

Online 2 Set B

You are working as a programmer for a painting job app. This app contains a list of N painting jobs available today, each job j_i mentions the duration d_i and payment p_i dollars. *These jobs can be done any time within the given day. If a painting job is partially completed, then partial payment will be given proportional to the amount done.*

You have to add a feature here such that any user can input a time range A to B (24-hour format) for the day, e.g., 10 to 18, and the app will recommend jobs within that time range such that his earning is maximized.

- A. Take the list of N jobs, A and B as input.
- B. Write a program to recommend jobs for the above scenario using a greedy algorithm.

Sample Input	Sample output
N d_1, p_1 ... d_N, p_N $A B$	
4 4 10 3 12 5 10 2 14 10 14	Recommended jobs: job4. you can start at 10, end at 12, earning will be 14 job2. you can start at 12, leave at 14, earning will be 8 (67% done) expected total earning 22 dollars
4 4 10 3 12 5 10 2 14 11 17	Recommended jobs: job4. you can start at 11, end at 13, earning will be 14 job2. you can start at 13, end at 16, earning will be 12 job1. you can start at 16, leave at 17, earning will be 2.5 expected total earning 28.5 dollars