# cødility

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## **Candidate Report: Anonymous**

Test Name:

Summary

**Timeline** 

**Test Score** 

Tasks in Test

100 out of 100 points

100%

BinaryGap
Submitted in: C++

2 min

Time Spent

Task Score

100%

#### 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:

#### Solution

Programming language used: C++

Total time used: 2 minutes

Effective time used: 2 minutes

Notes: not defined yet

Task timeline

2

```
int solution(int N);
```

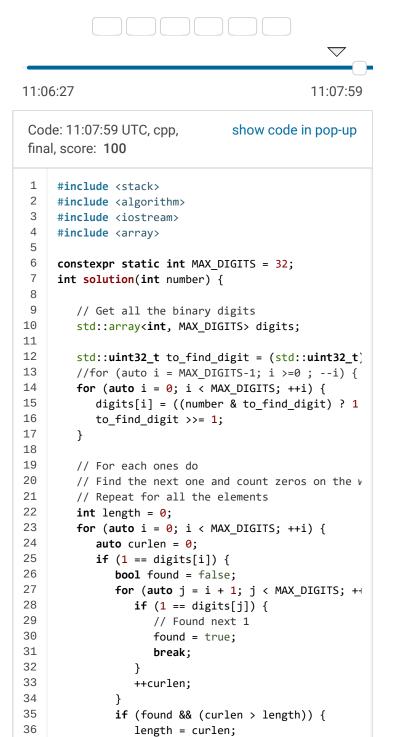
that, given a positive integer N, returns the length of its longest binary gap. The function should return 0 if N doesn't contain a binary gap.

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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### Analysis summary

37

38

39

40

41

The solution obtained perfect score.

}

return length;

}

}

# Analysis ?

collapse all Example tes		Example test	ts	
▼	example example n=1041=		✓ OK	
1.	0.001 s	ок		
▼	example example	ele2 e test n=15=1111_2	√ OK	
1.	0.001 s	ОК		
•	example example	le3 e test n=32=100000_2	✓ OK	
1.	0.001 s	ОК		
colla	pse all	Correctness te	ests	
▼	extrem n=1, n=5	nes 5=101_2 and 483647=2**31-1	✓ OK	
1.	0.001 s	ОК		
2.	0.001 s	ОК		
3.	0.001 s	ок		
<b>V</b>	trailing_zeroes			
1.	0.001 s	ОК		
2.	0.001 s	ок		
▼	power_ n=5=101 n=1024=	1_2, n=16=2**4 and	√ OK	
1.	0.001 s	OK		
2.	0.001 s	ОК		
3.				

```
0.001 OK
S
▼ simple1
                                ✓ OK
    n=9=1001_2 and n=11=1011_2
1. 0.001 OK
    S
2. 0.001 OK
                                ✓ OK
▼ simple2
    n=19=10011 and n=42=101010_2
1. 0.001 OK
    S
2. 0.001 OK
    S
                                ✓ OK
▼ simple3
    n=1162=10010001010_2 and
    n=5=101_2
1. 0.001 OK
    S
2. 0.001 OK
                                ✓ OK
▼ medium1
    n=51712=110010100000000_2 and
    n=20=10100_2
1. 0.001 OK
    S
2. 0.001 OK
                                ✓ OK
▼ medium2
    n=561892=10001001001011100100
    _2 and n=9=1001_2
1. 0.001 OK
2. 0.001 OK
▼ medium3
                                ✓ OK
    n=66561=1000001000000001_2
1. 0.001 OK
    S
\blacksquare
```

large1					
''	0.001 s	ОК			
r	large2 n=74901 0111000	729=1000111011011101 001		ОК	
	0.001 s	ОК			
r		)6373=1100000000000000 )000101_2		ОК	
	0.001 s	ОК			
r		796946=10100100001000 00010010_2		ОК	
	0.001 s	ОК			
r		741825=1000000000000000000000000000000000000		ОК	
''	0.001 s	ок			
r		312737=110000000000000 000000001_2		ОК	
	0.001 s	ОК			

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