```
1   // SPDX-License-Identifier: GPL-2.0-only
2   /*
3    * kretprobe_example.c
4    *
5    * Here's a sample kernel module showing the use of return probes to
6    * report the return value and total time taken for probed function
7    * to run.
8    *
9    * usage: insmod kretprobe_example.ko func=<func_name>
10   *
11   * If no func_name is specified, kernel_clone is instrumented
12   *
13   * For more information on theory of operation of kretprobes, see
14   * Documentation/trace/kprobes.rst
15   *
16   * Build and insert the kernel module as done in the kprobe example.
17   * You will see the trace data in /var/log/messages and on the console
18   * whenever the probed function returns. (Some messages may be suppressed
19   * if syslogd is configured to eliminate duplicate messages.)
20   */
21
22  #include <linux/kernel.h>
23  #include <linux/module.h>
24  #include <linux/kprobes.h>
25  #include <linux/ktime.h>
26  #include <linux/limits.h>
27  #include <linux/sched.h>
28
29  static char func_name[NAME_MAX] = "kernel_clone";
30  module_param_string(func, func_name, NAME_MAX, S_IRUGO);
31  MODULE_PARM_DESC(func, "Function to kretprobe; this module will report the"
32                         " function's execution time");
33
34  /* per-instance private data */
35  struct my_data {
36          ktime_t entry_stamp;
37  };
38
```