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Question 4

Firstly, sort the n jobs in descending order of profit. Secondly, iterate all the jobs, find a time interval that is not occupied, the time interval should be before the deadline and the time interval closest to the deadline as much as possible. Then mark this time period as occupied. Ignore this job if the above conditions are not met. In the above algorithm, sorting of the jobs will take $O(n \log n)$, then will need nest two loops to complete this algorithm, so its time complexity is $O(n^2)$.