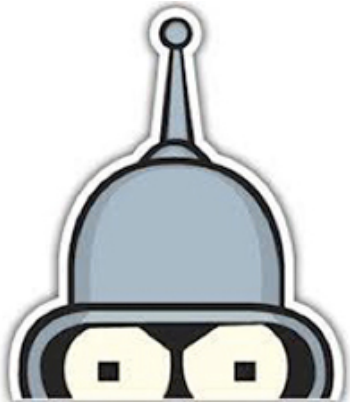
B2 - Stumpers

B-CPE-210

Fibonacci Checker

Solo Stumper



1.2

Fibonacci Checker

binary name: fibonacci_checker
language: C
compilation: via Makefile, including re, clean and fclean rules

- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).

For this project, the **only** authorized functions are `write` and `atoi`.

A *Fibonacci sequence* is a sequence of at least three whole numbers, where each of them (except the first two) is the sum of the previous two.
Two numbers are defined first, and then the sequence can be generated.

For example, if we take the traditionnal first two numbers 0 and 1, we get the following sequence:
$0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55...$

Write a program that takes a list of integers as parameters, and checks whether it is a valid Fibonacci sequence or not.

If the list is composed of integers that form a valid Fibonacci sequence, the program displays `OK` followed by a newline.
If the list is composed of integers that do not form a valid Fibonacci sequence, the program displays `Not a Fibonacci sequence` followed by a newline.
The aforementioned messages must be written on the standard output.

All the other cases are considered errors.

The parameters will always be valid numbers.

EXAMPLES

Terminal

```
~/B-CPE-210> ./fibonacci_checker 0 1 1 2 3 5 8
OK
~/B-CPE-210> ./fibonacci_checker 42 84 126 210 336 546 882 | cat -e
OK$
~/B-CPE-210> ./fibonacci_checker -1 1 0
OK
~/B-CPE-210> ./fibonacci_checker 0 1 1 3
Not a Fibonacci sequence
~/B-CPE-210> ./fibonacci_checker -1 -1 2 | cat -e
Not a Fibonacci sequence$
~/B-CPE-210> ./fibonacci_checker 14 | cat -e
Not a Fibonacci sequence$
~/B-CPE-210> ./fibonacci_checker ; echo $?
84
```