README File

I have implemented a program that takes input n and outputs the nth Fibonacci number.

Assembly code:

LOAD M(X) 0 ADD M(X) 1

STOR M(X) 2

LOAD M(X) 1 STOR M(X) 0

LOAD M(X) 2 STOR M(X) 1

JUMP M(X,0:19) 420

HALT

Input Format:

Input consists of these 6 binary instructions and the 7th line contains n.

For example, if you want to calculate fib(7), give the following inputs, after the corresponding prompts.

Please note that my code will work for n in the range [1,92], because fib(93) exceeds the max limit of long long int in c++.

0000000100000000000000000101000000000001

0000000000000000000000100001000000000010

0000000100000000000100100001000000000000

0000000100000000000100010000100000000001

0000000000000000000000001101000110100100

0000000000000000000000000000000000000000

7

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enter the 40 bit instructions

0000000100000000000000000101000000000001

0000000000000000000000100001000000000010

0000000100000000000010010000100000000000

0000000100000000000100010000100000000001

0000000000000000000000001101000110100100

0000000000000000000000000000000000000000

enter n

7

PC: 420

AC: 0

MBR: 0

PC: 421

AC: 1

MBR: 1

PC: 422

AC: 1

MBR: 1

PC: 422

AC: 1

MBR: 1

PC: 423

AC: 1

MBR: 1

PC: 423

AC: 1

MBR: 1

PC: 424

AC: 1

MBR: 1

PC: 424

AC: 1

MBR: 1

PC: 425

AC: 2

MBR: 1

PC: 426

AC: 2

MBR: 2

PC: 426

AC: 1

MBR: 1

PC: 427

AC: 1

MBR: 1

PC: 427

AC: 2

MBR: 2

PC: 428

AC: 2

MBR: 2

PC: 428

AC: 1

MBR: 1

PC: 429

AC: 3

MBR: 2

PC: 430

AC: 3

MBR: 3

PC: 430

AC: 2

MBR: 2

PC: 431

AC: 2

MBR: 2

PC: 431

AC: 3

MBR: 3

PC: 432

AC: 3

MBR: 3

PC: 432

AC: 2

MBR: 2

PC: 433

AC: 5

MBR: 3

PC: 434

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MBR: 5

PC: 436

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PC: 436

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MBR: 3

PC: 437

AC: 8

MBR: 5

PC: 438

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PC: 447

AC: 21

MBR: 21

PC: 448

AC: 21

MBR: 21

Fib(7) = 13