

# sequence.c

A C program using the fork() system call that generates this sequence in the child process.  
Solve the Collatz conjecture.

## Environmental dependencies

OS: CentOS-8.1.1911-x86\_64  
Language: C

## Installation

Use GNU C Compiler to compile.

```
gcc sequence.c -o sequence
```

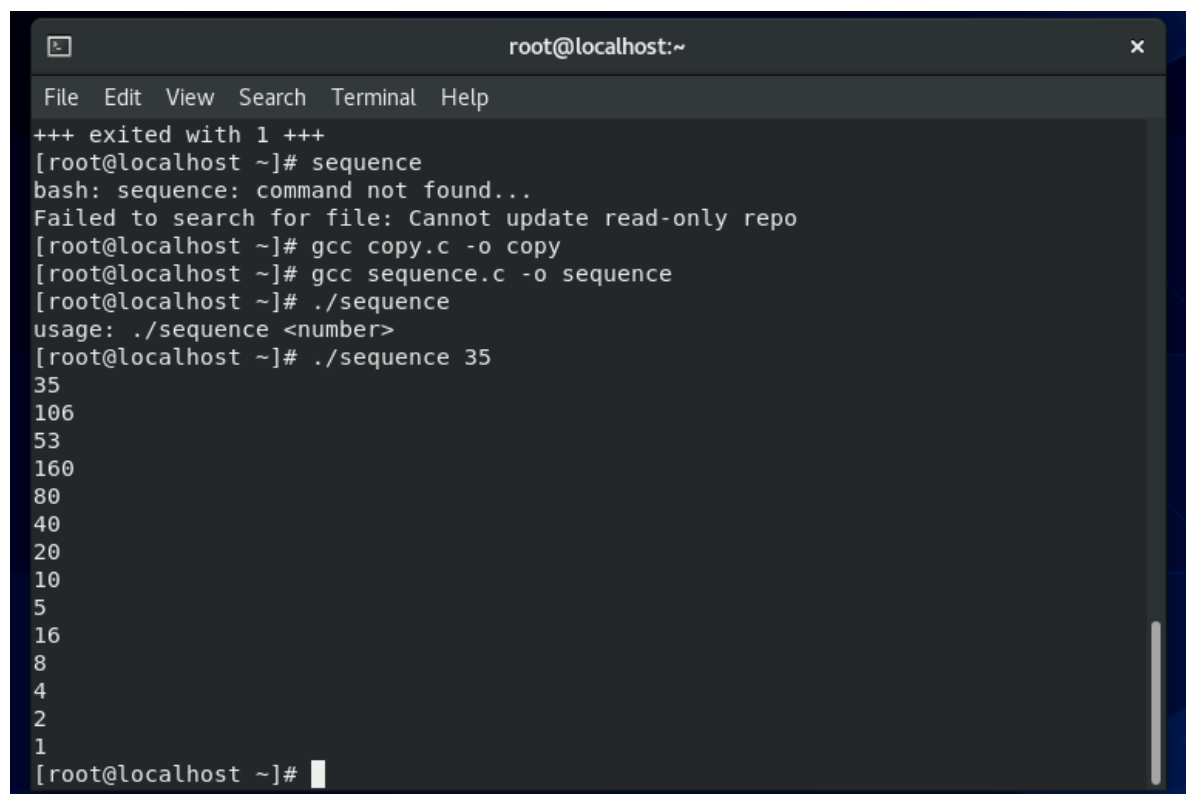
## Usage

```
./sequence <number>
```

## Trace

```
strace ./sequence
```

## Screenshots



```
root@localhost:~  
File Edit View Search Terminal Help  
+++ exited with 1 +++  
[root@localhost ~]# sequence  
bash: sequence: command not found...  
Failed to search for file: Cannot update read-only repo  
[root@localhost ~]# gcc copy.c -o copy  
[root@localhost ~]# gcc sequence.c -o sequence  
[root@localhost ~]# ./sequence  
usage: ./sequence <number>  
[root@localhost ~]# ./sequence 35  
35  
106  
53  
160  
80  
40  
20  
10  
5  
16  
8  
4  
2  
1  
[root@localhost ~]#
```

```
root@localhost:~  
File Edit View Search Terminal Help  
2  
1  
[root@localhost ~]# strace ./sequence  
execve("./sequence", ["/.sequence"], 0x7ffca7b76b10 /* 43 vars */) = 0  
brk(NULL) = 0x2508000  
arch_prctl(0x3001 /* ARCH_??? */, 0x7ffceeb22410) = -1 EINVAL (Invalid argument)  
access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory)  
openat(AT_FDCWD, "/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3  
fstat(3, {st_mode=S_IFREG|0644, st_size=72089, ...}) = 0  
mmap(NULL, 72089, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f69be248000  
close(3) = 0  
openat(AT_FDCWD, "/lib64/libc.so.6", O_RDONLY|O_CLOEXEC) = 3  
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\2009\2\0\0\0\0"... , 832) = 832  
fstat(3, {st_mode=S_IFREG|0755, st_size=5993088, ...}) = 0  
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f69be246000  
mmap(NULL, 3942432, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f69bdc6f000  
mprotect(0x7f69bde28000, 2097152, PROT_NONE) = 0  
mmap(0x7f69be028000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1b9000) = 0x7f69be028000  
mmap(0x7f69be02e000, 14368, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f69be02e000
```

## Contact

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