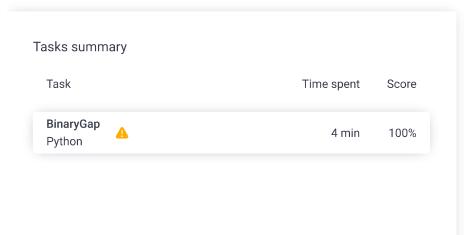
# Codility\_

# CodeCheck Report: trainingYFURDS-XJU

Test Name:

Summary Timeline 🖒 Al Assistant Transcript

Check out Codility training tasks





#### **Tasks Details**

## 1. BinaryGap

Find longest sequence of zeros in binary representation of an integer.

Task Score

Correctness

100%

Performance

100% Not assessed

#### Task description

A binary gap within a positive integer N is any maximal sequence of consecutive zeros that is surrounded by ones at both ends in the binary representation of N.

For example, number 9 has binary representation 1001 and contains a binary gap of length 2. The number 529 has binary representation 1000010001 and contains two binary gaps: one of length 4 and one of length 3. The number 20 has binary representation 10100 and contains one binary gap of length 1. The number 15 has binary representation 1111 and has no binary gaps. The number 32 has binary representation 100000 and has no binary gaps.

Write a function:

def solution(N)

that, given a positive integer N, returns the length of its longest binary gap. The function should return 0 if N doesn't contain a

#### Solution

Programming language used:	Python	
Total time used:	4 minutes	•
Effective time used:	4 minutes	•
Notes:	not defined yet	
Task timeline		•
09:33:38		09:37:39

binary gap.

For example, given N = 1041 the function should return 5, because N has binary representation 10000010001 and so its longest binary gap is of length 5. Given N = 32 the function should return 0, because N has binary representation '100000' and thus no binary gaps.

Write an efficient algorithm for the following assumptions:

• N is an integer within the range [1..2,147,483,647].

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```
Code: 09:37:38 UTC, py, final,
                                     show code in pop-up
 score: 100
1
     \# you can write to stdout for debugging purposes, \varepsilon
2
     # print("this is a debug message")
3
 4
     def solution(N):
 5
         max=0
 6
         count=0
 7
         init=2
 8
         bnry=list(bin(N))
 9
         arr=[]
10
         arr=bnry[2:][::-1]
         for i in range(len(arr)):
11
             if(int(arr[i])==1):
12
13
                  init=arr[i]
14
                  break
         # print(arr)
15
16
         for j in range(i,len(arr)):
17
              # print(j)
             if(arr[j]!=init):
18
19
                  count+=1
20
             else:
                  if(count>max):
21
22
                      max=count
23
                      count=0
24
                  else:
                      count=0
25
26
27
         return max
```

### Analysis summary

The solution obtained perfect score.

#### **Analysis**

ехра	nd all	Example tests	
•	example1 example test n=1041=	·	OK
•	example2 example test n=15=11	_	OK
•	example3 example test n=32=10	•	OK
ехра	nd all	Correctness test	S
•	extremes n=1, n=5=101_2 and n=2147483647=2**31	·	OK
•	trailing_zeroes n=6=110_2 and n=328	•	OK
•	power_of_2 n=5=101_2, n=16=2**. n=1024=2**10	•	OK
<b>&gt;</b>	simple1 n=9=1001_2 and n=11	•	OK
•	simple2	<b>√</b>	OK

n=19	=10011 and n=42=101010_2		
•	simple3 n=1162=10010001010_2 and n=5=101_2	✓	OK
•	medium1 n=51712=110010100000000_2 and n=20=10100_2	✓	OK
•	medium2 n=561892=10001001001011100100_2 and n=9=1001_2	✓	OK
•	medium3 n=66561=1000001000000001_2	✓	ОК
•	large1 n=6291457=1100000000000000000000000000000000000	✓	OK
•	large2 n=74901729=10001110110111010001 1100001	✓	OK
•	large3 n=805306373=110000000000000000000000000000000000	✓	OK
•	large4 n=1376796946=101001000010000010 0000100010010_2	✓	OK
•	large5 n=1073741825=1000000000000000000000000000000000000	✓	ОК
•	large6 n=1610612737=1100000000000000000 000000000001_2	✓	ОК