#### Fundamentals of Computing: Lecture 33

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Summary of the last class

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The static key word.



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- The extern key word

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Reverse polish calculator

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### Reverse polish calculator

A calculator where the operators are given in postfix notation

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A calculator where the operators are given in postfix notation The expression (2 + 3) \* 5 is given by 2 3 + 5 \*In the reverse polish notation there is no need to provide any bracket Proof ? Our goal is to write a program for reverse polish notation.

### The stack data structure

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push(x) : 'pushes' the value x on top of the stack.

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push(x) : 'pushes' the value x on top of the stack.

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pop() : 'pops' the top of the stack.

As you get numbers, keep pushing it.



- As you get numbers, keep pushing it.
- Whenever you get an operator, pop its operand(s), perform the operation and push the result back.

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# Lexical analysis

Splitting up the input into "tokens".

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p for popping the stack and

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- p for popping the stack and
- P for emptying the stack

## Organisation of the code

stack.c is the code for stack manipulation.

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- lex.c performes a lexical analysis.
- calc.c is the main program.