

Function code generation

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Description

Modify the parser to generate assembly-like code for entire programs. The specific requirements are

- As in previous projects, your parser should ignore (but copy) "meta-statements".
- The output program uses the same grammar as the grammar given in the [intra-function code generation project](#) except that **a generated program cannot have any function other than *main*, and it cannot have any variables other than array *mem[N]*, where *N* is a constant.** However, you can define and use macros such as *#define stackTop mem[0]*.
- Parameters are passed by value.
- As with the previous assignment, the output program should be compilable by a C compiler and have the same behavior as the input program.
- You may use a jump table to implement parameterized gotos as in the example given at the bottom. Or you may use a while loop, as in [another example](#).

An example

[original program](#)

[program after intra-function code generation](#)

[program after function code generation](#)