

```
main:  
    pushq %rbp  
    movq %rsp, %rbp  
    subq $16, %rsp  
    movl %edi, -4(%rbp)  
    movq %rsi, -16(%rbp)  
    leaq .LC3(%rip), %rdi  
    call puts@PLT  
    call do_the_thing  
    leave  
    ret
```

```
do_the_thing:  
    pushq %rbp  
    movq %rsp, %rbp  
    subq $16, %rsp  
    movl $0, -8(%rbp)  
    movl $4, -4(%rbp)  
    movl $0, -8(%rbp)  
    jmp .L2
```

```
L2a:  
    cmpl $44, -8(%rbp)  
    jle .L4
```

```
L4a:  
    movl -8(%rbp), %eax  
    cltd  
    shr $31, %edx  
    addl %edx, %eax  
    andl $1, %eax  
    subl %edx, %eax  
    cmpl $1, %eax  
    jne .L3
```

```
L2b:  
    leaq .LC2(%rip), %rdi  
    call puts@PLT  
    movl $0, %eax  
    leave  
    ret
```

```
L4b:  
    addl $1, -8(%rbp)  
    movl -8(%rbp), %eax  
    subl $1, %eax  
    movl %eax, %edx  
    leaq display_message(%rip), %rsi  
    leaq .LC0(%rip), %rdi  
    movl $0, %eax  
    call printf@PLT  
    movl -8(%rbp), %eax  
    xorl %eax, -4(%rbp)  
    jmp .L2
```

```
L3a:  
    movl -8(%rbp), %eax  
    movl %eax, %edx  
    leaq display_message(%rip), %rsi  
    leaq .LC1(%rip), %rdi  
    movl $0, %eax  
    call printf@PLT  
    addl $1, -8(%rbp)  
    movl -4(%rbp), %edx  
    movl -8(%rbp), %eax  
    addl %edx, %eax  
    andl $255, %eax  
    movl %eax, -4(%rbp)
```