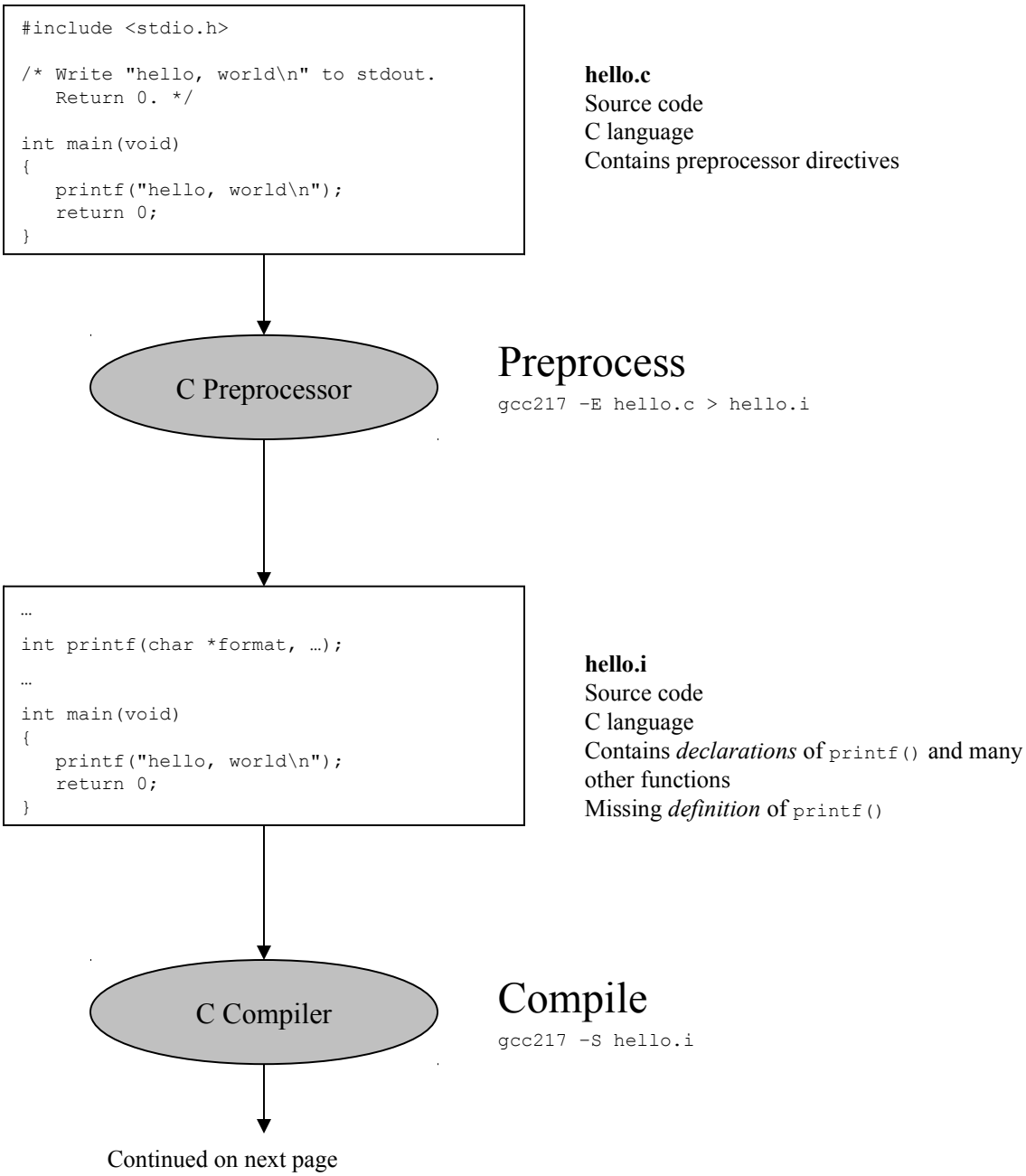
Princeton University
COS 217: Introduction to Programming Systems
Building C Programs



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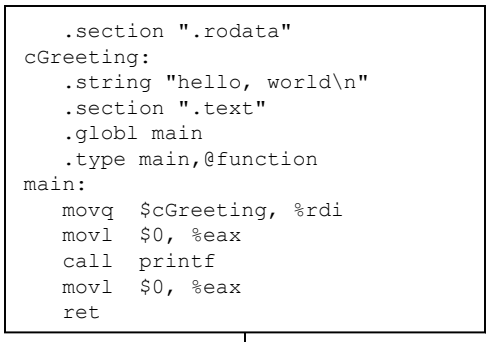

hello.s
Source code
Assembly language
Missing definition of `printf()`

Assembler

Assemble

`gcc217 -c hello.s`

`1001010001101001001000…`

hello.o
Object code
Machine language
Missing definition of `printf()`

`1111001000001010010011 0…`

libc.a
Library containing
machine language definitions
of `printf()` and many
other functions

Linker

Link

`gcc217 hello.o -o hello`

`0010100001010000001111110…`

hello
Executable code
Machine language
Contains definition of `printf()`

Shortcut:

```
gcc217 hello.c -o hello
```

`gcc217`

is an abbreviation for

```
gcc -Wall -Wextra -Wno-unused-parameter
    -ansi -pedantic
```