

Standard C Library

I/O commands are not included as part of the C language.
 Instead, they are part of the Standard C Library.

- A collection of functions and macros that must be implemented by any ANSI standard implementation.
- Automatically linked with every executable.
- Implementation depends on processor, operating system, etc., but interface is standard.
- Since they are not part of the language, compiler must be told about function interfaces.
- Standard header files are provided, which contain declarations of functions, variables, etc.

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Basic I/O Functions The standard I/O functions are declared in the

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 The standard I/O functions are declared in the <stdio.h> header file.

Function Description

putchar	Displays an ASCII character to the screen.	
getchar	Reads an ASCII character from the keyboard	
printf	Displays a formatted string,	
scanf	Reads a formatted string.	
fopen	Open/create a file for I/O.	
fprintf	Writes a formatted string to a file.	
fscanf	Reads a formatted string from a file.	
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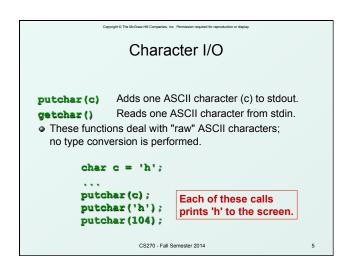
All character-based I/O in C is performed on text streams. A stream is a sequence of ASCII characters, such as:

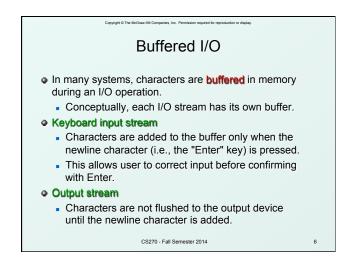
 the sequence of ASCII characters printed to the monitor by a single program

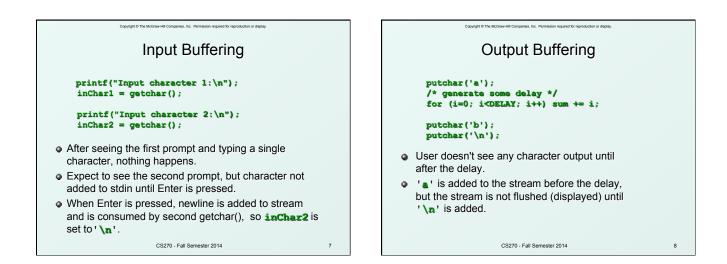
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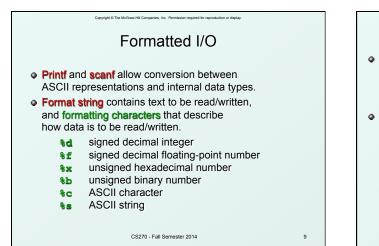
- the sequence of ASCII characters entered by the user during a single program
- the sequence of ASCII characters in a single file
- Characters are processed in the order in which they were added to the stream.
 - e.g., a program sees input characters in the same order as the user typed them.
 - Standard input stream (keyboard) is called stdin.
 - Standard output stream (monitor) is called stdout.

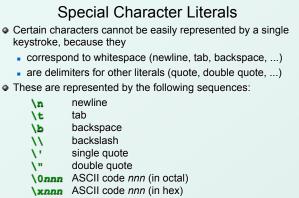
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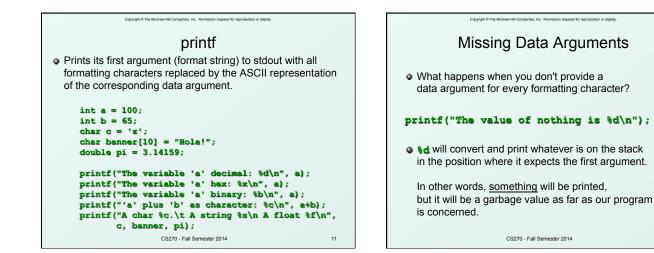


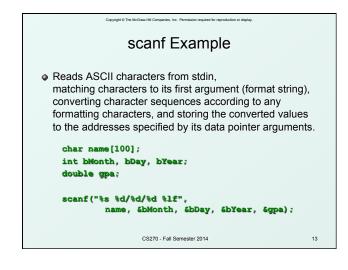


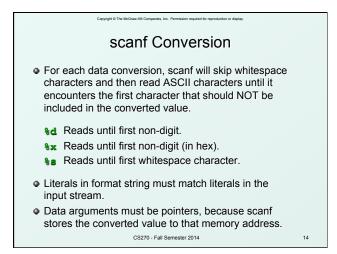


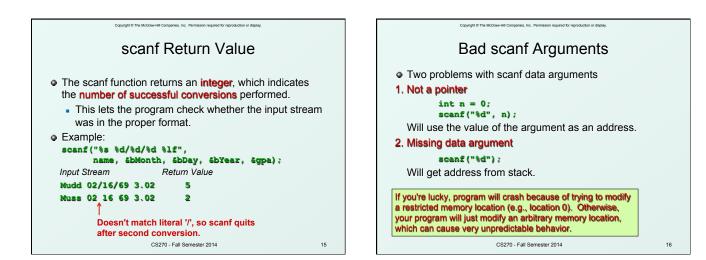


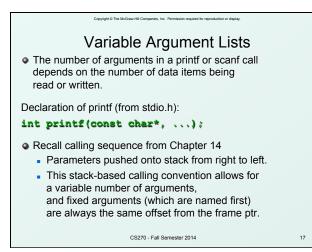
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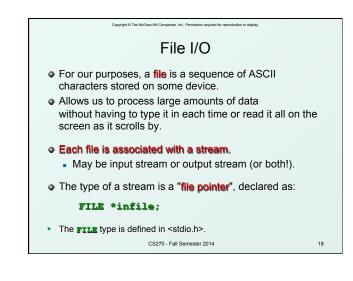




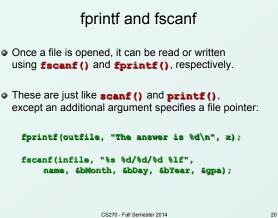








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                             fopen
• The fopen (pronounced "eff-open") function associates a
  physical file with a stream.
FILE *fopen(char* name, char* mode);
First argument: name
   • The name of the physical file, or how to locate it on the
      storage device. This may be dependent on the
     underlying operating system.
Second argument: mode
   How the file will be used:
      "r" -- read from the file
      "w" -- write, starting at the beginning of the file
      "a" -- write, starting at the end of the file (append)
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