

THE REPORT OF ASSIGNMENT1

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- ◇ **Subject** : Dynamic Arrays, Structs , Pointers ,File I/O

**** What is the main goal of the assignment and what points need to be understood ?**

- ◇ The main purpose of this assignment is to improve our coding skills and ensure that we produce an Algorithm that Works in a clear way using the most important topics, which are dynamic arrays, strcuts and pointers, of the C language . One of the other purposes is to understand that after creating a stativ arrays, their dimensions can not be changed but dynamic arrays can be changed. Also while taking any information from the file or retrieving information from the user, the end result of using struct is to understand that the number of arrays required is reduced and the space used by ram is less.

**** How do you approach this problem and how do you implement it , what do you use ?**

- ◇ First and foremost, I see each problem and each assignment as a chance to improve my ability to write code and then first step is to always think about how the problem can be solved and create an algorithmic diagram. After I create algorithmic diagram, I convert it into a code that the computer can understand.
- ◇ I have solved the problem by using structs, dynamic arrays, pointers and functions which are important topics for C language. To read it in detail , first I read the file that contains the properties of hero and monsters. Then I have how many hero and how many monster have these numbers. I created two array contains structs according to hero or monster. While I make comparisons , called some functions .As a result I changed the properties according to the commands and the problem solved by itself.

**** What structures do you use to store characters or the map etc. ?**

- ◇ I have used Hero, Monster, Character structs. I used Characters structs to make comparisons when taking any information. The character are just type properties in the struct. But If I mention hero and monster structs , they have name, hp, damage, location information

** Explanation of Code

- ◆ Findings of hero and monster features were read and hero and monster numbers were obtained.
- ◆ According to these numbers, a hero struct array and a monster struct array are created.
- ◆ By reading the file again, the quota assignments were made to the structs.
- ◆ Then the file containing the command lines was read and this information was extracted to the command line array.
- ◆ Then the file in which the command lines were read was read from the same, and certain functions were called according to these comparisons.
- ◆ These invoked functions allowed us to change the properties of both monsters and monsters.
- ◆ Finally, the show function was used to print to the file.

** Details of Algorithm

- ◇ 1 - Get the information from the files and assign them to arrays which includes structs.
- ◇ 2 - Make comparisons.
- ◇ 3 – Call functions according to these comparisons.
- ◇ 4 – Change the value in the arrays during the function.
- ◇ 5 – Get information from the arrays and print them to file.