Let's make clear here that my earlier explanation was not correct, I missed small understanding that there are 03 cases possible at each point in decision

LIS Approaches

- if I selected the Element
- And also following the increasing pattern meaning arr[i] < arr[i+1]
- But this won't follow the increasing pattern @ Lis(i+1)=1
- If I ignored that particular element

Lis(i+1) = Lis(i-1) // you simply ignored the ith element.

$$Lis(i+1) = \begin{cases} = 1 + Lis(i) & \text{// if } Lis(i) \le Lis(i+1) \\ = 1 & \text{// if } Lis(i) > Lis(i+1) \\ = Lis(i) & \text{if i ignore it} \end{cases}$$

maximize

This recursion relationship.

Now what is the base condition here

The base condition is, stop when you reach i==0 if i is the index or if i is ith element in series that- at i==1, just return 1 and stop.

So let's implement your code & push it into github!

reference of github :-