

# ASSIGNMENT-1

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Batch - 19

## Assignment 1: Maximum Non-Overlapping Meetings (Greedy)

### Problem Statement

You are given N meetings. Each meeting has a start time  $S_i$  and an end time  $E_i$ . You want to attend the maximum number of meetings. You can attend meeting  $j$  after meeting  $i$  only if the start time of meeting  $j$  is strictly greater than the end time of meeting  $i$  ( $S_j > E_i$ ). For each test case, output the maximum number of meetings that can be attended.

#### Input Format

The first line contains an integer T, the number of test cases. For each test case:

- The first line contains an integer N.
- The next N lines each contain two integers  $S_i$  and  $E_i$ .

Output Format: For each test case, print a single integer: the maximum number of meetings that can be attended. Constraints

- $1 \leq T \leq 20$
- $1 \leq N \leq 200000$  (sum of N over all test cases  $\leq 200000$ )
- $0 \leq S_i < E_i \leq 10^9$

#### Sample Input

```
1
3
1 3
2 4
3 5
```

#### Expected Output 2

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The screenshot shows a Java development environment with the following details:

- IDE Interface:** The top bar includes "File", "Edit", "Selection", "View", "Go", "Run", "Terminal", and "Help". The title bar says "Q COMPUTITIVE PROGRAMMING".
- Left Sidebar:** Includes sections for "RUN AND DEBUG", "WATCH", "CALL STACK" (showing threads like "Attach Listener", "Finalizer", "Reference Handler", "Signal Dispatcher", "Notification Thread", "Common-Cleaner" all in "RUNNING" state), and "BREAKPOINTS" (with checkboxes for "Uncaught Exceptions" and "Caught Exceptions").
- Code Editor:** Displays the code for "A\_1.java" under the package "Main". The code reads input from System.in, creates an array of "Meeting" objects, sorts them by end time, and prints the count of non-overlapping meetings.
- Output Console:** Shows the following text:

```
Listening on 59384
User program running
→ 1
→ 3
→ 1 3
→ 2 4
→ 3 5

User program finished
2
```

The output indicates the program is listening on port 59384, running, and processing user input (1, 3, 1 3, 2 4, 3 5). It then finishes and outputs the number 2.
- System Status:** The bottom status bar shows "17°C Mostly sunny", system icons, and the date/time "16-01-2026 09:36 AM".

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