Project 3　Scheduler

In this project, you have to modify the *minimal heap* (in project 2) to a scheduler. **Events have not only a *priority value* but also an *arrival time and an execution time***. Each time we select the maximal priority (minimal priority value) event to execute. Each selected event has to execute for a period of its execution time. There is at most one event to be executed at any time. Besides, this scheduler is a **preemptive** scheduler, that is, when a new event with higher priority arrives, it will interrupt the executing event and new event will execute immediately.

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We will give you list of events, and you show the **average waiting time** and **total execution time**.

waiting time =　(finish time) – (start time) – (execution time)
total time = the finish time of last event (no event anymore)

Sample Input:
1 1 100 1　; event id, arrive time ,priority value , execution time
2 3 45 3
3 5 50 10
4 10 60 5
5 11 70 4
6 13 20 3

Sample Output :
4.33　　; average waiting time
28　　; total execution time

Restrictions :

- Only use minimal heap
- This project will be personal, do not copy or modify by the others, or you will get nothing.
- Use c/c++ only.

Deadline:

- due time:　4/14 13:00
- **upload to e3**

please let me know if you have any problem

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