



# Beginners Languages



**Low level, stack based?**



**Functional, loosely typed?**



**Object oriented, strictly typed?**



**Yes!**



# OSDcLang

**Simple syntax**  
**Expressive**



# 3 Syntax Elements

OSDc.

OSDc?

OSDc!

# 8 Commands



## \* OSDc. OSDc?

Move the Memory Pointer to the next array cell.

## \* OSDc? OSDc.

Move the Memory Pointer to the previous array cell.

## \* OSDc. OSDc.

Increment the array cell pointed at by the Memory Pointer.

## \* OSDc! OSDc!

Decrement the array cell pointed at by the Memory Pointer.

## \* OSDc. OSDc!

Read a character from STDIN and put its ASCII value into the cell at the Memory Pointer.

## \* OSDc! OSDc.

Print the character with ASCII value of the cell pointed at by the Memory Pointer.

## \* OSDc! OSDc?

Move to the command following the matching OSDc? OSDc! if the value in the cell pointed at by the Memory Pointer is zero. Note that OSDc! OSDc? and OSDc? OSDc! commands nest like pairs of parentheses, and matching pairs are defined in the same way as for parentheses.

## \* OSDc? OSDc!

Move to the command following the matching OSDc! OSDc? if the value in the cell pointed at by the Memory Pointer is non-zero.



**OSDcLang is Turing complete**

**Trivially isomorphic to BrainF\*\*k**



<b>OSDc . OSDc?</b>	<b>==</b>	<b>&gt;</b>
<b>OSDc? OSDc .</b>	<b>==</b>	<b>&lt;</b>
<b>OSDc . OSDc .</b>	<b>==</b>	<b>+</b>
<b>OSDc! OSDc!</b>	<b>==</b>	<b>-</b>
<b>OSDc . OSDc!</b>	<b>==</b>	<b>,</b>
<b>OSDc! OSDc .</b>	<b>==</b>	<b>.</b>
<b>OSDc! OSDc?</b>	<b>==</b>	<b>[</b>
<b>OSDc? OSDc!</b>	<b>==</b>	<b>]</b>



<b>&gt;</b>	<b>==</b>	<b>OSDc .</b>	<b>OSDc?</b>
<b>&lt;</b>	<b>==</b>	<b>OSDc?</b>	<b>OSDc .</b>
<b>+</b>	<b>==</b>	<b>OSDc .</b>	<b>OSDc .</b>
<b>-</b>	<b>==</b>	<b>OSDc!</b>	<b>OSDc!</b>
<b>,</b>	<b>==</b>	<b>OSDc .</b>	<b>OSDc!</b>
<b>.</b>	<b>==</b>	<b>OSDc!</b>	<b>OSDc .</b>
<b>[</b>	<b>==</b>	<b>OSDc!</b>	<b>OSDc?</b>
<b>]</b>	<b>==</b>	<b>OSDc?</b>	<b>OSDc!</b>

**So what does it look like?**



**So what does it look like?**  
**Very simple! Print “A”:**











# OSDcLang

**Your new favorite language!**