ASSIGNMENT 2

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Section: A2

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

```
Reading symbols from /home/usr/student/ug/yr22/be2288/secondyear/se/Assignments/assign2/a.out...done.
(gdb) l
1       #include <stdio.h>
2
3
4       int main()
5       {
6          int i,j,k;
7          for ( i= 0 ; i< 10; i++)
8           for ( j = 0; j< 200; j++)
9               for (k = 0; k< 3000; k++)
10              {
(gdb) l
11                  int t1,t2;
12                  t1=i;
13                  t2=j;
14                  if ((k !=0) && (k%1000 == 0))
15                      printf ("you have reached [%d][%d][%d]-th iteraion \n",t1,t2,k);
16              }
17      }
18
(gdb) b 12
Breakpoint 1 at 0x400553: file d.c, line 12.
```

2. If you run and continue, how many times it is supposed to stop at breakpoint 1?

10*200*3000 = 60, 00,000

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

```
(gdb) r
Starting program: /home/usr/student/ug/yr22/be2288/secondyear/se/Assignments/assign2/a.out

Breakpoint 1, main () at d.c:12
12                  t1=i;
Missing separate debuginfos, use: debuginfo-install glibc-2.17-157.el7_3.2.x86_64
(gdb) c 998
Will ignore next 997 crossings of breakpoint 1.  Continuing.

Breakpoint 1, main () at d.c:12
12                  t1=i;
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep y   0x0000000000400553 in main at d.c:12
        breakpoint already hit 999 times
```

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

```
(gdb) condition 1 k%1000==0
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep y   0x0000000000400553 in main at d.c:12
        stop only if k%1000==0
```

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

```
(gdb) b 8
Breakpoint 2 at 0x400541: file d.c, line 8.
```

6. Disable breakpoint “1”

```
(gdb) disable 1
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep n   0x0000000000400553 in main at d.c:12
        stop only if k%1000==0
2       breakpoint     keep y   0x0000000000400541 in main at d.c:8
```

7. Add a command to breakpoint 2 so that it prints the value of “i” at each hit.

```
(gdb) command 2
Type commands for breakpoint(s) 2, one per line.
End with a line saying just "end".
>print i
>end
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep n   0x0000000000400553 in main at d.c:12
        stop only if k%1000==0
2       breakpoint     keep y   0x0000000000400541 in main at d.c:8
        print i
```

8. Delete breakpoint 2.

```
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep n   0x0000000000400553 in main at d.c:12
        stop only if k%1000==0
2       breakpoint     keep y   0x0000000000400541 in main at d.c:8
        print i
(gdb) delete 2
(gdb) i b
Num     Type           Disp Enb Address            What
1       breakpoint     keep n   0x0000000000400553 in main at d.c:12
        stop only if k%1000==0
```