REF.:

https://www.root.cz/texty/generating-code-in-m4-introduction/

https://www.root.cz/texty/generating-code-in-m4-introduction/#m4-code-generation-examples

### [5.5](https://www.root.cz/texty/generating-code-in-m4-introduction/" \l "m4-talent-and-time)Talent and time

M4 usually cannot be mastered over the weekend, especially when the fundamentals[[12]](https://is.muni.cz/elportal/estud/fi/js06/ib005/Formalni_jazyky_a_automaty_I.pdf) of [automata theory](https://en.wikipedia.org/wiki/Automata_theory) and [formal grammars](https://en.wikipedia.org/wiki/Formal_grammar) are lacking. In order to master the M4 language, it is necessary to program in a longer period of time and write amounts of bad (complex) M4 code that you rewrite for a better idea. In this way it is possible to gradually gain practice.

02f55b8[hello.ini](https://raw.githubusercontent.com/jkubin/m4root/02f55b80ec49fe11858441e101d131fb7efbc0b6/messages/hello.ini)

### [A.7](https://www.root.cz/texty/generating-code-in-m4-introduction/" \l "m4-hw-hex-counter)⟦⟧ .h: hex counter

The example uses the COUNTER macro to number the resulting macros and one output queue. The queue number 1 contains the preprocessor directive #endif to terminate the header file. The decimal value of the counter is converted to the two-digit hex by keyword eval().

# A → β

define(⟦COUNTER⟧, defn(⟦COUNT\_UP⟧))

# init counter

COUNTER(0)

# A → β

define(⟦ERROR⟧, ⟦

divert(0)dnl

⟦#define $1 0x⟧eval(COUNTER, 16, 2)

divert(-1)

⟧)

divert(0)dnl

/\*

\* DONTE()

\*/

#ifndef \_\_ERROR\_H

#define \_\_ERROR\_H

divert(1)

#endif /\* \_\_ERROR\_H \*/

divert(-1)

24fd4f3[messages.h.m4](https://raw.githubusercontent.com/jkubin/m4root/24fd4f31afda7ced456da6ab60904553760075a5/messages/messages.h.m4)

m4 [root0u.m4](https://raw.githubusercontent.com/jkubin/m4root/02f55b80ec49fe11858441e101d131fb7efbc0b6/gfiles/root0u.m4) [countu.m4](https://raw.githubusercontent.com/jkubin/m4root/17cb82f06ccca2e7775b95b3513ab56ee94c0457/gfiles/countu.m4) [messages.h.m4](https://raw.githubusercontent.com/jkubin/m4root/24fd4f31afda7ced456da6ab60904553760075a5/messages/messages.h.m4) [messages.mc](https://raw.githubusercontent.com/jkubin/m4root/55ac1eac6d38aa9e36ddea55a839355a6a5bcba4/messages/messages.mc) > [messages.h](https://raw.githubusercontent.com/jkubin/m4root/55ac1eac6d38aa9e36ddea55a839355a6a5bcba4/messages/messages.h)

/\*

\* DO NOT EDIT! This file is generated automatically!

\*/

#ifndef \_\_ERROR\_H

#define \_\_ERROR\_H

#define COMPLEX 0x00

#define SUCCESS 0x01

#define NO\_FAULT 0x02

#endif /\* \_\_ERROR\_H \*/

http://www.linuxfocus.org/English/September1999/article111.html