⊞   student@ai-hp-prodesk-72: ~/Desktop/Unix_lab   🔍 ☰ — ⬛ ❌

```
student@ai-hp-prodesk-72:~/Desktop/Unix_lab$ gcc -g task.c
student@ai-hp-prodesk-72:~/Desktop/Unix_lab$ gdb ./a.out
GNU gdb (Ubuntu 9.2-0ubuntu1~20.04.1) 9.2
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This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "x86_64-linux-gnu".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
    <http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from ./a.out...
(gdb) list
1          #include<stdio.h>
2          #include<stdlib.h>
3
4          int main(){
5              int a = 2;
6              int b = 3;
7              int c = 5;
8              printf("hello,ready for the ERROR !!!\n");
9              int A[5];
10             for(int i = 0 ;i <=5;i++){
(gdb) list
11                 A[i] = i;
12             }
13
14         }
15
16
(gdb)
```

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```
15
16
(gdb) break 6
Breakpoint 1 at 0x118b: file task.c, line 6.
(gdb) break 9
Breakpoint 2 at 0x11a5: file task.c, line 10.
(gdb) break 10
Note: breakpoint 2 also set at pc 0x11a5.
Breakpoint 3 at 0x11a5: file task.c, line 10.
(gdb) break 11
Breakpoint 4 at 0x11ae: file task.c, line 11.
(gdb) run
Starting program: /home/student/Desktop/Unix_lab/a.out

Breakpoint 1, main () at task.c:6
6              int b = 3;
(gdb) print a
$1 = 2
(gdb) continue
Continuing.
hello,ready for the ERROR !!!

Breakpoint 2, main () at task.c:10
10             for(int i = 0 ;i <=5;i++){
(gdb) print a
$2 = 2
(gdb) print b
$3 = 3
(gdb) print c
$4 = 5
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11                 A[i] = i;
(gdb) print i
$5 = 0
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11                 A[i] = i;
(gdb) print i
$6 = 1
(gdb)
```

```
(gdb) print c
$4 = 5
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$5 = 0
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$6 = 1
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$7 = 2
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$8 = 3
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$9 = 4
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$10 = 5
(gdb)
```

```
(gdb) print i
$5 = 0
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$6 = 1
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$7 = 2
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$8 = 3
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$9 = 4
(gdb) continue
Continuing.

Breakpoint 4, main () at task.c:11
11              A[i] = i;
(gdb) print i
$10 = 5
(gdb) continue
Continuing.
[Inferior 1 (process 10374) exited normally]
(gdb) print i
No symbol "i" in current context.
(gdb) continue
The program is not being run.
(gdb)
```

student@ai-hp-prodesk-72: ~/Desktop/Unix_lab

```
student@ai-hp-prodesk-72:~/Desktop/Unix_lab$ gcc -g fault.c
student@ai-hp-prodesk-72:~/Desktop/Unix_lab$ gdb ./a.out
GNU gdb (Ubuntu 9.2-0ubuntu1~20.04.1) 9.2
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Find the GDB manual and other documentation resources online at:
    <http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word"...
Reading symbols from ./a.out...
(gdb) list
1       #include<stdio.h>
2       int main(){
3           int *p = NULL;
4           *p = 3;
5           return 0;
6       }
(gdb) break 4
Breakpoint 1 at 0x1139: file fault.c, line 4.
(gdb) run
Starting program: /home/student/Desktop/Unix_lab/a.out

Breakpoint 1, main () at fault.c:4
4           *p = 3;
(gdb) continue
Continuing.

Program received signal SIGSEGV, Segmentation fault.
0x000055555555513d in main () at fault.c:4
4           *p = 3;
(gdb) 
```