Lab 8

Processors: Function That Can Be Called From C

Purpose

To learn how to write an assembly language function that can be called from a C program.

Background Reading And Preparation

Read Chapter 8 to learn about subroutine calls in assembly languages, and read the C and assembler reference manuals to determine the conventions that C uses to call a function on your local computer.

Overview

Write an assembly language function that can be called from a C program to perform the exclusive or of two integer values.

Procedure And Details (checkmark as each is completed)

1. Write a C program that calls function xor with two integer arguments and displays the result of the function.

2. Create an assembly language function, xor, that takes two integer values as arguments, computes the exclusive or of the two arguments, and returns the result as the value of the function.

3. Add a printf call to the xor function to verify that the function correctly receives the two values that the C program passes as arguments (i.e., argument passing works correctly).

4. Add a printf call to the C function to verify that the xor code returns the correct value.
Optional Extensions (checkmark as each is completed)

5. Modify the C program and the xor function so the C program passes a single structure as an argument instead of two integers. Arrange for the structure to contain two integer values.

Notes