Assignments-2 on gdb

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a. Put a breakpoint in 1 st executable line of the

innermost loop.

gcc -g -o out d.c

gdb out

```
(gdb) break 12
Breakpoint 1 at 0x401492: file d.c, line 12.
```

b. If you run and continue ,how many times it is

supposed to stop at breakpoint 1?

Command

>silent

>continue

>end

```
(gdb) command
Type commands for breakpoint(s) 1, one per line.
End with a line saying just "end".
>silent
>continue
>end
(gdb) run
Starting program: C:\Users\ADMIN\Downloads\Assignments\Assignments\assign2/out.exe
[New Thread 7668.0x3b0]
[New Thread 7668.0x27d4]
you have reached [0][0][1000]-th iteraion
you have reached [0][0][2000]-th iteraion
you have reached [0][1][1000]-th iteraion
you have reached [0][1][2000]-th iteraion
you have reached [0][2][1000]-th iteraion
```

```
you have reached [9][196][2000]-th iteraion
you have reached [9][197][1000]-th iteraion
you have reached [9][197][2000]-th iteraion
you have reached [9][198][1000]-th iteraion
you have reached [9][198][2000]-th iteraion
you have reached [9][199][1000]-th iteraion
you have reached [9][199][2000]-th iteraion
[Inferior 1 (process 7668) exited normally]
(gdb) info breakpoints
Num     Type           Disp Enb Address    What
1       breakpoint     keep y   0x00401492 in main at d.c:12
        breakpoint already hit 6000000 times
        silent
        continue
```

6000000 times

c. How will you continue so that it stops at 1000 th iteration of innermost loop ?

ignore 1 1000

run

```
(gdb) ignore 1 1000
Will ignore next 1000 crossings of breakpoint 1.
(gdb) run
Starting program: C:\Users\ADMIN\Downloads\Assignments\Assignments\assign2/out.exe
[New Thread 13020.0x4bd8]
[New Thread 13020.0x15bc]
you have reached [0][0][1000]-th iteraion
you have reached [0][0][2000]-th iteraion
you have reached [0][1][1000]-th iteraion
you have reached [0][1][2000]-th iteraion
you have reached [0][2][1000]-th iteraion
you have reached [0][2][2000]-th iteraion
```

```
you have reached [9][198][1000]-th iteraion
you have reached [9][198][2000]-th iteraion
you have reached [9][199][1000]-th iteraion
you have reached [9][199][2000]-th iteraion
[Inferior 1 (process 13020) exited normally]
```

d. How you can condition your breakpoint , so that the loop stops at every 1000 th iteration of innermost loop ?

condition 1 k>0 && (k-999)%1000== 0

```
(gdb) condition 1 k>0 && (k-999)%1000== 0
(gdb) run
Starting program: C:\Users\ADMIN\Downloads\Assignments\Assignments\assign2/out.exe
[New Thread 9360.0x19d4]
[New Thread 9360.0x4334]
you have reached [0][0][1000]-th iteraion
you have reached [0][0][2000]-th iteraion
you have reached [0][1][1000]-th iteraion
```

e. Put a breakpoint in the 1 st line of outermost loop.

```
(gdb) break 8
Breakpoint 1 at 0x40147b: file d.c, line 8.
```

f. Disable breakpoint “1”

disable breakpoint 1

```
(gdb) disable breakpoint 1
(gdb) info breakpoints
Num     Type           Disp Enb Address    What
1       breakpoint     keep n   0x0040147b in main at d.c:8
        stop only if k>0 && (k-999)%1000== 0
2       breakpoint     keep y   0x00401492 in main at d.c:12
```

g. Add a command to breakpoint 2 so that it prints

the value of “i” at each hit.

```
(gdb) commands 2
Type commands for breakpoint(s) 2, one per line.
End with a line saying just "end".
>print i
>end
(gdb) c
The program is not being run.
(gdb) run
Starting program: C:\Users\ADMIN\Downloads\Assignments\Assignments\assign2/out.exe
[New Thread 3716.0x2814]
[New Thread 3716.0x12fc]

Breakpoint 2, main () at d.c:12
12                t1=i;
$1 = 0
(gdb) c
Continuing.
```

```
you have reached [9][198][1000]-th iteraion
you have reached [9][198][2000]-th iteraion
you have reached [9][199][1000]-th iteraion
you have reached [9][199][2000]-th iteraion
[Inferior 1 (process 13020) exited normally]
```

h. Delete breakpoint 2.

delete breakpoint 2

info breakpoints

```
(gdb) delete breakpoint 2
(gdb) info breakpoints
Num     Type           Disp Enb Address    What
1       breakpoint     keep n   0x0040147b in main at d.c:8
        stop only if k>0 && (k-999)%1000== 0
```