REPORT

In this assignment, we are expected to write a short game(turn based frp)which is based on structures and dynamic memory,file i/o...
From what i understand the goal of this assignment is to understand structures,pointers,dynamic memory allocation and getting used to them.It is a fun way to understand these topics and I believe we have fully understood these topics.From my point of view,reading this file was the key of this assingment.So i began with file i/o.Then i wrote some functions to solve this problem with less risk,less error chance.In the first txt, i have updated my structure with the provided details such as names,types,hps,ads.I've used strtok which helps splitting the line.So first txt was easier than the second one.When i tried to read the second txt i needed an another point of view because it was not just
like the first txt.So i began splitting the lines after checking their first word.So it became a big while loop which takes a line splits into tokens andcompares tokens with the commands and than executes the if,else parts and executes the other performing things to get what command file wants from me.This helped me very much because everything was started to look easier than normal. At that stage it was all about my algorithm and thanks to my chess skills i handled every possible scenario (there was lots of scenarios).For example in attack mode you have hp,xp,deleting from map,scanning the map,skipping if attacker and defender is same type etc...So before coding i draw bunch of pseucodes to plan my to do’s.It helps everytime and it helped in that time too.And there was a part where you are expected to use 2d dynamic array because its more efficient and easy to use.I took the values from txt and transfered them to integer values and than i created my dynamic 2d array, with the help of put command i put every hero to their places in the map.1 structure was enough for 2 type so with the help of 1 struct i handled every possible option.More than 1 struct seems more complicated to me.I only used a few functions because they are easy to use and they are causing less error.And these a few functions were key functions which helped me to find number of heroes,number of words in

1 line, splitting into tokens,comparing the strings etc...So this is what my code looks like.First takes the character.txt and reads the components of the file,splits into tokens,stores tokens into a array which is lost at the every end of line so im splitting them giving them to array and using the elements of array to assign my values to my structure.And for the next part i started with 1 line and took the first word of it and i compared it with the commands i have so if these 2 matches they enter a new part which takes the second word of the line and compares again and when i have enough clues to determine what line wants from me i perform the operations.For example if first word is show second word can be 3 different words and because of that i have 3 if else's to perform what line wants from me.Its more easier and less line of codes and they are what we want(max performance less memory).
Attack and move parts are kind of a similar.In move part we are taking the name from line,finding the name in the struct and updating that members x and y values meanwhile we are checking if the hero is alive,hero can go to that place because it might be out of bounds or it may be already filled with another person.And in the attack mode we are finding the struct member with that name, we are checking the possible can attackable areas around our character and checking if they have the same type or not.And updating the map,hp value,xp value because the defender can die so when he dies he must be erased from the map so he is no longer able to attack,move.And there is a chance for game to end.I am checking that condition at the start of every struct member and if characters with the same type all have 0 hp the game ends and other type wins.This is the key parts of my assignment and i'm happy to take part in something like this.