Homework 2 Report

In this assignment, I was asked to implement a scheduler program, which sorts the events given in a txt file using heapsort algorithm and prints them in the ascending order as virtual time passes.

To accomplish this task, I needed to implement an event class first, because I would need to know the event's name, time and whether it is start time or end time. Therefore, I implemented a class and min heapified an array of event objects, not only the times. After creating the class, I implemented my own minHeapify and heapsort functions. Inside the latter function, I printed the events for each virtual clock tick.

In the main function, I benefited from ifstream to read the given txt file. I read all the events from the file and push them one by one to a vector. Finally I pass this vector to my heapsort function and the function handles the rest. Here is the output of my program using the example events file from assignment PDF:

```
/itu/s05d04/user_home/gencoglu17/ALGO (335)/hw2$ g++ -Wall -Werror 150170019.cpp -o out2
/itu/s05d04/user_home/gencoglu17/ALGO (335)/hw2$ ./out2 events.txt
TIME 1: NO EVENT
TIME 2: EVENT-A STARTED
TIME 3: NO EVENT
TIME 4: EVENT-A ENDED
TIME 4: EVENT-C STARTED
TIME 5: EVENT-C ENDED
TIME 5: EVENT-B STARTED
TIME 6: NO EVENT
TIME 7: EVENT-B ENDED
TIME 7: NO MORE EVENTS, SCHEDULER EXITS
```