Practice Arena

Practice problems aimed to improve your coding skills.

- PRACTICE-02_SCAN-PRINT
- PRACTICE-03_TYPES
- LAB-PRAC-02_SCAN-PRINT
- LAB-PRAC-01
- PRACTICE-04_COND
- BONUS-PRAC-02
- LAB-PRAC-03_TYPES
- PRACTICE-05_COND-LOOPS
- LAB-PRAC-04_COND
- LAB-PRAC-05_CONDLOOPS
- PRACTICE-07_LOOPS-ARR
- LAB-PRAC-06_LOOPS
  - Fill in the Square
  - Pretty Numbers
  - Block Cipher
  - The Fibonacci Facade
  - Stream AM GM
  - Int on Int
  - Bejewelled Brooch
  - Mobile Mixup
  - Primes are in C
  - Towering Numbers
  - A Run of One
  - Where are the primes-
- LAB-PRAC-07_LOOPS-ARR
- LABEXAM-PRAC-01_MIDSEM
- PRACTICE-09_PTR-MAT
- LAB-PRAC-08_ARR-STR
- PRACTICE-10_MAT-FUN
- LAB-PRAC-09_PTR-MAT
- LAB-PRAC-10_MAT-FUN
- PRACTICE-11_FUN-PTR
- LAB-PRAC-11_FUN-PTR
- LAB-PRAC-12_FUN-STRUC
- LABEXAM-PRAC-02_ENDSEM
- LAB-PRAC-13_STRUC-NUM
- LAB-PRAC-14_SORT-MISC

The Fibonacci Facade

LAB-PRAC-06_LOOPS

The Fibonacci Facade [10 marks]

Problem Statement
Recall that the Fibonacci numbers are defined as follows
F(0) = 0
F(1) = 1
F(n) = F(n-1) + F(n-2), for n > 1

Given an **integer n**, print the Fibonacci triangle described below in the example. The triangle should have n rows

1. The first row should print F(0)
2. The second row should print F(0) F(1) (i.e. the first two Fibonacci numbers **separated by a single space**)
3. The third row should print F(0) F(1) F(2) (i.e. the first three Fibonacci numbers each separated by a single space)
4. ... and so on

There should be no space after the last number in any line. There should be no extra newline after the last line of the output. If n < 1, then your program should print "INVALID INPUT" (without quotes).

Caution

1. Fibonacci numbers can get very large. Even though n will fit inside int variables, **use long variables** to do all your computation and all your printing.
2. Be careful about extra/missing lines and extra/missing spaces.
3. Note that there is **no trailing space** at the end of the last number F(j-1). If your output has trailing spaces, you will receive no marks as there is no partial grading in this question.
4. Note that there is **no trailing new line** after the last line of the output.
5. Be very careful, even though the evaluation may give you marks for extra spaces and newlines, **the autograder will give you zero marks** for any extra spaces or new lines.
6. Take care of capitalization and spelling mistakes.

EXAMPLE:
INPUT
5

OUTPUT:
0
0 1
0 1 1
0 1 1 2
0 1 1 2 3

Grading Scheme:
Total marks: **[10 Points]**

There will be no partial grading in this question. An exact match will receive full marks whereas an incomplete match will receive 0 points. Please be careful of missing/extra spaces and missing/lines (take help of visible test cases). Each visible test case is worth 1 point and each hidden test case is worth 2 points. There are 2 visible and 4 hidden test cases

Start Solving! (/editor/practice/6113)