

CENG311 Lab Session 3

Calling Convention

Aim

Introducing basic calling convention, stack properties, getting parameters from stack, calling c function.

Pre-lab

- Study how to call external C function
- Study how to get any number of command line arguments from C functions

Laboratory Work

Write a function (not a program!) "Hypotenuse" in C that calculates the length of the hypotenuse of a right-angled triangle. Your function should accept two parameters (integers) as lengths of the catheti and return an integer value as the hypotenuse.

Write an assembly program that accepts two numbers (integers) as command line arguments. Call the "hypotenuse" function with these arguments. Display the return value of the "hypotenuse" function on the screen.

Hint: Pay attention to the types! Are command line arguments integers? Should you convert them to integers before passing to the "hypotenuse" function or not? Can you print an integer with a system call or you should first convert it to a string? Keep these in mind while programming.

Expected Results

Students should be able to understand stack (how to get parameter from it) learn to call C function.