

# Count binary strings with non two consecutive zeroes

14 April 2022 13:01

<https://nados.io/question/count-binary-strings>

DECISION TAKEN WITH THE HELP OF LAST ELEMENT.

```
#include<iostream>
using namespace std;
int main()
{
    int n;
    cin>>n;

    int arr[n+1][2];

    arr[0][1]=0;
    arr[0][0]=0;
    arr[1][0]=1;
    arr[1][1]=1;
    for(int i=2;i<=n;i++)
    {
        arr[i][0]=arr[i-1][1];
        arr[i][1]=arr[i-1][0]+arr[i-1][1];
    }
    cout<<arr[n][0]+arr[n][1]<<endl;
}
```

**DRY RUN**

.

1. Count Binary String of length  $n$

$n=5$

9:19 to 9:21

$\left\{ \begin{array}{l} 00000 \\ 10101 \\ 11111 \end{array} \right\}$	10011 X
	11010 ✓

2 minute

$O(n)$

10101 ✓ 01101 ✓  
 11111 ✓ 01010 ✓  
 11011 ✓ 01001 X

i, 2, 3

	0	1	2	3	4	5
0	0	2	1	3	2	5
1	0	1	2	3	5	8

$\begin{array}{l} 11011 \\ 10111 \\ 01111 \\ 11111 \end{array}$

(13)

	0	1	2	3	4
0	0	2	1	3	2
1	0	1	2	3	5

0  
 1  
 8