```
C source code
                   Include files, macros
     (hello.c)
                    (e.g. stdio.h)
            C preprocessor
                               $ cpp hello.c
                (cpp)
                               $ gcc -E hello.c
        Extended C source code
              (hello.i)
               Compiler
                            $ cc1 hello.i -o hello.s
                (gcc)
                            $ gcc -S hello.c
           ASM source code
Compile
              (hello.s)
 time
              Assembler
                            $ as hello.s -o hello.o
                 (as)
                            $ gcc -c hello.c
              Object code
                              Libraries
              (hello.o)
                           (e.g. printf)
                       Linker
              Load
                                 $ ld hello.o LIBs
              time
                        (ld)
                                 $ gcc -o hello hello.c
          Run
                 Executable program
                       (hello)
          time
```