Brainfunc

A programming language like brainf*ck

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Language background

- C++ template is Turing complete.
- Brainf*ck is also Turing complete.
- By How about introducing functions into brainf*ck?
- While-statements are substitutable with recursive functions and if-statements!

What is Brainfunc?

- It is a derivative of brainf*ck.
- There is a void function declaration in the language.
- There is an operation () in the language, which means an if-statement.
- There is no operation [] which means a while loop in brainf*ck in the language.

Sample code (an echo program)

```
# function main
 # input
# if (input + 1 != 0) (<=> input != EOF)
     # print input
     # continue echoing
```

Try it on Brainfunc visualizer now!

Commands

Command	Description
$x{y}$	Declare a function that executes y with the name x.
> <	Increment and decrement the index of the current cell.
+ -	Increment and decrement the value of the current cell.
,	Input to and output from the value of the current cell.
(x)	Execute x if the value of the current cell is not equal to 0.
X	Call a function with the name x.

See also: README.md

How can we enjoy Brainfunc?

- Try to code Brainfunc from Brainfunc visualizer.
- Install a Brainfunc compiler with a command below.

```
brew install shuzaei/brainfunc/brainfunc
```

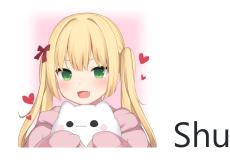
- Output filename | Output
- Install a Visual Studio Code extension from here.

What are the merits and the demerits of Brainfunc?

- ✓ You can use functions and write brainfunc-like code more with ease.
- You can use if-statement without affecting surrounding cells.
- You can leave comments more formally and efficiently.
- X You can use only 63 functions in the current status.

Good luck with your life on Brainfunc!

Thank you for watching,



The history and release notes

- 2021/06/25 Invented Brainfunc on the evening
- 2021/06/25 Created the first transpiler
- 2021/06/26 Created the first compiler
- 2021/06/25 Released an alpha version of the package
- 2021/06/26 Created the first visual studio code extension
- 2021/06/27 Created the first homebrew package
- 2021/06/27 Released a beta version of the package
- 2021/07/02 Started to create a visualizer
- 2021/07/03 Released an alpha version of the visualizer
- 2021/07/05 Released a beta version of the visualizer

Links

- GitHub repository
- GitHub repository of the homebrew package
- Visual Studio Code extension
- Brainfunc visualizer