CSE 204: Data Structures and Algorithms I Sessional

Online: Dynamic Programming (A1, A2)

Weighted Interval Scheduling

Recall the interval scheduling problem which we solved using a greedy algorithm. Now, we are interested in the *weighted interval scheduling* problem. There are n jobs and the start time, the finish time and the value of job i are given by s_i, f_i and v_i respectively. Our goal is to pick a mutually compatible set of jobs that maximizes the total value of the jobs picked. Develop a dynamic programming algorithm for the weighted interval scheduling problem.

Input format:

The first line will contain an integer n denoting the number of jobs. The next n lines will each contain 3 numbers separated by space denoting start time, finish time and the value of the corresponding job.

Input will be given in a file named **input.txt** .

Example: input.txt

```
1 2 50
3 5 20
6 19 100
2 100 200
```

Output format:

The total value of jobs picked.

Example: output.txt

```
250
```