Lab Exercises Week 5

1 Sorting

Using the file *Arrays.h*provided in blackboard, do the following:

- Improve BubbleSort method so on the first pass check if the array is sorted. If so, return. This results in significant improvement if the array is sorted or almost sorted. What is the Big-O complexity in this case?
- Define a Player class that has two private members ID and health (both integers). Two playes can be compared based on health and ID as follows: a player is bigger than another if either the player has higher health than the other player, or the player has same health but bigger ID.
- In your main program, using a loop, fill an UnorderedArray with players taking the input from the user. Once the user signals the end of data entry (using a sentinel), sort the list of players using improved BubbleSort. Print the array on the screen before and after sorting.