Exploration #5

Due: May 30, 11:59pm

Overview

For this exploration you will examine tail recursion optimization performed by `gcc`.

Tail Recursion

Examine the contents of the provided `tail_rec.c` and `tail_rec.s` files. Notice that there are two implementations of the factorial function. One is the more traditional implementation (`fact`) and the other is clearly tail recursive (`factrec` invoked via `fact2`).

In a file named `README`, discuss the assembly code for both `fact` and `fact2`. Explain the differences between these two functions.

Minor Modification

In the conditional in each function, change the upper-bound from 1 to 0 and regenerate the assembly code. Now just marvel at the work done by the compiler.

handin

Submit your `README` file to the `431exploration5` directory for the `akeen` account.