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1  /*
2  * Name: Joe Student
3  * Course-Section: CS-440
4  * Assignment: Simplex server example
5  * Date Due: 01/01/24
6  * Collaborators: None
7  * Resources: Textbook
8  * Description: Example server to demonstrate how to use the BSD socket API
9  */
10 #include <sys/types.h>
11 #include <sys/socket.h>
12 #include <netinet/in.h>
13 #include <netdb.h>
14
15 #include <err.h>
16 #include <stdio.h>
17 #include <string.h>
18 #include <unistd.h>
19
20 const int SERVER_PORT = 5432;
21 const int MAX_PENDING = 5;
22 const int MAX_LINE    = 256;
23
24 int
25 main(void)
26 {
27     char buf[MAX_LINE];
28     struct sockaddr_in sin;
29     socklen_t new_len;
30     int new_s, s;
31
32     /* build address data structure */
33     memset((char*)&sin, 0, sizeof sin);
34     sin.sin_family = AF_INET;
35     sin.sin_addr.s_addr = INADDR_ANY;
36     sin.sin_port = htons(SERVER_PORT);
37
38     /* begin passive open */
39     if ((s = socket(PF_INET, SOCK_STREAM, 0)) == -1)
40         err(1, "unable to open socket");
41
42     if ((bind(s, (struct sockaddr*)&sin, sizeof sin)) == -1)
43         err(1, "unable to bind socket");
44
45     if ((listen(s, MAX_PENDING)) == -1)
46         err(1, "listen on socket failed");
47
48     /* get next connection and print message */
49     while (1) {
50         new_len = sizeof sin;
51         if ((new_s = accept(s, (struct sockaddr*)&sin, &new_len)) == -1) {
52             close(s);
53             err(1, "accept failed");
54         }
55
56         while (recv(new_s, buf, sizeof buf, 0) > 0)
57             fputs(buf, stdout);
58
59         close(new_s);
60     }
61
62     /* NOT REACHED */
63     close(s);
64
65     return 0;
66 }

```