

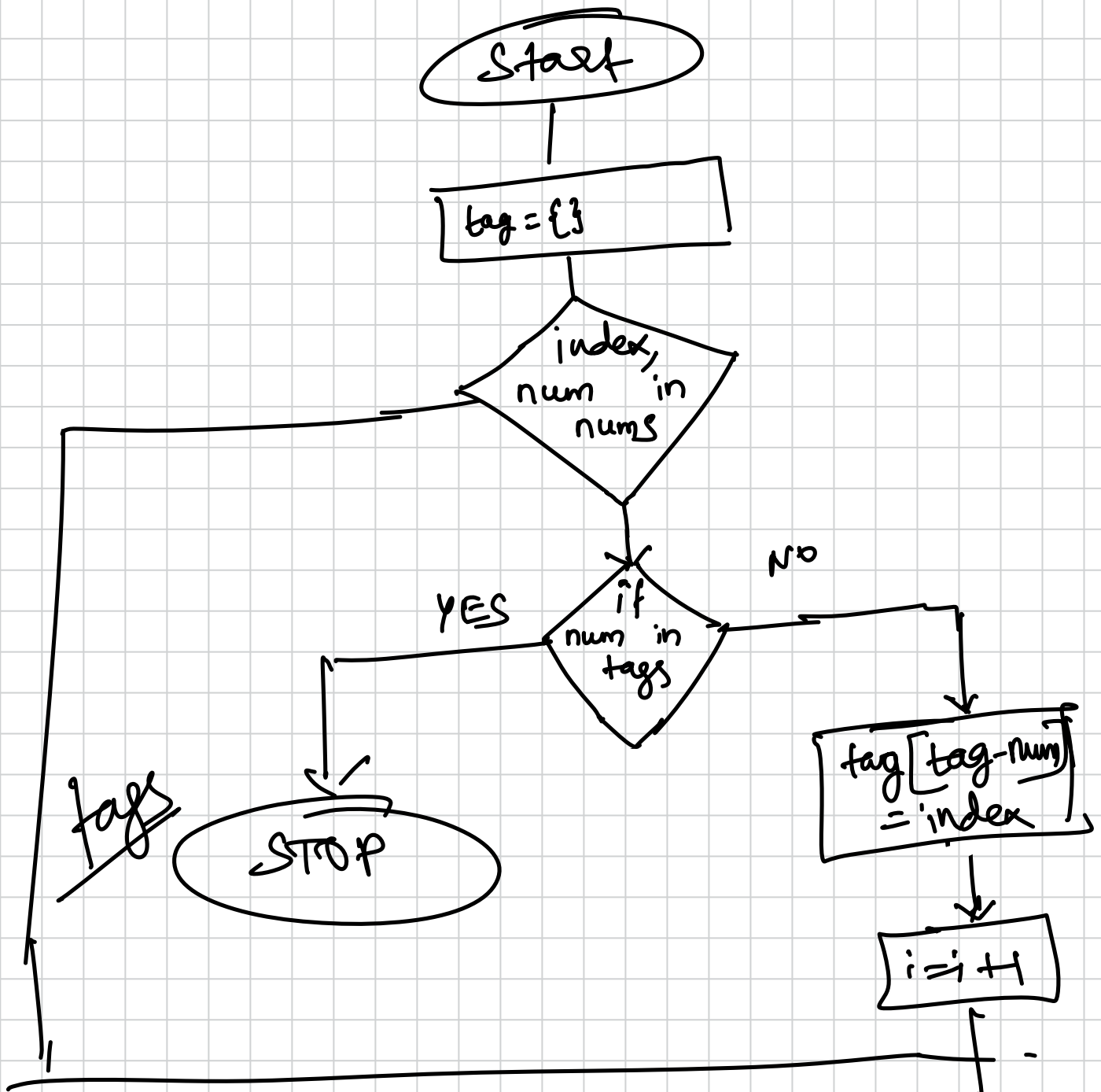
1. Two Sum

Given

- array of integers.

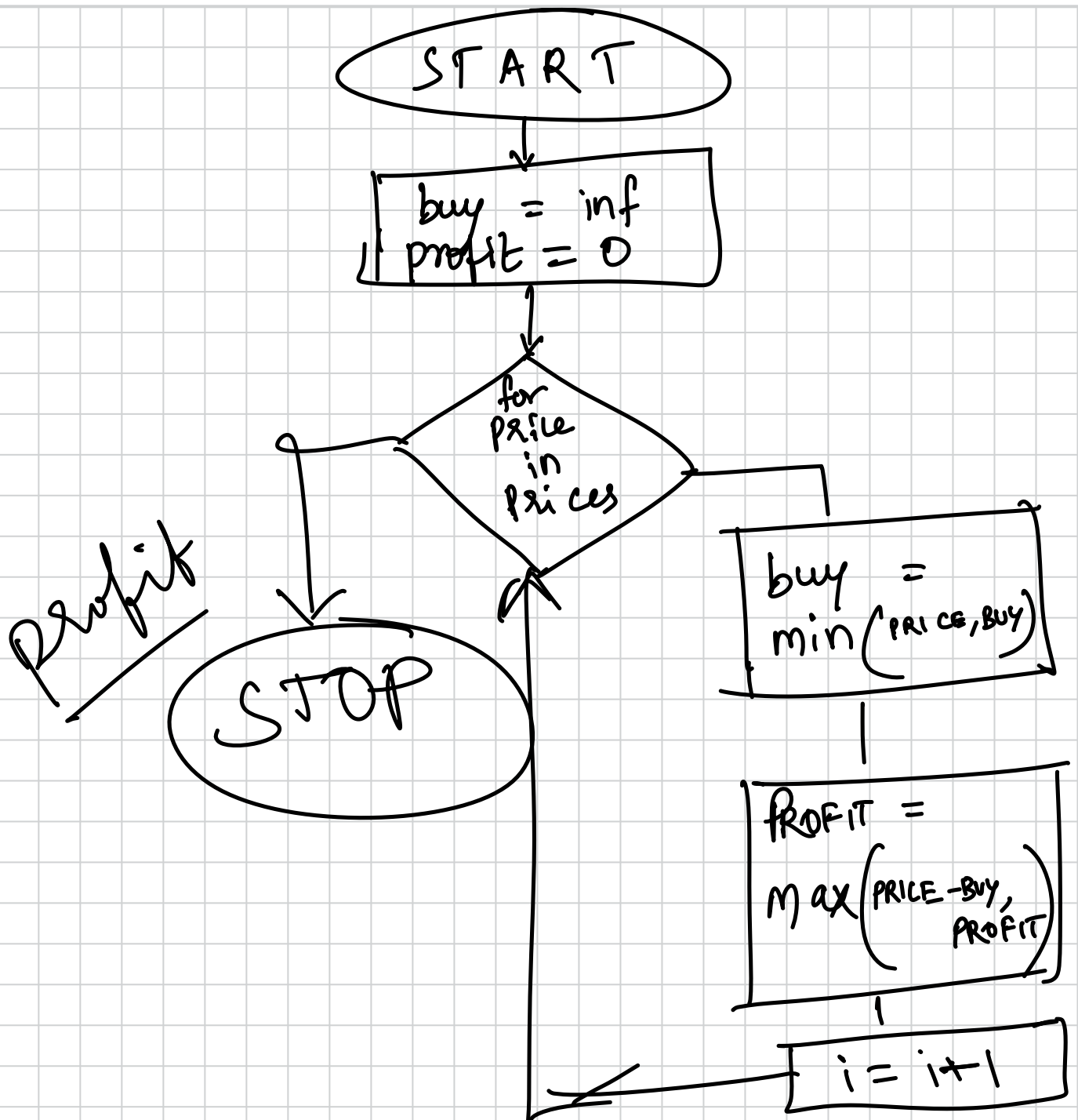
Return

- indices of two number
adds up to the target



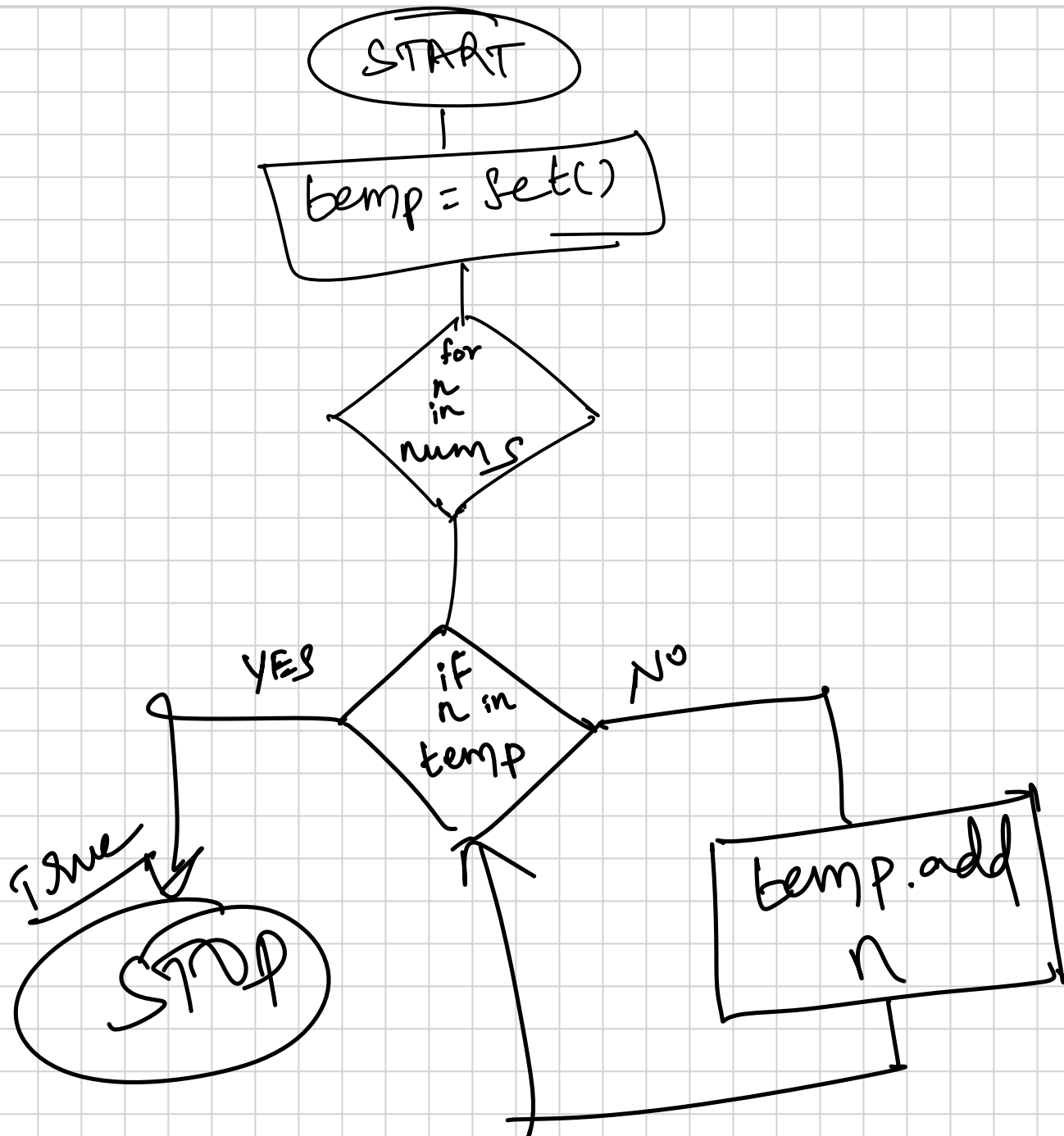
2. Buy or Sell Stocks

Given: a list of prices of stock.
Output: maximum profit possible considering buying and selling dates.



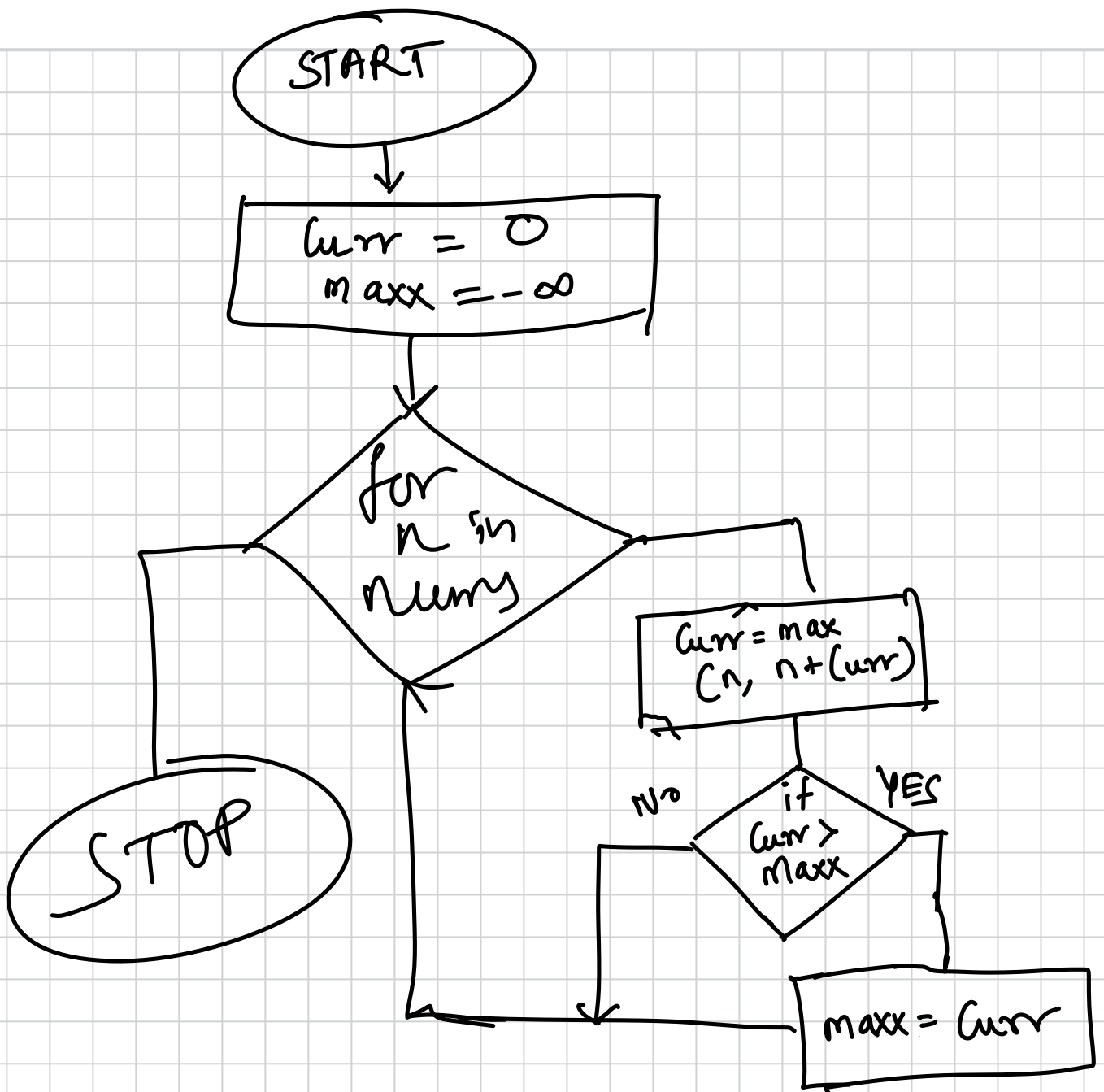
Q3. Contains duplicate

Input: array of numbers (int)
Output: YES if duplicate present
No if unique



Q4. MAXIMUM SUB ARRAY

Input: integer array
Output: Subarray with maximum sum



Chapter 2 Bits

mask = 0b11111111111111111111111111111111

max = 0b01111111111111111111111111111111

eg: $a=1$ $b=0$

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$a \wedge b \longrightarrow 0$

$a \& b \longrightarrow 0$

$a \ll 1 \longrightarrow 10$

$a | b \longrightarrow 1$

$(1 \ll a) \& b \longrightarrow 10 \& 0 \rightarrow 0$

$a \& (1 \ll b) \longrightarrow 1 \& 1 \rightarrow 1$

$b \ll (31 - a) \longrightarrow 0$

$\sim a \longrightarrow 0$

1

1

10

1

$10 \& 1 \rightarrow 0$

$1 \& 10 = 0$

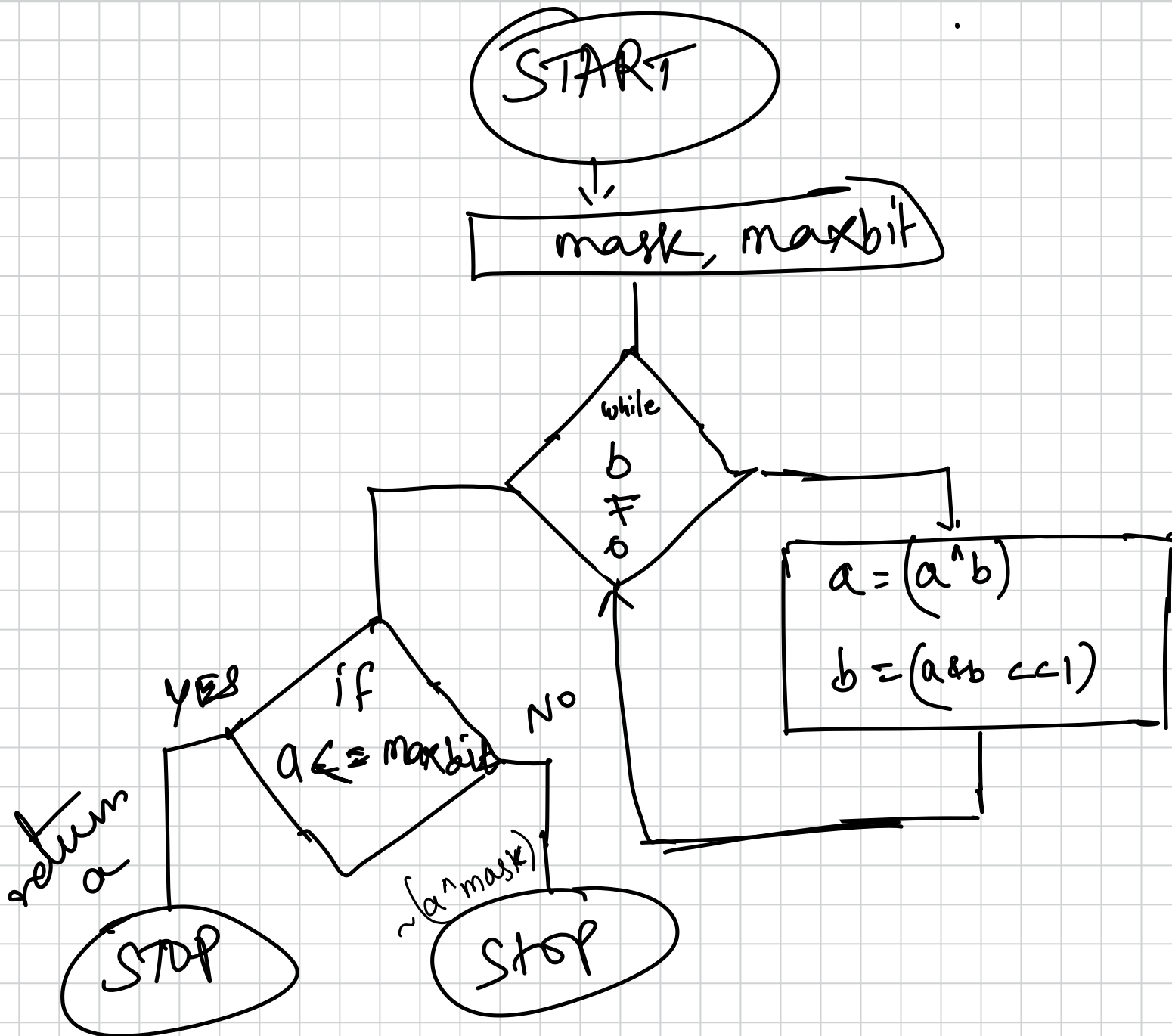
10000000000000000000000000000000

0

5- Sum of two integers

Input: two integers

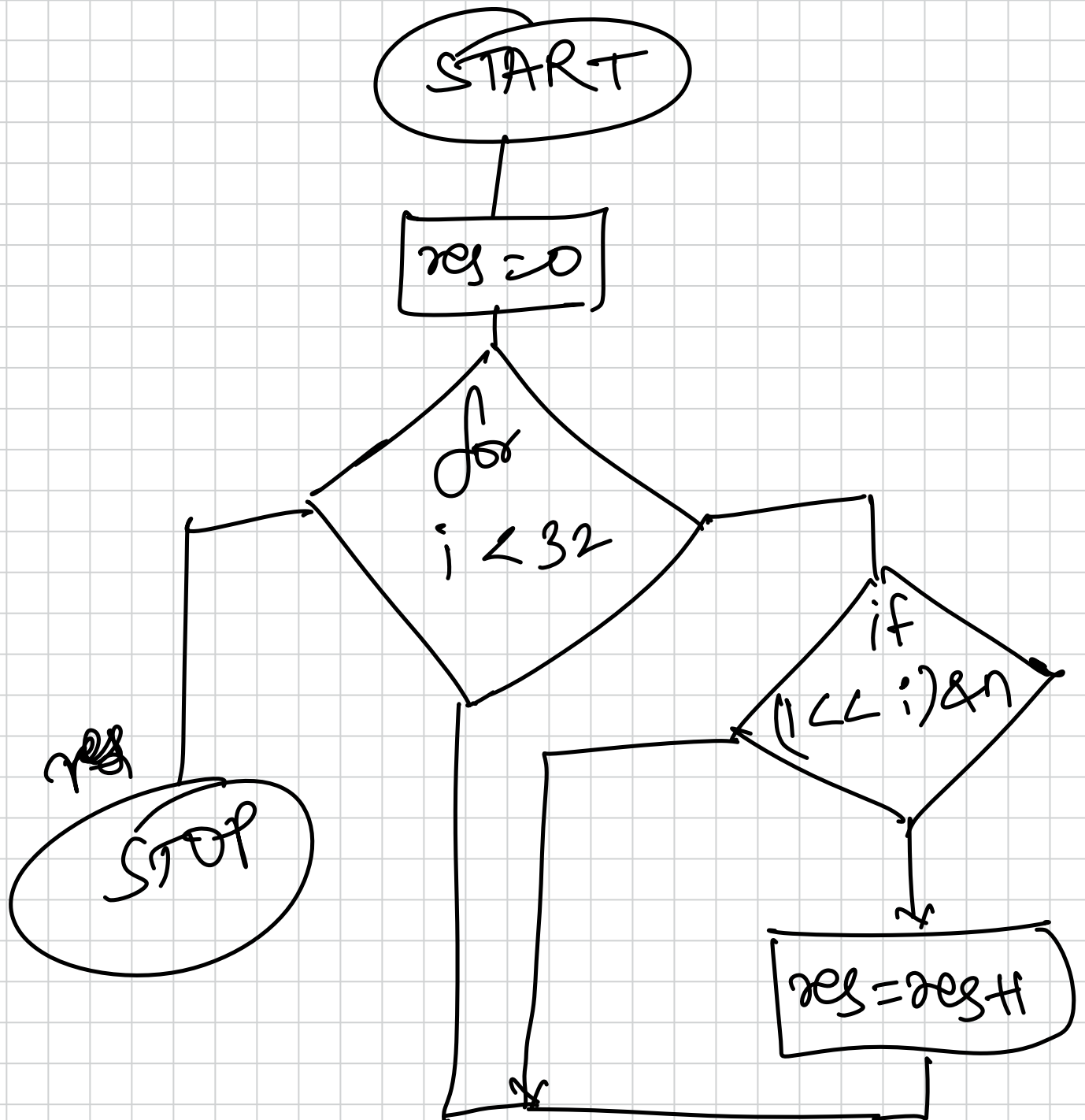
Output: Add them without '+' or '-'.



b. Number of 1 bits

Input: unsigned integer

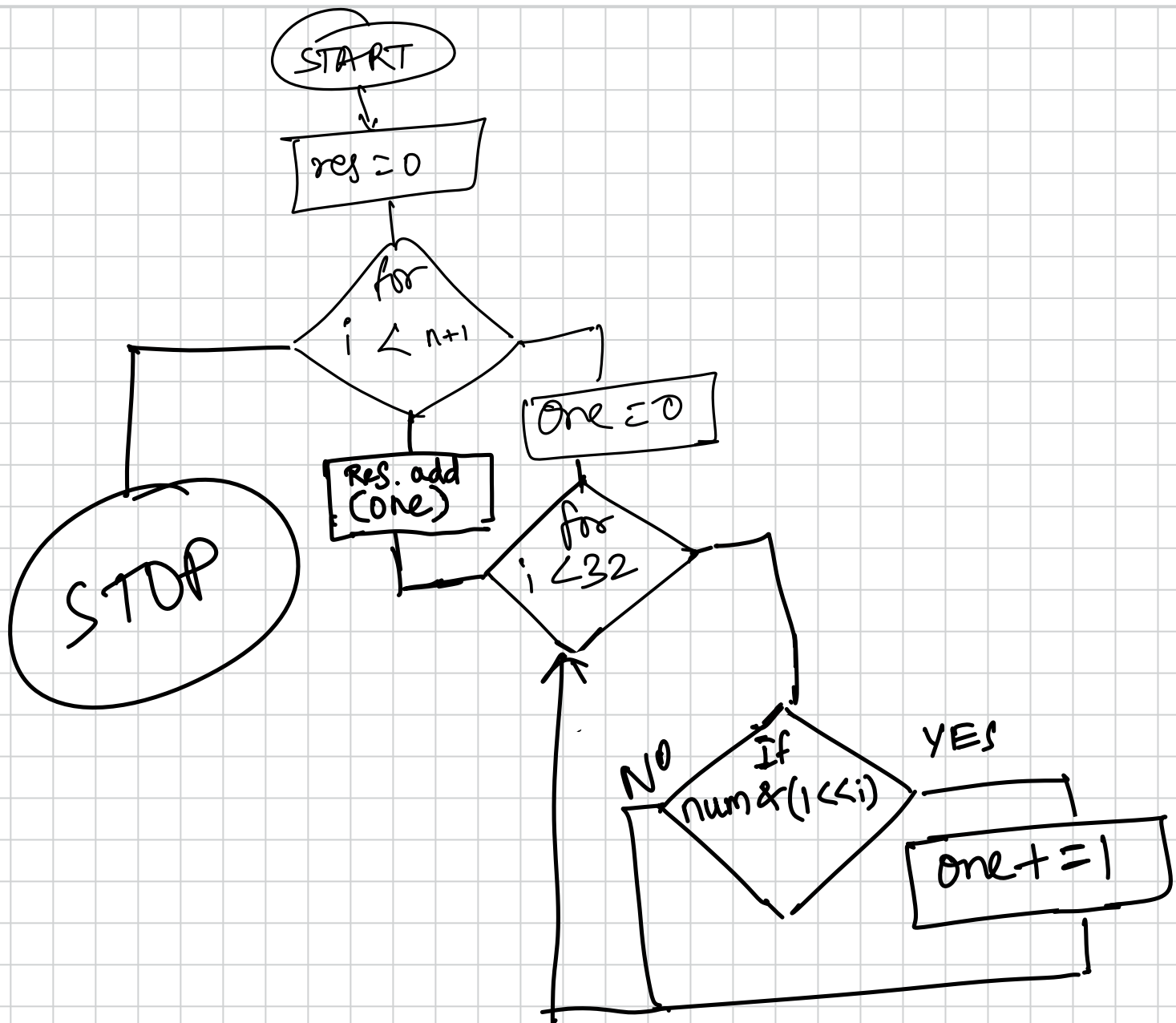
Output: Number of 1's in binary



F: Counting Bit

input: integer n

output: number of 1's in range $(0, n)$.



8. Reverse Bit

Given: unsigned integer
Output: Reverse bin & return Integer.

