

## Step 7

```
rishab@ada:~/Fall2017/cs510-Os/project1$ asm Hello.s
rishab@ada:~/Fall2017/cs510-Os/project1$ ldd Hello.o -o Hello
rishab@ada:~/Fall2017/cs510-Os/project1$ blitz -g Hello
Beginning execution...
Hello, world!

**** A 'debug' instruction was encountered ****
Done! The next instruction to execute will be:
000080: A1FFFFB8      jmp      0xFFFFB8      ! targetAddr = main

Entering machine-level debugger...
=====
=====
===== 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.
> q
Number of Disk Reads   = 0
Number of Disk Writes = 0
Instructions Executed  = 1705
Time Spent Sleeping    = 0
Total Elapsed Time     = 1705
```

## Step 8

```
rishab@ada:~/Fall2017/cs510-Os/project1$ asm Echo.s
rishab@ada:~/Fall2017/cs510-Os/project1$ ldd Echo.o -o Echo
rishab@ada:~/Fall2017/cs510-Os/project1$ blitz Echo
=====
=====
=====      The BLITZ Machine Emulator      =====
=====
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=====
=====

Enter a command at the prompt.  Type 'quit' to exit or 'help' for
info about commands.
> g
Beginning execution...
This text is echoed
This text is echoed
Yes it is echoed
Yes it is echoed
abcd
abcd
q
q
**** A 'debug' instruction was encountered ****
Done!  The next instruction to execute will be:
      cont:
0000A4: A1FFFFAC      jmp      0xFFFFAC      ! targetAddr = loop
> q
Number of Disk Reads   = 0
Number of Disk Writes  = 0
Instructions Executed   = 312336644
Time Spent Sleeping    = 0
      Total Elapsed Time = 312336644
rishab@ada:~/Fall2017/cs510-Os/project1$
```

## Step 9

```
rishab@ada:~/Fall2017/cs510-Os/project1$ kpl -unsafe System
rishab@ada:~/Fall2017/cs510-Os/project1$ asm System.s
rishab@ada:~/Fall2017/cs510-Os/project1$ kpl HelloWorld
rishab@ada:~/Fall2017/cs510-Os/project1$ asm HelloWorld.s
rishab@ada:~/Fall2017/cs510-Os/project1$ asm Runtime.s
rishab@ada:~/Fall2017/cs510-Os/project1$ ldd System.o Runtime.o HelloWorld.o -o HelloWorld
rishab@ada:~/Fall2017/cs510-Os/project1$ blitz -g HelloWorld
Beginning execution...
===== KPL PROGRAM STARTING =====
Hello, world...

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

**** A 'debug' instruction was encountered ****
Done! The next instruction to execute will be:
000D98: C0100000      sethi    0x0000,r1      ! 0x00000DA8 = 3496 (noGoMessage)

Entering machine-level debugger...
=====
===== 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.
> g
Beginning execution...

The KPL program has terminated; you may not continue!

**** A 'debug' instruction was encountered ****
Done! The next instruction to execute will be:
000D98: C0100000      sethi    0x0000,r1      ! 0x00000DA8 = 3496 (noGoMessage)
> q
Number of Disk Reads   = 0
Number of Disk Writes  = 0
Instructions Executed   = 1296
Time Spent Sleeping    = 0
Total Elapsed Time     = 1296
```

## Step 11

```
rishab@ada:~/Fall2017/cs510-Os/project1$ blitz -g HelloWorld
Beginning execution...
===== KPL PROGRAM STARTING =====
Hello, world...

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

**** A 'debug' instruction was encountered ****
Done! The next instruction to execute will be:
000D98: C0100000      sethi    0x0000,r1      ! 0x00000DA8 = 3496 (noGoMessage)

Entering machine-level debugger...
=====
===== 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.
> t

The KPL program has terminated; you may not continue!

**** A 'debug' instruction was encountered ****
About to execute RETURN statement      ***Invalid FP***

> up
Already at top of stack!
===== Frame number 0 (where StackTop = 0) =====
Bottom of activation frame stack!
Resetting current frame to top of stack!
> down
===== Frame number 1 (where StackTop = 0) =====
Invalid activation frame stack! The frame pointer is 0x00000000.
Resetting current frame to top of stack!
> q
Number of Disk Reads    = 0
Number of Disk Writes   = 0
Instructions Executed    = 1296
Time Spent Sleeping     = 0
Total Elapsed Time      = 1296
rishab@ada:~/Fall2017/cs510-Os/project1$
```