

Accountant's Dilemma

Danielle, the accountant of your company, needs help with a problem she is facing. She needs to deal with a document containing a 'Bank Transfer' and a list of 'Due Payments' represented as decimal numbers with 2 decimal places.

An entry in the 'Due Payments' list represents the amount the company should receive either as payment for a given product which is recently sold.

The 'Bank Transfer' value represents the amount of a bank transfer which sums up payments of sold items in a specific period of time (as they appear in the company's account statement).

Danielle tells you that the 'Bank Transfer' amount represents the sum of a part of the amounts in the 'Due Payments' list. This is because the amount transferred in the company's account is necessarily the sum of part of the due payments of recently sold items.

The problem is that Danielle does not know the payments to which the bank transfer corresponds. She is currently doing the mapping by hand and it is very time consuming. Can you build a small application/tool for Danielle so she could use it to speed up her day to day work?

An example

Due Payments Bank Transfer

22.75 74.06

59.33

34.22

27.21

17.09

100.99

In the example above, the solution Danielle found is:

- 74.06 corresponds to $22.75 + 34.22 + 17.09$

Some remarks:

- If several solutions exist, only one solution is needed. Any correct solution will be accepted.
- The input to the program is a text file containing one number per line. The program should accept the input file as a command line parameter. The first number represents the bank transfer. The remaining numbers represent the due payments. Each number has exactly 2 decimals.

- For the example above, the input file would contain:

74.06

22.75

59.33

34.22

27.21

17.09

100.99

- The output file, named 'output.txt' will contain the list of payments that make up the solution – one payment per line. If no solution is found the output file should contain the text 'No Solution' on the first line. In the above example, the output file would contain 22.75 34.22 17.09
- Please submit solution implemented in Java along with Makefile or Visual Studio Project.
Java class(es) must also be provided.