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CS441 Midterm Write-Up

The first thing that most of us learned as a group was that everyone had some small differences in how we code even within the same language, C++. Although there wasn’t very much of an impact on the project there, it was interesting at the least to see how someone can code something in a different way but still get the same result as you.

As far as self learning went in this project, the C++ part wasn’t too much of a difficulty due to us all knowing the language at least decently well. There wasn’t exactly too much to learn on the back end of things except how to put other people’s code together, as well as debugging some errors that might occur from not knowing how other people’s code might affect how things run. Aside from that, the main thing I had to learn pertained to the GUI. The first thing I learned about the GUI was that it was not similar to anything I had previously dealt with. I looked at plenty of tutorials, written and videos, but I couldn’t manage to find out how to do what I needed to do. QT was quite frustrating for the group as a whole. None of us managed to get a good grasp of it and it really started to slow down the whole group’s process. We thought it would take way less time and that we could keep adding more use cases as time went on, but we couldn’t have been more wrong.

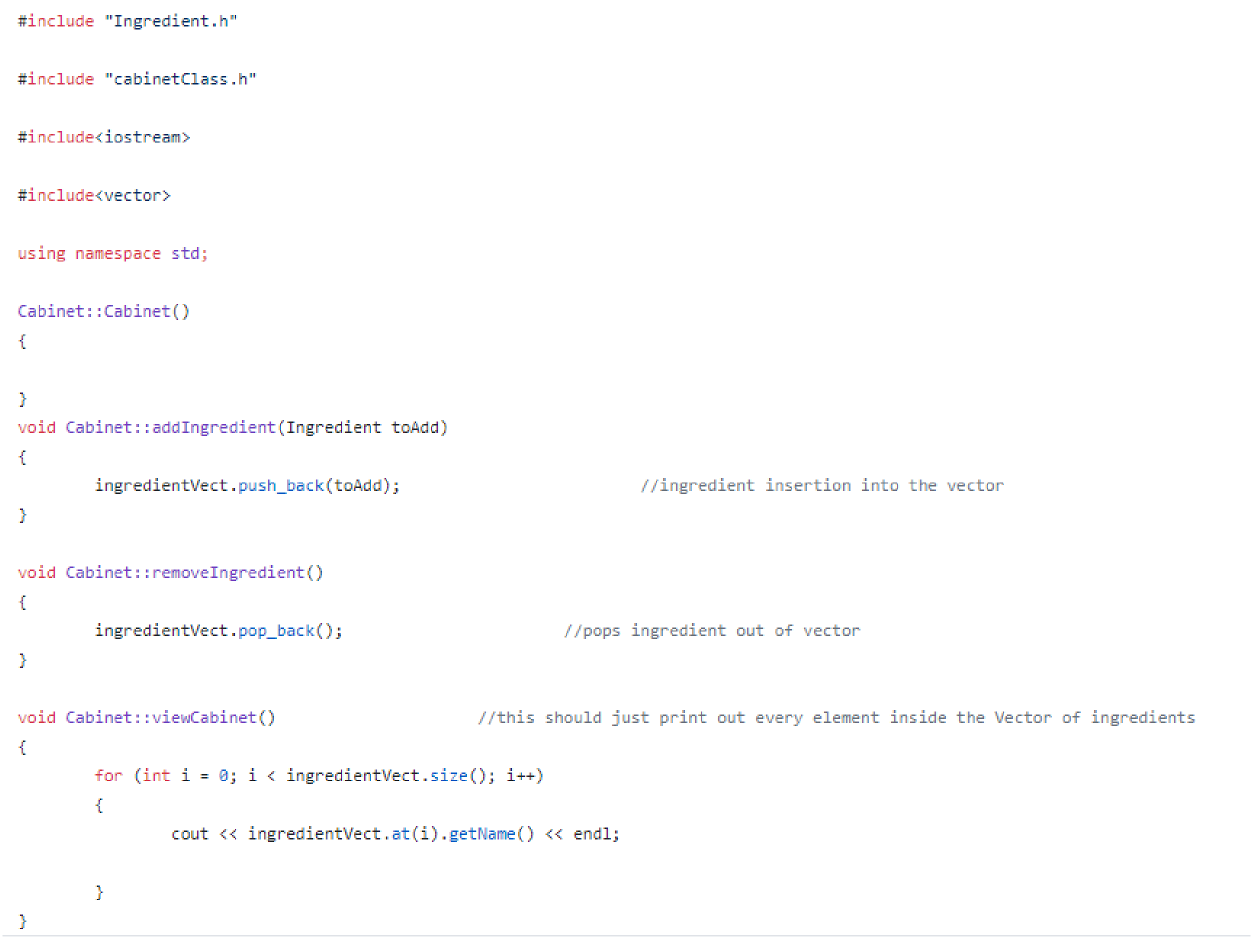
The use case that I developed was the cabinet class. It mainly interacts with the user and ingredient class. It is essentially a vector of ingredients. As a group we pitched many use cases in the beginning of the planning phase, and later on we had to scrap a lot of the features we were initially thinking would make the final cut.

The UML design we reviewed was primarily the activity diagram, but we also had some influence from the sequence diagram. The original UML diagrams that we drew up were not very accurate to what was applied in terms of classes and use cases when approaching this project. I think our approach was kind of messy and it could've been a bit cleaner, but what else is one to expect when this is all of our first times working on a project of this scale.

The code that I developed was the Cabinet Class, and also some parts of the GUI. At first I was having trouble with combining both the cabinet and ingredient classes together, but it didn't take too long to rid it of bugs and have it working smoothly. The relationship between user class and cabinet class is a 'has a' relationship, so I didn't really need to do too much to make it work with the user class.

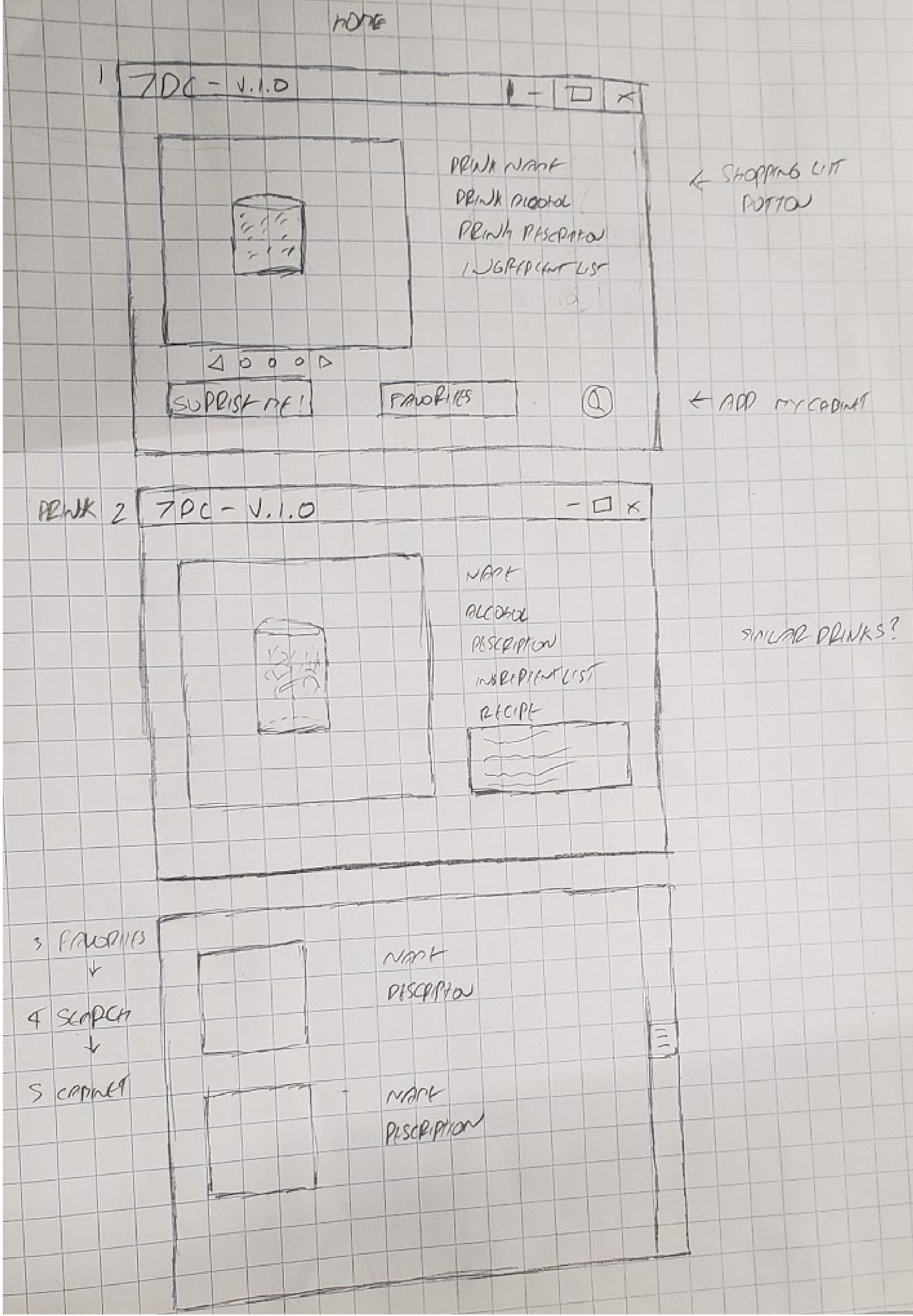
My greatest takeaway from this experience is that things will never go as planned. We planned to have a lot more in this cocktail recipe program, but our progress was halted when it came to the GUI. We should have expected something like this might have happened and had some sort of a plan to avoid being slowed down to such a degree.

The Cabinet Class is shown in the picture below.



```
#include "Ingredient.h"

#include "cabinetClass.h"

#include<iostream>

#include<vector>

using namespace std;

Cabinet::Cabinet()
{

}
void Cabinet::addIngredient(Ingredient toAdd)
{
        ingredientVect.push_back(toAdd);                         //ingredient insertion into the vector
}

void Cabinet::removeIngredient()
{
        ingredientVect.pop_back();                       //pops ingredient out of vector
}

void Cabinet::viewCabinet()                      //this should just print out every element inside the Vector of ingredients
{
        for (int i = 0; i < ingredientVect.size(); i++)
        {
                cout << ingredientVect.at(i).getName() << endl;

        }
}
```

And seen below is a picture of the design for the original GUI:


HOME
1
7DC - V.1.0
DRINK NAME
DRINK ALCOHOL
DRINK DESCRIPTION
INGREDIENT LIST
← SHOPPING LIST BUTTON
SUPRISE ME!
FAVORITES
← ADD MY CABINET
DRINK 2
7DC - V.1.0
NAME
ALCOHOL
DESCRIPTION
INGREDIENT LIST
RECIPE
SIMILAR DRINKS?
3 FAVORITES
4 SEARCH
5 CABINET
NAME
DESCRIPTION
NAME
DESCRIPTION

Later we put the drink GUI and the home screen GUI together so that it would display a drink and have it’s description. Although as of right now we are struggling to get the GUI to work, it should look very similar to the design.

Lastly, here are some of the tutorials I used for the GUI:

https://doc.qt.io/archives/qt-4.8/qscrollarea.html

https://wiki.qt.io/Basic_Qt_Programming_Tutorial

https://www.youtube.com/watch?v=QPbkJt2CYvk