

Binary Number with Alternating Bits

Problem statement:

Given a positive integer, check whether it has alternating bits: namely, if two adjacent bits will always have different values.

Example 1:

Input: 5

Output: True

Explanation:

The binary representation of 5 is: 101

Example 2:

Input: 7

Output: False

Explanation:

The binary representation of 7 is: 111.

Example 3:

Input: 11

Output: False

Explanation:

The binary representation of 11 is: 1011.

Example 4:

Input: 10

Output: True

Explanation:

The binary representation of 10 is: 1010.