

# Online shop report

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## ***Problem statement***

The main goal of the task is to create Qt application “Online shop”. It should load dataset from CSV file; then you may sort products by price; you may search for a specific item, that you need; you may add new items to a dataset. The main idea is to add items to the cart: in the cart you can sort products, delete them at all, or delete/add one to selected item. There you can see total price of the products in the cart and save them as CSV file.

## ***Project specification***

Here is the link: [specification](#)

## ***Implementation details section***

Link for repository: [here](#)

## **General info**

In general, I tried to comply with all the features and requirements of my specification, as well as the code structure that we did at the seminars. But I changed the file partitioning a bit, for a more comfortable understanding of the code.

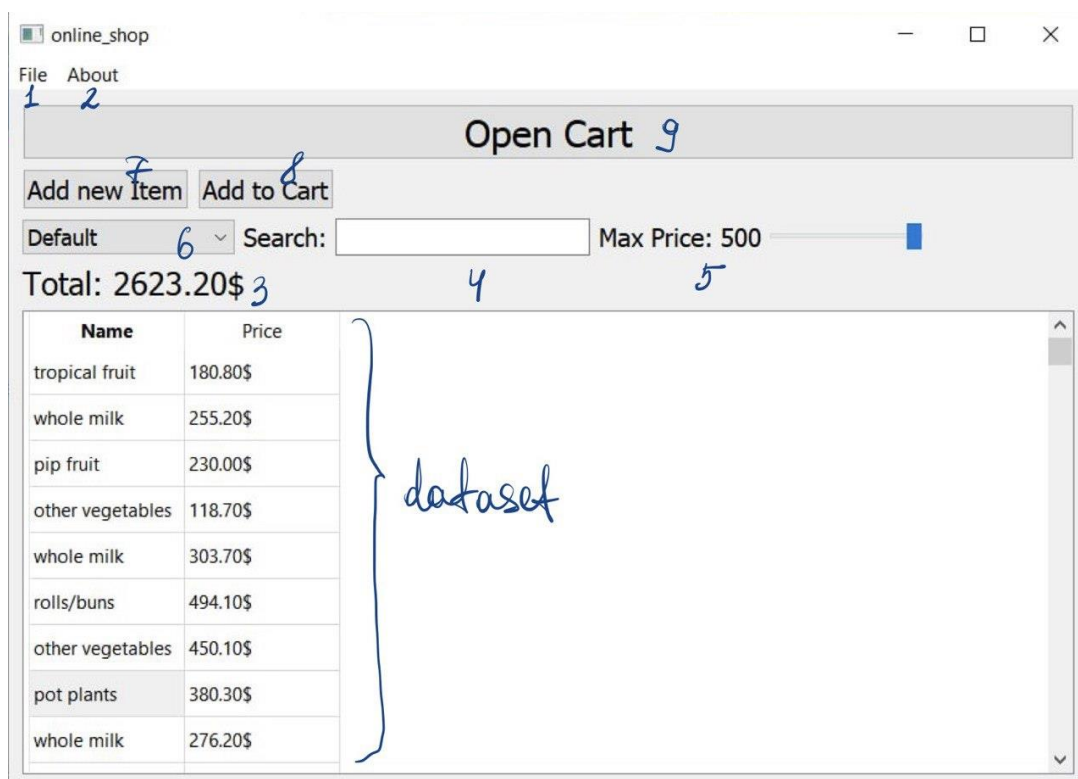
While working on the creation of the cart, I made some changes: I thought it is much better to stack exactly the same products together in the cart instead of just putting them as different items. I increase amount by one of the item instead of putting it as a new product to the cart.

I also faced the problem of sorting the price, initially because it was stored as a string, its sorting did not work correctly. Therefore, I had to change its storage into double format and overload the functions of comparing and displaying the date in the table.

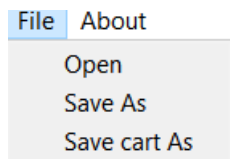
## Project structure

- src
  - about.cpp - custom widget which draws logo
  - about.h
  - about.ui
  - add.cpp - new QDialog window which allows to add new item
  - add.h
  - cart.cpp - custom widget for displaying cart(+functionality)
  - cart.h
  - mainwindow.cpp - main window(+functionality)
  - mainwindow.h
  - main.cpp – starts programm
  - online\_shop.pro – builds up a project
- data
  - Groceries\_dataset.csv
- report.pdf

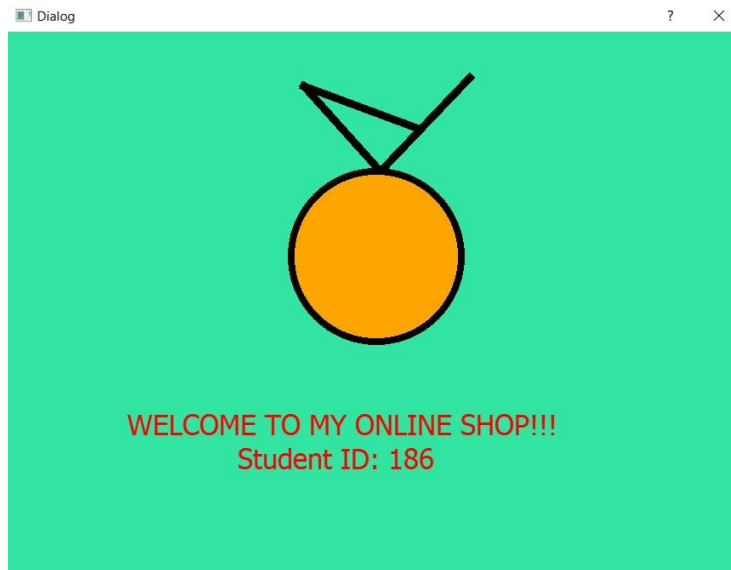
## Main window



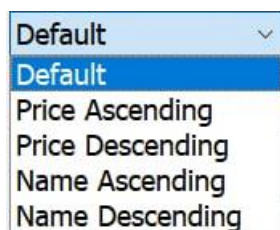
1. In file menu you have 3 options: you can open data in CSV file format; you can save your table as CSV file; you can save your cart as CSV file.



2. You can find logo of my online shop in menu bar "About" :



3. You can view total price of the products in the cart even in the main window with help of QLabel.
4. You can use search to find a specific item. Search gives you new product list below each time you enter new symbol using QLineEdit and QFilterProxyModel.
5. You can set up a maximum price of the shown products using QSlider. The maximum slider value is updated if the price of new added product is higher then previous maximum.
6. You can sort the products in the dataset by such criteria using QComboBox and QFilterProxyModel:



7. You can add new items to your dataset using this button, after pushing it there will appear new window in which you enter data. Data is checked

for being valid:

A Qt window titled "online\_shop" with a standard title bar (minimize, maximize, close buttons). Inside the window, there are two text input fields. The first is labeled "Name of Product" and the second is labeled "Price of Product". Below these fields is a large rectangular button labeled "Apply".

8. This QPushButton adds selected product to the cart.
9. This QPushButton opens cart window, which will be presented below.

## Cart window

A Qt window titled "online\_shop" displaying a cart interface. At the top, there are three buttons: "Add one Item" (annotated with a handwritten '1'), "Remove one Item" (annotated with a handwritten '2'), and "Delete Item" (annotated with a handwritten '3'). Below these buttons is a dropdown menu currently showing "Default" (annotated with a handwritten '5'). Under the dropdown, the text "Total: 2623.20\$" is displayed (annotated with a handwritten '4'). Below this is a table with the following data:

| Name       | Price for one | Quantity | Total cost |
|------------|---------------|----------|------------|
| rolls/buns | 494.10\$      | 3        | 1482.30\$  |
| pot plants | 380.30\$      | 3        | 1140.90\$  |

To the right of the table, there is a handwritten note in blue ink: "products in the cart" with a large curly brace grouping the two rows of the table.

1. You can add one item to selected product in the cart.
2. You can remove one item from selected product in the cart.
3. You can delete selected product from the cart at all.
4. Total price of the products in the cart using QLabel.
5. You can sort the products in the cart using QComboBox by such criteria:

A QComboBox widget with a dropdown menu open. The dropdown menu lists the following sorting criteria: "Default" (highlighted in blue), "Price for one Ascending", "Price for one Descending", "Name Ascending", "Name Descending", "Total price Ascending", "Total price Descending", "Quantity Ascending", and "Quantity Descending".

## ***Results and discussion***

My specification was quite boring for me, so I added some more functions, which were not required. I added: search, slider(max price), adding new item to the dataset and also sorting in the cart. All other requirements of my specification were fulfilled.

## ***Conclusion***

The main goal of the project was achieved, some more features were added, but there are some extra things that can be added to make my online shop better. For example:

- First of all, there should be beautiful design
- Secondly, it will be more comfortable to make something like accounts for users, in which after signing in you would be allowed to view your personal cart