Princeton University
COS 217: Introduction to Programming Systems
C Function Declarations and Definitions

Function **declaration**

A statement that informs the compiler of the function's signature (i.e., its name, return type, number of formal parameters, types of formal parameters) and linkage. Has no "body." Need not specify formal parameter names.

Function **definition**

A declaration that causes the compiler to generate executable code. Has a "body." Specifies formal parameter names.

C Code	Decl/Def	Linkage	Comment
`int f1(int);`	declaration	External	Common
`extern int f2(int);`	declaration	External	
`static int f3(int);`	declaration	Internal; f3 must be defined in same compilation unit	
`int f4(int i)` `{ ... }`	definition	External	Common
`extern int f5(int i)` `{ ... }`	definition	External	Rare
`static int f6(int i)` `{ ... }`	definition	Internal	Common

Note: Somewhat rare to use "extern" keyword with function declaration or definition – because "extern" is the default.