

10 ↓
Problem Definition:

Find the n^{th} number in the Fibonacci Series.

Fibonacci Series: A Sequence where each number is the Sum of the two preceding ones starting from 0 and 1.

Example: 0, 1, 1, 2, 3, 5, 8

Steps to Solve.

Step 1: Read the input Value n .

Step 2: Initialise Variables

$a = 0$ (first fibonacci number)

$b = 1$ (second fibonacci number)

Step 3: Initialize Counter $count = 2$.

Step 4: Loop until $count \leq n$:

Save current b in temp

Update b to $a + b$.

Update a to temp.

Increment count.

Step 5: Print the value of b . (n^{th} fibonacci number)

Pseudocode:

Start

Read n

Initialize $a = 0, b = 1, count = 2$

while $count \leq n$

temp = b

$b = b + a$

$a = temp$

count = temp + 1

End while

Print b

End

Explanation:

this algorithm starts from the first two numbers in the fibonacci series.

It iteratively calculates the next Fibonacci number by summing the previous two

this process continued until desired output n is reached.

Edge cases:

if n is 1, the output should be 0

if n is 2, the output should be 1.