Throughout the development time I faced a number of obstacles and problems that caused me to change and redesign the whole application. A couple examples are changing button from being hard coded to saved on a file. I also changed the functionality on the chef page to make it more usable for new users. All of these changes were made to increase the level of security, a smoother experience or to make to more usable for new users.

To increase the security of the app I made a decision to make the users of the app ‘staff’, ‘chef’ and ‘admin’ to be loaded from an file that is hidden away making it difficult for people to break in without access to the app. Saving the login of the users has another benefit not making the users hard coded into the code makes it impossible for the admin user or the ‘manager’ user to change, delete or edit the other users, moving the user details to a file makes everything simpler for managers that do not understand code, making add or deleting past employee details much much simpler.

Another large change that I had to make to make the admin user’s permissions of changing the pricing of the products sold, I had to do this for the entire staff user button system, changing the original view of the of hard coding each button because of the ease of coding each one, this not only makes the code much more readable and understandable using function instead of copy pasted code in more than half of the buttons in the entire staff user, by moving all of the products to a file, it makes the change pricing feature in the admin user possible, because then the admin can load and change the file instead of trying to change the code which is impossible.

From the original design I added the Easter, Summer time and Christmas buttons make the process of saving a sale much quicker for a staff member, this is a not a functional requirement, because having the Easter, Summer time and Christmas buttons are not needed for the functionality of the app, it adds a non-functional requirements that increases the efficiency of the app, this was an idea I got from when I was testing the functionality of the buttons and the pricing when I was changing from hard coding to moving them to a file.

On the member sign in form, I got rid of the number pad buttons from the member sign in form because it was not needed it only took up extra space for something that was not needed, that change was made to increase the effectiveness of the form, this change was minor in order to match the scope of the project

In the Chef form I had to differ from the original design making it simpler to increase the useability for new users, on the Chef page I added a load button that loads the order from the file, changing the design of the form from click and view to adding a button may seem like a downgrade, but this was to increase the user experience for a new user, this change also speed to which a new user can understand the application.

There were a lot of problems that I faced while coding this project, the main and largest one was the massive time constraint that all students faced, forcing us to decrease the size of our scope to make the app much more possible, if given more time the application would have been much larger with much more ironed out features that do not work properly.

In the application I had to change how the buttons work because if I do not then almost the entire admin user becomes redundant. This would be a massive bug in the application because this would make the it impossible to create new users, delete old users, or edit current users because of the users being hard coded into the app. Moving everything into a file was very difficult because it involved in learning a lot of new ways of using XML, in which I had not done before. A lot of the app was made through trial and error because in the beginning of the development period I was very confused in where to start from because almost every part of the application was a new field of coding in c#, I thoroughly enjoyed learning heaps of new things including having patience and willingness to learn something new.

In the beginning of development, I had started the design of the application completing a small chunk that I was working on for a while was deleted though an error that I faced in visual studio. In total I had to redesign the app 3 - 4 time because of issues that I was facing, like having every button lead to the save part in the code instead of opening a new part in the code for the button.

Another large challenge that I faced was creating a way for three users with different usernames and passwords to login to the app while having them load from a file, this challenge took me a while because of it’s uniqueness, the only solution that I found online were almost completely different from the error that I was having.

Another feature that I weas not expecting was the auto id feature that each order has after it is saved to a file. Making the number pad change the quantity in the list view was very difficult because had to learn how to change the quantity with a function in a way that was new to me.

Making the 5, 10, 20, 50 dollar note buttons work properly was a massive challenge because of the my lack of knowledge in that area, this was difficult to find the solution to because online I found similar questions but the answers di note work for my use case.