

Cookbook application report

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Problem statement section.

Create a Qt application which loads a dataset with information about dishes from a file and helps user to choose favourite ones by displaying details of a selected dish and adding/removing it to/from special table.

Individual problem specification.

Will be in the end.

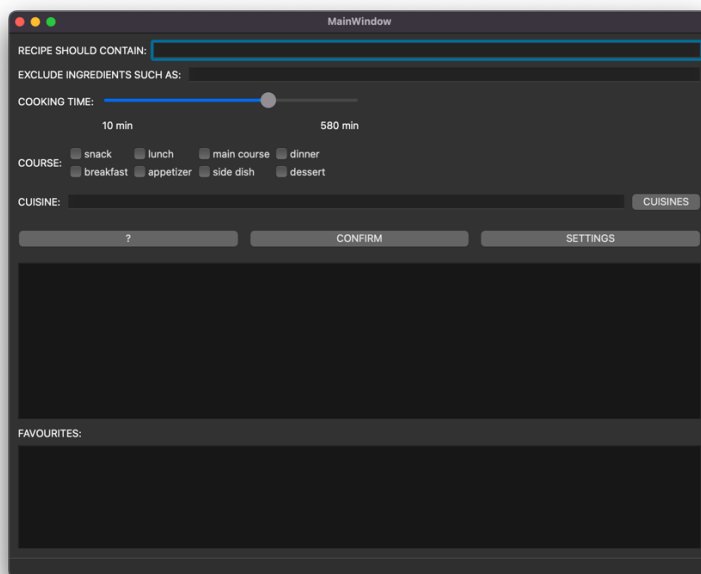
In general, I did an application with an opportunity to choose parameters for wanted dishes

Implementation details section.

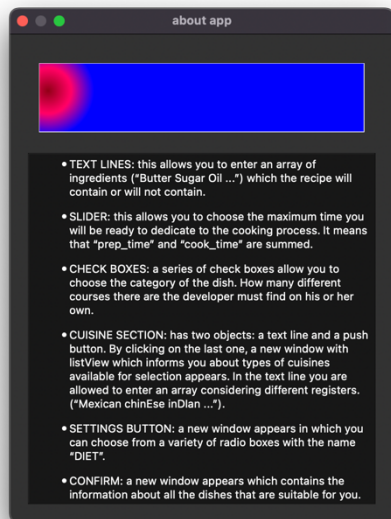
Repo URL: <https://github.com/rinpmchs/dsba-itop2022-hw>

I used QAbstractTableModel, QSortFilterProxyModel, QMainWindow, QDialog, QObject, QList, QVariant, QString, QStringListModel, QStringList, QTextStream, QMessageBox, QFile, QListView, QLabel, QGridLayout, QFileDialog, QMenu, QPainter libraries.

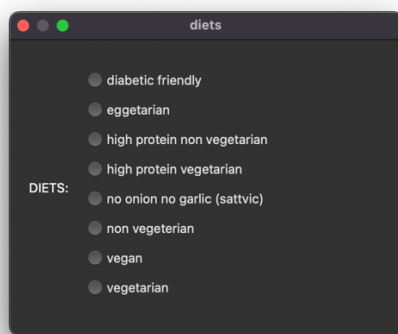
Here is the MainWindow:



In the “about app” window you can find some information about project, my student ID and a logo for application. It appears when user clicks on “?” button.



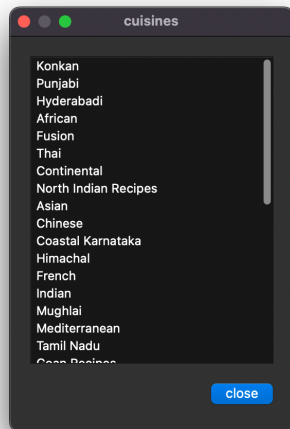
After pushing the “settings” button, “diets” window appears, where user can choose the diet from a range of radio boxes.



I implemented two different ways for adding and removing rows to/from “favourites” table. You may use whatever you like more. The first way is a doubleclick, the second is:

Karwar Style ...	https://...	4.88	Coastal ...	Side Dish	High Protein ...	5 M	20 M
Rajma Kofta I...	https://...	4.82	North Indian ...	Side Dish	High Protein ...	20 M	30 M
Barnyard ...	https://...	4.90	Indian	Lunch	High Protein ...	30 M	30 M
FAVOURITES:							
Spicy Grilled ...	https://...	4.94	Mexican	Side Dish	Vegetarian	10 M	0 M
Rajma Kofta I...	https://...	4.82	North Indian ...	Side Dish	High Protein ...	20 M	30 M

Here is a list of cuisines in a separate window:



This is a window with proxyModel. Unfortunately, I haven't implemented search/filtering feature for its normal work.

recipe_title	url	rating	cuisine	course	diet	
Roasted ...	https://...	4.95	Mexican	Dinner	Vegetarian	1
Thakkali Got...	https://...	4.93	South Indian ...	Lunch	Vegetarian	1
Spicy Grilled ...	https://...	4.94	Mexican	Side Dish	Vegetarian	1
Karwar Style ...	https://...	4.88	Coastal ...	Side Dish	High Protein ...	5
Rajma Kofta I...	https://...	4.82	North Indian ...	Side Dish	High Protein ...	2
Barnyard ...	https://...	4.90	Indian	Lunch	Vegetarian	1
Mexican ...	https://...	4.95	Mexican	Side Dish	Vegetarian	1
Karnataka ...	https://...	4.86	Karnataka	South Indian ...	Vegetarian	1
Schezwan ...	https://...	4.93	North Indian ...	Snack	Vegetarian	1
Pineapple ...	https://...	4.78	Continental	Dessert	Vegetarian	2
Matar Butter ...	https://...	4.95	North Indian ...	Lunch	Vegetarian	5
Cheesy Rice ...	https://...	4.95	Continental	Dinner	Vegetarian	1
Savory ...	https://...	5.00	Indian	Appetizer	Non ...	2

Results and discussion.

Think twice before using QSet. Filtering takes a lot of time and effort.

Conclusion.

Taking into consideration all mentioned above, I did a great work (for me it was pretty hard), but I faced several problems. In future, this application can be updated with some windows that go to links next to dishes and show sites with the recipe and well working search feature.

Since the main task of the specification was to find “good” rows in dataset, which is a kind of filtering (non-obligatory feature) and there was no tableView model, I didn’t follow it directly. Nevertheless, you can read the specification:

Cookbook

Link to dataset - <https://ufile.io/j7le5xxz>

Description

You are asked to develop an app which will allow a person to find a dish to cook.

Logo



Dataset description

Given dataset contains the following columns with information:

- “recipe_title” – Name of the dish.
- “url” – Link that allows the user to visit the website of “Archana’s kitchen” with the chosen dish.
- “rating” – Rating of a specific dish which will help the user to choose between a variety of dishes.
- “cuisine” – Type of cuisine from which a specific dish comes from.
- “course” – Contains information about the category of a dish (e.g., “Dinner”, “Lunch”, ...).
- “diet” – Informs about the distinctive features of a dish (e.g., “Vegetarian”, “Diabetic Friendly”, ...).

- “prep_time” – How long it will take to prepare for cooking.
- “cook_time” – How long it will take to prepare the dish.
- “ingredients” – Ingredients that are used in this dish, separated by the symbol “|”.

Design

Here is an approximate sketch of the application:

Explanation:

- **TEXT LINE:** This allows the user to enter an array of ingredients (“Butter Sugar Oil ...”) which the recipe will contain or will not contain. The user should be allowed to enter them with different registers. It means “Chicken” = “chicken” = “ChIcKeN” = If the user enters an ingredient which is not represented in the dataset, then program informs him or her with an appearing message box with the text: “No recipe contains such ingredient.”
- **SLIDER:** This allows the user to choose the maximum time he or she will be ready to dedicate to the cooking process. It means that “prep_time” and “cook_time” are summed. Minimal and maximal cooking time the developer must find on his or her own.
- **CHECK BOXES:** A series of check boxes which will allow the user to choose the category of the dish. How many different courses there are the developer must find on his or her own.
- **CUISINE SECTION:** Has two objects: a text line and a push button. By clicking on the last one, a list box appears which informs the user about types of cuisines available for selection. If the user enters a cuisine which is not represented in the dataset, then program informs him or her with an appearing message box with the text: “Such cuisine is not available for selection.” In the text line the user should be

allowed to enter an array considering different registers. (“Mexican chinEse inDIan ...”).

- **HELP BUTTON:** If the user clicks on it, a message box appears which informs him or her what each field is responsible for.
- **SETTINGS BUTTON:** If the user clicks on it, a new window appears in which he or she can choose from a variety of radio boxes with the name “DIET”. How many different diets there are the developer must find on his or her own. It is shown right here:

DIETS:

☐ VEGETARIAN ...

☐ HIGH IN PROTEIN ...

(AS MANY AS GIVEN IN THE DATASET)

RADIO BOXES

(e.g., the user clicks on “VEGETARIAN”, so all the dishes containing meat must be excluded. It means that, if afterwards he or she enters chicken in the “EXCLUDE INGREDIENTS SUCH AS:”, app must notify the user with the text: “No recipe contains such ingredient.” Radio boxes are important here to exclude the intersection of incongruous diets.)

- **CONFIRM:** If the user clicks on this button, a new window appears which contains the information about all the dishes that are suitable for him or her. It must contain the information about its title, rating, course, cuisine, cooking time and the url to the website. It is shown right here:

TITLE	RATING	COURSE	CUISINE	COOKING	TIME	URL
...

If the user has chosen parameters in such a way that no recipe is suitable, there should appear a new window with the text: “No recipe is suitable for your parameters. Please consider something different.”

- **FONTS AND COLOURS:** The developer must decide which to use themselves.

Additional tasks

- I. Make a sorting system which will allow to display dishes in descending order of rating.

- II. Make a possibility to record all final dishes in a file and save it on the computer. Such a button must be located on the final window when all the dishes were deliberately picked. In addition, dishes must be grouped with respect to the fields: "COURSE", "RATING", "CUISINE" (the priority is the same as when listing).

Believe in yourself and everything will work out. Good luck!