

```
Beginning execution...
===== KPL PROGRAM STARTING =====
Initializing Thread Scheduler...
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
Virtual address of the file : 0x0000BFF8
File Name: MyFileName
```

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

Handle\_Sys\_Open invoked  
Virtual address of the file name: 0x0000BFF8  
file name :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  
Virtual address 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  
Virtual address 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
```

```
*****
Could not open file
*****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 the user thread
" -- TERMINATING!
```

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

```
===== KPL PROGRAM TERMINATION =====
Done! The next instruction to execute will be:
001078: C0100000      sethi    0x0000,r1  ! 0x00001088 = 4232
```

(noGoMessage)

```
=====
=====
=====      The BLITZ Machine Emulator      =====
=====
===== Copyright 2001-2007, Harry H. Porter III =====
=====
=====
```

Enter a command at the prompt. Type 'quit' to exit or 'help' for info about commands.

```
> > Number of Disk Reads    = 17
Number of Disk Writes      = 0
Instructions Executed      = 1322918
Time Spent Sleeping        = 873
    Total Elapsed Time     = 1323791
```