

University of Illinois at Urbana-Champaign
Dept. of Electrical and Computer Engineering

ECE 220: Computer Systems & Programming

Call Interface Specification

Author Designs the Interface to Assembly Subroutines

Imagine that you are writing a subroutine.

How is information passed into the subroutine?

(For example, two operands to multiply, or a number to be printed.)

How is information returned from the subroutine?

(For example, the product of a multiplication, or a number read from the keyboard.)

The **answers are completely up to you** (the subroutine author).

Where Are Input/Output Bits to Subroutines Stored?

What are your options?

- registers
- specific memory locations
- memory locations pointed to by registers
- or by specific memory locations

Each type can be used for input, or for output, or for both.

Examples of Assembly Subroutine Interfaces*

READNUM (on the web page)

- Read a number from the keyboard as 2's complement.
- Returns number read in **R0**.

PRINT_SLOT (from MP1): **R1** (input) holds the slot number to be printed.

PRINT_CENTERED (also from MP1): **R1** (input) holds the string to be printed.

*These interfaces are NOT up to you...sorry.