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ICS4U  
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Project Review

**Did it work?**

The program does not function perfectly, but a majority of the functions work. There are problems with the main menu, with printing out error messages and taking in inputs from the user. This can be attributed to improper flushing of the Scanner object in the main method, which can be fixed relatively quickly.

All the searching and sorting methods work as intended, though the output for the searching methods prints out the entire menu rather than the specified object. I know that they work because they are used within the methods that buy ingredients and cook dishes, and both of those methods work without problems. The functionality that does not work is adding a dish, since it was not actually implemented in the code, but appears as a menu option to the user.

**Did it address the goals and objectives?**

The program addresses a fair number of the goals and objectives that we set out to meet at the beginning. It is able to read and write ingredients, dishes, suppliers and budget info to text files. It allows the user to pick a supplier to buy ingredients from, and updates the inventory accordingly. It stores all ingredients in the inventory and the ones needed for each dish. The program also allows users to do searches of ingredients and dishes by name. It prints all dishes, ingredients, and specific dishes, and allows the user to cook a dish from the menu

Most of the features that were cut from the final program were different ways to search and sort objects. For example, searching for a dish by category was cut, as well as searching for an ingredient by an amount. The second one seemed frivolous because it doesn’t make much sense for a user to want to find an ingredient when they only know how much of it is left. Sorting ingredients by amount left also made no sense because it seems pointless to organize ingredients by how much is left.

The most important feature that was cut is the ability to add and remove dishes from the menu, which will be discussed in the limitations section.

**Did it work for some data sets, but not others?**

Certain functions worked for some data sets, but not others. It is mainly because of improper flushing of the Scanner object, which would send the program into a state where it can no longer be run.

**Does the program in its current state have any limitations?**

In its current state, the main limitation this program has is that no new ingredients, objects or suppliers can be added to it. There has already been accommodations made for the adding of objects, since when the array is created upon file reading, a certain amount of empty indices (10 is the default) are created to store these empty values. Unfortunately, our team ran out of time before the main adding system we wanted to add, the ability to add dishes, before we could implement that functionality into the program.

**What additional features could the program have?**

With the way the Dish and Ingredient classes are handled, future expansions can include different types of ingredient, as well as different types of dishes with distinguishing features, much alike the way that the Drink class has a unique field indicating whether or not it has alcohol. Certain ingredients can also have ways of storage e.g. Meat has to be refrigerated while Spices do not.

**Was the initial design appropriate?**

The initial design seemed to be appropriate, but as it was being implemented I soon realized that it was rather lacking. More specifically, with the current functionality of the inventory class, it serves almost no purpose besides checking for all the ingredients. Most of the methods in the database only call the Inventory object to get access to the array of Drawer objects that it held. The functionality of the program could have been improved by either adding more methods to the Inventory to prevent this reaching in, or to scrap the Inventory class altogether and simply have an array of Drawer objects in the Database class.

Furthermore, the initial design was lacking in that in the Dish class, there was no way to keep track of how much of each Ingredient was needed, which is essential in making sure a dish can be cooked. This was remedied by having an array of Drawers inside of Dish rather than a list of Ingredients. Though it works functionally, it does not make much sense when considering that Drawer is defined as the drawer in which an ingredient is kept, not as part of the recipe for the Dish.

**Self Reflection**

**Victor**

In all honesty, this project was a huge mess. Deadlines were never met, and work was not distributed evenly. I feel like certain members were expected to do more work than others, and not a lot of effort was made to understand how the program works. We did not meet deadlines on time because we only met outside of school once. I think the thing that bothered me the most was certain members rushing to complete things when others were trying to think every option through. This was especially prevalent in the design stage, arguably the most important part, which is a factor into why our design ended up so poorly in my opinion.

**Andy**

The deadlines for this project were not met by my group. There were many stages involved in this project and each stage had a specific deadline. The reason that we did not meet this deadline is because of the amount of time coming up with an idea that everyone agreed and understood. Along with other projects, tests and the blackout many of us did not find the time to work on it over the winter holiday. It is because of these reasons along with bad time management that many of the deadlines were not met.

In terms of group work, the overall project could have been distributed more evenly among group members. We thought that everyone should be given a certain class to work on and in the end combine everything and fix whatever problems we had together. However as the work began, it grew noticeable that some of the classes had much heavier loads than others which could have been fixed with earlier communication. To fix this problem, classes with heavier methods could be further divided among group members so that not everything is dependent on a sole member in the group.

The project components were not handled very effectively. Throughout this whole project there was minimal communication between group members and this led to the project being setback because some of the classes were not finished or did not work the way intended. Along with occasional arguments over with algorithms are better, many of us felt that the lack of communication definitely played a major contributing factor when it came to mishandling the project components. To improve the management of project components, there should be much more communication between team members and a more efficient way of updating team members on what is going on with the current project and what still needs to be done.

**Stephen**

Throughout this project, my group failed to meet the deadlines given by the teacher. For example, we did not complete part 1 of the project - the analysis stage - prior to the holiday break. There were various reasons that led this, but one of the significant reasons was because we had a difficult time choosing and finalizing our project idea in the beginning. Also, we did not manage our time well enough, so my group was not able to use the class time given efficiently. Moreover, the group members only met outside of school once to catch up on the deadline, which made us further behind in terms of schedule.

The group work could have disturbed more evenly in this project. For this project, each member was given a certain portion of the project to complete, so every member was in charge of a few classes or text files. This led the group to very little collaboration between each member. Also, each member had a different workload, as some classes require more methods and algorithms to complete. Therefore, a suggestion would be that two or the whole group should work in a class together, so work can be divided more evenly and each member would have better understanding of each class.

We could have managed the project components better by having more interactions and communication between the group members. There were a lot of situations where the group members would disagree and have confusion on different aspects of the project due to the lack of communication within the group. Consequently, some people did know have thorough understanding of our project idea, so it was difficult to have full participation from the members. In order to prevent this from happening in the future, someone should have taken a leadership role and ensure that everyone knows their responsibilities.

**John**

No we have not met all of the deadlines. Section I for instance, we were not able to finalize our project idea before the holiday break. We did not use the class time efficiently, due to the fact that we have difficulty in determining what the project should be. We have met outside of the school once to catch up with the works; however we were still behind in terms of the schedule. One of the reasons is due to the blackout during the holiday, therefore we were not able to meet up or discuss about the project during that time.

In term of the group work, the work is being distributed to each member; the members will be in charge of the classes they were assigned to code. However this method of work distribution makes it hard for the other members to understand the code since everyone only worked on their own part of the codes. One way to improve this is to assign more than just one member to a part of the project; this will allow every member working on that part of the project to understand it completely instead of just one person being able to understand their own work.

In term of the project components, it is not handled very efficiently. The group maintained minimal communication; each member may have a different understanding of the project structure. Thus incidents such as some of the classes did not work due to misunderstanding of the project components and did not commute to other members. To improve the management issue, the members should maintain frequent communication between one and another.