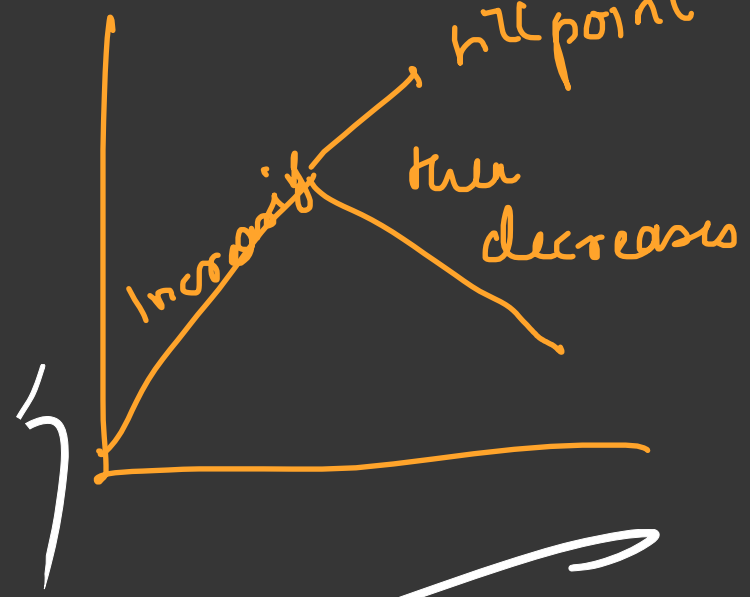
Longest Bitonic Sequence

Bitonic means

Increasing till point then decreasing



Or

just increasing

Or

just decreasing

eg:

arr = { 1 , 11 , 2 , 10, 4, 5, 2, 1 }

Here, LBS,

1 2 10 4 2

1 2 10 5 2

1 11 10 5 2 1

1 11 10 4 2 1

6

Approach:

1	1	1	2	10	4	5	2	1
dp1[]	1	2	2	3	3	4	2	1

Signify → This say the len of to LIS Increasing

dp2[]	1	5	2	4	3	3	2	1

Let say at ~~point~~ 10 what is the len of increasing forward & increasing backward

$4 + 3 = 7$ but 10 is common

$\frac{-1}{6}$ len of the LBS

Bitonic array

1 6 3 6 5 6 3 1

↳ maximum.