

66. Plus One

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You are given a **large integer** represented as an integer array `digits`, where each `digits[i]` is the i^{th} digit of the integer. The digits are ordered from most significant to least significant in left-to-right order. The large integer does not contain any leading 0's.

Increment the large integer by one and return the resulting array of digits.

Example 1:

Input: `digits = [1,2,3]`

Output: `[1,2,4]`

Explanation: The array represents the integer 123.

Incrementing by one gives $123 + 1 = 124$.

Thus, the result should be `[1,2,4]`.

* If last digit is less than 9 we add 1 in the last index

* If the last digit is 9 then it will become 0 and we need carry = 1 and we will stop once the carry become 0.

I/P O/P
idx
 $[4, 3, 2, 1] \Rightarrow [4, 3, 2, 2]$

idx idx idx
 $[1, 2, 9, 9] \Rightarrow [1, 3, 0, 0]$

idx idx idx
↑ ↑ ↑
-1 -1 -1
 $[9, 9, 9] \Rightarrow [1, 0, 0, 0]$

idx = n - 1
while idx >= 0 {
 if digit[idx] < 9
 digit[idx] += 1
 return digit
 else
 digits[idx] = 0
}

insert 1 in beginning of
digit.
return digits.

```
class Solution {  
    public int[] plusOne(int[] digits) {  
        int idx = digits.length - 1;  
        while(idx >= 0){  
            if(digits[idx] == 9){  
                digits[idx] = 0;  
            } else {  
                digits[idx] += 1;  
                return digits;  
            }  
            idx--;  
        }  
        int[] result = new int[digits.length + 1];  
        result[0] = 1;  
        return result;  
    }  
}
```