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1  #include <sys/socket.h>
2  #include <netinet/in.h>
3  #include <arpa/inet.h>
4  #include <stdio.h>
5  #include <stdlib.h>
6  #include <unistd.h>
7  #include <errno.h>
8  #include <string.h>
9  #include <sys/types.h>
10
11 int main(void)
12 {
13     int listenfd = 0;
14     int connfd = 0;
15     struct sockaddr_in serv_addr;
16     char sendBuff[1025];
17     int numrv;
18
19     listenfd = socket(AF_INET, SOCK_STREAM, 0);
20
21     printf("Socket retrieve success\n");
22
23     memset(&serv_addr, '0', sizeof(serv_addr));
24     memset(sendBuff, '0', sizeof(sendBuff));
25
26     serv_addr.sin_family = AF_INET;
27     serv_addr.sin_addr.s_addr = htonl(INADDR_ANY);
28     serv_addr.sin_port = htons(5001);
29
30     bind(listenfd, (struct sockaddr*)&serv_addr, sizeof(serv_addr));
31
32     if(listen(listenfd, 10) == -1)
33     {
34         printf("Failed to listen\n");
35         return -1;
36     }
37
38
39     while(1)
40     {
41         unsigned char offset_buffer[10] = {'\0'};
42         unsigned char command_buffer[2] = {'\0'};
43         int offset;
44         int command;
45         connfd = accept(listenfd, (struct sockaddr*)NULL, NULL);
46
47
48         printf("Waiting for client to send the command (Full File (0) Partial
File (1)\n");
49
50         while(read(connfd, command_buffer, 2) == 0);
51         sscanf(command_buffer, "%d", &command);
52
53         if(command == 0)
54             offset = 0;
55         else
56         {
57             printf("Waiting for client to send the offset\n");
58             while(read(connfd, offset_buffer, 10) == 0);
59             sscanf(offset_buffer, "%d", &offset);
60
61         }
62         /* Open the file that we wish to transfer */
63         FILE *fp = fopen("source_file.txt", "rb");
64         if(fp==NULL)
65         {
66             printf("File open error");
67             return 1;
68         }

```

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69
70     /* Read data from file and send it */
71     fseek(fp, offset, SEEK_SET);
72     while(1)
73     {
74         /* First read file in chunks of 256 bytes */
75         unsigned char buff[256]={0};
76         int nread = fread(buff,1,256,fp);
77         printf("Bytes read %d \n", nread);
78
79         /* If read was success, send data. */
80         if(nread > 0)
81         {
82             printf("Sending \n");
83             write(connfd, buff, nread);
84         }
85         /*
86         Either there was error, or we reached end of file.
87         */
88         if (nread < 256)
89         {
90             if (feof(fp))
91                 printf("End of file\n");
92             if (ferror(fp))
93                 printf("Error reading\n");
94             break;
95         }
96     }
97     close(connfd);
98     sleep(1);
99 }
100 return 0;
101 }

```