

1. compile code with -g option
2. objdump elf file with -S option

Sample 1: (on x86_64 Linux platform)

walterzh\$ cat test.c

```
#include <stdio.h>
```

```
int main(int argc, char *argv[])
```

```
{
```

```
    printf("Hello, world!\n");
```

```
    return 0;
```

```
}
```

walterzh\$ gcc -g test.c -o test

walterzh\$ objdump -S test

.....

00000000004004f4 <main>:

```
#include <stdio.h>
```

```
int main(int argc, char *argv[])
```

```
{
```

```
4004f4:    55                push    %rbp
```

```

4004f5:  48 89 e5          mov  %rsp,%rbp
4004f8:  48 83 ec 10       sub  $0x10,%rsp
4004fc:  89 7d fc          mov  %edi,-0x4(%rbp)
4004ff:  48 89 75 f0       mov  %rsi,-0x10(%rbp)

    printf("Hello, world!\n");

400503:  bf 0c 06 40 00    mov  $0x40060c,%edi
400508:  e8 e3 fe ff ff    callq 4003f0 <puts@plt>

    return 0;

40050d:  b8 00 00 00 00    mov  $0x0,%eax
}

400512:  c9              leaveq
400513:  c3              retq
400514:  90              nop
400515:  90              nop
400516:  90              nop
400517:  90              nop

```

.....

Sample 2: (on embedded ARM Linux platform)

use the same source file (test.c)

```
walterzh$ arm-linux-gnueabi-gcc -g test.c -o test_arm
```

```
walterzh$ arm-linux-gnueabi-objdump -S test_arm
```

.....

00008388 <main>:

#include <stdio.h>

int main(int argc, char *argv[])

{

8388: b580 push {r7, lr}

838a: b082 sub sp, #8

838c: af00 add r7, sp, #0

838e: 6078 str r0, [r7, #4]

8390: 6039 str r1, [r7, #0]

printf("Hello, world!\n");

8392: f248 4000 movw r0, #33792 ; 0x8400

8396: f2c0 0000 movt r0, #0

839a: f7ff efa0 blx 82dc <_init+0x20>

return 0;

839e: f04f 0300 mov.w r3, #0

}

83a2: 4618 mov r0, r3

83a4: f107 0708 add.w r7, r7, #8

83a8: 46bd mov sp, r7

83aa: bd80 pop {r7, pc}

