SERVER

```c
#include<string.h>
#include<unistd.h>
#include<sys/socket.h>
#include<sys/types.h>
#include<netinet/in.h>
#include<stdlib.h>
#include<stdio.h>

int main()
{
    int s,r,recb,sntb,x,ns,a=0;
    printf("INPUT port number: ");
    scanf("%d", &x);
    socklen_t len;
    struct sockaddr_in server,client;
    char buff[50];

    s=socket(AF_INET,SOCK_STREAM,0);
    if(s==-1)
    {
        printf("\nSocket creation error.");
        exit(0);
    }
    printf("\nSocket created.");

    server.sin_family=AF_INET;
    server.sin_port=htons(x);
    server.sin_addr.s_addr=htonl(INADDR_ANY);

    r=bind(s,(struct sockaddr*)&server,sizeof(server));
    if(r==-1)
    {
        printf("\nBinding error.");
        exit(0);
    }
    printf("\nSocket binded.");

    r=listen(s,1);
    if(r==-1)
    {
        close(s);
        exit(0);
    }
    printf("\nSocket listening.");
```

```c
    len=sizeof(client);

    ns=accept(s,(struct sockaddr*)&client, &len);
    if(ns==-1)
    {
        close(s);
        exit(0);
    }
    printf("\nSocket accepting.");

    recb=recv(ns,buff,sizeof(buff),0);
    if(recb==-1)
    {
        printf("\nMessage Recieving Failed");
        close(s);
        close(ns);
        exit(0);
    }
    printf("\nMessage Recieved: ");
    printf("%s", buff);

    printf("\n\n");
    scanf("%s", buff);

    sntb=send(ns,buff,sizeof(buff),0);
    if(sntb==-1)
    {
        printf("\nMessage Sending Failed");
        close(s);
        close(ns);
        exit(0);
    }

    close(ns);
    close(s);
}
```

CLIENT

```c
#include<string.h>
#include<arpa/inet.h>
#include<stdlib.h>
#include<stdio.h>
#include<unistd.h>
#include<sys/socket.h>
#include<sys/types.h>
#include<netinet/in.h>
```

```c
#include<fcntl.h>
#include<sys/stat.h>
int main()
{
    int s,r,recb,sntb,x;
    printf("INPUT port number: ");
    scanf("%d", &x);
    struct sockaddr_in server;
    char buff[50];
    s=socket(AF_INET,SOCK_STREAM,0);
    if(s==-1)
    {
        printf("\nSocket creation error.");
        exit(0);
    }
    printf("\nSocket created.");

    server.sin_family=AF_INET;
    server.sin_port=htons(x);
    server.sin_addr.s_addr=inet_addr("127.0.0.1");

    r=connect(s,(struct sockaddr*)&server,sizeof(server));
    if(r==-1)
    {
        printf("\nConnection error.");
        exit(0);
    }
    printf("\nSocket connected.");

    printf("\n\n");
    printf("Type Message: ");
    scanf("%s", buff);

    sntb=send(s,buff,sizeof(buff),0);
    if(sntb==-1)
    {
        close(s);
        printf("\nMessage Sending Failed");
        exit(0);
    }
    recb=recv(s,buff,sizeof(buff),0);
    if(recb==-1)
    {
        printf("\nMessage Recieving Failed");
        close(s);
        exit(0);
    }
```

```
    printf("\nMessage Recieved: ");
    printf("%s", buff);
    printf("\n\n");

    close(s);

}
```