

CMSI 284
COMPUTER SYSTEMS ORGANIZATION /
SYSTEMS PROGRAMMING
Spring 2010

Assignment 0325

As with C, we start our assembly journey with some “warm-up” forays.

Not for Submission

Review the notes from Dr. Toal’s web site as needed. Direct links can be found on the course web site.

By March 23

1. Get the hang of editing, assembling, and linking 64-bit *nasm* code on a Keck lab workstation.
2. There is a chance that *nasm* is not installed on the machine that you are using; if this is the case, let me know so I can install it for you.

For Submission

Write the following assembly language programs:

- A program that echoes its command-line arguments, including the program name, but in reverse (*rev-echo.asm*).
- A mixed C and assembly language program that displays Fibonacci numbers. The assembly language file *fib-func.asm* shall implement a function whose C signature would be:

```
int fib(int)
```

The C file *callfib.c* shall accept any number of integers as command-line arguments and display the result of *fib* for each argument.

- An assembly language version of *calculator.c* (*calculator.asm*, naturally).

Commit your work to CVS under the directory */homework/cmsi284/asm-warm-up*, using the given filenames.

Extra Credit

You will get 1 *additional* assignment credit for each successful *nasmexamples* conversion to Linux 64-bit:

- *power.asm*
- *sum.asm* (with accompanying C test program)
- *average.asm*
- *factorial.asm*
- *mmxarrayadd.asm*
- *sseexample.asm*
- *satexample.asm*

Successfully converting and running the last example, *triangle.asm*, is worth 2 extra credits.