Getting Started with Competitive Programming
Week 11 Dynamic Programming

Problem 1

You are given N jobs with start time s_i and finish time f_i, and has value v_i. Two jobs are compatible if they don't overlap. Find the maximum weight subset of mutually compatible jobs.

Example:

3
1 2 10
2 4 20
3 4 5

Output: 20

Problem 2

Given a set of non-negative integers, and a value *sum*, determine if there is a subset of the given set with sum equal to given *sum*.

Example

```
Input: set[] = {3, 34, 4, 12, 5, 2}, sum = 9
Output: True
There is a subset (4, 5) with sum 9.

Input: set[] = {3, 34, 4, 12, 5, 2}, sum = 30
Output: False
There is no subset that add up to 30.
```