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1  /* A simple server in the internet domain using TCP
2     The port number is passed as an argument */
3  #include <stdio.h>
4  #include <stdlib.h>
5  #include <string.h>
6  #include <unistd.h>
7  #include <sys/types.h>
8  #include <sys/socket.h>
9  #include <netinet/in.h>
10
11 void error(const char *msg)
12 {
13     perror(msg);
14     exit(1);
15 }
16
17 int main(int argc, char *argv[])
18 {
19     int sockfd, newsockfd, portno;
20     socklen_t clilen;
21     char buffer[255];
22     struct sockaddr_in serv_addr, cli_addr;
23     int n;
24     if (argc < 2) {
25         fprintf(stderr, "ERROR, no port provided\n");
26         exit(1);
27     }
28     sockfd = socket(AF_INET, SOCK_STREAM, 0);
29     if (sockfd < 0)
30         error("ERROR opening socket");
31     bzero((char *) &serv_addr, sizeof(serv_addr));
32     portno = atoi(argv[1]);
33     serv_addr.sin_family = AF_INET;
34     serv_addr.sin_addr.s_addr = INADDR_ANY;
35     serv_addr.sin_port = htons(portno);
36     if (bind(sockfd, (struct sockaddr *) &serv_addr,
37             sizeof(serv_addr)) < 0)
38         error("ERROR on binding");
39     listen(sockfd, 5);
40     clilen = sizeof(cli_addr);
41     newsockfd = accept(sockfd,
42                       (struct sockaddr *) &cli_addr,
43                       &clilen);
44     if (newsockfd < 0)
45         error("ERROR on accept");
46     while(1)
47     {
48         bzero(buffer, 256);
49         n = read(newsockfd, buffer, 255);
50         if (n < 0) error("ERROR reading from socket");
51         printf("Client: %s\n", buffer);
52         bzero(buffer, 256);
53         fgets(buffer, 255, stdin);
54         n = write(newsockfd, buffer, strlen(buffer));
55         if (n < 0) error("ERROR writing to socket");
56         int i = strncmp("Bye", buffer, 3);
57         if (i == 0)
58             break;
59     }
60     close(newsockfd);
61     close(sockfd);
62     return 0;
63 }
```