

GCC & GDB

gcc g++ gnu c & c++ gcc/g++ 4

- 1 , .i [**cpp**]
- 2 , .s [**egcs**]
- 3 () .o [**as**]
- 4 , [**ld**]

GCC

1 -x

.c .cpp

gcc -x language filename

gcc -x none filename

2 obj -c

gcc -c hello.c

3 -S

gcc -S hello.c

4 -E

gcc -E hello.c > text.txt

gcc -E hello.c | more

5 a.out -o

gcc -o ExecuteFileName hello.c

6 -pipe

GNU

gcc -pipe -o hello.exe hello.c

7 -include

#include

gcc hello.c -include /root/tmp.h

```

8      -E -C
9      -M
-M      #include
-MD
-M      .d
-MMD
-MM      .d

10     -llibrary

```

```

gcc -lcurses hello.c
      ncurses

```

GDB

1.

1.1

```

, ( Bug):

#include <stdio.h>
void do_thing() {

    printf("Hi!\n");

}

int main() {

    do_thing();

}

hello.c. dbg , :
bork@kiwi ~> gcc -g hello.c -o hello
bork@kiwi ~> gdb ./hello

hello.c( gdb ), , : (gdb) break , run

(gdb) break do_thing
Breakpoint 1 at 0x4004f8
(gdb) run

```

```
Starting program: /home/bork/hello
Breakpoint 1, 0x0000000004004f8 in do_thing ()
```

```
do_thing      where
```

```
(gdb) where
#0 do_thing () at hello.c:3
#1 0x08050cdb in main () at hello.c:6
(gdb)
```

1.2

```
disassemble , , x86 , callq printf
```

```
(gdb) disassemble do_thing
Dump of assembler code for function do_thing:
0x0000000004004f4 <+0>: push %rbp
0x0000000004004f5 <+1>: mov %rsp,%rbp
=> 0x0000000004004f8 <+4>: mov $0x40060c,%edi
0x0000000004004fd <+9>: callq 0x4003f0
0x000000000400502 <+14>: pop %rbp
0x000000000400503 <+15>: retq
```

```
disassemble disas
```

1.3

```
, gdb , examine, x x , 0x40060c
```

```
(gdb) x/s 0x40060c
0x40060c: "Hi!"
```

```
x/s /s , " " " 10 ", :
```

```
(gdb) x/10c 0x40060c
0x40060c: 72 'H' 105 'i' 33 '!' 0 '\000' 1 '\001' 27 '\033' 3 '\003' 59 ';'
0x400614: 52 '4' 0 '\000'
```

```
Hi! \0,
```

2. gdb +

2.1 gdb

```
-cd: ; -q: , ; -d: ; -x: GDB ; -s:
```

2.2 gdb

