

# Header files: defining the interface

`#include<stdio.h>`

versus

`#include"class.h"`

- Angle brackets versus quotes tells compiler where to look for the file
- Gets copied in by preprocessor and then compiled in the .c file
- A .h file is never in the compile command

`gcc -o exe -Wall program.c`

# .c files: the implementation

- Contain C code
- Do get compiled separately
- Are *linked* after compilation to form the executable

```
gcc -o exe -Wall program.c funcs.c
```

# Header guards

- We don't want to include headers multiple times, but they may reference one another
- Solution: header guards

```
#ifndef FILENAME_H  
#define FILENAME_H  
/* ... Declarations here ... */  
#endif
```

THE #1 PROGRAMMER EXCUSE  
FOR LEGITIMATELY SLACKING OFF:  
"MY CODE'S COMPILING."

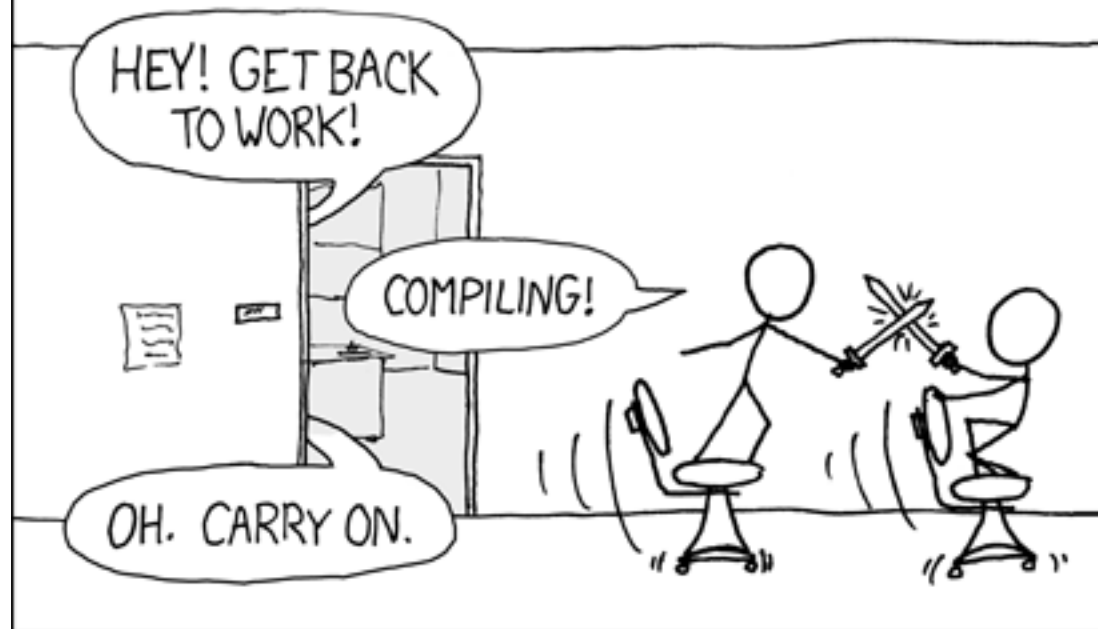
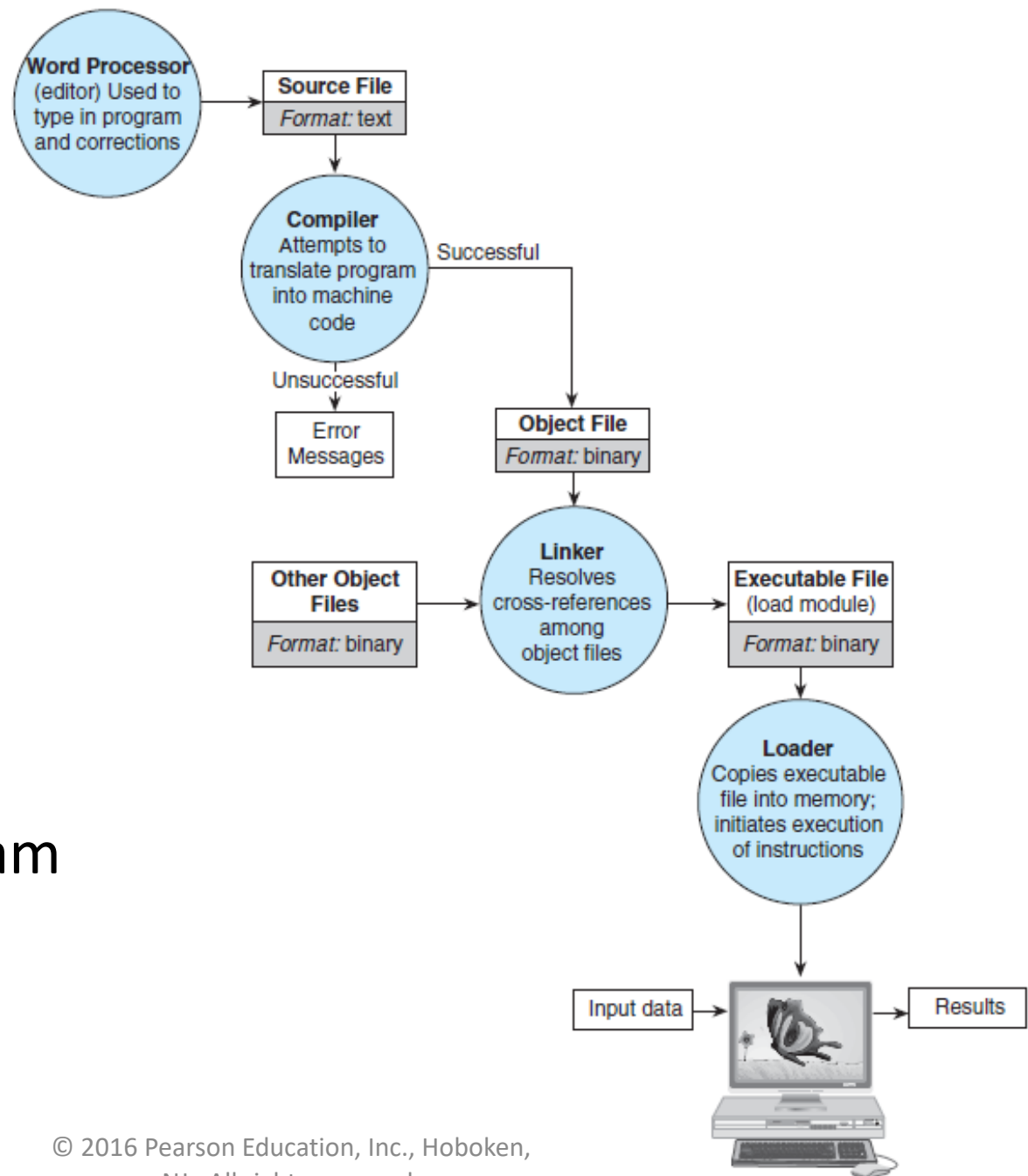


Figure 1.11  
Entering,  
Translating,  
and Running  
a High-Level  
Language Program



# Makefiles

- Once we have many .c files, which should be recompiled?
- -c flag in gcc only compiles, does not link
- A Makefile consists of rules (saying what depends on what) that make follows to recompile any changed code.
- The target in the file is the default goal

target: dependencies

what to do (how to build target)