НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ УКРАЇНИ

«КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

ФАКУЛЬТЕТ ІНФОРМАТИКИ І ОБЧИСЛЮВАЛЬНОЇ ТЕХНІКИ

КАФЕДРА ОБЧИСЛЮВАЛЬНОЇ ТЕХНІКИ

**Лабораторна робота №7**

з дисципліни **«**Архітектура комп’ютерів 2**»**

Виконала:

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Перевірив:

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Київ 2020 р.

**Лістинг програми:**

**hello.c**

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#include <linux/init.h>

#include <linux/module.h>

#include <linux/moduleparam.h>

#include <linux/printk.h>

#include <linux/types.h>

#include <linux/slab.h>

#include <linux/ktime.h>

struct head\_list {

struct head\_list \*next;

ktime\_t time;

};

MODULE\_AUTHOR("Chuiasova Tetiana IV-82");

MODULE\_DESCRIPTION("Hello world (Linux module for lab7)");

MODULE\_LICENSE("Dual BSD/GPL");

static struct head\_list \*head;

static uint repeat = 1;

module\_param(repeat,uint,S\_IRUGO);

MODULE\_PARM\_DESC(repeat, "repeat amount");

static int \_\_init init(void)

{

uint i = 0;

struct head\_list \*var\_1, \*var\_2, \*m, \*var;

head = kmalloc(sizeof(struct head\_list \*), GFP\_KERNEL);

var\_1 = head;

if(repeat == 0) {

pr\_warn("Repetition parametr = 0");

}else if(repeat >=5 && repeat <= 10) {

pr\_warn("Repetition parametr is between 5 and 10");

}

BUG\_ON(repeat>10);

for(i = 0; i < repeat; i++){

m = kmalloc(sizeof(struct head\_list), GFP\_KERNEL);

if (i == 8){

m = NULL;

}

if (ZERO\_OR\_NULL\_PTR(m)){

pr\_err("TESTING DEBUG OUTPUT");

while (head != NULL && repeat != 0) {

var = head;

head = var->next;

kfree(var);

}

BUG\_ON(!m);

return -ENOMEM;

}

var\_1->time = ktime\_get();

pr\_info("Hello, world!");

var\_2 = var\_1;

var\_1 = m;

}

if (repeat != 0) {

kfree(var\_2->next);

var\_2->next = NULL;

}

pr\_info("Repeat: %d\n", repeat);

return 0;

}

static void \_\_exit exit(void)

{

struct head\_list \*var;

while (head != NULL && repeat != 0) {

var = head;

pr\_info("Time of printing: %lld", var->time);

head = var->next;

kfree(var);

}

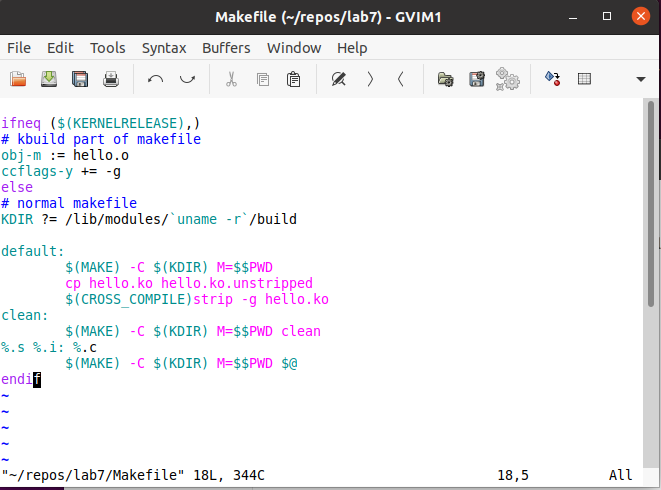
pr\_info("");

}

module\_init(init);

module\_exit(exit);

**MakeFile**

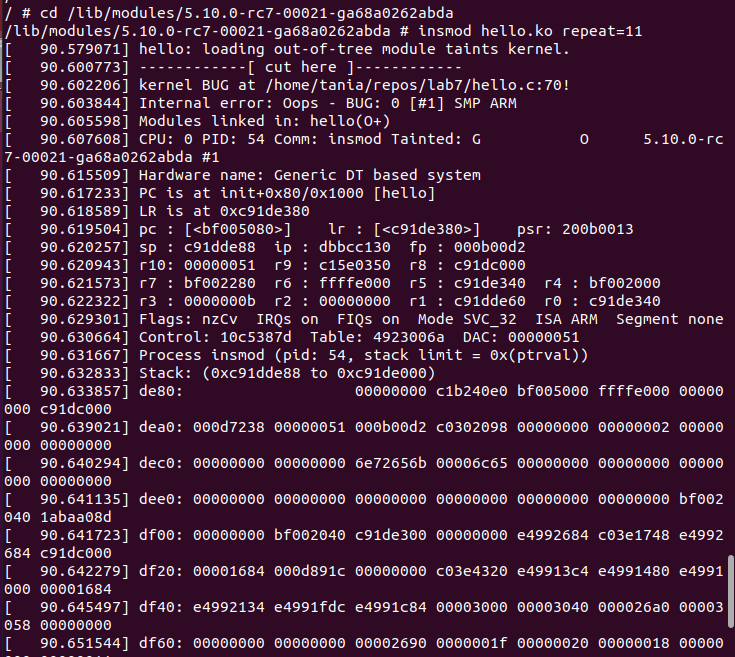


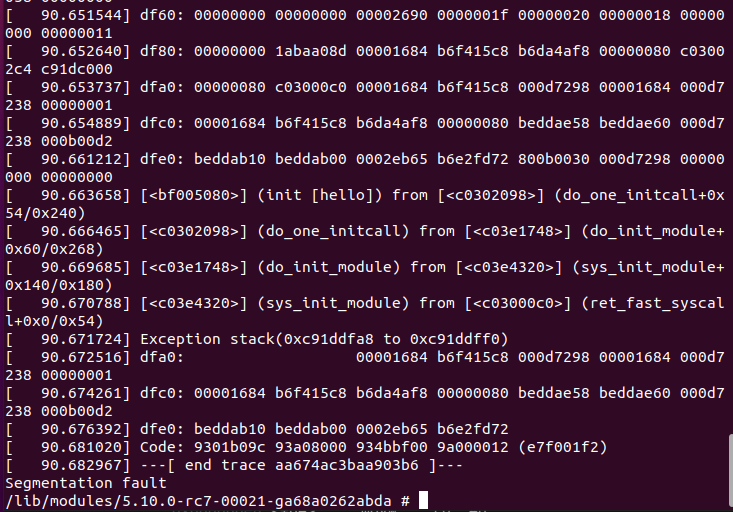
**Посилання на репозиторій:**

https://github.com/txt2021/Lab7\_AK

**Результати виконання роботи:**

**Repeat=11**





**Пошук місця аварії**

