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//SERVER
#include <sys/types.h>
#include <sys/socket.h>
#include <netdb.h>
#include <stdio.h>
#include <string.h>
#include <arpa/inet.h>

int main(void) {
    int sockfd;
    struct sockaddr_in server_addr, client_addr;
    char server_message[2000], client_message[2000];
    int client_struct_length = sizeof(client_addr);

    sockfd = socket(AF_INET, SOCK_DGRAM, 0);

    if (sockfd < 0) {
        printf("Error while creating socket\n");
        return -1;
    }
    printf("Socket created successfully\n");

    server_addr.sin_family = AF_INET;
    server_addr.sin_port = htons(22000);
    server_addr.sin_addr.s_addr = htonl(INADDR_ANY);

    if (bind(sockfd, (struct sockaddr *)&server_addr, sizeof(server_addr)) < 0) {
        printf("Couldn't bind to the port\n");
        return -1;
    }

    printf("Done with binding\n");

    printf("Listening for incoming messages...\n\n");

    while (1) {
        if (recvfrom(sockfd, client_message, sizeof(client_message), 0,
            (struct sockaddr *)&client_addr, &client_struct_length) < 0) {
            printf("Couldn't receive\n");
            return -1;
        }
        printf("Client: %s", client_message);

        if (strcmp(client_message, "exit\n") == 0) {

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    printf("Chat ended by client.\n");
    break;
}

printf("Server: ");
fgets(server_message, sizeof(server_message), stdin);

if (sendto(sockfd, server_message, strlen(server_message), 0,
           (struct sockaddr *)&client_addr, client_struct_length) < 0) {
    printf("Can't send\n");
    return -1;
}
}

close(sockfd);

return 0;
}

```

//CLIENT

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#include <sys/types.h>
#include <sys/socket.h>
#include <netdb.h>
#include <stdio.h>
#include <string.h>
#include <arpa/inet.h>

int main(void) {
    int socket_desc;
    struct sockaddr_in server_addr;
    char server_message[2000], client_message[2000];
    int server_struct_length = sizeof(server_addr);

    socket_desc = socket(AF_INET, SOCK_DGRAM, 0);

    if (socket_desc < 0) {
        printf("Error while creating socket\n");
        return -1;
    }
    printf("Socket created successfully\n");
}

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server_addr.sin_family = AF_INET;
server_addr.sin_port = htons(22000);
server_addr.sin_addr.s_addr = inet_addr("127.0.0.1");

while (1) {
printf("Client: ");
fgets(client_message, sizeof(client_message), stdin);

if (sendto(socket_desc, client_message, strlen(client_message), 0,
           (struct sockaddr *)&server_addr, server_struct_length) < 0) {
printf("Unable to send message\n");
return -1;
}

if (strcmp(client_message, "exit\n") == 0) {
printf("Chat ended by client.\n");
break;
}

if (recvfrom(socket_desc, server_message, sizeof(server_message), 0,
             (struct sockaddr *)&server_addr, &server_struct_length) < 0) {
printf("Error while receiving server's msg\n");
return -1;
}

printf("Server: %s", server_message);

if (strcmp(server_message, "exit\n") == 0) {
printf("Chat ended by server.\n");
break;
}
}

close(socket_desc);
return 0;
}

```