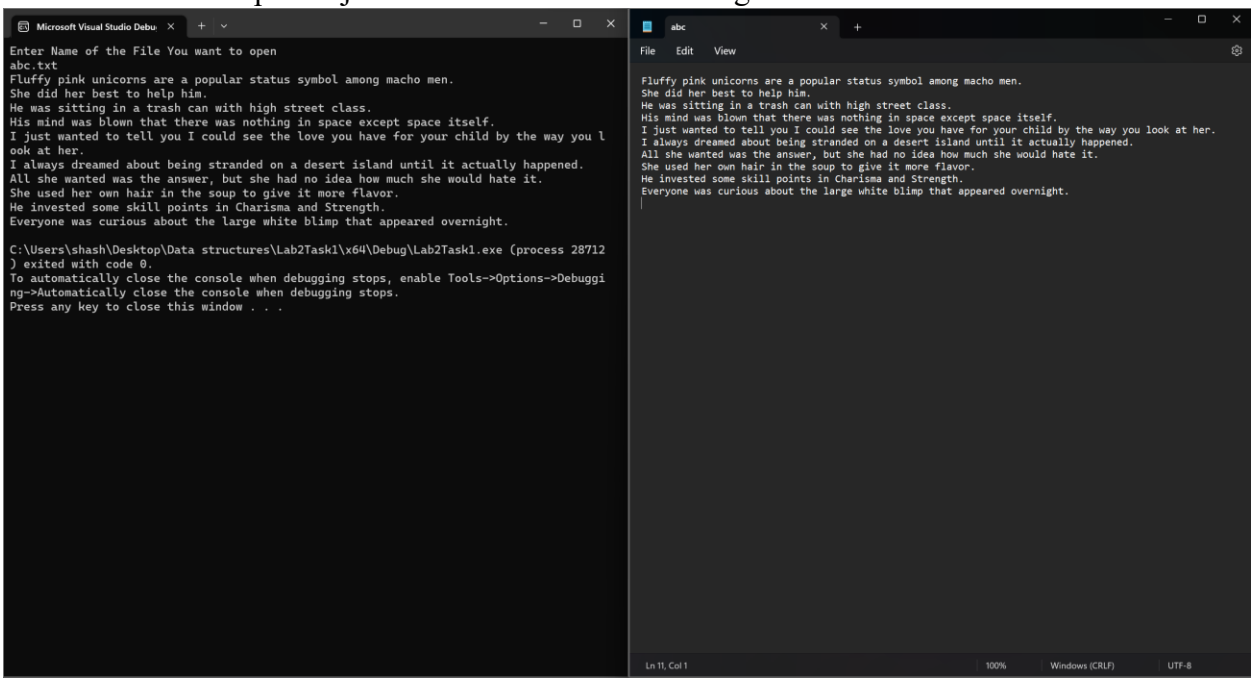
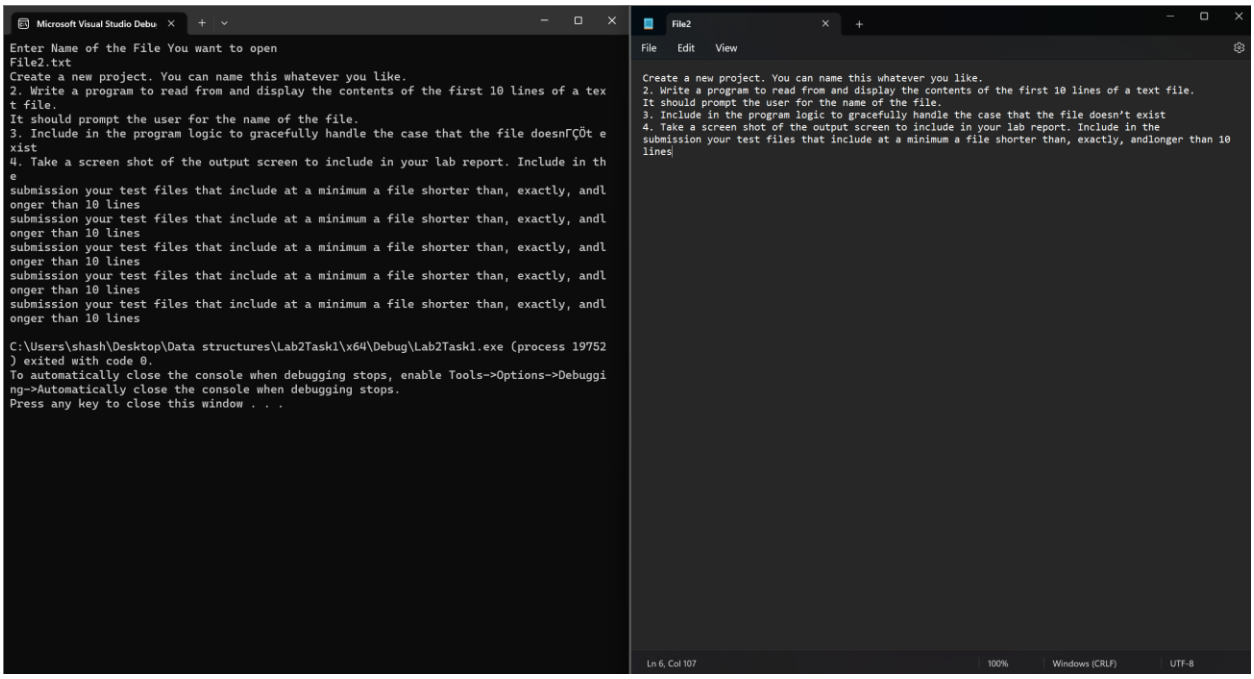
Lab report

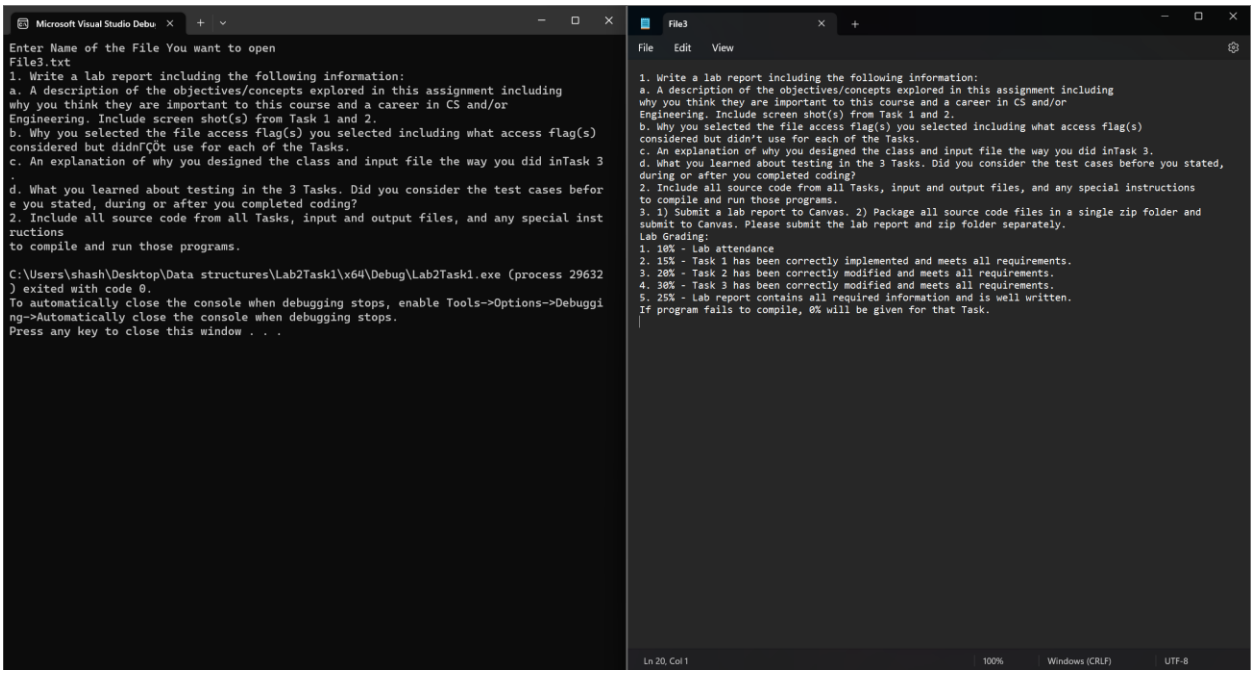
a. Concepts and objectives explored in Lab 2 included file I/O and classes in c++. I also used object oriented programming to complete these tasks. This is very important to the course and for a career in computer science as people in the industries (software engineers) use these concepts to manage data and handle files. It make the code more readable and easy to understand. Having private members in the classes helps us to data validation before updating the member values. Separating code from declarations of classes in a separate header file can be useful as programmers can't modify code and we don't have to recompile objects when the main code changes.



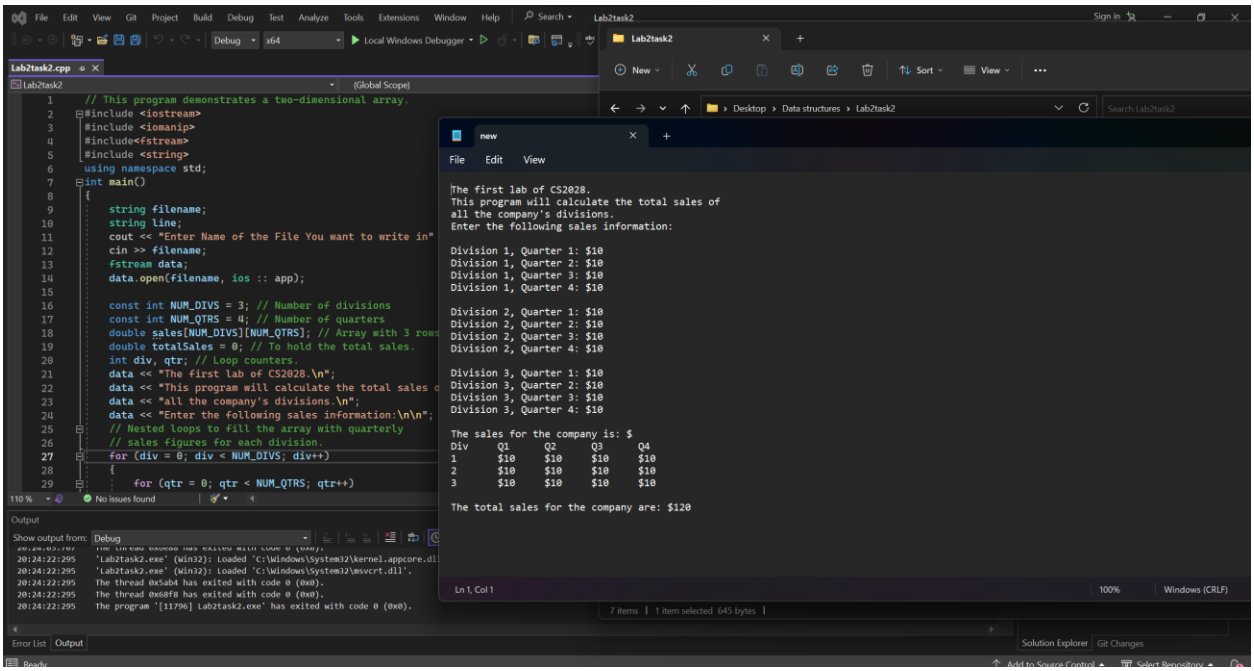
Output1 from task1 – abc.txt has 10lines



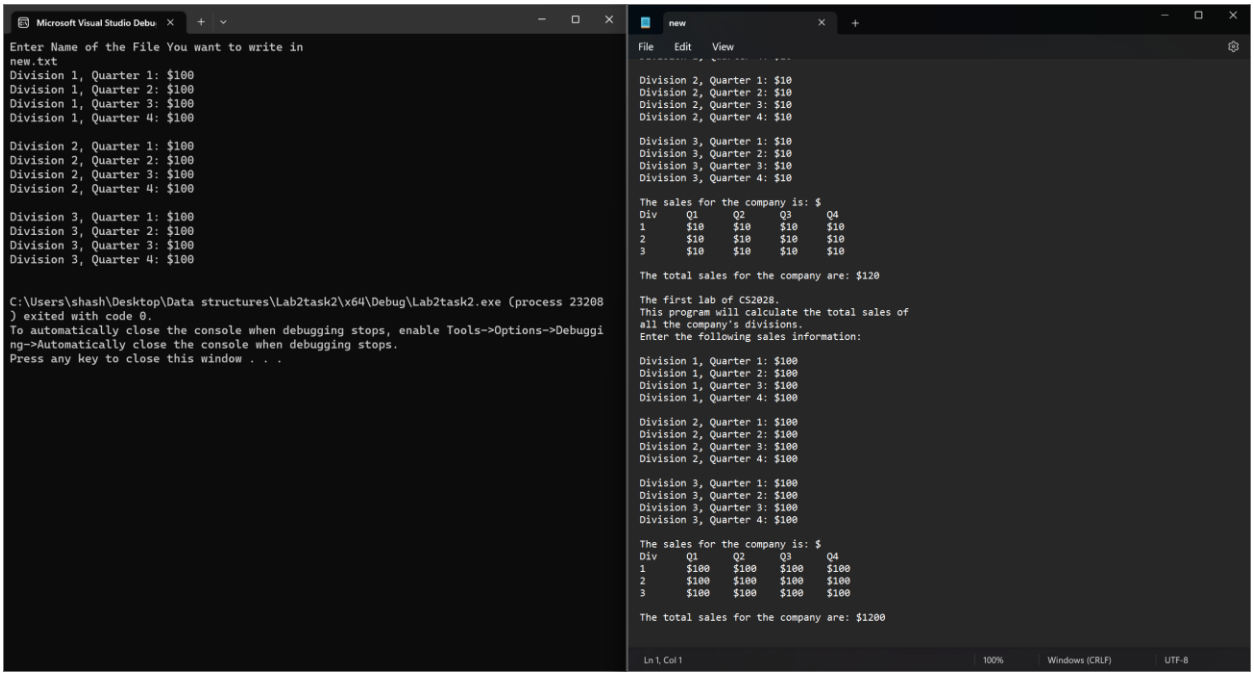
Output 2 from task1 – File2.txt has less than 10 lines



Output 3 from task1 – File3.txt has more than 10 lines



Output 1 from task2 – new.txt file was created and written into



Output 2 from task2 – new.txt file already existed and new data was appended into it.

b. File access flags I used for task 1 was ‘ios :: in’. This access flag opens the file in input mode so data can be read from the file and if the file did not exist it will produce an error. I used this access flag for task 1 as I had read data from file and if file did not exist, give an error message. I considered using the ‘ios :: app’ access flag but did not use it as it creates a new file if the file does not exist and we had to give an error message instead of creating a new file.
   For task2 I used the ‘ios :: app’ access flag to open the file in append mode. I did this because the append mode opens already existing files or creates one if it does not exist. I also had to write into the file at the end. I considered using the “ios : out” access flag but to open it in output mode and write into the file but it delete’s the data of the file if it already exists and we had to append the data not delete all the pre-existing data in the file.
c. The class was written in a header file and declaration was done in another source file (.cpp). This was done to make the code more readable. The input file had various inputs to be read from to test what would happen if there were lesser inputs than what was specified in the code or if the inputs were more than what was specified in the code.
d. I learned to test code and debug code using various input files. I considered test cases as exact number of entries, lesser entries and extra entries for the product array in the code. I considered the test cases after completing the code to test the accuracy of the code.