Linux C 编程指北

郑海永

October 8, 2019

目录

1. 编辑器 vi/vim

```
$ vim tmp.txt
$ man vim
```

- 插入模式编辑文件
- 命令模式操作文件

2. 编译器 gcc/g++

```
$ vim hello.c
$ file hello.c
$ cat hello.c
```

1. 预处理

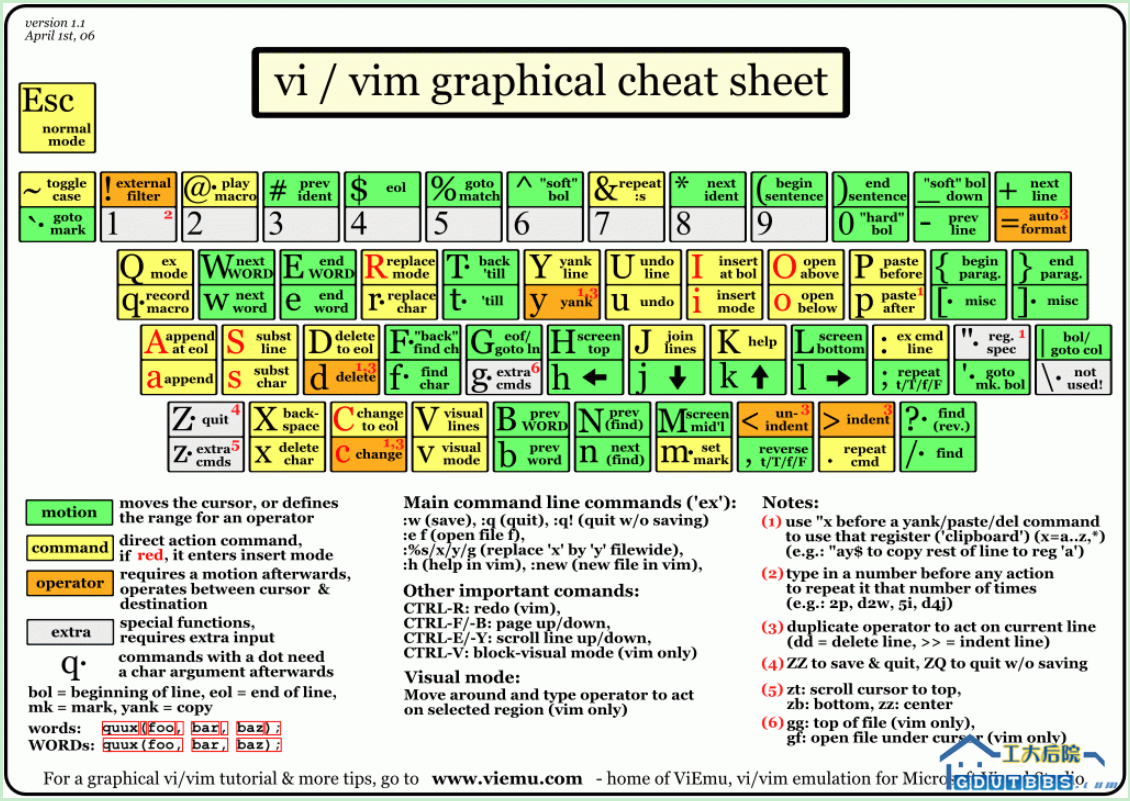

图 1: VIM 键盘图

```
$ gcc -E hello.c -o hello.i
$ file hello.i
$ cat hello.i
```

2. 编译

```
$ gcc -S hello.i -o hello.s
$ file hello.s
$ cat hello.s
```

3. 汇编

```
$ gcc -c hello.s -o hello.o
$ file hello.o
$ cat hello.o
```

4. 链接

```
$ gcc hello.o -o hello
$ file hello
$ cat hello
```

5. 运行

```
$ ls -l hello*
$ ./hello
```

3. 调试器 gdb

```
$ vim swapNum.c
```

```c
#include <stdio.h>

void Swap(int* number1,int* number2)
{
    int tmp=(*number1);
    (*number1)=(*number2);
    (*number2)=tmp;
}

int main()
{
    int x=2;
    int y=3;
    printf("%d,%d\n",x,y);
    Swap(&x,&y);
```

```
    printf("%d,%d\n",x,y);
    retrun 0;
}
```

```
$ gcc -o swapNum -g swapNum.c
$ gdb swapNum
```

```
(gdb) run
```

```
(gdb) break 13
```

```
(gdb) run
```

```
(gdb) print x
```

```
(gdb) n
(gdb) n
```

```
(gdb) break 6
(gdb) c
```

```
(gdb) n
(gdb) n
(gdb) n
```

```
(gdb) print x
(gdb) print y
```

```
(gdb) q
```