BACK

Different Rightmost Bit

DESCRIPTION SOLUTIONS 7031 COMMENTS 12 RE. RECOVERY SCORE: 100/100

You're given two integers, `n` and `m`. Find position of the rightmost bit in which they differ in their binary representations (it is guaranteed that such a bit exists), counting from right to left.

Return the value of $2^{position\_of\_the\_found\_bit}$ (0-based).

Example

- For `n = 11` and `m = 13`, the output should be
  `differentRightmostBit(n, m) = 2`.

  $11_{10} = 10\mathbf{1}1_2$, $13_{10} = 11\mathbf{0}1_2$, the rightmost bit in which they differ is the bit at position `1` (0-based) from the right in the binary representations.
  So the answer is $2^1 = 2$.

- For `n = 7` and `m = 23`, the output should be
  `differentRightmostBit(n, m) = 16`.

  $7_{10} = 111_2$, $23_{10} = 10111_2$, i.e.

  ```
  00111
  10111
  ```

  So the answer is $2^4 = 16$.

Input/Output

- **[execution time limit] 4 seconds (js)**
- **[input] integer n**

  Guaranteed constraints:
  $0 \le n \le 2^{30}$.
- **[input] integer m**

  Guaranteed constraints:
  $0 \le m \le 2^{30}$,
  $n \neq m$.
- **[output] integer**