For situation that multiple events occurs in same year, I have several method to deal with.
During insert operation, accroding to the pseudocode professor given on the note, we do not have to worry about this situation.
In remove operation, I will detect every node no larger than the given one and use an if"==" sentence to judge whether the current search result is what we seek. Therefore, all same year events will included in remove operation.
Things go a little tricky in findmostrecent function. I set a counter here to calculate all the same year event. I initialize counter as 1 since once I can output a result there must be at least 1 element. If there are more than one event in the most recent years, the w pointer points to the first element of the same year events and we can start search next counter-1 element in the 0 level from w.
In findrange function we find the first event element meets our judge criteria and start from this element. So if any years between the range contains more than 1 events, they have already been inserted correctly and we can visit them in sorted order from the 0 level. Hence that they can also be printed successfully.
The implementation of dynamic height of the skip list can be done at the start of each insertion. Once the new inserted event has a height over existed max height, we double the maximum height until it succeed the new one. Then we initialize the head and tail ,work has been done.