COMPETITIVE PROGRAMMING

Assignment-1

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B-07

Maximum Non-Overlapping Meetings (Greedy)

Algorithm:

1. Read integer **t** (number of test cases).
2. Repeat the following steps **t** times:
    a. Read integer **n** (number of meetings).
    b. Read **n** pairs of integers **(Si, Ei)** representing start and end times of meetings.
    c. Store all meetings in a list.
    d. Sort the meetings in **ascending order of end time (Ei)**.
    e. Select the first meeting and initialize:
        i. `count = 1`
        ii. `lastEnd = end time of the first meeting`
    f. For each remaining meeting from the second to the last:
        i. If `Si ≥ lastEnd`, select the meeting:
            1. Increment `count`
            2. Update `lastEnd = Ei`
    g. Output the value of `count`.
3. End.

Code and output:

ass_1.py > ...

```python
t=int(input())
for _ in range(t):
    n=int(input())
    meetings=[]
    for i in range(n):
        s,e=map(int,input().split())
        meetings.append((s,e))
    meetings.sort(key=lambda x:x[1])
    count=1
    lastEnd=meetings[0][1]
    for i in range(1,n):
        if meetings[i][0]>=lastEnd:
            count+=1
            lastEnd=meetings[i][1]
    print(count)

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\AAC_> & C:/Users/harsh/AppData/Local/Programs/Python/Python314/python.exe c:/AA
1
3
1 3
2 4
3 5
2
PS C:\AAC_>
```