



rodney@rodney-vm: ~/VM



```
return c;
```

```
}
```

```
rodney@rodney-vm:~/VM$ cat test.i
```

```
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-gcc-9 -E test.c > test.i
```

```
rodney@rodney-vm:~/VM$ cat test.i
```

```
# 1 "test.c"
```

```
# 1 "<built-in>"
```

```
# 1 "<command-line>"
```

```
# 31 "<command-line>"
```

```
# 1 "/usr/include/stdc-predef.h" 1 3 4
```

```
# 32 "<command-line>" 2
```

```
# 1 "test.c"
```

```
int main () {
```

```
    int a, b, c;
```

```
    a = 10;
```

```
    b = 15;
```

```
    c = a + b;
```

```
    return c;
```

```
}
```

```
rodney@rodney-vm:~/VM$
```

```
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-gcc-9 test.c -S
```

```
rodney@rodney-vm:~/VM$ cat test.s
```

```
.arch armv8-a
.file "test.c"
.text
.align 2
.global main
.type main, %function
```

```
main:
```

```
.LFB0:
```

```
.cfi_startproc
sub sp, sp, #16
.cfi_def_cfa_offset 16
mov w0, #10
str w0, [sp, 4]
mov w0, #15
str w0, [sp, 8]
ldr w1, [sp, 4]
ldr w0, [sp, 8]
add w0, w1, w0
str w0, [sp, 12]
ldr w0, [sp, 12]
add sp, sp, 16
.cfi_def_cfa_offset 0
ret
.cfi_endproc
```

```
.LFE0:
```

```
.size main, .-main
.ident "GCC: (Ubuntu 9.3.0-17ubuntu1~20.04) 9.3.0"
.section .note.GNU-stack,"",@progbits
```

```
rodney@rodney-vm:~/VM$
```



```
.type    main, %function
main:
.LFB0:
.cfi_startproc
sub      sp, sp, #16
.cfi_def_cfa_offset 16
mov      w0, 10
str      w0, [sp, 4]
mov      w0, 15
str      w0, [sp, 8]
ldr      w1, [sp, 4]
ldr      w0, [sp, 8]
add      w0, w1, w0
str      w0, [sp, 12]
ldr      w0, [sp, 12]
add      sp, sp, 16
.cfi_def_cfa_offset 0
ret
.cfi_endproc
.LFE0:
.size    main, .-main
.ident   "GCC: (Ubuntu 9.3.0-17ubuntu1~20.04) 9.3.0"
.section .note.GNU-stack,"",@progbits
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-as demo.s -o demo.o
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-as demo.s -o demo.o
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-ld demo.o
rodney@rodney-vm:~/VM$ aarch64-linux-gnu-ld demo.s -o demo.o -lc
aarch64-linux-gnu-ld:demo.s: file format not recognized; treating as linker script
aarch64-linux-gnu-ld:demo.s:2: syntax error
rodney@rodney-vm:~/VM$ qemu-aarch64 a.out
rodney@rodney-vm:~/VM$ qemu-aarch64 -L /usr/aarch64-linux-gnu/ a.out
rodney@rodney-vm:~/VM$ ls
a.out  demo.s  test.c  test.i  test.s
rodney@rodney-vm:~/VM$
```