CISC 3130 Project: Building an App: Question Set

Answer the following questions either as a group or individually, if you answer individually, each group member should supply an answer. Signify who the member is by either noting it or using a different text color for the answer.

This project is done by my own, not in the group.

1. (3 points) Project idea:
   1. What is the goal/problem you are trying to solve with your project?

Jianhong Li: I want to create an app for a small business, like clinic management system or restaurant order system.

* 1. Why did you choose to implement this program?

Jianhong Li: I have two sisters. One is the owner of a small business, the other one is working for a clinic. So, I know these businesses have software or an app for managing information. Making these apps is challenging but it is considered real life working scenario.

* 1. In what fields can this project be applied to (social networks, gaming, messaging, finance, data visualization etc.)? How would you apply it?

Jianhong Li: Small Business Management System

* 1. What are the possible difficulties or limitations of this project? Does it provide for a gap in an industry (assuming the app you used for inspiration would not exist if you went to market now)?

Jianhong Li: I think as a newbie programmer, the hardest part is still the fear of getting stuck with a problem you cannot do with what you have learned. In addition, I believe there are many people in the market who will do these applications. In my opinion, for those who are new to the industry, it is not a bad idea to take the road others have taken before, after all, everything is to come step by step.

* 1. Did you attempt to draw inspiration from an existing program, or was this your own idea?

Jianhong Li: I worked for a restaurant before. So, the system management was the first thing that came to my mind. The ordering system of the restaurant was too simple, and I felt it was difficult to achieve the requirements of the project. So, I turned to the ENT Clinic where my sister works. Before the beginning of project, I draw a pic of UML, and try to write down the variables that will be used, and I decided which data structures that I can use for different parts of the project.

1. (4 points) Your attempt:
   1. What are the steps you chose (or tried) to implement your program?

* 1. Which data structures did you use? How did you use them (list each and explain)?

Jianhong Li: Array List, Stack, Queue, LinkedList.(OOP)

Array List: Doctors, Patients, Employees (It is simpler if we delete or add for each array instances of the classes)

Queue: Appointments (It can store the appointments and delete the first one when needed to delete the old appointments by implementing the dequeue function each time).

Stack: Equipment. (To store information of Equipment, it is a little bit inappropriate to use stack to store equipment, but I have to do it to achieve the requirement of the project.)

* 1. Which functions did you use? What are they used for? How did you use them (list each and explain)?

Jianhong Li: get, add, remove, print, peek, push, pop, enqueue, dequeue, Etc.

Real life programs need them to check and update the information.

* 1. Why did you choose those particular functions/data structures? Looking back, is there an easier way than what you tried at first?

Jianhong Li: well, TBH, it is because I learned them form your class. I just want to make sure that the project can run smoothly.

* 1. What extra resources would help make this project more fun/doable (note: this is meant to be challenging but not overtly difficult)?

Jianhong Li: I might to use Generic Methods to extend the data structures.

1. (3 points) Difficulties:
   1. What difficulties did you have when trying to solve this project?

Jianhong Li: I heard the Generic Methods before, but I never actually code one.

So, I checked the tutorial that how to use a generic methods, but I still spend a lot of time to apply the data structures by using it perfectly.

* 1. Were you successful? If you were not, what went wrong?

Jianhong Li: Although my project needs some update, it is not perfect, for the data structure parts, yes, I personally think it is fine.

* 1. Would a change of reference make the problem easier? What would that change of reference be?

Jianhong Li: Yes, definitely. When the change of the reference is invoked, it is passed a copy of the reference held in variables. Now both the variables and the method parameter hold references to the same object. The method can use its reference to change the contents of the object.

* 1. What was simple or intuitive in this project?

Jianhong Li: Each information that was shown to the users is straight forwards.

* 1. Did your skills as a programmer improve as a result of this project? Which skills improved? If you did not improve, what are the possible reasons?

Jianhong Li:

a). The basics of data structures have become more solid.

b). Learned how to compile generic methods and implement the data structure to real life scenarios.

c). I did not use the deeper knowledge of data structures, mainly because I was afraid that the program would not work properly. It is a bit conservative.

1. (2 points) Wrapping it up:
   1. On what data set would you really like to try your program on? If this is unapplicable, where would you like to use/try your project in real life?

Jianhong Li:

Most of them are Object-oriented programming. Yes, I think they are applicable in real life.

* 1. What if anything, did the project teach you? Do you have any suggestions to improve this project and what issues did you face? Did you enjoy this project?

Jianhong Li:

I learned that how to compile the data structure knowledge in real life. I think I need to improve the code that using GUI to let user input each element of the information. (Sorry, run out of time.) Yes, I enjoy the project, Unfortunately, it is good enough.

* 1. This project was given with minimal instructions on purpose. Do you like this form of limited rules or should the project be more rigid (i.e. should I be more explicit on what a data structure/function means or should I allow you to define it)?

Jianhong Li: Overall, the limited of the project is fine. I do not think it should be more explicit. Because situations in the real world are very vary and there are times when things themselves have many limiting points.

* 1. If you had unlimited time and resources, what project would you choose and how would you implement it?

Jianhong Li: Real Life related project to build an app with front end and back end.