

Strace for the C program:

```

bonny@bonny-Lenovo-Gaming:~/OSP7-main$ gcc helloWorld.c
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ ./a.out
Hello World
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ strace ./a.out
execve("./a.out", ["/a.out"], 0x7ffe095e29b0 /* 66 vars */) = 0
brk(NULL) = 0x560b953c3000
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
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) = 6
fstat(6, {st_mode=S_IFREG|0644, st_size=79919, ...}) = 0
mmap(NULL, 79919, PROT_READ, MAP_PRIVATE, 6, 0) = 0x7efc56915000
close(6) = 0
access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory)
openat(AT_FDCWD, "/lib/x86_64-linux-gnu/libc.so.6", O_RDONLY|O_CLOEXEC) = 6
read(6, "\177ELF\2\1\3\0\0\0\0\0\0\0\0\0\3\0-\0\1\0\0\0\260\34\2\0\0\0\0\0...", 832) = 832
fstat(6, {st_mode=S_IFREG|0755, st_size=2030544, ...}) = 0
mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7efc56913000
mmap(NULL, 4131552, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 6, 0) = 0x7efc56311000
mprotect(0x7efc564f8000, 2097152, PROT_NONE) = 0
mmap(0x7efc566f8000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 6, 0x1e7000) = 0x7efc566f8000
mmap(0x7efc566fe000, 15072, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7efc566fe000
close(6) = 0
arch_prctl(ARCH_SET_FS, 0x7efc569144c0) = 0
mprotect(0x7efc566f8000, 16384, PROT_READ) = 0
mprotect(0x560b947ad000, 4096, PROT_READ) = 0
mprotect(0x7efc56929000, 4096, PROT_READ) = 0
munmap(0x7efc56915000, 79919) = 0
fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(136, 1), ...}) = 0
brk(NULL) = 0x560b953c3000
brk(0x560b953e4000) = 0x560b953e4000
write(1, "Hello World\n", 12Hello World
) = 12
exit_group(0) = ?
+++ exited with 0 +++

```

Build Process For Assembly Code:

```
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ as --64 -o helloWorld.o helloWorld.S
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ ld -m elf_x86_64 helloWorld.o
```

Results from Assembly Program:

```
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ strace ./a.out
execve("./a.out", ["/a.out"], 0x7ffd3f168610 /* 66 vars */) = 0
write(1, "Hello World\n", 12Hello World
)
= 12
exit(12)
= ?
+++ exited with 12 +++
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ ./a.out
Hello World
bonny@bonny-Lenovo-Gaming:~/OSP7-main$ echo $?
12
```