

**NAME**

bf – a fast Brainfuck interpreter

**SYNTAX**

**bf** [**-h**] [*options*] *filename*

**DESCRIPTION**

**bf** is a fast interpreter for the esoteric programming language Brainfuck.

Try **bf -h** to see a short usage help and default values, which are not mentioned in this manual page.

**OPTIONS**

**-num** Specify the number *num* of cells you are allowed to use in your Brainfuck program.

So if you use **-c1**, you will get one cell (one byte in memory) to use on your tape. ‘>’ and ‘<’ will be impossible. The original Brainfuck interpreter by Urban Mueller used an array of 30000 bytes (**-c30000**).

**-f** Use this option if you do not care to see a character right after it shall be printed (‘.’).

**-n** Some Brainfuck contests specify a 0 byte as End Of Input. So **-n** translates a ‘\n’ (0x0A) byte input into a 0x00 byte input.

**-w** Disallow byte wrap-around. This causes errors if you try to decrement (‘-’) a 0x00 byte or to increment (‘+’) a 0xFF byte.

This feature is useful if you want to take part in Brainfuck contests where such wrap-arounds are disallowed.

By default (without **-w**), incrementing 0xFF results in 0x00 and decrementing 0x00 results in 0xFF.

**-imode** Specify input mode: the behavior on ‘,’. *mode* can be:

000 – Keep system settings.

001 – Single-char input. You *will not* see what you type.

010 – Canonical input. You *will* see what you type.

011 – Single-char input. You *will* see what you type.

100 – Canonical input. You *will not* see what you type. Ignores escape sequences.

101 – Single-char input. You *will not* see what you type. Ignores escape sequences.

110 – Canonical input. You *will* see what you type. Ignores escape sequences.

111 – Single-char input. You *will* see what you type. Ignores escape sequences.

Different Brainfuck programs need a different behavior.

A tiny Brainfuck program to test the different modes is ‘+[ , . ]’ or simply ‘, .’.

**LIMITATIONS**

- It’s not allowed to ‘<’ below the first cell.
- It’s not allowed to ‘>’ beyond the last cell.
- Nesting ‘[’ and ‘]’ is limited.

**BUGS**

The `-i1xx` input modes are experimental, and try to ignore ECMA-48 escape sequences. It is possible that they do not work correctly. If you find some obscure behavior regarding inputs, then please drop me a mail containing the Brainfuck code, the keys you have pressed, and the output of `echo $TERM` (in a *sh*-ish shell). Thank you.

**AUTHORS**

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