

# lab5 test

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## Task 1

- 首先make
- 然后将文件引入blitz的模拟disk
- 最后运行

```
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ make
kpl Kernel -unsafe
asm Kernel.s
ldd Runtime.o Switch.o System.o List.o BitMap.o Kernel.o Main.o -o os
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -i
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -a MyProgram MyProgram
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ blitz -g os
Beginning execution...
===== KPL PROGRAM STARTING =====
Initializing Thread Scheduler...
Initializing Thread Manager...
Initializing Frame Manager...
AllocateRandomFrames called.  NUMBER_OF_PHYSICAL_PAGE_FRAMES = 100
Initializing Disk Driver...
Initializing File Manager...

My user-level program is running!!!

FATAL ERROR in UserProgram: "Syscall 'Shutdown' was invoked by a user thread" -- TERMINATING!

(To find out where execution was when the problem arose, type 'st' at the emulator prompt.)

===== KPL PROGRAM TERMINATION =====
```

## Task2、3

- 首先make
- 然后将文件引入blitz的模拟disk
- 最后运行

```
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ make
kpl Kernel -unsafe
asm Kernel.s
lddd Runtime.o Switch.o System.o List.o BitMap.o Kernel.o Main.o -o os
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -i
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -a TestProgram1 TestProgram1
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -a TestProgram2 TestProgram2
harryovo@harryovo-virtual-machine:~/Desktop/lab5$ blitz -g os
Beginning execution...
===== KPL PROGRAM STARTING =====
Initializing Thread Scheduler...
Initializing Thread Manager...
Initializing Frame Manager...
AllocateRandomFrames called.  NUMBER_OF_PHYSICAL_PAGE_FRAMES = 100
Initializing Disk Driver...
Initializing File Manager...
User-level program 'TestProgram1' is running...

**** Testing Syscall Parameter Passing ****

**** About to call Sys_Yield...
**** Should print:
****      Handle_Sys_Yield invoked!

Handle_Sys_Yield invoked!

**** About to call Sys_Fork...
**** Should print:
****      Handle_Sys_Fork invoked!

Handle_Sys_Fork invoked!
```

```
***** About to call Sys_Join...
***** Should print:
*****      Handle_Sys_Join invoked!
*****      processID = 1111

Handle_Sys_Join invoked!
processID = 1111

***** About to call Sys_Create...
***** Should print:
*****      Handle_Sys_Create invoked!
*****      virt addr of filename = 0x0000BFF8
*****      filename = MyFileName

Handle_Sys_Create invoked!
virt addr of filename = 0x0000BFF8
filename = MyFileName

***** About to call Sys_Open...
***** Should print:
*****      Handle_Sys_Open invoked!
*****      virt addr of filename = 0x0000BFF8
*****      filename = MyFileName

Handle_Sys_Open invoked!
virt addr of filename = 0x0000BFF8
filename = MyFileName
```

```
***** About to call Sys_Read...
***** Should print:
*****      Handle_Sys_Read invoked!
*****      fileDesc = 2222
*****      virt addr of buffer = 0x0000B0B0
*****      sizeInBytes = 3333

Handle_Sys_Read invoked!
fileDesc = 2222
virt addr of buffer  = 0x0000B0B0
sizeInBytes = 3333

***** About to call Sys_Write...
***** Should print:
*****      Handle_Sys_Write invoked!
*****      fileDesc = 4444
*****      virt addr of buffer = 0x0000B0B0
*****      sizeInBytes = 5555

Handle_Sys_Write invoked!
fileDesc = 4444
virt addr of buffer  = 0x0000B0B0
sizeInBytes = 5555

***** About to call Sys_Seek...
***** Should print:
*****      Handle_Sys_Seek invoked!
*****      fileDesc = 6666
*****      newCurrentPos = 7777
```

```
Handle_Sys_Seek invoked!
fileDesc = 6666
newCurrentPos =7777

***** About to call Sys_Close...
***** Should print:
*****      Handle_Sys_Close invoked!
*****      fileDesc = 8888

Handle_Sys_Close invoked!
FileDesc = 8888

***** About to call Sys_Exit...
***** Should print:
*****      Handle_Sys_Exit invoked!
*****      returnStatus = 9999

Handle_Sys_Exit invoked!
returnStatus = 9999

***** Syscall Test Complete *****

***** Testing Exec Syscall *****

***** About to call Sys_Exec with a non-existent file...
***** Should print:
*****      Okay

Okay
```

```
***** About to call Sys_Exec with an overly long file name...
***** Should print:
*****      Okay

Okay

***** About to perform a successful Exec and jump to TestProgram2...
***** Should print:
*****      User-level program 'TestProgram2' is running!

User-level program 'TestProgram2' is running!

***** About to call Sys_Shutdown...
***** Should print:
*****      FATAL ERROR in UserProgram: "Syscall 'Shutdown' was invoked by a user thread" -- TERMINATING!

FATAL ERROR in UserProgram: "Syscall 'Shutdown' was invoked by a user thread" -- TERMINATING!

(To find out where execution was when the problem arose, type 'st' at the emulator prompt.)

===== KPL PROGRAM TERMINATION =====
```

```

1  harryovo@harryovo-virtual-machine:~/Desktop/lab5$ make
2  kpl kernel -unsafe
3  asm kernel.s
4  ldd Runtime.o Switch.o System.o List.o BitMap.o Kernel.o Main.o -o os
5  harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -i
6  harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -a TestProgram1
   TestProgram1
7  harryovo@harryovo-virtual-machine:~/Desktop/lab5$ diskUtil -a TestProgram2
   TestProgram2
8  harryovo@harryovo-virtual-machine:~/Desktop/lab5$ blitz -g os
9  Beginning execution...
10 ===== KPL PROGRAM STARTING =====
11 Initializing Thread Scheduler...
12 Initializing Thread Manager...
13 Initializing Frame Manager...
14 AllocateRandomFrames called.  NUMBER_OF_PHYSICAL_PAGE_FRAMES = 100
15 Initializing Disk Driver...
16 Initializing File Manager...
17 User-level program 'TestProgram1' is running...
18
19 ***** Testing Syscall Parameter Passing *****
20
21 ***** About to call Sys_Yield...
22 ***** Should print:
23 *****      Handle_Sys_Yield invoked!
24
25 Handle_Sys_Yield invoked!
26
27 ***** About to call Sys_Fork...
28 ***** Should print:
29 *****      Handle_Sys_Fork invoked!
30
31 Handle_Sys_Fork invoked!
32
33 ***** About to call Sys_Join...
34 ***** Should print:
35 *****      Handle_Sys_Join invoked!
36 *****      processID = 1111
37
38 Handle_Sys_Join invoked!
39 processID = 1111
40
41 ***** About to call Sys_Create...
42 ***** Should print:
43 *****      Handle_Sys_Create invoked!
44 *****      virt addr of filename = 0x0000BFF8
45 *****      filename = MyFileName
46
47 Handle_Sys_Create invoked!
48 virt addr of filename = 0x0000BFF8
49 filename = MyFileName
50
51 ***** About to call Sys_Open...
52 ***** Should print:
53 *****      Handle_Sys_Open invoked!
54 *****      virt addr of filename = 0x0000BFF8
55 *****      filename = MyFileName

```

```
56
57 Handle_Sys_Open invoked!
58 virt addr of filename = 0x0000BFF8
59 filename = MyFileName
60
61 ***** About to call Sys_Read...
62 ***** Should print:
63 ***** Handle_Sys_Read invoked!
64 ***** fileDesc = 2222
65 ***** virt addr of buffer = 0x0000B0B0
66 ***** sizeInBytes = 3333
67
68 Handle_Sys_Read invoked!
69 fileDesc = 2222
70 virt addr of buffer = 0x0000B0B0
71 sizeInBytes = 3333
72
73 ***** About to call Sys_Write...
74 ***** Should print:
75 ***** Handle_Sys_Write invoked!
76 ***** fileDesc = 4444
77 ***** virt addr of buffer = 0x0000B0B0
78 ***** sizeInBytes = 5555
79
80 Handle_Sys_Write invoked!
81 fileDesc = 4444
82 virt addr of buffer = 0x0000B0B0
83 sizeInBytes = 5555
84
85 ***** About to call Sys_Seek...
86 ***** Should print:
87 ***** Handle_Sys_Seek invoked!
88 ***** fileDesc = 6666
89 ***** newCurrentPos = 7777
90
91 Handle_Sys_Seek invoked!
92 fileDesc = 6666
93 newCurrentPos = 7777
94
95 ***** About to call sys_Close...
96 ***** Should print:
97 ***** Handle_Sys_Close invoked!
98 ***** fileDesc = 8888
99
100 Handle_Sys_Close invoked!
101 FileDesc = 8888
102
103 ***** About to call Sys_Exit...
104 ***** Should print:
105 ***** Handle_Sys_Exit invoked!
106 ***** returnStatus = 9999
107
108 Handle_Sys_Exit invoked!
109 returnStatus = 9999
110
111 ***** Syscall Test Complete *****
112
113 ***** Testing Exec Syscall *****
```

```
114
115 ***** About to call Sys_Exec with a non-existant file...
116 ***** Should print:
117 *****      okay
118
119 okay
120
121 ***** About to call Sys_Exec with an overly long file name...
122 ***** Should print:
123 *****      okay
124
125 okay
126
127 ***** About to perform a successful Exec and jump to TestProgram2...
128 ***** Should print:
129 *****      User-level program 'TestProgram2' is running!
130
131 User-level program 'TestProgram2' is running!
132
133 ***** About to call Sys_Shutdown...
134 ***** Should print:
135 *****      FATAL ERROR in UserProgram: "Syscall 'Shutdown' was invoked by a
136 user thread" -- TERMINATING!
137
138 FATAL ERROR in UserProgram: "Syscall 'Shutdown' was invoked by a user
139 thread" -- TERMINATING!
140
141 (To find out where execution was when the problem arose, type 'st' at the
142 emulator prompt.)
143
144 ===== KPL PROGRAM TERMINATION =====
```