

SET-II

1Q) Given an array of integers, print the length of the largest increasing subsequence.

$$\text{ex: } I = [1, 2, 1, 5]$$

$$\text{ans} = 3$$

$(1, 2, 5) \Rightarrow$ no need to print sequence.

$$\text{ex: } I = [0, 8, 4, 12, 2, 10, 6, 14, 1, 9, 5, 13, 3, 11, 7, 15]$$

$$\underline{\text{Ans}} = 6$$

$$(0, 2, 6, 9, 13, 15) \text{ or}$$

$$(0, 4, 6, 9, 11, 15) \text{ or}$$

$$(0, 4, 6, 9, 13, 15)$$

2Q) Given a set of meetings with their starting and ending times given, allocate a meeting room with highest number of meetings using greedy method.

Ex

M₁

M₂

*

5

9

1

2

✓

3

4

✓

6

6

5

7

✓

8

9

✓

4 meetings can be scheduled without overlapping.

O/P = 4

3Q) You are given 'n' which is the no. of steps to go up. You are able to take 1 or 2 steps each time. Determine the no. of ways you can reach your destination.

Ex

n = 3

O/P ⇒ 3

1 1 1

1 2

2 1

$$n = 4$$

$$o/p = 5.$$

$$(1 \ 1 \ 1 \ 1)$$

$$(2 \ 1 \ 1)$$

$$(1 \ 2 \ 1)$$

$$(1 \ 1 \ 2)$$

$$(2 \ 2)$$