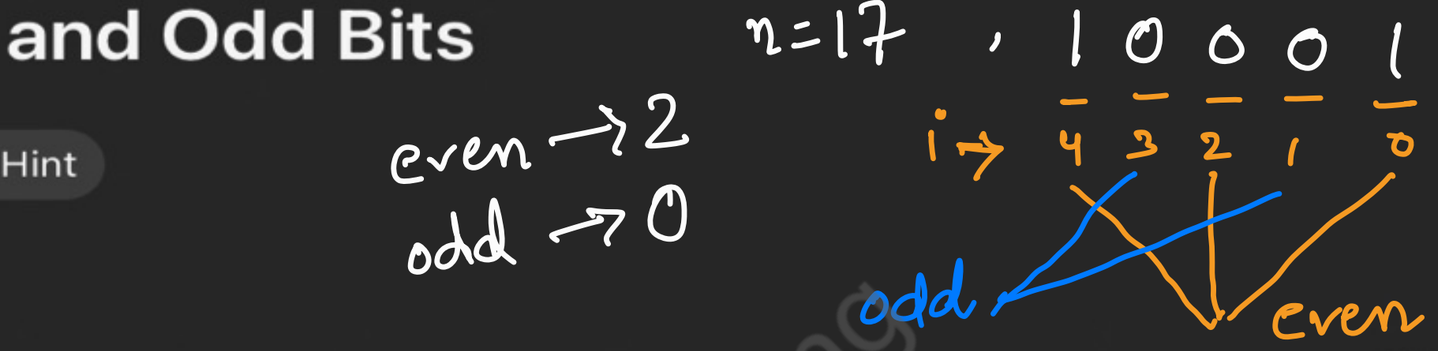
Topics to discuss

Bit manipulation Problem - 5

- Number of Even and odd Bits.

2595. Number of Even and Odd Bits



Easy | Topics | Companies | Hint

You are given a **positive** integer `n`.

Let `even` denote the number of even indices in the binary representation of `n` (**0-indexed**) with value `1`.

Let `odd` denote the number of odd indices in the binary representation of `n` (**0-indexed**) with value `1`.

Return *an integer array* `answer` *where* `answer = [even, odd]`.

Example 1:

> **Input:** n = 17
> **Output:** [2,0]
> **Explanation:** The binary representation of 17 is 10001.
> It contains 1 on the 0^{th} and 4^{th} indices.
> There are 2 even and 0 odd indices.

Example 2:

> **Input:** n = 2
> **Output:** [0,1]
> **Explanation:** The binary representation of 2 is 10.
> It contains 1 on the 1^{st} index.
> There are 0 even and 1 odd indices.

```
public int[] evenOddBits (int n) {
        int even = 0;
        int odd =0;
        int   idx = 0;
        while (n>0) {
            if((n &1) ==1){
                if ( idx %2 == 1)
                        odd ++;
                    else  even ++;
            }
              idx++;
            n = n/2;
        }
        return new int[]{even ,odd};
}
```

$n = 17$. $10001 \;\&\; 1 \Longrightarrow 1$

$y\ 3\ 2\ 1\ 0$

$n = 17$

$\frac{n}{2} = 8.5 = 8 = 1000$

$\frac{8}{2} = 4 \rightarrow 100$

Follow Now

Start Practicing

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