```c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/time.h>
#include <sys/ioctl.h>

int main()
{
    char buffer[128];
    int result, nread;

    fd_set inputs, inputfds; // 2 sets of file descriptors bit-arrays
    struct timeval timeout;

    FD_ZERO(&inputs);        // initialize inputs to the empty set
    FD_SET(0, &inputs);      // set file descriptor 0 (stdin)

    //  Wait for input on stdin for a maximum of 2.5 seconds.
    for (;;)  {
        inputfds = inputs;

        // 2.5 seconds.
        timeout.tv_sec = 2;
        timeout.tv_usec = 500000;

        // Get select() results.  FD_SETSIZE = 1024 bits/FDs
        result = select(FD_SETSIZE, &inputfds,
                        (fd_set *) 0, (fd_set *) 0, &timeout);

        // Check the results.
        //   No input:  the program loops again.
        //   Got input: print what was typed, then terminate.
        //   Error:     terminate.
        switch(result) {
            case 0: {                   // timeout w/o input
                printf("@");
                fflush(stdout);
                break;
            }

            case -1: {                  // error
                perror("select");
                exit(1);
            }

            // If, during the wait, we have some action on the file descriptor,
            // we read the input on stdin and echo it whenever an
            // <end of line> character is received, until that input is Ctrl-D.
            default: {                  // Got input
                if (FD_ISSET(0, &inputfds)) {
```

```
                    ioctl(0,FIONREAD,&nread);   // read # of bytes available
                                                // on stdin and set nread arg
                                                // to that value

                    if (nread == 0) {
                        printf("Keyboard input done.\n");
                        exit(0);
                    }

                    nread = read(0,buffer,nread);
                    buffer[nread] = 0;
                    printf("Read %d characters from the keyboard: %s",
                           nread, buffer);
                }
                break;
            }
        }
    }
}
```