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I pledge my honor that I have abided by the Stevens Honor System.

Lab 3 Report

CS 382 LB

```
Reading symbols from ./a.out...
(gdb) b 19
Breakpoint 1 at 0x1342: file main.c, line 19.
(gdb) run
Starting program: /home/rohan/Downloads/Stevens/CS382/Lab3/handout/handout/a.out
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Empty array created

Breakpoint 1, main () at main.c:19
19                  add(arr, i, counter);
(gdb) c
Continuing.


Breakpoint 1, main () at main.c:19
19                  add(arr, i, counter);
(gdb) p arr[0]
$1 = 0
(gdb) p counter
$2 = 0
(gdb)
```

- Checked the values of the params of the called functions using gdb after each iteration
- Noticed counter isn't incrementing after first iteration so added a counter++ on line 20
- As well add on line 26 for second half of array

```
Breakpoint 1, main () at main.c:19
19                      add(arr, i, counter);
(gdb) c
Continuing.
0

Breakpoint 1, main () at main.c:19
19                      add(arr, i, counter);
(gdb) p arr[0]
$2 = 0
(gdb) p counter
$3 = 1
(gdb) s
add (arr=0x7fffffffdb30, i=2, count=1) at buggy.c:14
14              arr[++count] = i;
(gdb) s
15      }
(gdb) p arr[1]
$4 = 0
(gdb) p arr[2]
$5 = 2
(gdb)
```

- Used gdb to go through the loop
- After implementing a counter noticed that arr[++count] was assigning to wrong addresses in the arr so got rid of the ++

```
Breakpoint 1, main () at main.c:30
30              if (contains(arr, size, 6))
(gdb) s
contains (arr=0x7fffffffdb30, count=20, target=6) at buggy.c:28
28              for (i = 0; i < count; ++i)
(gdb) s
30                      if (arr[i] == target)
(gdb) s
33                              return 0;
(gdb)
```

- Use gdb to step by step go through the for loop for contains
- Else statement will cause function to end after first test and not execute full loop, remove the else statement

Working code