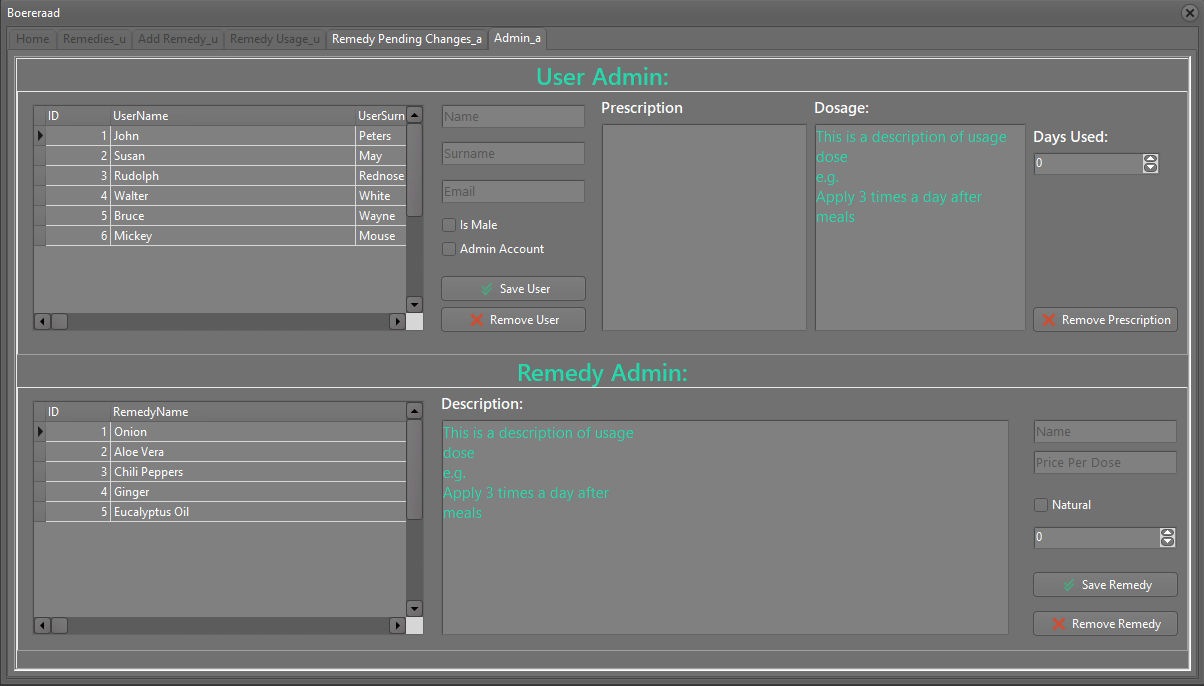
## User:



## 



## Admin:



# **IPO – Software Design Tool (Task 5)**

## INPUT: tsAddRemedy

| **Source** | **Variable name & data type** | **Format (type, size)** | **GUI Object Name** | **Local/Global variable** |
| --- | --- | --- | --- | --- |
| Keyboard | sRemedyName : String | None, String Input | edtAddRemedyInputsRemedyName | Local |
| Keyboard | rRemedyPrice : Real | Currency, 2 decimals | edtAddRemedyInputsPrice | Local |
| Mouse Click | bIsNatural : Boolean | None, Boolean Input | chkAddRemedyInputsNatural | Local |
| Keyboard, Mouse Click | iEaseOfUse : Integer | None, Integer Input | sedAddRemedyInputsEaseOfUse | Local |
| Keyboard | sDescription : String | Concat Each Line | redAddRemedyInputsDescription | Local |
| Keyboard, Mouse Click | arrSymptoms : array of string | For each element in cltAddRemedyInputsSymptoms | cltAddRemedyInputsSymptoms | Local |

## INPUT: tsRemedyPendingChanges

| **Source** | **Variable name & data type** | **Format (type, size)** | **GUI Object Name** | **Local/Global variable** |
| --- | --- | --- | --- | --- |
| Mouse Click | iRemedyIndex : Integer | Selected object in lstRemedyPendingChangesAdditionsRemediesList | lstRemedyPendingChangesAdditionsRemediesList | Local |
| Keyboard | sRemedyName : String | None, String Input | edtRemedyPendingChangesAdditionsInfoName | Local |
| Keyboard | rRemedyPrice : Real | Currency, 2 Decimals | edtRemedyPendingChangesAdditionsInfoPrice | Local |
| Mouse Click | bIsNatural : Boolean | None, Boolean Input | chkRemedyPendingChangesAdditionsInfoNatural | Local |
| Keyboard | sDescription : String | Concat Each Line | redRemedyPendingChangesAdditionsInfoDescription | Local |
| Keyboard, Mouse Click | arrSymptoms : array of strings | For each element in cltRemedyPendingChangesAdditionsInfoSymptoms | cltRemedyPendingChangesAdditionsInfoSymptoms | Local |

## VALIDATION:

| **Input** | **Validation technique and description** | **Associated error message** |
| --- | --- | --- |
| edtAddRemedyInputsRemedyName | Empty Check, check if no value was given as name | Please enter a name for the remedy |
| edtAddRemedyInputsPrice | Type Check, check if input can be parsed to currency real value | Please enter a valid currency amount |
| lstRemedyPendingChangesAdditionsRemediesList | Presence Check, check if an item was selected in the listbox | Please select a Remedy from the list |
| redRemedyPendingChangesAdditionsInfoDescription | Length Check, check if the description given is within the accepted length (255) of characters | Description may not be longer than 255 characters |

## PROCESSING:

|  |  |
| --- | --- |
| **What processing will be done** | **Algorithms, formulas, etc.** |
| **List:** | **Algorithms:** |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. | Algorithm 1: |
| 6. | Algorithm 2: |
| 7. | Algorithm 3: |
| 8. | Algorithm 4: |

## OUTPUT: tsRemedies

| **Data for Output** | **Format (Type, size)** | **Output Component** |
| --- | --- | --- |
| Remedy Name | String. Start with capital, with lowercase letters. | Label |
| Remedy Image | Small Resized PNG image of the remedy | Image |
| Remedy Description | Text paragraph with a max length of 255 characters | Richedit |
| Symptoms Use | A list of symptoms to use the remedy for in a listbox | ListBox |
| Natural Remedy | A boolean value to indicate if the remedy is natural | Checkbox |
| Remedy Price | A real value formatted to currency, rounded to 2 decimals indicating the remedy price | Edit |

## OUTPUT: tsAdmin

| **Data for Output** | **Format (Type, size)** | **Output Component** |
| --- | --- | --- |
| User DB Information | All user records saved in the database sorted by rows with columns as fields selectable to display in other controls | DBGrid |
| User Name | Display the user record name as a string | Edit |
| User Surname | Display the user record surname as a string | Edit |
| User Email | Display the user record email as a string | Edit |
| User Gender | Display the user record gender as a boolean. True if male, false if female | Checkbox |
| User Type | Display the user record type as a boolean. True if Admin, False if only User. | Checkbox |
| User Prescriptions | Display the user record connected prescriptions from the database in a list as strings | Listbox |
| Prescription Dosage | Display the dosage of the selected prescription as a string | Richedit |
| Prescription Days Used | Display the amount of days a prescription was used | SpinEdit |