

系統程式 HW10

410410060 資工二 林柔均

1. 產生zombie以後是否可以使用kill指令將zombie殺掉？

```
A ~/Downloads/SP_HW10 > kill -9 9096 22:22:54
A ~/Downloads/SP_HW10 > ps -aux |grep "defunct" 22:23:04
rogewood    9096  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9098  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9100  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9102  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9104  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9106  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9108  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9110  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9112  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9114  0.0  0.0      0      0 pts/1    Z+   22:22   0:00 [zombie] <defunct>
rogewood    9212  0.0  0.0    6924  2560 pts/2    S+   22:23   0:00 grep defunct
```

Ans: 否

2. 請附上截圖證明『zombie』的確會產生10個zombie。

```
A ~/Downloads/SP_HW10 > ps -aux |grep "defunct" 22:13:05
rogewood    7892  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7894  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7896  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7898  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7900  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7902  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7904  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7906  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7908  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7910  0.0  0.0      0      0 pts/1    Z+   22:16   0:00 [zombie] <defunct>
rogewood    7997  0.0  0.0    6924  2304 pts/2    S+   22:16   0:00 grep defunct
```

3. 請附上截圖證明『nozombie』幾乎不會產生zombie

```
A ~/Downloads/SP_HW10 > ps -aux |grep "defunct" 22:21:39
rogewood    8874  0.0  0.0      0      0 pts/1    Z+   22:21   0:00 [nozombie] <defunct>
rogewood    9024  0.0  0.0    6924  2560 pts/2    S+   22:21   0:00 grep defunct
```

4. 請說明你的系統中『task_struct』到底有多大，並附上截圖證明你的說法

```
man slabinfo
```

```
slabinfo(5)                                File Formats Manual                                slabinfo(5)

NAME
    slabinfo - kernel slab allocator statistics

SYNOPSIS
    cat /proc/slabinfo

DESCRIPTION
    Frequently used objects in the Linux kernel (buffer heads, inodes, dentries, etc.)
    have their own cache. The file /proc/slabinfo gives statistics on these caches.
    The following (edited) output shows an example of the contents of this file:

    $ sudo cat /proc/slabinfo
    slabinfo - version: 2.1
    # name      <active_objs> <num_objs> <objsize> <objperslab> <pagesperslab> ...
    sigqueue    100    100    160    25    1 : tunables    0    0    0 : slabdata    4    4    0
    sighand_cache 355    405   2112   15    8 : tunables    0    0    0 : slabdata   27   27    0
    kmalloc-8192  96     96   8192    4    8 : tunables    0    0    0 : slabdata   24   24    0
    ...

Manual page slabinfo(5) line 1 (press h for help or q to quit)
```

```
sudo cat /proc/slabinfo | grep task_struct
```

```
^ ~/Downloads/SP_HW10 $ sudo cat /proc/slabinfo | grep task_struct          X INT 22:32:38
task_struct          1714    1728    8448     3     8 : tunables     0     0     0 : slabdata    576    576     0
```

8448 bytes

註: 有參考學長姐的作業