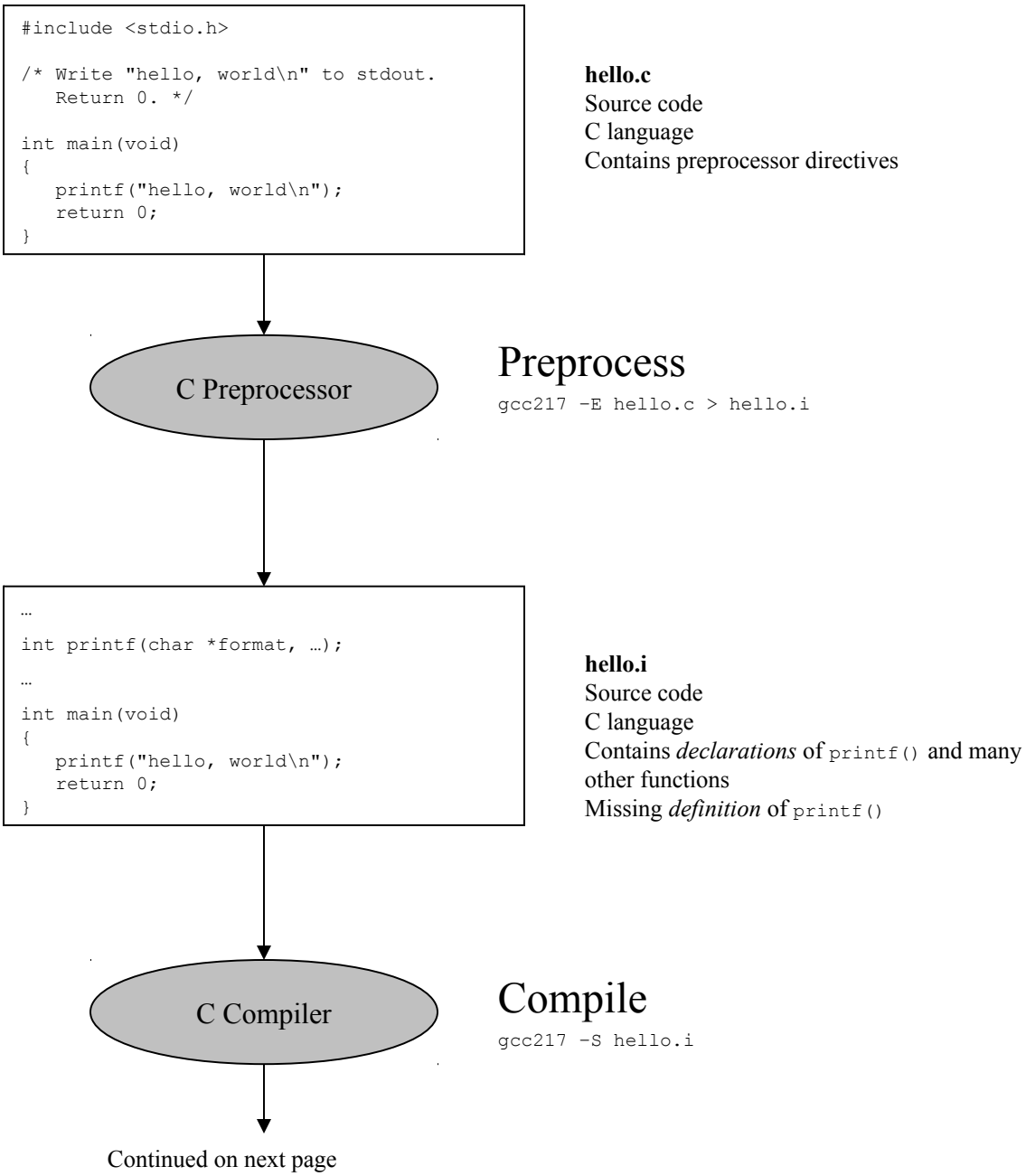
# Princeton University
# COS 217: Introduction to Programming Systems
# Building C Programs

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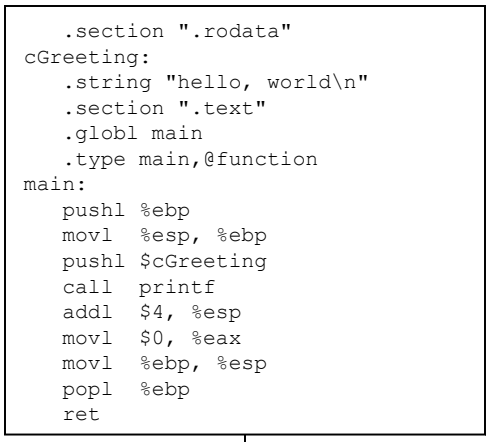
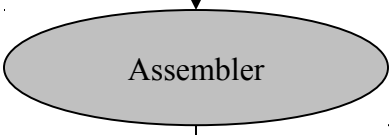
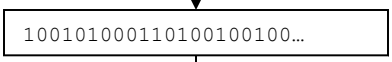



**hello.s**
Source code
Assembly language
Missing definition of `printf()`

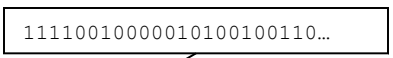



## Assemble

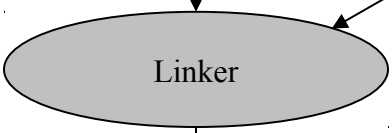
```
gcc217 -c hello.s
```




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

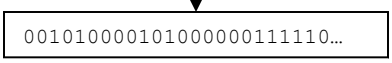



**libc.a**
Library containing
machine language definitions
of `printf()` and many
other functions




## Link

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




**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 -m32 -march=i386
```