CS 531: Fundamentals of Systems Programming
Fall 2015
Instructor: Hal Greenwald
Homework # 2

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>

int main()
{

char command[50];

strcpy(command, "ls -l");  // Any shell command or process should work.
system(command);

return(0);
}
```

```
gcc system_test.c -o system_test

Hals-iMac:HW2 halgreenwald$ ./system_test
total 96
-rwxr-xr-x  1 halgreenwald  staff  8692 Feb 23 17:18 system_test
-rw-r--r--    1 halgreenwald  staff    151 Feb 23 17:18 system_test.c
-rwxr-xr-x  1 halgreenwald  staff  9132 Feb 23 17:00 udp_c
-rw-r--r--    1 halgreenwald  staff    832 Feb 23 17:00 udp_c.c
-rwxr-xr-x  1 halgreenwald  staff  8728 Feb 23 16:53 udp_s
-rw-r--r--    1 halgreenwald  staff    915 Feb 23 16:53 udp_s.c

Hals-iMac:HW2 halgreenwald$
```

The C library function:
int system(const char *comm)
is used to execute subprocesses and commands. It is defined in the stdlib.h header.

Parameters:
comm -- This is a character string containing the requested command.

Return Value:
The value returned is -1 on error, and the return status of the command otherwise.

Assignment:
Implement your own user defined *system* function:
int cs531_system(const char *comm)

Use:
open(), close(), fork(), dup() , exec*(), wait(), signal()

Do Not use system()**.**

Cs531_system() must have robust error handeling and be well documented.

Submit the source file labeled as ***lastname***-HW2.c

I will compile it using gcc and link the resulting object module to my test program. **Note**: your submitted file must not have an active main() function (it may be commented out).
Due October 21.