CPE464 – Support Functions Library

selectMod(), bindMod(), in_cksum(), and sendtoErr()

I have provided an object library with four functions (selectMod(), bindMod(), in_cksum(), and sendtoErr()). Notes:

A. To install this library – two steps:

   a. Get the files (if you are on a linux box e.g. vogon, unix1…) type:[1]

      i. wget http://users.csc.calpoly.edu/~networks/cpe464/lib.mk

   b. Make the library, type:

make -f lib.mk

B. The lib.mk creates an object library that includes the functions selectMod(), bindMod(), in_cksum(), and sendtoErr(). The library is the file libcpe464.1.2.a

C. The Makefile (called Makefile) that comes with the library is already written to use the object library when compiling the rcopy and server programs.

D. The file cpe464.h is the header file for all of the functions in the object library. You must include this in your code files (e.g. #include "cpe464.h")

E. sendtoErr() function – The object library contains the sendtoErr() function. This function should be used in place of the normal call to sendto(). This function drops packets and flips bits prior to sending the packet. See the cpe464.h file (which you copied over in the step above) for details on using this function. Also, remember to call the sendtoErr_init() function.

F. selectMod() function – Use the selectMod() function in place of your calls to select(). This function just replaces the select function and will help us in testing your program. The call to selectMod() is identical to the call to select(). In your new select_call() function use the selectMod() call instead of the normal select call.

G. bindMod() function – Use the bindMod() function in place of your call to bind(). This function just replaces the bind() function and will help us in testing your program. The call to bindMod() is identical to the call to bind().

H. in_cksum() function – This library includes the in_cksum() function which calculates the Internet checksum. This is the same function you used in the trace program.

[1] If you are not on a linux box then go to the following link and download the page into a file called lib.mk: http://users.csc.calpoly.edu/~networks/cpe464/lib.mk