## **Documentation**

In reverse Polish notation, the operators follow their operands; for instance, to add 3 and 4, one would write 3.4 + r ather than 3 + 4. If there are multiple operations, operators are given immediately after their second operands; so the expression written 3 - 4 + 5 in conventional notation would be written 3.4 - 5 + i in reverse Polish notation: 4 is first subtracted from 3, then 5 is added to it. An advantage of reverse Polish notation is that it removes the need for parentheses that are required by infix notation. While  $3 - 4 \times 5$  can also be written  $3 - (4 \times 5)$ , that means something quite different from  $(3 - 4) \times 5$ . In reverse Polish notation, the former could be written  $3.4.5 \times -$ , which unambiguously means  $3.4.5 \times -$  which reduces to 3.20 - (which can further be reduced to -17); the latter could be written  $3.4.5 \times -$  if keeping similar formatting), which unambiguously means  $(3.4.5) \times -$ 

Link to Wikipedia (source)

## Compilation:

Just type 'make' in terminal while you're in folder containing program.

## Using the program:

In terminal after compilation type './rpnCalculator' then you will see entry menu, after pressing enter you can use program. This program in usage is similar to dc gnome program. Example:

321+

this will push 3, 2 and 1 to the stack and make addition on 1 and 2, result is remaining 3 and 3 in stack.

**Warning**: You can type multiple operations at once in line only if you use space button to seperate them. (Only exception is when you are inserting an negative number with '\_', then you have to type it together, for example '\_3' will push -3 to the stack).

## List of options:

- Pushing number to the stack: type any integer number, "I' will add 1
- Pushing negative number to the stack: '24' will add -24
- Displaying the entire stack: "
- Displaying last number on the stack: 'p'
- · Clearing all stack: 'c'
- Deleting last number on the stack: "P"
- Adding numbers: You have to push two numbers to the stack and the use +'
- Subtracting numbers: After pushing two numbers to the stack use "
- Multiplying numbers: After pushing two numbers to the stack use \*'
- Dividing numbers: After pushing two numbers to the stack use /
- Operator modulo: After pushing two numbers to the stack use  $\%^{\prime}$
- Power operator: After pushing two numbers to the stack use ^'
- Square root: Type 's' and this will square last number on the stack and push result
- Swapping last numbers: 'r' this will swap places of two last numbers in the stack
- Adding number to memory: type M+' (this will push last number to memory)
- Removing number from memory: type M-'
- Clearing memory: type 'MC' (this will clear memory stack)
- Receiving number from memory: MR' (This will pop number from memory and push it to the stack)
- · Quiting program: type 'q'