

Source File: lab25.asm
Input: Standard Input
Output: Standard Output
Value: 1

Write an assembly language program that will read a header *H*. Then read *H* additional signed 32-bit integers. For each input integer determine if it is divisible by 4. Using any shift or division instruction is prohibited. Your program should display the integer to standard output along with a descriptive literal message. The exact form of the output is shown below. Note the inclusion of an identification line at the beginning of the output.

A sample execution sequence is shown in Figure 1. To use the Makefile as distributed in class, add a target of lab25 to targetsAsmLanguage.

```
1 newuser@csunix ~/3304/25> cp /usr/local/3304/data/25/* .
2 newuser@csunix ~/3304/25> cp /usr/local/3304/src/Makefile .
3 newuser@csunix ~/3304/25> touch lab25.asm
4 newuser@csunix ~/3304/25> make lab25
5 nasm -f elf32 -l lab25.lst -o lab25.o lab25.asm -I/usr/local/3304/include/ -I.
6 ld -m elf_i386 --dynamic-linker /lib/ld-linux.so.2 -o lab25 lab25.o \
7 /usr/local/3304/src/Along32.o -lc
8 newuser@csunix ~/3304/25> ../irvine_test.sh lab25 01.dat
9 Your Name - CS 3304 - Lab 25
10
11 +0 is divisible by 4
12 +4 is divisible by 4
13 -4 is divisible by 4
14 -2147483648 is divisible by 4
15 +2147483644 is divisible by 4
16 +2147483647 is not divisible by 4
17 +2 is not divisible by 4
18 -2 is not divisible by 4
19 newuser@csunix ~/3304/25> ../irvine_test.sh lab25 01.dat > my.out
20 newuser@csunix ~/3304/25> diff 01.out my.out
21 newuser@csunix ~/3304/25>
```

Figure 1. Commands to Assemble, Link, & Run Lab 25