

Memory Explore

Given the following 64-bit GDB output, circle and label the following variables in the memory dump:
greeting[], num1, num2, num3, ptr

Reading symbols from Memory Explore...done.

(gdb) **list 1,7**

```
1  int main(void) {
2      char greeting[12] = "I am Groot\n";
3      int num1 = 36, num2 = 0x4301;
4      int *ptr = &num1;
5      int num3 = *ptr + num2;
6      return 0;
7  }
```

(gdb) **break 6**

Breakpoint 1 at 0x40052a: file Memory Explore.c, line 6.

(gdb) **run**

Starting program: Memory Explore

Breakpoint 1, main () at Memory Explore.c:6

```
6      return 0;
```

(gdb) **print &ptr**

\$1 = (int **) 0x7fffffff520

(gdb) **print &num2**

\$2 = (int *) 0x7fffffff52c

(gdb) **x/48xb \$rbp-48**

0x7fffffff500:	0x30	0xe5	0xff	0xff	0xff	0x7f	0x00	0x00
0x7fffffff508:	0x00	0x00	0x43	0x21	0x20	0x00	0x00	0x00
0x7fffffff510:	0x49	0x20	0x61	0x6d	0x20	0x47	0x72	0x6f
0x7fffffff518:	0x6f	0x74	0x0a	0x00	0x21	0x43	0x00	0x00
0x7fffffff520:	0x0c	0xe5	0xff	0xff	0xff	0x7f	0x00	0x00
0x7fffffff528:	0x20	0x00	0x00	0x00	0x01	0x43	0x00	0x00