

Fibonacci Sequence Calculation

You are tasked with calculating the Fibonacci sequence for a given integer 'n' within a specified range. The Fibonacci sequence is defined as:

- $F(0)=0$
- $F(1)=1$
- $F(n)=F(n-1)+F(n-2)$

Function Descriptions

1. **getNum():**
 - Reads an integer 'n' from a file. The file name is provided as input.
 - The file will contain only one integer, 'n'.
2. **show(n, fib_n):**
 - Displays the Fibonacci number in the format: "Fibonacci(n) = F(n)".
3. **saveFile(n, fib_n, validity):**
 - Saves the result to a file named "result.txt".
 - If n is within the valid range $0 \leq n \leq 200$, save "Fibonacci(n) = F(n)".
 - If n is outside this range, save "Invalid input!".

Input Format

- A single integer 'n' is read from a file.
- You must check if the input is valid.

Output Format

- Print "Invalid input!" if n is not in the range $0 \leq n \leq 200$.
- If n is valid, calculate and display the Fibonacci number in the format: "Fibonacci(n) = F(n)".
- Save the result to "result.txt".

Constraints

- $0 \leq n \leq 200$
- The output Fibonacci number $F(n) \leq 2^{32}$

Sample Input

3

Sample Output

Fibonacci(3) = 2

Explanation

For the given input $n = 3$, the Fibonacci sequence is computed as:

- $F(0) = 0$
- $F(1) = 1$
- $F(2) = 1$
- $F(3) = 2$

Thus, the output is "Fibonacci(3) = 2".