Assignment name : powerset

Expected files : \*.c \*.h

Allowed functions : atoi, printf, malloc, calloc, realloc, free.

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Write a program that will take as argument an integer n follow by a set of integers,

your program should display all the subsets of whose sum of elements is n.

In case of a malloc error your program will exit with the code 1.

We will not test invalid test(for example '1 1 2')

hint: the empty set is a subset of anyset.

For example this should work:

$> ./powerset 3 1 0 2 4 5 3 | cat -e

3$

0 3$

1 2$

1 0 2$

$> ./powerset 12 5 2 1 8 4 3 7 11 | cat -e

8 4$

1 11$

1 4 7$

2 3 7$

5 4 3$

5 7$

5 2 1 4$

$> ./powerset 7 3 8 2| cat -e

$

$> ./powerset 0 1 -1| cat -e

1 -1$

The order of lines is not important, but the order of the element in a subset is.

You must not have any duplicates (for example 2 1, 1 2)

$> ./powerset 5 1 2 3 4 5| cat -e

valid:

1 4$

2 3$

5$

or:

2 3$

5$

1 4$

not valid:

4 1$

3 2$

5$